



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet R
<b>Tree Stratum</b> Plot size: <u>r=30'</u>					<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>6</u> (A)  Total number of dominant species across all strata: <u>6</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)	
1.	<u>Acer saccharinum</u>	5	Y	FACW		
2.	<u>Fraxinus pennsylvanica</u>	10	Y	FACW		
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
		15 = Total Cover				
		50% of total Cover: <u>7.5</u>	20% of Total Cover: <u>3</u>			
<b>Sapling/Shrub Stratum</b> Plot size: <u>r=15'</u>					<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species      50    x    1 <u>50</u> FACW species    40    x    2 <u>80</u> FAC species      0     x    3 <u>0</u> FACU species    0     x    4 <u>0</u> UPL species      0     x    5 <u>0</u> Column Total    90    (A) <u>130</u> (B)  Prevalence Index: <u>1.4</u> (B/A)	
1.	_____					
2.	_____					
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
8.	_____					
9.	_____					
		0 = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Herb Stratum</b> Plot size: <u>r=5'</u>					<b>Hydrophytic Vegetation Indicators:</b> x    1 - Rapid Test for Hydrophytic Vegetation x    2 - Dominance Test is >50% x    3 - Prevalence Index is ≤3.0* 4 - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) 5 - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1.	<u>Typha latifolia</u>	20	Y	OBL		
2.	<u>Scirpus cyperinus</u>	5	N	FACW		
3.	<u>Onoclea sensibilis</u>	20	Y	FACW		
4.	<u>Carex sp.</u>	15	Y	OBL		
5.	<u>Carex sp.</u>	15	Y	OBL		
6.	_____					
7.	_____					
8.	_____					
9.	_____					
10.	_____					
11.	_____					
		75 = Total Cover				
		50% of total Cover: <u>37.5</u>	20% of Total Cover: <u>15</u>			
<b>Woody Vine Stratum</b> Plot size: <u>r=5'</u>					<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1.	_____					
2.	_____					
3.	_____					
4.	_____					
5.	_____					
		0 = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
Remarks: (Include photo numbers here or on a separate sheet.)  Photos 144-145					<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____	





WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet A
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>3</u> (A)  Total number of dominant species across all strata: <u>8</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>38%</u> (A/B)
1.	<u>Ulmus americana</u>		<u>5</u>	Y	FACW	
2.	<u>Quercus rubra</u>		<u>5</u>	Y	FACU	
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
			<u>10</u> = Total Cover			
			50% of total Cover: <u>5</u>	20% of Total Cover: <u>2</u>		
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species    0    x    1    = <u>0</u> FACW species   35   x   2    = <u>70</u> FAC species     5    x   3    = <u>15</u> FACU species   35   x   4    = <u>140</u> UPL species     5    x   5    = <u>25</u> Column Total   80   (A)       = <u>250</u> (B)  Prevalence Index: <u>3.1</u> (B/A)
1.	<u>Rosa multiflora</u>		<u>5</u>	Y	FACU	
2.	_____					
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
8.	_____					
9.	_____					
			<u>5</u> = Total Cover			
			50% of total Cover: <u>2.5</u>	20% of Total Cover: <u>1</u>		
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Brassica juncea</u>		<u>5</u>	Y	UPL	
2.	<u>Phalaris arundinacea</u>		<u>20</u>	Y	FACW	
3.	<u>Boehmeria cylindrica</u>		<u>5</u>	Y	FACW	
4.	<u>Podophyllum peltatum</u>		<u>10</u>	Y	FACU	
5.	<u>Melilotus officinalis</u>		<u>5</u>	N	FACU	
6.	<u>Juncus effusus</u>		<u>5</u>	N	FACW	
7.	<u>Lonicera japonica</u>		<u>5</u>	N	FAC	
8.	<u>Solidago canadensis</u>		<u>10</u>	Y	FACU	
9.	_____					
10.	_____					
11.	_____					
			<u>65</u> = Total Cover			
			50% of total Cover: <u>32.5</u>	20% of Total Cover: <u>13</u>		
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____					
2.	_____					
3.	_____					
4.	_____					
5.	_____					
			<u>0</u> = Total Cover			
			50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>		
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.)   						



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL 10 Mile Pipeline</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/2/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Up A</u>	
Investigator(s): <u>A. Mathes, T. Raabe</u> Section, Township, Range: <u>Section 19, Township 10N, Range 8W</u>	
Landform: (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concave, convex, none): <u>Convex</u> Slope %: <u>10</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.765209</u> Long. <u>-81.409811</u> Datum: <u>NAD 1983 Zone 17N</u>	
Soil Map Unit Name: <u>GdC</u> NWI Classification: <u>None</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>      </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>      </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	<b>Yes</b> <u>      </u> <b>No</b> <u>X</u>
Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	If yes, optional Wetland Site ID: <u>      </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	True Aquatic Plants (B14)
High Water Table (A2)	Surface Soil Cracks (B6)
Saturation (A3)	Hydrogen Sulfide Odor (C1)
Water Marks (B1)	Sparsely Vegetated Concave Surface (B8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Drainage Patterns (B10)
Algal Mat or Crust (B4)	Moss Trim Lines (B16)
Iron Deposits (B5)	Presence of Reduced Iron (C4)
Inundation Visible on Aerial Imagery (B7)	Dry-Season Water Table (C2)
Water Stained Leaves (B9)	Recent Iron Reduction in Tilled Soil (C6)
Aquatic Fauna (B13)	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Thin Muck Surface (C7)
	Stunted or Stressed Plants (D1)
	Other (Explain in Remarks)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	<b>Wetland Hydrology Present?</b> Yes <u>      </u> No <u>X</u>
Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	
Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up A				
<u>Tree Stratum</u> Plot size: <u>r=30'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>4</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>25%</u> (A/B)					
1.	<u>Quercus rubra</u>	5	Y	FACU						
2.	_____									
3.	_____									
4.	_____									
5.	_____									
6.	_____									
7.	_____									
		5 = Total Cover			<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 20 x 2 <u>40</u> FAC species 0 x 3 <u>0</u> FACU species 30 x 4 <u>120</u> UPL species 0 x 5 <u>0</u> Column Total 50 (A) <u>160</u> (B) Prevalence Index: <u>3.2</u> (B/A)					
		50% of total Cover: <u>2.5</u>	20% of Total Cover: <u>1</u>							
<u>Sapling/Shrub Stratum</u> Plot size: <u>r=15'</u>							<b>Hydrophytic Vegetation Indicators:</b> _____ 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0* _____ 4 - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) _____ 5 - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
1.	_____									
2.	_____									
3.	_____									
4.	_____									
5.	_____									
6.	_____									
7.	_____									
8.	_____									
9.	_____									
		0 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.					
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>							
<u>Herb Stratum</u> Plot size: <u>r=5'</u>							<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>			
1.	<u>Phalaris arundinacea</u>	20	Y	FACW						
2.	<u>Solidago canadensis</u>	5	N	FACU						
3.	<u>Melilotus officinalis</u>	10	Y	FACU						
4.	<u>Vicia americana</u>	10	Y	FACU						
5.	_____									
6.	_____									
7.	_____									
8.	_____									
9.	_____									
10.	_____									
11.	_____									
		45 = Total Cover			<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>					
		50% of total Cover: <u>22.5</u>	20% of Total Cover: <u>9</u>							
<u>Woody Vine Stratum</u> Plot size: <u>r=5'</u>							<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>			
1.	_____									
2.	_____									
3.	_____									
4.	_____									
5.	_____									
		0 = Total Cover					<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>			
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>							
Remarks: (Include photo numbers here or on a separate sheet.) Photos 9-13										

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up A
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-5	10YR 3/2	100					Silty loam	
6-14	10YR 5/4	100					Silty loam	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)	
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)	

<b>Restrictive Layer (if observed)</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____    No <u>  X  </u>
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Remarks:    No hydric soil indicators present.



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet C
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A)  Total number of dominant species across all strata: <u>3</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>67%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		_____ = Total Cover	_____	_____	_____	
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 5 x 1 <u>5</u> FACW species 25 x 2 <u>50</u> FAC species 0 x 3 <u>0</u> FACU species 45 x 4 <u>180</u> UPL species 0 x 5 <u>0</u> Column Total 75 (A) <u>235</u> (B) Prevalence Index: <u>3.1</u> (B/A)
1.	<u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		_____ = Total Cover	_____	_____	_____	
		50% of total Cover: <u>2.5</u>	20% of Total Cover: <u>1</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Juncus effusus</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	_____	
2.	<u>Solidago canadensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	_____	
3.	<u>Phalaris arundinacea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	_____	
4.	<u>Typha latifolia</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	_____	
5.	<u>Poa pratensis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	_____	
6.	<u>Cirsium vulgare</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
10.	_____	_____	_____	_____	_____	
11.	_____	_____	_____	_____	_____	
		_____ = Total Cover	_____	_____	_____	
		50% of total Cover: <u>35</u>	20% of Total Cover: <u>14</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		_____ = Total Cover	_____	_____	_____	
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.)						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet C
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-2	organic							
2-6	5Y 3/1	90	2.5Y 5/3	10	RM	M	clay silt	
6-12	2.5Y 4/1	65%	10YR 5/6	35	RM	M	silty clay	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ***	
	Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
	Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)
	Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
X	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)
	Stratified Layers (A5)		Depleted Matrix (F3)	Other (Explain in Remarks)
	2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
	Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)	
	Thick Dark Surface (A12)		Redox Depressions (F8)	
	Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	X	Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
	Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	
	Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)	
	Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)	

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="checkbox"/>    No _____</p>
---	---

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: COWL 10 Mile Pipeline City/County: Canton/Stark Sampling Date: 6/2/2014  
 Applicant/Owner: Marathon Petroleum State: OH Sampling Point: Up C  
 Investigator(s): A. Mathes, T. Raabe Section, Township, Range: Section 19, Township 10N, Range 8W  
 Landform: (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 3  
 Subregion (LRR or MLRA): LRR R Lat. 40.763445 Long. -81.410621 Datum: NAD 1983 Zone 17N  
 Soil Map Unit Name: Sb NWI Classification: None  
 Are climatic/hydrologic conditions on the site typical for time of year? Yes X No      (If no, explain in the Remarks)  
 Are Vegetation N Soil N or Hydrology N significantly disturbed?  
 Are Vegetation N Soil N or Hydrology N naturally problematic?  
 Are Normal Circumstances Present? Yes X No      (If needed, explain any answers in Remarks)

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? Yes      No X **Is the Sampled Area within a Wetland?**  
 Hydric Soil Present? Yes      No X **Yes**      **No** X  
 Wetland Hydrology Present? Yes      No X If yes, optional Wetland Site ID:     

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (check all that apply)		Secondary Indicators	
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	True Aquatic Plants (B14)
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Presence of Reduced Iron (C4)
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Thin Muck Surface (C7)
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)
<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Shallow Aquitard (D3)
<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Microtopographic Relief (D4)
		<input type="checkbox"/>	FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes      No X Depth (inches) -  
 Water Table Present? Yes      No X Depth (inches) -  
 Saturation Present? Yes      No X Depth (inches) -

**Wetland Hydrology Present?**  
 Yes      No X

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

Remarks: Within maintained right-of-way; transmission lines  
 Photo 20

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up C
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>0</u> (A)  Total number of dominant species across all strata: <u>2</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 0 x 2 <u>0</u> FAC species 0 x 3 <u>0</u> FACU species 40 x 4 <u>160</u> UPL species 0 x 5 <u>0</u> Column Total 40 (A) <u>160</u> (B) Prevalence Index: <u>4.0</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Poa pratensis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>		
2.	<u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>35</u> = Total Cover				
		50% of total Cover: <u>17.5</u>	20% of Total Cover: <u>7</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	<u>Rosa multiflora</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
		<u>5</u> = Total Cover				
		50% of total Cover: <u>2.5</u>	20% of Total Cover: <u>1</u>			
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>						
Remarks: (Include photo numbers here or on a separate sheet.)   						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up C
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-8	2.5Y 3/2	100					Loamy clay	
8-14	2.5Y 4/2	100					Loamy clay	Loose aggregate

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b>	<b>Hydric Soil Present?</b> Yes _____ No <u>  X  </u>
Type: _____	
Depth (inches): _____	

Remarks: No hydric soil indicators present.



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet D
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>3</u> (A)  Total number of dominant species across all strata: <u>4</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>75%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 5 x 1 <u>5</u> FACW species 90 x 2 <u>180</u> FAC species 0 x 3 <u>0</u> FACU species 15 x 4 <u>60</u> UPL species 0 x 5 <u>0</u> Column Total 110 (A) <u>245</u> (B) Prevalence Index: <u>2.2</u> (B/A)
1.	<u>Salix nigra</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
		<u>5</u> = Total Cover				
		50% of total Cover: <u>2.5</u>	20% of Total Cover: <u>1</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>x</u> <u>2</u> - Dominance Test is >50% <u>x</u> <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Phalaris arundinacea</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>		
2.	<u>Boehmeria cylindrica</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>90</u> = Total Cover				
		50% of total Cover: <u>45</u>	20% of Total Cover: <u>18</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	<u>Rosa multiflora</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
		<u>15</u> = Total Cover				
		50% of total Cover: <u>7.5</u>	20% of Total Cover: <u>3</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photos 24-25						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet D
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-15	2.5Y 5/2	75	7.5YR 3/4	25	C	M	Silty clay	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	X	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	X	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)		

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="checkbox"/>    No _____</p>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL 10 Mile Pipeline</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/2/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Up D</u>	
Investigator(s): <u>A. Mathes, T. Raabe</u> Section, Township, Range: <u>Section 19, Township 10N, Range 8W</u>	
Landform: (hillslope, terrace, etc.): <u>Tilled field</u> Local relief (concave, convex, none): <u>None</u> Slope %: <u>1</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.759457</u> Long. <u>-81.413843</u> Datum: <u>NAD 1983 Zone 17N</u>	
Soil Map Unit Name: <u>FcA</u> NWI Classification: <u>None</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	<b>Yes <u>    </u> No <u>X</u></b>
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	If yes, optional Wetland Site ID: <u>    </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	True Aquatic Plants (B14)
High Water Table (A2)	Surface Soil Cracks (B6)
Saturation (A3)	Hydrogen Sulfide Odor (C1)
Water Marks (B1)	Sparsely Vegetated Concave Surface (B8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Drainage Patterns (B10)
Algal Mat or Crust (B4)	Moss Trim Lines (B16)
Iron Deposits (B5)	Presence of Reduced Iron (C4)
Inundation Visible on Aerial Imagery (B7)	Dry-Season Water Table (C2)
Water Stained Leaves (B9)	Recent Iron Reduction in Tilled Soil (C6)
Aquatic Fauna (B13)	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Thin Muck Surface (C7)
	Stunted or Stressed Plants (D1)
	Other (Explain in Remarks)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>-</u>	<b>Wetland Hydrology Present?</b> Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>-</u>	
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>-</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Has been tilled	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up D
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>0</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species    0    x 1 <u>0</u> FACW species   0    x 2 <u>0</u> FAC species    0    x 3 <u>0</u> FACU species   75   x 4 <u>300</u> UPL species    0    x 5 <u>0</u> Column Total   75   (A) <u>300</u> (B)  Prevalence Index: <u>4.0</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Lepidium virginicum</u>	<u>75</u>	<u>Y</u>	<u>FACU</u>	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
10.	_____	_____	_____	_____	_____	
11.	_____	_____	_____	_____	_____	
		<u>75</u> = Total Cover				
		50% of total Cover: <u>37.5</u>	20% of Total Cover: <u>15</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>						
Remarks: (Include photo numbers here or on a separate sheet.)						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up D
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-13	10YR 4/2	85	7.5YR 3/4	15	C	M	Loamy clay	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	X	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)		
Thick Dark Surface (A12)		Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	X	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)		

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="checkbox"/>    No _____</p>
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Remarks:  
active agriculture

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: COWL 10 Mile Pipeline City/County: Canton/Stark Sampling Date: 6/3/2014  
 Applicant/Owner: Marathon Petroleum State: OH Sampling Point: Wet E  
 Investigator(s): A. Mathes, T. Raabe Section, Township, Range: Section 19, Township 10N, Range 8W  
 Landform: (hillslope, terrace, etc.): Drainage/tillable field Local relief (concave, convex, none): Concave Slope %: 2  
 Subregion (LRR or MLRA): LRR R Lat. 40.752185 Long. -81.414489 Datum: NAD 1983 Zone 17N  
 Soil Map Unit Name: Sb NWI Classification: PEM  
 Are climatic/hydrologic conditions on the site typical for time of year? Yes X No        (If no, explain in the Remarks)  
 Are Vegetation N Soil N or Hydrology N significantly disturbed?  
 Are Vegetation N Soil N or Hydrology N naturally problematic?  
 Are Normal Circumstances Present? Yes X No        (If needed, explain any answers in Remarks)

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? Yes X No        **Is the Sampled Area within a Wetland?**  
 Hydric Soil Present? Yes X No        **Yes** X **No**         
 Wetland Hydrology Present? Yes X No        If yes, optional Wetland Site ID:       

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (check all that apply)		Secondary Indicators	
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	True Aquatic Plants (B14)
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)
<input type="checkbox"/>	Saturation (A3)	<input checked="" type="checkbox"/>	Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Presence of Reduced Iron (C4)
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)
<input checked="" type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Thin Muck Surface (C7)
<input checked="" type="checkbox"/>	Algal Mat or Crust (B4)	<input checked="" type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Surface Soil Cracks (B6)
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Drainage Patterns (B10)
<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Moss Trim Lines (B16)
		<input type="checkbox"/>	Dry-Season Water Table (C2)
		<input type="checkbox"/>	Crayfish Burrows (C8)
		<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)
		<input type="checkbox"/>	Stunted or Stressed Plants (D1)
		<input checked="" type="checkbox"/>	Geomorphic Position (D2)
		<input type="checkbox"/>	Shallow Aquitard (D3)
		<input type="checkbox"/>	Microtopographic Relief (D4)
		<input type="checkbox"/>	FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes        No X Depth (inches) -  
 Water Table Present? Yes        No X Depth (inches) -  
 Saturation Present? Yes        No X Depth (inches) -

**Wetland Hydrology Present?**  
 Yes X No       

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

Remarks: In tillable field, vegetated swale, disturbed soil and vegetation due to active agriculture

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet E
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 80 x 2 <u>160</u> FAC species 5 x 3 <u>15</u> FACU species 15 x 4 <u>60</u> UPL species 0 x 5 <u>0</u> Column Total 100 (A) <u>235</u> (B) Prevalence Index: <u>2.4</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Symphotrichum ericoides</u>	<u>15</u>	<u>N</u>	<u>FACU</u>		
2.	<u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
3.	<u>Bromus ciliatus</u>	<u>80</u>	<u>Y</u>	<u>FACW</u>		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>100</u> = Total Cover				
		50% of total Cover: <u>50</u>	20% of Total Cover: <u>20</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photos 34-35						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet E
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-8	10YR 4/2	95	10YR 5/4	5	C	M	Clay silt	
8-14	10YR 5/2	80	7.5YR 3/3	20	C	M	Clay silt	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	X	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	X	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	X	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)		

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="checkbox"/>    No _____</p>
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Remarks:



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up E
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 100 x 2 <u>200</u> FAC species 0 x 3 <u>0</u> FACU species 0 x 4 <u>0</u> UPL species 15 x 5 <u>75</u> Column Total 115 (A) <u>275</u> (B) Prevalence Index: <u>2.4</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Bromus ciliatus</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>		
2.	<u>Medicago sativa</u>	<u>15</u>	<u>N</u>	<u>UPL</u>		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>115</u> = Total Cover				
		50% of total Cover: <u>57.5</u>	20% of Total Cover: <u>23</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.)						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up E
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-15	10YR 3/3	100					Loamy silt	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____    No <input checked="" type="checkbox"/>
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Remarks: No hydric soil indicators



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet F
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 90 x 1 <u>90</u> FACW species 0 x 2 <u>0</u> FAC species 5 x 3 <u>15</u> FACU species 25 x 4 <u>100</u> UPL species 0 x 5 <u>0</u> Column Total 120 (A) <u>205</u> (B) Prevalence Index: <u>1.7</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
2.	<u>Poa pratensis</u>	<u>15</u>	<u>N</u>	<u>FACU</u>		
3.	<u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
4.	<u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
5.	<u>Rhynchospora capitellata</u>	<u>90</u>	<u>Y</u>	<u>OBL</u>		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>120</u> = Total Cover				
		50% of total Cover: <u>60</u>	20% of Total Cover: <u>24</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photo 39-41						



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL 10 Mile Pipeline</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/3/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Up F</u>	
Investigator(s): <u>A. Mathes, T. Raabe</u> Section, Township, Range: <u>Section 30, Township 10N, Range 8W</u>	
Landform: (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concave, convex, none): <u>Convex</u> Slope %: <u>4</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.750362</u> Long. <u>-81.414576</u> Datum: <u>NAD 1983 Zone 17N</u>	
Soil Map Unit Name: <u>Sb &amp; BoB</u> NWI Classification: <u>None</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>      </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>      </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	<b>Yes</b> <u>      </u> <b>No</b> <u>X</u>
Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	If yes, optional Wetland Site ID: <u>      </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	True Aquatic Plants (B14)
High Water Table (A2)	Surface Soil Cracks (B6)
Saturation (A3)	Hydrogen Sulfide Odor (C1)
Water Marks (B1)	Sparsely Vegetated Concave Surface (B8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Drainage Patterns (B10)
Algal Mat or Crust (B4)	Moss Trim Lines (B16)
Iron Deposits (B5)	Presence of Reduced Iron (C4)
Inundation Visible on Aerial Imagery (B7)	Dry-Season Water Table (C2)
Water Stained Leaves (B9)	Recent Iron Reduction in Tilled Soil (C6)
Aquatic Fauna (B13)	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Thin Muck Surface (C7)
	Stunted or Stressed Plants (D1)
	Other (Explain in Remarks)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	<b>Wetland Hydrology Present?</b> Yes <u>      </u> No <u>X</u>
Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	
Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Horses present - trampling and grazing	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up F
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>0</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 0 x 2 <u>0</u> FAC species 0 x 3 <u>0</u> FACU species 75 x 4 <u>300</u> UPL species 5 x 5 <u>25</u> Column Total 80 (A) <u>325</u> (B)  Prevalence Index: <u>4.1</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Trifolium repens</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
2.	<u>Trifolium pratense</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>		
3.	<u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
4.	<u>Achillea millefolium</u>	<u>15</u>	<u>N</u>	<u>FACU</u>		
5.	<u>Stellaria media</u>	<u>5</u>	<u>N</u>	<u>UPL</u>		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>80</u> = Total Cover				
		50% of total Cover: <u>40</u>	20% of Total Cover: <u>16</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>						
Remarks: (Include photo numbers here or on a separate sheet.) Photo 42						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up F
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-1	Organic							
1-4	10YR 4/3	100					Loamy clay	
4-15	10YR 4/4	100%					Loamy clay	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____    No <u>  X  </u>
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Remarks: No hydric soil indicators

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL 10 Mile Pipeline</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/3/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Up F</u>	
Investigator(s): <u>A. Mathes, T. Raabe</u> Section, Township, Range: <u>Section 30, Township 10N, Range 8W</u>	
Landform: (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concave, convex, none): <u>None</u> Slope %: <u>1</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.749398</u> Long. <u>-81.415397</u> Datum: <u>NAD 1983 Zone 17N</u>	
Soil Map Unit Name: <u>Sb</u> NWI Classification: <u>None</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>      </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>      </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	<b>Yes</b> <u>      </u> <b>No</b> <u>X</u>
Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	If yes, optional Wetland Site ID: <u>      </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> X Water Stained Leaves (B9)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>      </u>
Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	
Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Horses present - trampling and grazing	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up F
<u>Tree Stratum</u> Plot size: <u>r=30'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A)  Total number of dominant species across all strata: <u>6</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>33%</u> (A/B)	
1.	<u>Acer rubrum</u>	10	Y	FAC		
2.	<u>Prunus serotina</u>	25	Y	FACU		
3.	<u>Sassafras albidum</u>	10	Y	FACU		
4.	_____					
5.	_____					
6.	_____					
7.	_____					
		<u>45</u> = Total Cover				
		50% of total Cover: <u>22.5</u>	20% of Total Cover: <u>9</u>			
<u>Sapling/Shrub Stratum</u> Plot size: <u>r=15'</u>					<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 50 x 2 <u>100</u> FAC species 10 x 3 <u>30</u> FACU species 60 x 4 <u>240</u> UPL species 0 x 5 <u>0</u> Column Total 120 (A) <u>370</u> (B) Prevalence Index: <u>3.1</u> (B/A)	
1.	_____					
2.	_____					
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
8.	_____					
9.	_____					
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u> Plot size: <u>r=5'</u>					<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1.	<u>Boehmeria cylindrica</u>	50	Y	FACW		
2.	<u>Solidago canadensis</u>	20	Y	FACU		
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
8.	_____					
9.	_____					
10.	_____					
11.	_____					
		<u>70</u> = Total Cover				
		50% of total Cover: <u>35</u>	20% of Total Cover: <u>14</u>			
<u>Woody Vine Stratum</u> Plot size: <u>r=5'</u>					<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1.	<u>Rosa multiflora</u>	5	Y	FACU		
2.	_____					
3.	_____					
4.	_____					
5.	_____					
		<u>5</u> = Total Cover				
		50% of total Cover: <u>2.5</u>	20% of Total Cover: <u>1</u>			
Remarks: (Include photo numbers here or on a separate sheet.)					<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up F
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-4	10YR 3/2	100					Silty loam	
4-14	10YR 4/3	100					Silty loam	
14-16	10YR 4/4	100%					Silty loam	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes _____    No <u>  X  </u></p>
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Remarks: No hydric soil indicators

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL 10 Mile Pipeline</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/3/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Wet G</u>	
Investigator(s): <u>A. Mathes, T. Raabe</u> Section, Township, Range: <u>Section 30, Township 10N, Range 8W</u>	
Landform: (hillslope, terrace, etc.): <u>Toe of slope</u> Local relief (concave, convex, none): <u>Concave</u> Slope %: <u>2</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.749071</u> Long. <u>-81.416581</u> Datum: <u>NAD 1983 Zone 17N</u>	
Soil Map Unit Name: <u>BoB</u> NWI Classification: <u>PUB/PEM</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>      </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>      </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No <u>      </u>	Yes <u>      </u> No <u>X</u>
Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	If yes, optional Wetland Site ID: <u>      </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> True Aquatic Plants (B14)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Water Stained Leaves (B9)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>X</u> No <u>-</u> Depth (inches) <u>12+</u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>      </u>
Water Table Present? Yes <u>X</u> No <u>-</u> Depth (inches) <u>12+</u>	
Saturation Present? Yes <u>X</u> No <u>-</u> Depth (inches) <u>0</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: man-made pond	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet G
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 30 x 1 <u>30</u> FACW species 110 x 2 <u>220</u> FAC species 0 x 3 <u>0</u> FACU species 15 x 4 <u>60</u> UPL species 0 x 5 <u>0</u> Column Total 155 (A) <u>310</u> (B) Prevalence Index: <u>2.0</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Phalaris arundinacea</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>		
2.	<u>Trifolium pratense</u>	<u>15</u>	<u>N</u>	<u>FACU</u>		
3.	<u>Typha latifolia</u>	<u>15</u>	<u>N</u>	<u>OBL</u>		
4.	<u>Nymphaea odorata</u>	<u>15</u>	<u>N</u>	<u>OBL</u>		
5.	<u>Juncus effusus</u>	<u>10</u>	<u>N</u>	<u>FACW</u>		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>155</u> = Total Cover				
		50% of total Cover: <u>77.5</u>	20% of Total Cover: <u>31</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photos 45-46						





WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet B
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A)  Total number of dominant species across all strata: <u>2</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 0 x 2 <u>0</u> FAC species 55 x 3 <u>165</u> FACU species 30 x 4 <u>120</u> UPL species 0 x 5 <u>0</u> Column Total 85 (A) <u>285</u> (B) Prevalence Index: <u>3.4</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Equisetum arvense</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>		
2.	<u>Juncus tenuis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>		
3.	<u>Poa pratensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
4.	<u>Trifolium pratense</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
5.	<u>Euthamia graminifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
6.	<u>Schedonorus arundinaceus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
7.	<u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>85</u> = Total Cover				
		50% of total Cover: <u>42.5</u>	20% of Total Cover: <u>17</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photo 54						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet B
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-6	10YR4/3	80	10YR5/1	10	D	M	Silty clay loam	Distinct redox concentrations
			10YR5/6	10	RM	M	Silty clay loam	Distinct redox concentrations
6-16	10YR4/2	60%	2.5Y5/1	20	D	M	Silty clay loam	Distinct redox concentrations
			10YR5/8	20	RM	M	Silty clay loam	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	X	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.	
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)		
Thick Dark Surface (A12)		Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)		

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="checkbox"/>    No _____</p>
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Remarks:



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up B
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>0</u> (A)  Total number of dominant species across all strata: <u>2</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species    0    x 1 <u>0</u> FACW species   0    x 2 <u>0</u> FAC species     3    x 3 <u>9</u> FACU species   95   x 4 <u>380</u> UPL species     0    x 5 <u>0</u> Column Total   98   (A) <u>389</u> (B)  Prevalence Index: <u>4.0</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Trifolium pratense</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>		
2.	<u>Solidago canadensis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>		
3.	<u>Poa pratensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
4.	<u>Lolium perenne</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
5.	<u>Juncus tenuis</u>	<u>3</u>	<u>N</u>	<u>FAC</u>		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>98</u> = Total Cover				
		50% of total Cover: <u>49</u>	20% of Total Cover: <u>19.6</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>						
Remarks: (Include photo numbers here or on a separate sheet.)   						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up B
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-8	10YR4/2	60	2.5Y5/1	10	D	M	Silty Clay Loam	Faint redox concentrations
			10YR5/6	30	RM	M	Silty Clay Loam	Prominent redox concentrations
8-16	10YR4/2	100					Silty Clay Loam	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	X	Depleted Matrix (F3)	Other (Explain in Remarks)
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)	
Thick Dark Surface (A12)		Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)	
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)	

<b>Restrictive Layer (if observed)</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____
--	--

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/3/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Wet B</u>	
Investigator(s): <u>B. Graves, V. Tremante, S. Walker</u> Section, Township, Range: <u>Section 30, Township 10N, Range 8W</u>	
Landform: (hillslope, terrace, etc.): <u>Toe of slope</u> Local relief (concave, convex, none): <u>None</u> Slope %: <u>0-2%</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.744922</u> Long. <u>-81.420842</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>Sb</u> NWI Classification: <u>PEM</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>      </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>      </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No <u>      </u>	Yes <u>X</u> No <u>      </u>
Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	If yes, optional Wetland Site ID: <u>Wetland B</u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>X</u> No <u>      </u> Depth (inches) <u>2</u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>      </u>
Water Table Present? Yes <u>X</u> No <u>      </u> Depth (inches) <u>14-17</u>	
Saturation Present? Yes <u>X</u> No <u>      </u> Depth (inches) <u>0-14</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet B
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>3</u> (A)  Total number of dominant species across all strata: <u>3</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 55 x 1 <u>55</u> FACW species 51 x 2 <u>102</u> FAC species 15 x 3 <u>45</u> FACU species 7 x 4 <u>28</u> UPL species 0 x 5 <u>0</u> Column Total 128 (A) <u>230</u> (B) Prevalence Index: <u>1.8</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> x <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* 4 - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) 5 - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Scirpus atrovirens</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>		
2.	<u>Leersia oryzoides</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>		
3.	<u>Impatiens capensis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>		
4.	<u>Equisetum arvense</u>	<u>15</u>	<u>N</u>	<u>FAC</u>		
5.	<u>Onoclea sensibilis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>		
6.	<u>Carex granularis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>		
7.	<u>Agrimonia parviflora</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
8.	<u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
9.	<u>Sanicula marilandica</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
10.	<u>Phalaris arundinacea</u>	<u>1</u>	<u>N</u>	<u>FACW</u>		
11.	_____	_____	_____	_____	_____	
		<u>128</u> = Total Cover				
		50% of total Cover: <u>64</u>	20% of Total Cover: <u>25.6</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.)						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet B
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-5	10YR2/1	100						
5-17	10YR4/1	95	10YR3/6	5	C	M	Silty Clay Loam	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	X Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="checkbox"/>    No _____</p>
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Remarks:



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up B
<u>Tree Stratum</u> Plot size: <u>r=30'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>3</u> (A)  Total number of dominant species across all strata: <u>5</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>60%</u> (A/B)	
1.	<u>Acer saccharinum</u>	50	Y	FACW		
2.	_____					
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
		50 = Total Cover				
		50% of total Cover: <u>25</u>	20% of Total Cover: <u>10</u>			
<u>Sapling/Shrub Stratum</u> Plot size: <u>r=15'</u>					<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 2 x 1 <u>2</u> FACW species 62 x 2 <u>124</u> FAC species 72 x 3 <u>216</u> FACU species 32.5 x 4 <u>130</u> UPL species 0 x 5 <u>0</u> Column Total 168.5 (A) <u>472</u> (B) Prevalence Index: <u>2.8</u> (B/A)	
1.	<u>Rosa multiflora</u>	15	Y	FACU		
2.	<u>Viburnum dentatum</u>	15	Y	FAC		
3.	<u>Fraxinus americana</u>	10	Y	FACU		
4.	<u>Cornus racemosa</u>	5	N	FAC		
5.	<u>Viburnum prunifolium</u>	5	N	FACU		
6.	_____					
7.	_____					
8.	_____					
9.	_____					
		50 = Total Cover				
		50% of total Cover: <u>25</u>	20% of Total Cover: <u>10</u>			
<u>Herb Stratum</u> Plot size: <u>r=5'</u>					<b>Hydrophytic Vegetation Indicators:</b> _____ 1 - Rapid Test for Hydrophytic Vegetation x _____ 2 - Dominance Test is >50% x _____ 3 - Prevalence Index is ≤3.0* _____ 4 - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) _____ 5 - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1.	<u>Equisetum arvense</u>	40	Y	FAC		
2.	<u>Carex granularis</u>	10	N	FACW		
3.	<u>Cornus racemosa</u>	10	N	FAC		
4.	<u>Sanicula marilandica</u>	2	N	FACU		
5.	<u>Scirpus atrovirens</u>	2	N	OBL		
6.	<u>Agrimonia parviflora</u>	1	N	FACW		
7.	<u>Persicaria virginiana</u>	1	N	FAC		
8.	<u>Toxicodendron radicans</u>	1	N	FAC		
9.	<u>Ulmus americana</u>	1	N	FACW		
10.	<u>Solidago canadensis</u>	0.5	N	FACU		
11.	_____					
		68.5 = Total Cover				
		50% of total Cover: <u>34.25</u>	20% of Total Cover: <u>13.7</u>			
<u>Woody Vine Stratum</u> Plot size: <u>r=5'</u>					<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1.	_____					
2.	_____					
3.	_____					
4.	_____					
5.	_____					
		0 = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
Remarks: (Include photo numbers here or on a separate sheet.)					<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up B
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-8	10YR3/1	100						
8-16	10YR5/1	60	10YR5/6	40	C	M	Silty Clay	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	X	Depleted Matrix (F3)	Other (Explain in Remarks)
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)	
Thick Dark Surface (A12)		Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)	
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)	

<b>Restrictive Layer (if observed)</b>	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/4/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Wet H</u>	
Investigator(s): <u>B. Graves, V. Tremante, A. Mathes</u> Section, Township, Range: <u>Section 36, Township 10N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Toe of slope</u> Local relief (concave, convex, none): <u>Concave</u> Slope %: <u>2-5%</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.736677</u> Long. <u>-81.436463</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>SI/WuC2</u> NWI Classification: <u>PEM</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	Yes <u>X</u> No <u>    </u>
Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	If yes, optional Wetland Site ID: <u>    </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>0</u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
Water Table Present? Yes <u>X</u> No <u>    </u> Depth (inches) <u>8-16</u>	
Saturation Present? Yes <u>X</u> No <u>    </u> Depth (inches) <u>0-8</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet H	
<b>Tree Stratum</b> Plot size: <u>r=30'</u>					<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>3</u> (A)  Total number of dominant species across all strata: <u>5</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>60%</u> (A/B)		
1.	<u>Salix discolor</u>	25	Y	FACW			
2.	<u>Robinia pseudoacacia</u>	10	Y	FACU			
3.	<u>Prunus serotina</u>	5	N	FACU			
4.	_____						
5.	_____						
6.	_____						
7.	_____						
		40 = Total Cover					
		50% of total Cover: <u>20</u>	20% of Total Cover: <u>8</u>				
<b>Sapling/Shrub Stratum</b> Plot size: <u>r=15'</u>					<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species      10      x      1      = <u>10</u> FACW species    105    x      2      = <u>210</u> FAC species      0      x      3      = <u>0</u> FACU species    25    x      4      = <u>100</u> UPL species      0      x      5      = <u>0</u> Column Total    140 (A)      = <u>320</u> (B) Prevalence Index: <u>2.3</u> (B/A)		
1.	<u>Prunus serotina</u>	5	Y	FACU			
2.	<u>Salix alba</u>	5	Y	FACW			
3.	_____						
4.	_____						
5.	_____						
6.	_____						
7.	_____						
8.	_____						
9.	_____						
		10 = Total Cover					
		50% of total Cover: <u>5</u>	20% of Total Cover: <u>2</u>				
<b>Herb Stratum</b> Plot size: <u>r=5'</u>					<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>x</u> <u>2</u> - Dominance Test is >50% <u>x</u> <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
1.	<u>Phalaris arundinacea</u>	65	Y	FACW			
2.	<u>Typha angustifolia</u>	10	N	OBL			
3.	<u>Impatiens capensis</u>	10	N	FACW			
4.	<u>Cirsium arvense</u>	5	N	FACU			
5.	_____						
6.	_____						
7.	_____						
8.	_____						
9.	_____						
10.	_____						
11.	_____						
		90 = Total Cover					
		50% of total Cover: <u>45</u>	20% of Total Cover: <u>18</u>				
<b>Woody Vine Stratum</b> Plot size: <u>r=5'</u>					<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.		
1.	_____						
2.	_____						
3.	_____						
4.	_____						
5.	_____						
		0 = Total Cover					
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>				
Remarks: (Include photo numbers here or on a separate sheet.) Photos 71-72					<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____		

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet H
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-16	10YR3/1	85	7.5YR4/4	15	C	M	Clay loam	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)		Depleted Matrix (F3)	Other (Explain in Remarks)
2 cm Muck (A10) (LRR N)	X	Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)	
Thick Dark Surface (A12)		Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)	
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)	

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="checkbox"/>    No _____</p>
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Remarks:

A one inch thick sand lense was observed at approximatly 8 inches deep.



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up H
<u>Tree Stratum</u> Plot size: <u>r=30'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>6</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>17%</u> (A/B)	
1.	<u>Prunus serotina</u>	10	Y	FACU		
2.	<u>Acer rubrum</u>	10	Y	FAC		
3.	<u>Carya glabra</u>	5	Y	FACU		
4.	_____					
5.	_____					
6.	_____					
7.	_____					
		<u>25</u> = Total Cover				
		50% of total Cover: <u>12.5</u>	20% of Total Cover: <u>5</u>			
<u>Sapling/Shrub Stratum</u> Plot size: <u>r=15'</u>					<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 0 x 2 <u>0</u> FAC species 10 x 3 <u>30</u> FACU species 80 x 4 <u>320</u> UPL species 35 x 5 <u>175</u> Column Total 125 (A) <u>525</u> (B) Prevalence Index: <u>4.2</u> (B/A)	
1.	_____					
2.	_____					
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
8.	_____					
9.	_____					
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u> Plot size: <u>r=5'</u>					<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1.	<u>Trifolium repens</u>	30	Y	FACU		
2.	<u>Schedonorus pratensis</u>	25	Y	FACU		
3.	<u>Plantago lanceolata</u>	20	Y	UPL		
4.	<u>Trifolium procumbens</u>	15	N	UPL		
5.	<u>Poa pratensis</u>	10	N	FACU		
6.	_____					
7.	_____					
8.	_____					
9.	_____					
10.	_____					
11.	_____					
		<u>100</u> = Total Cover				
		50% of total Cover: <u>50</u>	20% of Total Cover: <u>20</u>			
<u>Woody Vine Stratum</u> Plot size: <u>r=5'</u>					<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1.	_____					
2.	_____					
3.	_____					
4.	_____					
5.	_____					
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
					<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>	
Remarks: (Include photo numbers here or on a separate sheet.)						



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/3/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Wet M</u>	
Investigator(s): <u>B. Graves, V. Tremante, A. Mathes</u> Section, Township, Range: <u>Section 36, Township 10N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Toe of slope</u> Local relief (concave, convex, none): <u>Concave</u> Slope %: <u>0-2%</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.736185</u> Long. <u>-81.436715</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>Sl;WuC2</u> NWI Classification: <u>PEM</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	Yes <u>X</u> No <u>    </u>
Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	If yes, optional Wetland Site ID: <u>                    </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)
<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>          </u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>          </u>	
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>          </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: wetland was not indicated on NWI mapping	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet M
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 30 x 1 <u>30</u> FACW species 2.5 x 2 <u>5</u> FAC species 0 x 3 <u>0</u> FACU species 0 x 4 <u>0</u> UPL species 0 x 5 <u>0</u> Column Total 32.5 (A) <u>35</u> (B) Prevalence Index: <u>1.1</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> x <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* 4 - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) 5 - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Carex vulpinoidea</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>		
2.	<u>Carex frankii</u>	<u>5</u>	<u>N</u>	<u>OBL</u>		
3.	<u>Scirpus atrovirens</u>	<u>5</u>	<u>N</u>	<u>OBL</u>		
4.	<u>Glyceria striata</u>	<u>3</u>	<u>N</u>	<u>OBL</u>		
5.	<u>Juncus effusus</u>	<u>2</u>	<u>N</u>	<u>FACW</u>		
6.	<u>Eleocharis obtusa</u>	<u>2</u>	<u>N</u>	<u>OBL</u>		
7.	<u>Lysimachia nummularia</u>	<u>0.5</u>	<u>N</u>	<u>FACW</u>		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>32.5</u> = Total Cover				
		50% of total Cover: <u>16.25</u>	20% of Total Cover: <u>6.5</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photo 76						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet M
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-16	5Y2.5/1	97	10YR5/6	3	C	PL	Silty Clay	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)		Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	X	Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)		
Thick Dark Surface (A12)		Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____
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Remarks:



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up M
<u>Tree Stratum</u> Plot size: <u>r=30'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>	
1.	_____	_____	_____	_____	Number of dominant species that are OBL, FACW, or FAC: <u>0</u> (A)  Total number of dominant species across all strata: <u>2</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
		<u>0</u> = Total Cover			<b>Prevalence Index Worksheet</b>	
50% of total Cover: <u>0</u>		20% of Total Cover: <u>0</u>		Total % cover of:		
<u>Sapling/Shrub Stratum</u> Plot size: <u>r=15'</u>					OBL species 0 x 1 <u>0</u> FACW species 1 x 2 <u>2</u> FAC species 1 x 3 <u>3</u> FACU species 95 x 4 <u>380</u> UPL species 5 x 5 <u>25</u> Column Total 102 (A) <u>410</u> (B) Prevalence Index: <u>4.0</u> (B/A)	
1.	_____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
		<u>0</u> = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
50% of total Cover: <u>0</u>		20% of Total Cover: <u>0</u>		<b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.		
<u>Herb Stratum</u> Plot size: <u>r=5'</u>					<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>	
1.	<u>Schedonorus arundinaceus</u>	35	Y	FACU		
2.	<u>Trifolium repens</u>	30	Y	FACU		
3.	<u>Dactylis glomerata</u>	15	N	FACU		
4.	<u>Taraxacum officinale</u>	10	N	FACU		
5.	<u>Plantago lanceolata</u>	5	N	UPL		
6.	<u>Trifolium pratense</u>	5	N	FACU		
7.	<u>Mentha spicata</u>	1	N	FACW		
8.	<u>Ranunculus acris</u>	1	N	FAC		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>102</u> = Total Cover				
50% of total Cover: <u>51</u>		20% of Total Cover: <u>20.4</u>				
<u>Woody Vine Stratum</u> Plot size: <u>r=5'</u>						
1.	_____	_____	_____	_____		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
		<u>0</u> = Total Cover				
50% of total Cover: <u>0</u>		20% of Total Cover: <u>0</u>				
Remarks: (Include photo numbers here or on a separate sheet.) Photo 77						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up M
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-8	10YR3/3						Silt loam	
8-11	10YR4/1	95	10YR4/6	5	C	M	Silt	Prominent redox concentrations
11-16	10YR4/2	85	7.5YR4/6	15	C	M	Silt loam	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b>	<b>Hydric Soil Present?</b> Yes _____ No <u>  X  </u>
Type: _____	
Depth (inches): _____	

Remarks:



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet I
<b>Tree Stratum</b> Plot size: <u>r=30'</u>					<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>4</u> (A)  Total number of dominant species across all strata: <u>5</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>80%</u> (A/B)	
1.	<u>Acer rubrum</u>	40	Y	FAC		
2.	<u>Ulmus americana</u>	30	Y	FACW		
3.	<u>Salix nigra</u>	15	N	OBL		
4.	<u>Populus deltoides</u>	20	N	FAC		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
		105 = Total Cover				
		50% of total Cover: <u>52.5</u>	20% of Total Cover: <u>21</u>			
<b>Sapling/Shrub Stratum</b> Plot size: <u>r=15'</u>					<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species      20    x    1 <u>20</u> FACW species    230   x    2 <u>460</u> FAC species      60    x    3 <u>180</u> FACU species    20    x    4 <u>80</u> UPL species      0     x    5 <u>0</u> Column Total    330 (A) <u>740 (B)</u>  Prevalence Index: <u>2.2 (B/A)</u>	
1.	_____	_____	_____	_____		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
		0 = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Herb Stratum</b> Plot size: <u>r=5'</u>					<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1.	<u>Typha latifolia</u>	5	N	OBL		
2.	<u>Briza minor</u>	100	Y	FACW		
3.	<u>Equisetum hyemale</u>	100	Y	FACW		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		205 = Total Cover				
		50% of total Cover: <u>102.5</u>	20% of Total Cover: <u>41</u>			
<b>Woody Vine Stratum</b> Plot size: <u>r=5'</u>					<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1.	<u>Rosa multiflora</u>	20	Y	FACU		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
		20 = Total Cover				
		50% of total Cover: <u>10</u>	20% of Total Cover: <u>4</u>			
Remarks: (Include photo numbers here or on a separate sheet.) Photos 84-85					<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____	



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL 10 Mile Pipeline</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/4/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Up I</u>	
Investigator(s): <u>S. Walker, T. Raabe</u> Section, Township, Range: <u>Section 1, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concave, convex, none): <u>none</u> Slope %: <u>1</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.728937</u> Long. <u>-81.438519</u> Datum: <u>NAD 1983 Zone 17N</u>	
Soil Map Unit Name: <u>Sh</u> NWI Classification: <u>None</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>    </u> No <u>X</u>	Yes <u>    </u> No <u>X</u>
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	If yes, optional Wetland Site ID: <u>    </u>
Remarks: Area mowed	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	True Aquatic Plants (B14)
High Water Table (A2)	Surface Soil Cracks (B6)
Saturation (A3)	Hydrogen Sulfide Odor (C1)
Water Marks (B1)	Sparsely Vegetated Concave Surface (B8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Drainage Patterns (B10)
Algal Mat or Crust (B4)	Moss Trim Lines (B16)
Iron Deposits (B5)	Presence of Reduced Iron (C4)
Inundation Visible on Aerial Imagery (B7)	Dry-Season Water Table (C2)
Water Stained Leaves (B9)	Recent Iron Reduction in Tilled Soil (C6)
Aquatic Fauna (B13)	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Thin Muck Surface (C7)
	Stunted or Stressed Plants (D1)
	Other (Explain in Remarks)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>-</u>	<b>Wetland Hydrology Present?</b> Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>-</u>	
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>-</u>	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No hydrologic indicators present	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up 1
<u>Tree Stratum</u> Plot size: <u>r=30'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A)  Total number of dominant species across all strata: <u>3</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>67%</u> (A/B)	
1.	<u>Acer saccharinum</u>	40	Y	FACW		
2.	<u>Ulmus americana</u>	10	N	FACW		
3.	<u>Quercus rubra</u>	5	N	FACU		
4.	_____					
5.	_____					
6.	_____					
7.	_____					
		<u>55</u> = Total Cover				
		50% of total Cover: <u>27.5</u>	20% of Total Cover: <u>11</u>			
<u>Sapling/Shrub Stratum</u> Plot size: <u>r=15'</u>					<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 65 x 2 <u>130</u> FAC species 0 x 3 <u>0</u> FACU species 35 x 4 <u>140</u> UPL species 0 x 5 <u>0</u> Column Total 100 (A) <u>270</u> (B) Prevalence Index: <u>2.7</u> (B/A)	
1.	_____					
2.	_____					
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
8.	_____					
9.	_____					
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u> Plot size: <u>r=5'</u>					<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1.	<u>Boehmeria cylindrica</u>	15	Y	FACW		
2.	<u>Solidago canadensis</u>	30	Y	FACU		
3.	_____					
4.	_____					
5.	_____					
6.	_____					
7.	_____					
8.	_____					
9.	_____					
10.	_____					
11.	_____					
		<u>45</u> = Total Cover				
		50% of total Cover: <u>22.5</u>	20% of Total Cover: <u>9</u>			
<u>Woody Vine Stratum</u> Plot size: <u>r=5'</u>					<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1.	_____					
2.	_____					
3.	_____					
4.	_____					
5.	_____					
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
					<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)						





WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet J
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 0 x 2 <u>0</u> FAC species 80 x 3 <u>240</u> FACU species 0 x 4 <u>0</u> UPL species 0 x 5 <u>0</u> Column Total 80 (A) <u>240</u> (B) Prevalence Index: <u>3.0</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Carex sp.</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
10.	_____	_____	_____	_____	_____	
11.	_____	_____	_____	_____	_____	
		<u>80</u> = Total Cover				
		50% of total Cover: <u>40</u>	20% of Total Cover: <u>16</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photos 92-93						



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL 10 Mile Pipeline</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/4/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Up J</u>	
Investigator(s): <u>S. Walker, T. Raabe</u> Section, Township, Range: <u>Section 1, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concave, convex, none): <u>None</u> Slope %: <u>1</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.728232</u> Long. <u>-81.439856</u> Datum: <u>NAD 1983 Zone 17N</u>	
Soil Map Unit Name: <u>Sh</u> NWI Classification: <u>None</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>      </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>      </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	<b>Yes</b> <u>      </u> <b>No</b> <u>X</u>
Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	If yes, optional Wetland Site ID: <u>      </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	True Aquatic Plants (B14)
High Water Table (A2)	Surface Soil Cracks (B6)
Saturation (A3)	Hydrogen Sulfide Odor (C1)
Water Marks (B1)	Sparsely Vegetated Concave Surface (B8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Drainage Patterns (B10)
Algal Mat or Crust (B4)	Moss Trim Lines (B16)
Iron Deposits (B5)	Presence of Reduced Iron (C4)
Inundation Visible on Aerial Imagery (B7)	Dry-Season Water Table (C2)
Water Stained Leaves (B9)	Recent Iron Reduction in Tilled Soil (C6)
Aquatic Fauna (B13)	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Thin Muck Surface (C7)
	Stunted or Stressed Plants (D1)
	Other (Explain in Remarks)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	<b>Wetland Hydrology Present?</b> Yes <u>      </u> No <u>X</u>
Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	
Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches) <u>-</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up J
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>4</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>25%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 15 x 2 <u>30</u> FAC species 0 x 3 <u>0</u> FACU species 115 x 4 <u>460</u> UPL species 5 x 5 <u>25</u> Column Total 135 (A) <u>515</u> (B) Prevalence Index: <u>3.8</u> (B/A)
1.	<u>Acer saccharinum</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>10</u> = Total Cover				
		50% of total Cover: <u>5</u>	20% of Total Cover: <u>2</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Solidago canadensis</u>	<u>80</u>	<u>Y</u>	<u>FACU</u>	_____	
2.	<u>Potentilla simplex</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	_____	
3.	<u>Eragrostis refracta</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	_____	
4.	<u>Trifolium repens</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	_____	
5.	<u>Lepidium perfoliatum</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
10.	_____	_____	_____	_____	_____	
11.	_____	_____	_____	_____	_____	
		<u>120</u> = Total Cover				
		50% of total Cover: <u>60</u>	20% of Total Cover: <u>24</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	<u>Rosa multiflora</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>5</u> = Total Cover				
		50% of total Cover: <u>2.5</u>	20% of Total Cover: <u>1</u>			
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>						
Remarks: (Include photo numbers here or on a separate sheet.)						





WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet K
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>6</u> (A)  Total number of dominant species across all strata: <u>8</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>75%</u> (A/B)
1.	<u>Salix nigra</u>		<u>5</u>	<u>Y</u>	<u>OBL</u>	
2.	<u>Acer saccharinum</u>		<u>5</u>	<u>Y</u>	<u>FACW</u>	
3.						
4.						
5.						
6.						
7.						
			<u>10</u> = Total Cover			
			50% of total Cover: <u>5</u>	20% of Total Cover: <u>2</u>		
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species <u>55</u> x <u>1</u> = <u>55</u> FACW species <u>145</u> x <u>2</u> = <u>290</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>90</u> x <u>4</u> = <u>360</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Column Total <u>290</u> (A) = <u>705</u> (B) Prevalence Index: <u>2.4</u> (B/A)
1.	<u>Ulmus americana</u>		<u>5</u>	<u>Y</u>	<u>FACW</u>	
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
			<u>5</u> = Total Cover			
			50% of total Cover: <u>2.5</u>	20% of Total Cover: <u>1</u>		
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>x</u> <u>2</u> - Dominance Test is >50% <u>x</u> <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Typha latifolia</u>		<u>50</u>	<u>Y</u>	<u>OBL</u>	
2.	<u>Solidago canadensis</u>		<u>50</u>	<u>Y</u>	<u>FACU</u>	
3.	<u>Eragrostis frankii</u>		<u>60</u>	<u>Y</u>	<u>FACW</u>	
4.	<u>Onoclea sensibilis</u>		<u>75</u>	<u>Y</u>	<u>FACW</u>	
5.						
6.						
7.						
8.						
9.						
10.						
11.						
			<u>235</u> = Total Cover			
			50% of total Cover: <u>117.5</u>	20% of Total Cover: <u>47</u>		
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	<u>Rosa multiflora</u>		<u>40</u>	<u>Y</u>	<u>FACU</u>	
2.						
3.						
4.						
5.						
			<u>40</u> = Total Cover			
			50% of total Cover: <u>20</u>	20% of Total Cover: <u>8</u>		
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photos 96-97						



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: COWL 10 Mile Pipeline City/County: Canton/Stark Sampling Date: 6/4/2014  
 Applicant/Owner: Marathon Petroleum State: OH Sampling Point: Up K  
 Investigator(s): S. Walker, T. Raabe Section, Township, Range: Section 1, Township 9N, Range 9W  
 Landform: (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 0  
 Subregion (LRR or MLRA): LRR R Lat. 40.727345 Long. -81.439559 Datum: NAD 1983 Zone 17N  
 Soil Map Unit Name: Sh NWI Classification: None  
 Are climatic/hydrologic conditions on the site typical for time of year? Yes X No      (If no, explain in the Remarks)  
 Are Vegetation N Soil N or Hydrology N significantly disturbed?  
 Are Vegetation N Soil N or Hydrology N naturally problematic?  
 Are Normal Circumstances Present? Yes X No      (If needed, explain any answers in Remarks)

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? Yes      No X **Is the Sampled Area within a Wetland?**  
 Hydric Soil Present? Yes X No      **Yes**      **No** X  
 Wetland Hydrology Present? Yes      No X If yes, optional Wetland Site ID:     

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (check all that apply)		Secondary Indicators	
Surface Water (A1)		True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)		Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)		Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)			Moss Trim Lines (B16)
Sediment Deposits (B2)		Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Drift Deposits (B3)		Recent Iron Reduction in Tilled Soil (C6)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)			Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Thin Muck Surface (C7)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)	Geomorphic Position (D2)
Water Stained Leaves (B9)			Shallow Aquitard (D3)
Aquatic Fauna (B13)			Microtopographic Relief (D4)
			FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes      No X Depth (inches) -  
 Water Table Present? Yes      No X Depth (inches) -  
 Saturation Present? Yes      No X Depth (inches) -

**Wetland Hydrology Present?**  
 Yes      No X

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

Remarks: No hydrologic indicators present

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up K
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>2</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>50%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species    0    x 1 <u>0</u> FACW species   20   x 2 <u>40</u> FAC species     5    x 3 <u>15</u> FACU species   25   x 4 <u>100</u> UPL species     0    x 5 <u>0</u> Column Total   50   (A) <u>155</u> (B)  Prevalence Index: <u>3.1</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Solidago canadensis</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
2.	<u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
3.	<u>Eragrostis frankii</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>		
4.	<u>Briza minor</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
5.	<u>Trifolium pratense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>50</u> = Total Cover				
		50% of total Cover: <u>25</u>	20% of Total Cover: <u>10</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>						
Remarks: (Include photo numbers here or on a separate sheet.)						



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/3/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Wet N</u>	
Investigator(s): <u>B. Graves, V. Tremante, A. Mathes</u> Section, Township, Range: <u>Section 12, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Terrace</u> Local relief (concave, convex, none): <u>Concave</u> Slope %: <u>0-2%</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.706984</u> Long. <u>-81.441329</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>Sh; Sb</u> NWI Classification: <u>PEM</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>Y</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	Yes <u>X</u> No <u>    </u>
Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	If yes, optional Wetland Site ID: <u>    </u>
Remarks:	
Wetland was located in a pasture and vegetation was grazed.	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
Water Table Present? Yes <u>X</u> No <u>    </u> Depth (inches) <u>12-13</u>	
Saturation Present? Yes <u>X</u> No <u>    </u> Depth (inches) <u>8-12</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland is not indicated on NWI mapping	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet N
<u>Tree Stratum</u> Plot size: <u>r=30'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A)  Total number of dominant species across all strata: <u>3</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>67%</u> (A/B)	
1.	_____	_____	_____	_____		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u> Plot size: <u>r=15'</u>					<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 35 x 1 <u>35</u> FACW species 33 x 2 <u>66</u> FAC species 5.5 x 3 <u>16.5</u> FACU species 40 x 4 <u>160</u> UPL species 0 x 5 <u>0</u> Column Total 113.5 (A) <u>277.5</u> (B) Prevalence Index: <u>2.4</u> (B/A)	
1.	_____	_____	_____	_____		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u> Plot size: <u>r=5'</u>					<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1.	<u>Eleocharis obtusa</u>	30	Y	OBL		
2.	<u>Mentha arvensis</u>	30	Y	FACW		
3.	<u>Schedonorus arundinaceus</u>	25	Y	FACU		
4.	<u>Poa pratensis</u>	15	N	FACU		
5.	<u>Carex vulpinoidea</u>	5	N	OBL		
6.	<u>Aster sp.</u>	5	N	FAC		
7.	<u>Carex granularis</u>	3	N	FACW		
8.	<u>Rumex crispus</u>	0.5	N	FAC		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>113.5</u> = Total Cover				
		50% of total Cover: <u>56.75</u>	20% of Total Cover: <u>22.7</u>			
<u>Woody Vine Stratum</u> Plot size: <u>r=5'</u>					<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1.	_____	_____	_____	_____		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photo 106						





WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up N
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>0</u> (A)  Total number of dominant species across all strata: <u>2</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 5 x 2 <u>10</u> FAC species 0 x 3 <u>0</u> FACU species 95 x 4 <u>380</u> UPL species 3 x 5 <u>15</u> Column Total 103 (A) <u>405</u> (B) Prevalence Index: <u>3.9</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Poa pratensis</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>		
2.	<u>Trifolium repens</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>		
3.	<u>Plantago major</u>	<u>20</u>	<u>N</u>	<u>FACU</u>		
4.	<u>Erigeron annuus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
5.	<u>Mentha arvensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
6.	<u>Cerastium arvense</u>	<u>3</u>	<u>N</u>	<u>UPL</u>		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>103</u> = Total Cover				
		50% of total Cover: <u>51.5</u>	20% of Total Cover: <u>20.6</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>						
Remarks: (Include photo numbers here or on a separate sheet.)						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up N
-------------	-----------------	------

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-3	10YR4/3	100					Silt	
3-10	2.5Y5/1	95	10YR4/6	5	C	M	Silty loam	Prominent redox concentrations
10-16	2.5Y3/1	90	10YR4/6	10	C	M	Silty clay	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)		2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)		Coast Prairie Redox (A16) (MLRA 147, 148)
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)		Piedmont Floodplain Soils (F19) (MLRA 136, 147)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	X	Depleted Matrix (F3)		Other (Explain in Remarks)
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)		*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)		
Thick Dark Surface (A12)		Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)		

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="checkbox"/>    No _____</p>
---	---

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>8/11/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Wet L</u>	
Investigator(s): <u>B. Graves, V. Tremante</u> Section, Township, Range: <u>Section 13, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.69210339</u> Long. <u>-81.45154706</u> Datum: <u>WGS 1984</u>	
Soil Map Unit Name: <u>Wayland Silt Loam</u> NWI Classification: <u>NONE</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No _____ (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No _____ (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No _____	Yes <u>X</u> No _____
Wetland Hydrology Present? Yes <u>X</u> No _____	If yes, optional Wetland Site ID: _____
Remarks: HEAVY RAINS PRIOR TO AND DURING DATA COLLECTION	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches) _____	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u> Depth (inches) <u>-</u>	
Saturation Present? Yes <u>X</u> No _____ Depth (inches) <u>0-16</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet L
<b>Tree Stratum</b> Plot size: <u>r=30'</u> Absolute % Cover      Dominant Species      Indicator Status					<b>Dominance Test Worksheet</b>	
1.	_____	_____	_____	_____	Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A)  Total number of dominant species across all strata: <u>3</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>67%</u> (A/B)	
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
_____ = Total Cover 50% of total Cover: <u>0</u> 20% of Total Cover: <u>0</u>					<b>Prevalence Index Worksheet</b>	
<b>Sapling/Shrub Stratum</b> Plot size: <u>r=15'</u>					Total % cover of:	
1.	<u>Salix eriocephala</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	OBL species	<u>0</u> x <u>1</u> = <u>0</u>
2.	_____	_____	_____	_____	FACW species	<u>117</u> x <u>2</u> = <u>234</u>
3.	_____	_____	_____	_____	FAC species	<u>0</u> x <u>3</u> = <u>0</u>
4.	_____	_____	_____	_____	FACU species	<u>5</u> x <u>4</u> = <u>20</u>
5.	_____	_____	_____	_____	UPL species	<u>0</u> x <u>5</u> = <u>0</u>
6.	_____	_____	_____	_____	Column Total	<u>122</u> (A) = <u>254</u> (B)
7.	_____	_____	_____	_____	Prevalence Index: <u>2.1</u> (B/A)	
8.	_____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
9.	_____	_____	_____	_____	_____ 1 - Rapid Test for Hydrophytic Vegetation x _____ 2 - Dominance Test is >50% x _____ 3 - Prevalence Index is ≤3.0* _____ 4 - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) _____ 5 - Problematic Hydrophytic Vegetation*	
_____ = Total Cover 50% of total Cover: <u>2.5</u> 20% of Total Cover: <u>1</u>						
<b>Herb Stratum</b> Plot size: <u>r=5'</u>						
1.	<u>Carex granularis</u>	<u>95</u>	<u>Y</u>	<u>FACW</u>	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
2.	<u>Eutrochium maculatum</u>	<u>10</u>	<u>N</u>	<u>FACW</u>		
3.	<u>Phalaris arundinacea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
4.	<u>Apocynum cannabinum</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
5.	<u>Solidago gigantea</u>	<u>1</u>	<u>N</u>	<u>FACW</u>		
6.	<u>Onoclea sensibilis</u>	<u>1</u>	<u>N</u>	<u>FACW</u>		
7.	<u>Strophostyles helvola</u>	<u>3</u>	<u>Y</u>	<u>FACU</u>		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
_____ = Total Cover 50% of total Cover: <u>58.5</u> 20% of Total Cover: <u>23.4</u>						
<b>Woody Vine Stratum</b> Plot size: <u>r=30'</u>					<b>Hydrophytic Vegetation Present?</b>	
1.	_____	_____	_____	_____	Yes <u>X</u> No _____	
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
_____ = Total Cover 50% of total Cover: <u>0</u> 20% of Total Cover: <u>0</u>						
Remarks: (Include photo numbers here or on a separate sheet.) Photos 119-121						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet L
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-3	10YR3/3	100					SILT LOAM	NO MOTTLES
3-5	2.5YR4/1	100					SILTY CLAY LOAM	NO MOTTLES
5-9	10YR5/1	90%	7.5YR4/6	10	RM	M	SILTY CLAY LOAM	PROMINENT REDOX CONCENTRATIONS
9-16	10YR4/1	60	10YR4/6	40	C	M	SILTY CLAY LOAM	PROMINENT REDOX CONCENTRATIONS

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)		2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)		Coast Prairie Redox (A16) (MLRA 147, 148)
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)		Piedmont Floodplain Soils (F19) (MLRA 136, 147)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	X	Depleted Matrix (F3)		Other (Explain in Remarks)
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)		*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)		
Thick Dark Surface (A12)		Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b>	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>8/11/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Up L</u>	
Investigator(s): <u>B. Graves, V. Tremante</u> Section, Township, Range: <u>Section 13, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.69213092</u> Long. <u>-81.45160335</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>Wayland Silt Loam</u> NWI Classification: <u>NONE</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No _____ (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No _____ (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes _____ No <u>X</u>	Yes _____ No <u>X</u>
Wetland Hydrology Present? Yes _____ No <u>X</u>	If yes, optional Wetland Site ID: _____
Remarks: HEAVY RAINS PRIOR TO AND DURING DATA COLLECTION	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	True Aquatic Plants (B14)
High Water Table (A2)	Surface Soil Cracks (B6)
Saturation (A3)	Hydrogen Sulfide Odor (C1)
Water Marks (B1)	Sparsely Vegetated Concave Surface (B8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Drainage Patterns (B10)
Algal Mat or Crust (B4)	Moss Trim Lines (B16)
Iron Deposits (B5)	Presence of Reduced Iron (C4)
Inundation Visible on Aerial Imagery (B7)	Dry-Season Water Table (C2)
Water Stained Leaves (B9)	Recent Iron Reduction in Tilled Soil (C6)
Aquatic Fauna (B13)	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Thin Muck Surface (C7)
	Stunted or Stressed Plants (D1)
	Other (Explain in Remarks)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches) _____	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u> Depth (inches) _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches) _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up L
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>2</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>50%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 60 x 2 <u>120</u> FAC species 11 x 3 <u>33</u> FACU species 38 x 4 <u>152</u> UPL species 6 x 5 <u>30</u> Column Total 115 (A) <u>335</u> (B) Prevalence Index: <u>2.9</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>x 3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Carex granularis</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>		
2.	<u>Festuca rubra</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>		
3.	<u>Setaria pumila</u>	<u>10</u>	<u>N</u>	<u>FAC</u>		
4.	<u>Plantago lanceolata</u>	<u>5</u>	<u>N</u>	<u>UPL</u>		
5.	<u>Glechoma hederacea</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
6.	<u>Daucus carota</u>	<u>1</u>	<u>N</u>	<u>UPL</u>		
7.	<u>Taraxacum officinale</u>	<u>1</u>	<u>N</u>	<u>FACU</u>		
8.	<u>Rumex crispus</u>	<u>1</u>	<u>N</u>	<u>FAC</u>		
9.	_____	_____	_____	_____	_____	
10.	_____	_____	_____	_____	_____	
11.	_____	_____	_____	_____	_____	
		<u>115</u> = Total Cover				
		50% of total Cover: <u>57.5</u>	20% of Total Cover: <u>23</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photo 122						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up L
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-16	10YR3/4						Gravelly silt loam	NO MOTTLES

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____    No <u>  X  </u>
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Remarks:



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet O
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>1</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 10 x 1 <u>10</u> FACW species 90 x 2 <u>180</u> FAC species 0 x 3 <u>0</u> FACU species 5 x 4 <u>20</u> UPL species 0 x 5 <u>0</u> Column Total 105 (A) <u>210</u> (B) Prevalence Index: <u>2.0</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> x <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* 4 - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) 5 - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Phalaris arundinacea</u>	<u>80</u>	<u>Y</u>	<u>FACW</u>	_____	
2.	<u>Typha angustifolia</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	_____	
3.	<u>Scirpus cyperinus</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	_____	
4.	<u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
10.	_____	_____	_____	_____	_____	
11.	_____	_____	_____	_____	_____	
		<u>105</u> = Total Cover				
		50% of total Cover: <u>52.5</u>	20% of Total Cover: <u>21</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photos 130-131						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet O
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-2								Organic
2-16	10YR3/1	85%	7.5YR4/4	15	C	PL	Silty Clay	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)		Depleted Matrix (F3)	Other (Explain in Remarks)
2 cm Muck (A10) (LRR N)	X	Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)	
Thick Dark Surface (A12)		Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)	
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)	

<b>Restrictive Layer (if observed)</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____
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Remarks:



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up O
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>0</u> (A)  Total number of dominant species across all strata: <u>1</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
			<u>0</u> = Total Cover			
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 0 x 1 <u>0</u> FACW species 5 x 2 <u>10</u> FAC species 0 x 3 <u>0</u> FACU species 82 x 4 <u>328</u> UPL species 13 x 5 <u>65</u> Column Total 100 (A) <u>403</u> (B) Prevalence Index: <u>4.0</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
			<u>0</u> = Total Cover			
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Solidago canadensis</u>	<u>80</u>	<u>Y</u>	<u>FACU</u>		
2.	<u>Hieracium caespitosum</u>	<u>10</u>	<u>N</u>	<u>UPL</u>		
3.	<u>Phalaris arundinacea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
4.	<u>Lonicera maackii</u>	<u>2</u>	<u>N</u>	<u>UPL</u>		
5.	<u>Rubus allegheniensis</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
6.	<u>Leucanthemum vulgare</u>	<u>1</u>	<u>N</u>	<u>UPL</u>		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
			<u>100</u> = Total Cover			
		50% of total Cover: <u>50</u>	20% of Total Cover: <u>20</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
			<u>0</u> = Total Cover			
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>						
Remarks: (Include photo numbers here or on a separate sheet.)						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up O
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-1								Organic
1-16	10YR3/1	99	7.5YR4/4	1	C	M	Silty Clay	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b>	<b>Hydric Soil Present?</b> Yes _____ No <u>  </u> X <u>  </u>
Type: _____	
Depth (inches): _____	

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/5/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Wet P</u>	
Investigator(s): <u>B. Graves, V. Tremante, A. Mathes</u> Section, Township, Range: <u>Section 14, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concave, convex, none): <u>Concave</u> Slope %: <u>0-2%</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.687234</u> Long. <u>-81.464132</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>FcA; GfB</u> NWI Classification: <u>PEM</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	Yes <u>X</u> No <u>    </u>
Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	If yes, optional Wetland Site ID: <u>    </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	
Saturation Present? Yes <u>X</u> No <u>    </u> Depth (inches) <u>0-7</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Standing water was evident nearby in the wetland despite not having surface water or a water table present. Wetland is not indicated on NWI mapping.	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet P
<u>Tree Stratum</u>		Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A)  Total number of dominant species across all strata: <u>2</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
			<u>0</u> = Total Cover			
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Sapling/Shrub Stratum</u>		Plot size: <u>r=15'</u>				<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species 50 x 1 <u>50</u> FACW species 25 x 2 <u>50</u> FAC species 5 x 3 <u>15</u> FACU species 20 x 4 <u>80</u> UPL species 0 x 5 <u>0</u> Column Total 100 (A) <u>195</u> (B) Prevalence Index: <u>2.0</u> (B/A)
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
6.	_____	_____	_____	_____	_____	
7.	_____	_____	_____	_____	_____	
8.	_____	_____	_____	_____	_____	
9.	_____	_____	_____	_____	_____	
			<u>0</u> = Total Cover			
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<u>Herb Stratum</u>		Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Indicators:</b> x <u>1</u> - Rapid Test for Hydrophytic Vegetation x <u>2</u> - Dominance Test is >50% x <u>3</u> - Prevalence Index is ≤3.0* 4 - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) 5 - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Eleocharis obtusa</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>		
2.	<u>Carex vulpinoidea</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>		
3.	<u>Lysimachia nummularia</u>	<u>15</u>	<u>N</u>	<u>FACW</u>		
4.	<u>Schedonorus arundinaceus</u>	<u>15</u>	<u>N</u>	<u>FACU</u>		
5.	<u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
6.	<u>Phalaris arundinacea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
7.	<u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
8.	<u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
			<u>100</u> = Total Cover			
		50% of total Cover: <u>50</u>	20% of Total Cover: <u>20</u>			
<u>Woody Vine Stratum</u>		Plot size: <u>r=5'</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.
1.	_____	_____	_____	_____	_____	
2.	_____	_____	_____	_____	_____	
3.	_____	_____	_____	_____	_____	
4.	_____	_____	_____	_____	_____	
5.	_____	_____	_____	_____	_____	
			<u>0</u> = Total Cover			
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____						
Remarks: (Include photo numbers here or on a separate sheet.) Photos 137-138						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet P
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-9	10YR4/1	80	10YR3/6	20	C	M	Silty clay	Prominent redox concentrations
9-16	10YR5/1	50	10YR5/6	50	C	M	Clay loam	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	X	Depleted Matrix (F3)	Other (Explain in Remarks)
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)	
Thick Dark Surface (A12)		Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)	
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)	

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="checkbox"/>    No _____</p>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/5/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Up P</u>	
Investigator(s): <u>B. Graves, V. Tremante, A. Mathes</u> Section, Township, Range: <u>Section 14, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Toe of slope</u> Local relief (concave, convex, none): <u>Concave</u> Slope %: <u>0-2%</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.687308</u> Long. <u>-81.464281</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>FcA; GfB</u> NWI Classification: <u>None</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>Y</u> Soil <u>Y</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>    </u> No <u>X</u>	<b>Yes <u>    </u> No <u>X</u></b>
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	If yes, optional Wetland Site ID: <u>    </u>
Remarks: Wetland was a wet area in an agricultural field. All upland around wetland was actively farmed and had recently been tilled and seeded.	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	True Aquatic Plants (B14)
High Water Table (A2)	Surface Soil Cracks (B6)
Saturation (A3)	Hydrogen Sulfide Odor (C1)
Water Marks (B1)	Sparsely Vegetated Concave Surface (B8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Drainage Patterns (B10)
Algal Mat or Crust (B4)	Moss Trim Lines (B16)
Iron Deposits (B5)	Presence of Reduced Iron (C4)
Inundation Visible on Aerial Imagery (B7)	Dry-Season Water Table (C2)
Water Stained Leaves (B9)	Recent Iron Reduction in Tilled Soil (C6)
Aquatic Fauna (B13)	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Thin Muck Surface (C7)
	Stunted or Stressed Plants (D1)
	Other (Explain in Remarks)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	<b>Wetland Hydrology Present?</b> Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Up P
<u>Tree Stratum</u>	Plot size: <u>r=30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>0</u> (A)  Total number of dominant species across all strata: <u>0</u> (B)  Percent of dominant species that are OBL, FACW, or FAC:      (A/B)	
1. _____						
2. _____						
3. _____						
4. _____						
5. _____						
6. _____						
7. _____						
		<u>0</u> = Total Cover			<b>Prevalence Index Worksheet</b> Total % cover of: OBL species    0    x    1 <u>0</u> FACW species   0    x    2 <u>0</u> FAC species     0    x    3 <u>0</u> FACU species    0    x    4 <u>0</u> UPL species     0    x    5 <u>0</u> Column Total   0    (A) <u>0</u> (B) Prevalence Index:                      (B/A)	
50% of total Cover: <u>0</u>		20% of Total Cover: <u>0</u>				
<u>Sapling/Shrub Stratum</u>	Plot size: <u>r=15'</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall. <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1. _____						
2. _____						
3. _____						
4. _____						
5. _____						
6. _____						
7. _____						
8. _____						
9. _____						
		<u>0</u> = Total Cover				
50% of total Cover: <u>0</u>		20% of Total Cover: <u>0</u>				
<u>Herb Stratum</u>	Plot size: <u>r=5'</u>				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>	
1. _____						
2. _____						
3. _____						
4. _____						
5. _____						
6. _____						
7. _____						
8. _____						
9. _____						
10. _____						
11. _____						
		<u>0</u> = Total Cover				
50% of total Cover: <u>0</u>		20% of Total Cover: <u>0</u>				
<u>Woody Vine Stratum</u>	Plot size: <u>r=5'</u>				(Continuation of Hydrophytic Vegetation Present? section)	
1. _____						
2. _____						
3. _____						
4. _____						
5. _____						
		<u>0</u> = Total Cover				
50% of total Cover: <u>0</u>		20% of Total Cover: <u>0</u>				
Remarks: (Include photo numbers here or on a separate sheet.)  Actively farmed. Recently tilled and seeded. No vegetation.						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up P
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-12	10YR4/2	100					Loamy clay	
12-16	10YR5/2	65	10YR5/6	35	RM	M	Sandy clay	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes _____    No <u>  X  </u></p>
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Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/5/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Wet Q</u>	
Investigator(s): <u>B. Graves, V. Tremante, A. Mathes</u> Section, Township, Range: <u>Section 14, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concave, convex, none): <u>Concave</u> Slope %: <u>10-15%</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.686654</u> Long. <u>-81.466697</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>CdC</u> NWI Classification: <u>PEM</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	Yes <u>X</u> No <u>    </u>
Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	If yes, optional Wetland Site ID: <u>    </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>0-9</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland is not indicated on NWI mapping.	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	Wet Q
<b>Tree Stratum</b> Plot size: <u>r=30'</u> Absolute % Cover      Dominant Species      Indicator Status					<b>Dominance Test Worksheet</b>	
1.	_____	_____	_____	_____	Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A)  Total number of dominant species across all strata: <u>2</u> (B)  Percent of dominant species that are OBL, FACW, or FAC:      100% (A/B)	
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
_____ = Total Cover 50% of total Cover: <u>0</u> 20% of Total Cover: <u>0</u>					<b>Prevalence Index Worksheet</b>	
<b>Sapling/Shrub Stratum</b> Plot size: <u>r=15'</u>					Total % cover of: OBL species      0      x      1 <u>0</u> FACW species      120      x      2 <u>240</u> FAC species      0      x      3 <u>0</u> FACU species      0      x      4 <u>0</u> UPL species      5      x      5 <u>25</u> Column Total      125 (A) <u>265 (B)</u> Prevalence Index:      2.1 (B/A)	
1.	_____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> x      1 - Rapid Test for Hydrophytic Vegetation x      2 - Dominance Test is >50% x      3 - Prevalence Index is ≤3.0* 4 - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) _____ 5 - Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
_____ = Total Cover 50% of total Cover: <u>0</u> 20% of Total Cover: <u>0</u>						
<b>Herb Stratum</b> Plot size: <u>r=5'</u>						
1.	<u>Onoclea sensibilis</u>	80	Y	FACW		
2.	<u>Impatiens capensis</u>	40	Y	FACW		
3.	<u>Bromus inermis</u>	5	N	UPL		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
_____ = Total Cover 50% of total Cover: <u>62.5</u> 20% of Total Cover: <u>25</u>					<b>Definitions of Four Vegetation Strata:</b>	
<b>Woody Vine Stratum</b> Plot size: <u>r=5'</u>					<b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1.	_____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____	
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
_____ = Total Cover 50% of total Cover: <u>0</u> 20% of Total Cover: <u>0</u>						
Remarks: (Include photo numbers here or on a separate sheet.) Photo 139-141						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Wet Q
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-16	2.5YR5/2	80	7.5YR4/4	20	C	M	Silt Loam	Prominent redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ***	
Histosol (A1)		Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	X	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)		Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)		
Thick Dark Surface (A12)		Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)		Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b>	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/5/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>UPL Q</u>	
Investigator(s): <u>B. Graves, V. Tremante, A. Mathes</u> Section, Township, Range: <u>Section 14, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concave, convex, none): <u>Concave</u> Slope %: <u>10-15%</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.686649</u> Long. <u>-81.466789</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>CdC</u> NWI Classification: <u>None</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>    </u> No <u>X</u>	<b>Yes <u>    </u> No <u>X</u></b>
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	If yes, optional Wetland Site ID: <u>    </u>
Remarks:	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	True Aquatic Plants (B14)
High Water Table (A2)	Surface Soil Cracks (B6)
Saturation (A3)	Hydrogen Sulfide Odor (C1)
Water Marks (B1)	Sparsely Vegetated Concave Surface (B8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Drainage Patterns (B10)
Algal Mat or Crust (B4)	Moss Trim Lines (B16)
Iron Deposits (B5)	Presence of Reduced Iron (C4)
Inundation Visible on Aerial Imagery (B7)	Dry-Season Water Table (C2)
Water Stained Leaves (B9)	Recent Iron Reduction in Tilled Soil (C6)
Aquatic Fauna (B13)	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Thin Muck Surface (C7)
	Stunted or Stressed Plants (D1)
	Other (Explain in Remarks)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	<b>Wetland Hydrology Present?</b> Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>    </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

VEGETATION					Sampling Point:	UPL Q
<u>Tree Stratum</u> Plot size: <u>r=30'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>  Number of dominant species that are OBL, FACW, or FAC: <u>0</u> (A)  Total number of dominant species across all strata: <u>3</u> (B)  Percent of dominant species that are OBL, FACW, or FAC: <u>0%</u> (A/B)	
1.	<u>Prunus serotina</u>	<u>2</u>	<u>Y</u>	<u>FACU</u>		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
		<u>2</u> = Total Cover				
		50% of total Cover: <u>1</u>	20% of Total Cover: <u>0.4</u>			
<u>Sapling/Shrub Stratum</u> Plot size: <u>r=15'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>  Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>20</u> x <u>2</u> = <u>40</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>26</u> x <u>4</u> = <u>104</u> UPL species <u>82</u> x <u>5</u> = <u>410</u> Column Total <u>128</u> (A) = <u>554</u> (B) Prevalence Index: <u>4.3</u> (B/A)	
1.	<u>Rosa multiflora</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
		<u>10</u> = Total Cover				
		50% of total Cover: <u>5</u>	20% of Total Cover: <u>2</u>			
<u>Herb Stratum</u> Plot size: <u>r=5'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0* <u>4</u> - Morphological Adaptations* (Provide supporting data in remarks or on a separate sheet) <u>5</u> - Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1.	<u>Bromus inermis</u>	<u>80</u>	<u>Y</u>	<u>UPL</u>		
2.	<u>Impatiens capensis</u>	<u>20</u>	<u>N</u>	<u>FACW</u>		
3.	<u>Solidago canadensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>		
4.	<u>Convolvulus arvensis</u>	<u>2</u>	<u>N</u>	<u>UPL</u>		
5.	<u>Rubus allegheniensis</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
6.	<u>Urtica dioica</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
		<u>116</u> = Total Cover				
		50% of total Cover: <u>58</u>	20% of Total Cover: <u>23.2</u>			
<u>Woody Vine Stratum</u> Plot size: <u>r=5'</u>		Absolute % Cover	Dominant Species	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> - Woody plants, excluding vines, 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1m) tall.  <b>HERB</b> - All herbaceous (non-Woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody Vine</b> - All woody vines greater than 3.28 ft in height.	
1.	_____	_____	_____	_____		
2.	_____	_____	_____	_____		
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
		<u>0</u> = Total Cover				
		50% of total Cover: <u>0</u>	20% of Total Cover: <u>0</u>			
					<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>	
Remarks: (Include photo numbers here or on a separate sheet.)						

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	UPL Q
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-13	10YR4/3	100					Silty clay	
13-16	10YR4/3	95	7.5YR4/3	5	RM	M	Silty clay	Faint redox concentrations

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<b>Restrictive Layer (if observed)</b>	<b>Hydric Soil Present?</b> Yes _____ No <u>  </u> X <u>  </u>
Type: _____	
Depth (inches): _____	

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

Site: <u>COWL</u> City/County: <u>Canton/Stark</u> Sampling Date: <u>6/5/2014</u>	
Applicant/Owner: <u>Marathon Petroleum</u> State: <u>OH</u> Sampling Point: <u>Up R</u>	
Investigator(s): <u>S. Walker, T. Raabe</u> Section, Township, Range: <u>Section 22, Township 9N, Range 9W</u>	
Landform: (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concave, convex, none): <u>Concave</u> Slope %: <u>3</u>	
Subregion (LRR or MLRA): <u>LRR R</u> Lat. <u>40.685136</u> Long. <u>-81.4734</u> Datum: <u>Ohio North NAD 1983</u>	
Soil Map Unit Name: <u>GfD2; CdD; WuE2</u> NWI Classification: <u>None</u>	
Are climatic/hydrologic conditions on the site typical for time of year? Yes <u>X</u> No <u>    </u> (If no, explain in the Remarks)	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> significantly disturbed?	
Are Vegetation <u>N</u> Soil <u>N</u> or Hydrology <u>N</u> naturally problematic?	
Are Normal Circumstances Present? Yes <u>X</u> No <u>    </u> (If needed, explain any answers in Remarks)	
<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	<b>Yes <u>    </u> No <u>X</u></b>
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	If yes, optional Wetland Site ID: <u>    </u>
Remarks: Rain within last 24 hours	
<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	True Aquatic Plants (B14)
High Water Table (A2)	Surface Soil Cracks (B6)
Saturation (A3)	Hydrogen Sulfide Odor (C1)
Water Marks (B1)	Sparsely Vegetated Concave Surface (B8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Drainage Patterns (B10)
Algal Mat or Crust (B4)	Moss Trim Lines (B16)
Iron Deposits (B5)	Presence of Reduced Iron (C4)
Inundation Visible on Aerial Imagery (B7)	Recent Iron Reduction in Tilled Soil (C6)
Water Stained Leaves (B9)	Thin Muck Surface (C7)
Aquatic Fauna (B13)	Other (Explain in Remarks)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>-</u>	<b>Wetland Hydrology Present?</b> Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>-</u>	
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches) <u>-</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



WETLAND DETERMINATION DATA FORM - Eastern Mountains Piedmont Region

<b>SOIL</b>	Sampling Point:	Up R
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**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color	%	Color	%	Type*	Loc**		
0-10	2.5Y 4/3	100						
10-15	2.5Y 4/3	85	7.5YR 3/4	15	C	M	Silty clay	Gravel present

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ***	
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 148, 148)	Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)	Depleted Matrix (F3)	Other (Explain in Remarks)	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	*** Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)		
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)		

<p><b>Restrictive Layer (if observed)</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes _____    No <input checked="" type="checkbox"/> _____</p>
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Remarks: