ATTACHMENT B

HARRISON COUNTY

WETLAND SWVM FORMS/WETLAND DELINEATION FORM/PHOTOS

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	39.436246	Lon.	-80.474973
STREAM/SITE ID AND SITE DESCR	RIPTION:					W-B55, Timber Mat Crossing		
(% stream slope, watershed size {a	creage}, unaltered	or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-B55	Emergent	0.0054	Emergent					
						PART III - Advanced Sustainable Determination Made on		on
						Advanced Mitigation (Y or N)		Υ
Total Impact		0.0054						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0054			\$324.00		
Total Forested			0			\$324.00		
			0					
Total Open Water			U	1				

Project/Site: MVP		City/C	county: Harrison		Sampling Date: 05/30/2015			
Applicant/Owner: MVP					Sampling Point: W-B55			
Investigator(s): C. Ansari, M.	Whitten, M. Bric				_ ,			
Landform (hillslope, terrace, etc.)					Slope (%): 2			
Subregion (LRR or MLRA): LRF					Datum: NAD 83			
Soil Map Unit Name: Vandalia			_					
Are climatic / hydrologic condition	s on the site typical	for this time of year? Y	res No ((If no, explain in R	emarks.)			
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Normal	Circumstances" p	oresent? Yes No			
Are Vegetation, Soil				xplain any answe				
-	-				, important features, etc.			
Hydrophytic Vegetation Present	? Yes 🗸	No						
Hydric Soil Present?	Yes V		Is the Sampled Area within a Wetland?	Yes 🗸	No			
Wetland Hydrology Present?	Yes 🗸		Within a Wenanu:	165	NU			
Remarks:								
Cowardin Code: PEM								
HGM:Riverine								
WT: RPWWD								
HYDROLOGY								
Wetland Hydrology Indicators	::			Secondary Indica	tors (minimum of two required)			
Primary Indicators (minimum of	one is required; che	ck all that apply)		Surface Soil	Cracks (B6)			
Surface Water (A1)		_ True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)		_ Hydrogen Sulfide Ode		Drainage Patterns (B10)				
Saturation (A3)			es on Living Roots (C3)	(C3) Moss Trim Lines (B16)				
Water Marks (B1)	_	Presence of Reduced	, ,		Water Table (C2)			
Sediment Deposits (B2)	<u> </u>	Recent Iron Reductio		Crayfish Buri				
Drift Deposits (B3)		_ Thin Muck Surface (C			sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	_	_ Other (Explain in Ren	narks)		tressed Plants (D1)			
Iron Deposits (B5)	Imagan, (D7)			Geomorphic	, ,			
Inundation Visible on Aerial	• • • •			Shallow Aqui				
Water-Stained Leaves (B9)Aquatic Fauna (B13)				FAC-Neutral	aphic Relief (D4)			
Field Observations:				TAO Neutral	1031 (00)			
	Yes No 🗸	, Depth (inches):						
		Depth (inches):						
	Yes No		8 Wetland H	lydrology Presen	ıt? Yes ✔ No			
(includes capillary fringe)								
Describe Recorded Data (stream	n gauge, monitoring	well, aerial photos, pre	vious inspections), if ava	ılable:				
Remarks:								
Wetland location is a heav	rily grazed pastu	re. The soils are co	ompacted from the h	neavy cattle us	e.			
	, ,		•	•				

mpling Point: W-B55
orksheet:
nt Species
W, or FAC: (A)
minant
Strata: <u>2</u> (B)
nt Species
W, or FAC: 100 (A/B)
worksheet:
of: Multiply by:
x 1 =
x 2 =
x 3 =
x 4 =
x 5 =
(A) (B)
dov. D/A
dex = B/A =
tation Indicators:
for Hydrophytic Vegetation
Test is >50%
Index is ≤3.0 ¹
cal Adaptations ¹ (Provide supporting
arks or on a separate sheet)
drophytic Vegetation ¹ (Explain)
soil and wetland hydrology must
disturbed or problematic.
r Vegetation Strata:
ts, excluding vines, 3 in. (7.6 cm) or
breast height (DBH), regardless of
oody plants, excluding vines, less
greater than or equal to 3.28 ft (1
ous (non-woody) plants, regardless
plants less than 3.28 ft tall.
oody vines greater than 3.28 ft in
Yes No
165 <u> </u>

SOIL Sampling Point: W-B55

Profile Desc	cription: (Describe t	o the depth	needed to docum	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			c Features				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 4/2	70	10YR 4/6	30	С	M/PL	LS	
			_					
								
						· ——		
						· ——		
¹ Type: C=C	oncentration, D=Deple	etion, RM=Re	educed Matrix, MS	=Masked	Sand Gr	ains.	² Location: Pl	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			_ 2	cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Bel		ce (S8) (N	ILRA 147,		Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su				· -	(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (F2)		P	riedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Mat	rix (F3)				(MLRA 136, 147)
2 cm Mu	uck (A10) (LRR N)		Redox Dark S	Surface (F	6)		V	ery Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Dar				0	Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	Mucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,		
	A 147, 148)		MLRA 136	•			•	
	Sleyed Matrix (S4)		Umbric Surfa					icators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	') un	less disturbed or problematic.
	Layer (if observed):							
Type:			_					
Depth (in	ches):		_				Hydric Soil	Present? Yes V No No
Remarks:								



Photograph Direction NW

0 1		
Comments:		

Project/Site: MVP	City/C	county: Harrison		Sampling Date: 05/30/2015			
Applicant/Owner: MVP		,		Sampling Point: W-B55-UP			
Investigator(s): C. Ansari, M. Whitten, M. E	Brice Section	on, Township, Range: N/					
Landform (hillslope, terrace, etc.): Valley floor				Slope (%): 2			
Subregion (LRR or MLRA): LRRN				Datum: NAD 83			
Soil Map Unit Name: Vandalia silty clay loa							
Are climatic / hydrologic conditions on the site typ							
Are Vegetation, Soil, or Hydrology	•						
Are Vegetation, Soil, or Hydrology			explain any answe				
SUMMARY OF FINDINGS – Attach si							
				, ,			
	No	Is the Sampled Area					
	No	within a Wetland?	Yes	No			
Upland							
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)			
Primary Indicators (minimum of one is required;	check all that apply)		Surface Soil	Cracks (B6)			
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patterns (B10)				
Saturation (A3)	Oxidized Rhizosphere	=	Moss Trim Li				
Water Marks (B1)	Presence of Reduced	, ,		Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reductio		Crayfish Burr				
Drift Deposits (B3) Algal Mat or Crust (B4)	Thin Muck Surface (0 Other (Explain in Rer			sible on Aerial Imagery (C9) tressed Plants (D1)			
Algar Wat Of Crust (B4) Iron Deposits (B5)	Other (Explain in Kei	ilaiks)	Geomorphic				
Inundation Visible on Aerial Imagery (B7)			Shallow Aqui	, ,			
Water-Stained Leaves (B9)				aphic Relief (D4)			
Aquatic Fauna (B13)			FAC-Neutral				
Field Observations:							
Surface Water Present? Yes No _	Depth (inches):						
Water Table Present? Yes No _	Depth (inches):						
Saturation Present? Yes No _ (includes capillary fringe)	Depth (inches):	Wetland H	lydrology Presen	nt? Yes No			
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, pre	vious inspections), if ava	ilable:				
Demorks							
Remarks: Upland plot							
Spiaria piot							

VEGETATION (Four Strata) - Use scientific names of plants.

___)

50% of total cover: ___0

50% of total cover: 45 20% of total cover: 18

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

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

30'

Tree Stratum (Plot size: _

Sapling/Shrub Stratum (Plot size: 15'

1. None

1. None

Herb Stratum (Plot size: _ 1. Verbesina alternifolia

2. Daucus carota

3. Rumex crispus

4. Plantago major

6. Solidago sp

nes of plants.	Sampling Poi	nt: <u>W-B55-</u> l	JP					
bsolute Dominant Indicator	Dominance Test worksheet:							
% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:	0	_ (A)					
	Total Number of Dominant Species Across All Strata:	2	_ (B)					
	Percent of Dominant Species That Are OBL, FACW, or FAC:	0%	_ (A/B					
	Prevalence Index worksheet:							
0 = Total Cover	Total % Cover of:	Multiply by:						
20% of total cover: 0	OBL species x 1	l =						
	FACW species x 2	2 =						
	FAC species x 3	B =						
	FACU species x 4	1 =						
	UPL species x 5	5 =						
	Column Totals: (A)		— (B)					
	Column rotals: (r.)		(5)					
	Prevalence Index = B/A =		_					
	Hydrophytic Vegetation Indicators:							
	1 - Rapid Test for Hydrophytic Vegetation							
	2 - Dominance Test is >50%							
	3 - Prevalence Index is ≤3.0 ¹							
0 = Total Cover	4 - Morphological Adaptations ¹ (Provide supporting							
20% of total cover: 0	data in Remarks or on a s	eparate sheet	t)					
10 FAC	Problematic Hydrophytic Veg	etation ¹ (Expl	ain)					
10 170								
1 <u>A00</u>	¹ Indicators of hydric soil and wetla	and hydrology	must					
170	be present, unless disturbed or p	roblematic.						
1 <u>A00</u>	Definitions of Four Vegetation	Strata:						
5 FACU 10 ND	Tree – Woody plants, excluding wore in diameter at breast height height.							
	Sapling/Shrub – Woody plants, of than 3 in. DBH and greater than of m) tall.							
90 = Total Cover 20% of total cover: 18	Herb – All herbaceous (non-wood of size, and woody plants less that		ardless					
	Woody vine – All woody vines gr height.	eater than 3.2	28 ft in					
0 = Total Cover 20% of total cover: 0	Hydrophytic Vegetation Present? Yes	No <u> </u>						

Remarks: (Include photo numbers here or on a separate sheet.)

5. Poa compressa

Woody Vine <u>Stratum</u> (Plot size: ______)

Sampling Point: W-B55-UP

SOIL

Profile Description: (Describe to the de	oth needed to docur	nent the i	ndicator	or confirn	n the absence	of indicators.)
Depth <u>Matrix</u>		x Feature				
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12 10YR 4/3 90	10YR 4/6	10	<u>C</u>	M	-	
						
					-	
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix MS	S=Masked	Sand Gr	ains	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil Indicators:	=reduced Matrix, Me	J-Masket	d Garia Gi	airio.		ators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface	(S7)				cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Be	. ,	ce (S8) (I	VILRA 147.		coast Prairie Redox (A16)
Black Histic (A3)	Thin Dark Su					(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleye			, ,	P	iedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Ma	trix (F3)				(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark	Surface (F	- 6)			ery Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dar				c	other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depre					
Sandy Mucky Mineral (S1) (LRR N,	Iron-Mangan		es (F12) (LRR N,		
MLRA 147, 148)	MLRA 13	-	MIDA 4	ne 400\	31m d	icators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)Sandy Redox (S5)	Umbric Surfa Piedmont Flo					etland hydrology must be present,
Stripped Matrix (S6)	Red Parent N					less disturbed or problematic.
Restrictive Layer (if observed):		natoriai (i	, (.,	-, u	issoc distances of problematic.
Type:						
Depth (inches):					Hydric Soil	Present? Yes No
Remarks:					Tiyunc 3011	Tresent: res No
Remarks.						

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.391614	Lon.	-80.477085
STREAM/SITE ID AND SITE DESCR	IPTION:				W-J3	32-PEM-1, Temporary Access Road		
(% stream slope, watershed size {a	creage}, unaltered	or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-J32-PEM-1	Emergent	0.0417	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0417						
		Init Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0417	-		\$2 502 00		
Total Scrub-Shrub Total Forested			0	-		\$2,502.00		
				-				
otal Open Water			0					

Project/Site: MVP		City/County: H	arrison		Sampling Date: 05/29/2015
Applicant/Owner: MVP		, ,	;	State: WV	Sampling Point: W-J32-PEM-1
Investigator(s): P. Johnson, C. We	eber, N. Katsiasicas	Section, Towns			
Landform (hillslope, terrace, etc.): Hill			-		Slope (%): 3
Subregion (LRR or MLRA): LRRN			Long: <u>-</u> 80.4		Datum: NAD 83
Soil Map Unit Name: Udifluvents a					
Are climatic / hydrologic conditions on					
Are Vegetation, Soil, or					resent? Yes No
Are Vegetation, Soil, o SUMMARY OF FINDINGS –				olain any answer	
JONIMART OF FINDINGS - 7	ttacii site iliap silow		Onit location	5, transects,	important reatures, etc.
Hydrophytic Vegetation Present?	Yes No		ampled Area		
Hydric Soil Present?	Yes No	— within a	Wetland?	Yes	No
Wetland Hydrology Present?	Yes No				
Remarks: Cowardin Code: PEM HGM:	Slope WT: RPWWD				
Information listed on this form presence of wetland hydrology was obstructed by timber matt	hydrophytic vegetation	llected in 2015. on, and hydric so	The wetland voils was unable	vas revisited e to be confir	on 09/17/2019. The med because the wetland
HYDROLOGY					
Wetland Hydrology Indicators:			<u>S</u>	econdary Indicat	ors (minimum of two required)
Primary Indicators (minimum of one i	s required; check all that app	oly)		_ Surface Soil (Cracks (B6)
Surface Water (A1)		ic Plants (B14)	<u> </u>	_ Sparsely Veg	etated Concave Surface (B8)
High Water Table (A2)		Sulfide Odor (C1)	_	_ Drainage Pat	
Saturation (A3)		hizospheres on Livir	—	_ Moss Trim Lir	
Water Marks (B1)		of Reduced Iron (C4)		-	Vater Table (C2)
Sediment Deposits (B2)		Reduction in Tilled	Soils (C6)	_ Crayfish Burr	` '
Drift Deposits (B3)		Surface (C7)	_		sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Exp	lain in Remarks)	_	 '	ressed Plants (D1)
Iron Deposits (B5)	von. (P7)		_	_ Geomorphic I	
Inundation Visible on Aerial Imag Water-Stained Leaves (B9)	jery (b7)		_	_ Shallow Aquit	phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	, ,
Field Observations:			_	17.0 1104141	1001 (20)
	No 🖍 Depth (inc	hes):			
	No L Depth (inc				
Saturation Present? Yes	No Depth (inc	hes): 6	Wetland Hyd	drology Present	t? Yes No
(includes capillary fringe)					
Describe Recorded Data (stream gau	ige, monitoring well, aerial p	hotos, previous insp	ections), if availa	ble:	
Remarks:					
remarks.					

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

<u>-</u>	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				T
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				Specifica Moreosa Alli Stratia.
5				Percent of Dominant Species That Are OBL FACW or FAC: 100 (A/B)
				That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
/				Total % Cover of: Multiply by:
500/ // /		= Total Cov		OBL species x 1 =
50% of total cover: 0	20% of	total cover	:0	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Provolonce Index = P/A =
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
			-	2 - Dominance Test is >50%
9	0	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		total cover	_	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	2070 01	10101 00101		data in Remarks or on a separate sheet)
1. Juncus effusus	40	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Carex vulpinoidea	20	<u> </u>		
3. Carex lurida	30	<u> </u>	OBL	¹ Indicators of hydric soil and wetland hydrology must
			<u>OBL</u>	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Carling/Chrub Woody plants avaluating vines less
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				Horto All hards account (account of a locate manufacture
	90	= Total Cov	/er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		, p
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
1.				height.
2.				
				
3				
4		·		Hydrophytic
5				Vegetation Present?
0		= Total Cov	_	Fresent? Tes NO
50% of total cover:0		total cover	:0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: W-J32-PEM-1

SOIL

Depth	Matrix		Redo	x Feature:	s	. ,	_		_	
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹		<u>Texture</u>		Remarks	
0-18	10 YR 5/2	90	10YR 5/6	10	С	M/PL	L			
					-			-		
vpe: C=Co	oncentration, D=Depl	etion. RM=F	Reduced Matrix. M	S=Masked	Sand G	rains.	² Location: F	PL=Pore Lini	ng, M=Matrix.	
	ndicators:		,						roblematic Hy	dric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)					A10) (MLRA 1	
	ipedon (A2)		Polyvalue Be		ce (S8) (MLRA 147,		•	Redox (A16)	,
Black Hi			Thin Dark Su	ırface (S9)	(MLRA	147, 148)	, <u> </u>	(MLRA 14		
_ Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix (F2)		'	Piedmont Flo	oodplain Soils	(F19)
	Layers (A5)		Depleted Ma	, ,				(MLRA 13		
	ck (A10) (LRR N)		Redox Dark	•					Dark Surface	
	Below Dark Surface	e (A11)	Depleted Da				_ (Other (Expla	in in Remarks)	
	irk Surface (A12)	DD N	Redox Depre			/LDD N				
	lucky Mineral (S1) (L	KK N,	Iron-Mangan		es (F12)	(LKK N,				
	147, 148) leyed Matrix (S4)		MLRA 13 Umbric Surfa	•	MI DA 1	36 122\	3In	dicators of h	ydrophytic veg	etation and
	edox (S5)		Piedmont Flo						ology must be p	
	Matrix (S6)		Red Parent N						ed or problema	
	ayer (if observed):				, (1		<u> </u>	
Type: No										
Depth (inc			_				Hydric Soi	I Present?	Yes_	No
emarks:							Tiyano oo	TT TOSCIIC.		
HIIdIKS.										

Wetland Photograph Page

Wetland ID W-J32-PEM-1 Cowardin Code PEM



Photograph Direction South

Date: 05/29/2015

Comments: 2015 wetland delineation.



Photograph Direction South

Date: 09/17/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/C	county: Lewis	Sampling Date: 05/28/2015		
Applicant/Owner: MVP		St	tate: WV Sampling Point: W-J32 UF		
	Section				
Landform (hillslope, terrace, etc.): Terrace			Convex Slope (%): 1		
Subregion (LRR or MLRA): LRRN			6980 Datum: NAD 83		
Soil Map Unit Name: Vandalia silty clay					
Are climatic / hydrologic conditions on the site					
Are Vegetation, Soil, or Hydro					
Are Vegetation, Soil, or Hydro					
			ain any answers in Remarks.) , transects, important features, etc		
SOMMAN OF THE BINGS - Attack	i site iliap silowilig sail	ipinig point locations	, transects, important reatures, etc		
	es No	Is the Sampled Area			
	es No	within a Wetland?	Yes No		
Wetland Hydrology Present? Ye Remarks:	es No				
Upland					
HYDROLOGY					
Wetland Hydrology Indicators:		Sec	condary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required	red; check all that apply)		Surface Soil Cracks (B6)		
Surface Water (A1)	True Aquatic Plants (Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patterns (B10)		
Saturation (A3)	Oxidized Rhizospher	- · · · · · · · · · · · · · · · · · · ·	Moss Trim Lines (B16)		
Water Marks (B1)	Presence of Reduced	· · · —	Dry-Season Water Table (C2)		
Sediment Deposits (B2) Drift Deposits (B3)	Recent Iron Reduction Thin Muck Surface (0)		Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in Rer		Stunted or Stressed Plants (D1)		
Iron Deposits (B5)	Out of (Explain in 10)	<u></u>	Geomorphic Position (D2)		
Inundation Visible on Aerial Imagery (B)	7)	_	Shallow Aquitard (D3)		
Water-Stained Leaves (B9)		<u> </u>	Microtopographic Relief (D4)		
Aquatic Fauna (B13)		_	FAC-Neutral Test (D5)		
Field Observations:					
	No Depth (inches):				
	No Depth (inches):				
Saturation Present? Yes (includes capillary fringe)	No Depth (inches):	Wetland Hydr	ology Present? Yes No		
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos, pre	vious inspections), if available	e:		
Remarks:					
Remarks.					

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

Sampling Point: W-J32 UP

- 3 0'	Absolute	Dominant		Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: 30')	% Cover	Species?	<u>Status</u>	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:	0	(A)
2						
3				Total Number of Dominant Species Across All Strata:	3	(B)
				Species Acioss Ali Strata.		(D)
4				Percent of Dominant Species	•	
5				That Are OBL, FACW, or FAC:	0	(A/B)
6				December of the december of		
7				Prevalence Index worksheet:		
	0 .	= Total Cov	er	Total % Cover of:		
50% of total cover: 0	20% of	total cover:	0	OBL species x 1	=	_
Sapling/Shrub Stratum (Plot size: 15')			,	FACW species x 2	=	_
				FAC species x 3		
1				FACU species x 4		
2						
3				UPL species x 5		
4				Column Totals: (A)	-	(B)
5						
				Prevalence Index = B/A = _		_
6				Hydrophytic Vegetation Indicate	ors:	
7				1 - Rapid Test for Hydrophytic	C Vegetation	
8				2 - Dominance Test is >50%	_	
9				3 - Prevalence Index is ≤3.0 ¹		
	0 .	= Total Cov	er		1 (0	
50% of total cover: 0				4 - Morphological Adaptations		porting
Herb Stratum (Plot size: 5')				data in Remarks or on a se	eparate sheet)	
1. Plantango lanceolata	30	/	FACU	Problematic Hydrophytic Vege	etation¹ (Expla	in)
2 Trifolium repuns	30	~				
			<u>UPL</u>	¹ Indicators of hydric soil and wetla	and hydrology r	nust
3. Trifolium pratense	20		<u>UPL</u>	be present, unless disturbed or pre-		
4. Plantango major	10		FACU_	Definitions of Four Vegetation S		
5. Leucanthemum vulgare	10		FACU	Deminions of Four Vegetation C	muu.	
6				Tree - Woody plants, excluding vi		
				more in diameter at breast height	(DBH), regardl	ess of
7				height.		
8				Sapling/Shrub – Woody plants, e	xcluding vines	less
9				than 3 in. DBH and greater than o		
10				m) tall.		
11.				Harb All barbagasia (non wood	lul planta raga	rdlooo
	100 .	= Total Cov		Herb – All herbaceous (non-wood of size, and woody plants less tha	y) plants, rega	raiess
50% of total cover: 50		total cover:		or olze, and weedy plante lees tha		
	20 /6 01	total cover.		Woody vine – All woody vines gre	eater than 3.28	ft in
Woody Vine Stratum (Plot size: 15')				height.		
1						
2						
3						
4.						
5.				Hydrophytic		
o	0 .	T-1-1-0		Vegetation Present? Yes	No 🗸	
50% -(1-1-1		= Total Cov	_			
50% of total cover:0		total cover:				
Remarks: (Include photo numbers here or on a separate sh	neet.)					

Sampling Point: W-J32 UP

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	the absen	ce of indicat	ors.)		
Depth	Matrix			x Features							
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>		Remar	ks	
0-18	10 YR 5/3	100					L				
	·										
	·										
	-										
			_								
					-						
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore Lin	ing, M=Mat	rix.	
Hydric Soil I	ndicators:						Ind	licators for P	roblematic	Hydric So	oils³:
Histosol	(A1)		Dark Surface	e (S7)				2 cm Muck ((A10) (MLR	A 147)	
	pipedon (A2)		Polyvalue Be	, ,	ce (S8) (N	ILRA 147,		Coast Prairi			
Black Hi			Thin Dark Su					(MLRA 1			
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix (F2)			Piedmont Fl	oodplain So	oils (F19)	
Stratified	l Layers (A5)		Depleted Ma	trix (F3)				(MLRA 1	36, 147)		
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (F	6)			Very Shallov	w Dark Surf	ace (TF12))
	Below Dark Surface	e (A11)	Depleted Da					Other (Expla	ain in Rema	rks)	
	ark Surface (A12)		Redox Depre								
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (LRR N,					
	\ 147, 148)		MLRA 13	-							
	leyed Matrix (S4)		Umbric Surfa					Indicators of h		-	
-	edox (S5)		Piedmont Flo					wetland hydro			,
	Matrix (S6)		Red Parent N	Material (F	21) (MLR	A 127, 147	')	unless disturb	ed or probl	ematic.	
Restrictive I	ayer (if observed):										
Туре:			<u>—</u>								
Depth (inc	ches):						Hydric S	oil Present?	Yes	No _	<u> </u>
Remarks:							<u> </u>				

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.369569	Lon.	-80.485054
STREAM/SITE ID AND SITE DESCR	RIPTION:				•	W-A10a, Timber Mat Crossing		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-A10a	Emergent	0.0153	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
Total Impact		0.0153				Fatimatad		
Madand O		Unit Scores	Devile sement Unit(-)			Estimated		
Total Emergent	lassification		Replacement Unit(s) 0.0153			ILF Costs		
Total Scrub-Shrub			0.0153			\$918.00		
Total Forested			0			φ910.00		
Total Open Water			0					

Project/Site: MVP			City/County: Harrison		Sampling Date: 10/22/2014
Applicant/Owner: MVP					Sampling Point: W-A10a
Investigator(s): E. Strohmai	er, D. McCullo	ough, M. Whitten	Section, Township, Range: N		_
Landform (hillslope, terrace, etc					Slone (%): 3
Subregion (LRR or MLRA): LI			Long: <u>-80</u>		Datum: NAD 83
Soil Map Unit Name: Philo si		Lat	Long		
			•		cation: _=
Are climatic / hydrologic conditi	•				·
Are Vegetation, Soil	, or Hydrolog	gy significantly o	disturbed? Are "Norma	al Circumstances" p	present? Yes No
Are Vegetation, Soil	, or Hydrolog	gy naturally prob	blematic? (If needed,	explain any answe	ers in Remarks.)
SUMMARY OF FINDING	GS – Attach s	site map showing	sampling point location	ons, transects	s, important features, etc.
Hydrophytic Vegetation Prese	ent? Yes	✓ No			
Hydric Soil Present?	Yes		Is the Sampled Area	🗸	
Wetland Hydrology Present?	Yes		within a Wetland?	Yes	No
Remarks:					
Cowardin Code: PEM					
HGM: Riverine					
WT: RPWWD					
HYDROLOGY					
Wetland Hydrology Indicato	ors:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum	of one is required	l; check all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)		True Aquatic Pla	ants (B14)	Sparsely Ve	getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfid	e Odor (C1)	Drainage Pa	tterns (B10)
Saturation (A3)		Oxidized Rhizos	spheres on Living Roots (C3)	Moss Trim L	ines (B16)
Water Marks (B1)		Presence of Rec	duced Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)			duction in Tilled Soils (C6)	Crayfish Bur	
Drift Deposits (B3)		Thin Muck Surfa			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in	n Remarks)		tressed Plants (D1)
Iron Deposits (B5)	(53)				Position (D2)
Inundation Visible on Aer				Shallow Aqu	, ,
Water-Stained Leaves (B	·9)			· -	aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:	Voc. No.	Depth (inches):			
Surface Water Present?		Depth (inches):			
Water Table Present?					-10 Y-1 V
Saturation Present? (includes capillary fringe)	Yes _ • No	Depth (inches):	wetland	Hydrology Preser	nt? Yes / No
Describe Recorded Data (stre	am gauge, moni	toring well, aerial photos	s, previous inspections), if ava	ailable:	
Remarks:					
Surface water was prese	ent in the wetl	and ditch portion of	f W-A10, but not in the	sample plot loc	ation.
'		'	,		
Wetland consists of a lin	ear ditch/stre	am system that is d	dominated by hydrophyt	es and function	ns more as a wetland than
		•			ent pasture. The sample plo
_			•	•	grass and Carex sp. in the
sample plot to be unider	•		attio grazing in the pac	iaro rocantoa iri	grade and darek oprim and
campio piot to be unider	illiable to the	oposico iovoi.			

	Sampli	ina	Point:	W	'-A1	0a
--	--------	-----	--------	---	------	----

30'	Absolute	Dominant		Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species	
1	-			That Are OBL, FACW, or FAC:1 (A)	
2				Total Number of Dominant	
3	-	-		Species Across All Strata: 2 (B)	
4				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC:50 (A/B))
6				Bassalan as Indansoralist at	
7				Prevalence Index worksheet:	
	0	= Total Cov	er	Total % Cover of: Multiply by:	
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species45	
1				FAC species x 3 =	
2				FACU species 30 x 4 = 120	
3				UPL species x 5 =	
4				Column Totals:75 (A)210 (B)	
5				Prevalence Index = R/A = 2.8	
6				Trevalence index = B/Tt =	
7				Hydrophytic Vegetation Indicators:	
8				1 - Rapid Test for Hydrophytic Vegetation	
9.				2 - Dominance Test is >50%	
<u>. </u>	0	= Total Cov		✓ 3 - Prevalence Index is ≤3.0 ¹	
50% of total cover:0		total cover:		4 - Morphological Adaptations ¹ (Provide supporting	g
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)	
1. Cyperus odoratus	40	/	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Trifolium pratense	30	~	FACU		
3. Scirpus cyperinus	5	-	FACW	¹ Indicators of hydric soil and wetland hydrology must	
4 Carex sp	20		ND	be present, unless disturbed or problematic.	
Ti			110	Definitions of Four Vegetation Strata:	
5		-		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or	r
6				more in diameter at breast height (DBH), regardless of	f
1				height.	
8	-			Sapling/Shrub – Woody plants, excluding vines, less	
9				than 3 in. DBH and greater than or equal to 3.28 ft (1	
10				m) tall.	
11				Herb - All herbaceous (non-woody) plants, regardless	;
47.1		= Total Cov		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 47.5	20% of	total cover:	19	Woody vine – All woody vines greater than 3.28 ft in	
Woody Vine Stratum (Plot size: 30')				height.	
1					
2					
3					
4		<u></u>		Hydrophytic	
5.				Hydrophytic Vegetation	
	0	= Total Cov	er	Present? Yes No	
50% of total cover:0		total cover:	_		

Remarks: (Include photo numbers here or on a separate sheet.)

Carex sp. (20%) and grass sp. (5%) were observed in the herbaceous stratum but were not identified to the species level; therefore, they were not included in the percent cover calculations.

Although the vegetation does not meet the dominance test, based on landscape context, positive hydrology and soils indicators, and the likelihood that the unidentified Carex sp. is a hydrophytic species, it is assumed that the plot meets the wetland vegetation parameter. Additionally, the plot does meet the prevalence index test.

Sampling Point: W-A10a

Depth	Matrix	0/		x Features		Loc ²	Touters		Dan	
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹		Texture SiL		Remarks	<u>i</u>
0-6	7.5YR 4/3	90	7.5YR 4/6	10	С	<u>M</u>				
6-16"	10YR 4/2	90	10YR 3/6	10	С	<u>M</u>	SiCL			
		. 								
		· ——								
	ncentration, D=Dep	letion RM-	-Reduced Matrix M	 S=Masked	Sand G	ains	² Location: P	 I =Pore I in	ing M–Matriy	·
ydric Soil II		iction, rawi-	-reduced Matrix, W	0-Masked	Oana Oi	airio.				·· łydric Soils³
_ Histosol (Dark Surface	(S7)					A10) (MLRA	-
	ipedon (A2)		Polyvalue Be	, ,	ce (S8) (I	/II RΔ 147.			Redox (A16	
_ Black His			Thin Dark Su				,	(MLRA 14		• •
	n Sulfide (A4)		Loamy Gleye			· · · , · · · · ,	P	•	oodplain Soil	s (F19)
	Layers (A5)		Depleted Ma		,			(MLRA 13		- (-)
	ck (A10) (LRR N)		Redox Dark	. ,	6)		V		v Dark Surfac	ce (TF12)
	Below Dark Surface	e (A11)	Depleted Da	•	,			•	in in Remark	, ,
	rk Surface (A12)	, ,	Redox Depre					` '		•
	ucky Mineral (S1) (L	RR N,	Iron-Mangan			LRR N,				
	147, 148)		MLRA 13		, ,					
	leyed Matrix (S4)		Umbric Surfa	ace (F13) (MLRA 1	36, 122)	³ Ind	icators of h	ydrophytic ve	egetation and
			Piedmont Flo						logy must be	-
Sandy Re	edox (S5)							-		
_ Sandy Re _ Stripped	edox (S5) Matrix (S6)		Red Parent I	Material (F	21) (MLF	A 127, 147	') un	less disturb	ed of proble	
_ Stripped	Matrix (S6)			Material (F	21) (MLF	A 127, 147	') un	less disturb	ed of problet	
_ Stripped				Material (F	21) (MLF	A 127, 147	') un	less disturb	· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L	Matrix (S6) ayer (if observed):			Material (F	21) (MLF	A 127, 147	Hydric Soil		Yes	No
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F	21) (MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F:	21) (MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F:	21) (MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F:	21) (MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F:	21) (MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F:	21) (MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F	(MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F	(MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	(MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	(MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	(MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	(MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	(MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	(MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	(MLF	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped Restrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped Restrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped Restrictive L Type:	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped Restrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped Restrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped Restrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped estrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	
Stripped cestrictive L Type: Depth (inc	Matrix (S6) ayer (if observed):			Material (F.	21) (ML F	A 127, 147			· · · · · · · · · · · · · · · · · · ·	



Photograph Direction SW

Comments:		

Project/Site: Mountain Val	ley Pipeline	City/C	ounty: Harrison		Sampling Date: 10/22/2014
Applicant/Owner: MVP					Sampling Point: W-A10-UP
Investigator(s): ES, DM, M	W	Section			
Landform (hillslope, terrace, e					Slone (%): 3
Subregion (LRR or MLRA): L			•		Datum: NAD 83
		Lat. doi:docodoco	=		
Soil Map Unit Name: Philo s				NWI classific	
Are climatic / hydrologic condi					_
Are Vegetation, Soil _	, or Hydrology	significantly distur	bed? Are "Normal	Circumstances" p	present? Yes V No No
Are Vegetation, Soil _	, or Hydrology	naturally problema	atic? (If needed, e	xplain any answe	ers in Remarks.)
SUMMARY OF FINDIN	IGS – Attach sit	e map showing sam	pling point locatio	ns, transects	s, important features, etc.
Hydrophytic Vegetation Pres	sent? Yes	No_ V			
Hydric Soil Present?		No 🗸	Is the Sampled Area		No
Wetland Hydrology Present?		No	within a Wetland?	res	NO
Remarks:					
Upland plot W-A10-UP	Tio located * To	location and would in	occw Allo Wi 1.		
HYDROLOGY					
Wetland Hydrology Indicat	ors:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Ode		Drainage Pa	
Saturation (A3)			es on Living Roots (C3)	Moss Trim L	
Water Marks (B1)		Presence of Reduced			Water Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)		Recent Iron Reductio Thin Muck Surface (C		Crayfish Bur	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			tressed Plants (D1)
Iron Deposits (B5)		Outer (Explain in Nei	nano)		Position (D2)
Inundation Visible on Ae	erial Imagery (B7)			Shallow Aqu	
Water-Stained Leaves (aphic Relief (D4)
Aquatic Fauna (B13)	,			FAC-Neutral	. , ,
Field Observations:					
Surface Water Present?	Yes No _	✓ Depth (inches):			
Water Table Present?	Yes No _	✓ Depth (inches):			
Saturation Present?	Yes No _	✓ Depth (inches):	Wetland H	ydrology Preser	nt? Yes No
(includes capillary fringe) Describe Recorded Data (str	ream gauge monitor	ing well aerial photos, pre	vious inspections) if avai	lable.	
Docoribo Mocordou Bala (oli	oam gaago, monto	ing won, donar photos, pro	vious inspections), ii uvui	ilabio.	
Remarks:					

Sampling Point: W-A10-UP	Sampling	Point:	W-A	10-UP
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30'	Absolute	Dominant Ir		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species That Are OBL_FACW_or_FAC: 0 (A)
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
50% of total cover: 0		= Total Cove	_	OBL species x 1 =
	20% 01	total cover:		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =
1				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4				(2)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9	_			3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		= Total Cover total cover:	r 0	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	20 /6 01	total cover		data in Remarks or on a separate sheet)
1. Trifolium pratense	30	✓	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Digitaria ischaemum	20		UPL	
3. Taraxicum officinale	20	<u> </u>	FACU	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11.				
	70	= Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 35		total cover:		
Woody Vine Stratum (Plot size: 30')		_		Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2.				
3.				
4				
5.				Hydrophytic Vegetation
	_	= Total Cove		Present? Yes No
50% of total cover:0		total cover:_	_	
Remarks: (Include photo numbers here or on a separate s				
Poa sp. (30%) was observed in the herbaceous included in the percent cover calculations.	•	but was no	t identif	fied to the species level; therefore, it was not
moraded in the percent cover calculations.				
See photo W-A10-P1.				
·				

Sampling Point: W-A10-UP

Depth	Matrix	%		x Features	Type ¹	Loc²	Touture		Domori	l.o	
(inches)	Color (moist)		Color (moist)	<u></u> %	туре	LOC	Texture silt loam		Remarl	KS	
0-16	10YR 3/3	100									
16-20	10YR 4/4	95	10YR 4/6	5	С	M	silt loam				
	-	-					-	-			
		-									
							-	-			
ype: C=Cc	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	S=Masked S	Sand Gra	ins.	² Location: F	L=Pore Lini	ing, M=Mat	rix.	
dric Soil I	ndicators:						Indic	ators for P	roblematic	Hydric So	oils³:
_ Histosol			Dark Surface	, ,				cm Muck (
	ipedon (A2)		Polyvalue Be				148) (Coast Prairie		16)	
_ Black His			Thin Dark Su			47, 148)	_	(MLRA 14		(540)	
	n Sulfide (A4) I Layers (A5)		Loamy Gleye Depleted Ma		<u>2)</u>		'	Piedmont Flo MLRA 13)		DIIS (F19)	
	ck (A10) (LRR N)		Redox Dark		١		\	ery Shallov		ace (TF12)
	Below Dark Surfac	e (A11)	Depleted Dai	, ,				Other (Expla			,
_ Thick Da	rk Surface (A12)		Redox Depre	ssions (F8)							
-	lucky Mineral (S1) (I	LRR N,	Iron-Mangan		(F12) (I	_RR N,					
	147, 148)		MLRA 13	-			3,				
-	leyed Matrix (S4) edox (S5)		Umbric Surfa Piedmont Flo					licators of hetland hydro		-	
-	Matrix (S6)		Red Parent N					eliano nyoro iless disturb			,
		<u> </u>	Red r archi h	natorial (1 2 i	i) (IVILIX	~ 121, 1 7 1		iicoo diotarb	ca or probl	Ciriatic.	
estrictive L	.aver (it observed):										
	_ayer (if observed):										
Туре:							Hydric Soi	Present?	Yes	No	/
Type:							Hydric Soi	l Present?	Yes	No _	~
Type:			<u> </u>				Hydric Soi	Present?	Yes	No _	<u> </u>
Type:							Hydric Soi	l Present?	Yes	No _	<u> </u>
Type:							Hydric Soi	l Present?	Yes	No _	<u> </u>
Type:							Hydric Soi	Present?	Yes	No _	<u> </u>
Type:							Hydric Soi	Present?	Yes	No _	<u> </u>
Type:							Hydric Soi	Present?	Yes	No _	
Type:							Hydric Soi	I Present?	Yes	No _	✓
Type:							Hydric Soi	I Present?	Yes	No _	<u> </u>
Type:							Hydric Soi	Present?	Yes	No _	✓
Type:							Hydric Soi	I Present?	Yes	No _	<u>v</u>
Type:							Hydric Soi	I Present?	Yes	No _	<u>v</u>
Type:							Hydric Soi	I Present?	Yes	No _	<u> </u>
Type:							Hydric Soi	I Present?	Yes	No _	<u> </u>
Type:							Hydric Soi	I Present?	Yes	No _	<u>v</u>
Type:							Hydric Soi	I Present?	Yes	No _	<u>v</u>
Type:							Hydric Soi	I Present?	Yes	No _	<u>v</u>
Type:							Hydric Soi	I Present?	Yes	No _	<u>v</u>
Туре:							Hydric Soi	I Present?	Yes	No _	<u>v</u>
Type:							Hydric Soi	I Present?	Yes	No _	<u>v</u>
Type:							Hydric Soi	I Present?	Yes	No _	<u> </u>
Type:							Hydric Soi	I Present?	Yes	No _	<u>v</u>
Type: Depth (inc							Hydric Soi	I Present?	Yes	No _	<u>v</u>

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.360192	Lon.	-80.492766
STREAM/SITE ID AND SITE DESCR						W-B1a, Pipeline ROW		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-B1a	Emergent	0.0119	Emergent					
					_			
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
					Ļ	11 OF NO		
Total Impact	DADT "	0.0119			Г	Estimated		
Westland Cl		Jnit Scores	Danie annout Helifa					
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0119	-		\$714.00		
Total Forested			0	-		\$71 4.00		
Total Open Water				-				
Total Open water			0					

Project/Site:	Mountain Valley	Pipeline	City/County:	Harrison		9	Sampling Dat	te:	October 21, 2	2014
Applicant/ Owner:	MVP		State:	WV	Samplin	g Point:	W-B1a-W	/P1		
Investigator(s)	SR CM KL			Section	n, Township,	Range:	N/A			
Landform (hillslope, terrace, etc.):	Terrace		Local Relief (co	oncave, convex	, none):	Concave)		Slope (%):	35
Subregion:	LRR	Lat: 39	.360092	Long	: -80.4	92534		Datum	: NAD83	
Soil Map Unit Name:	Gilpin-Upshur complex,	35 to 70 percent slop	es, severely eroded	NWI classi	fication:	PEM				
Are Vegetation Are Vegetation SUMMARY C	on, Soil, or	Hydrolog Hydrolog Attach sit	y significantly dist y naturally probler e map showing	rurbed?	Are "Norma (If needed, e	explain an	tances" prese	ent?: Remarks	Yes [□ No
Нус	getation Present?: dric Soil Present?: drology Present?:	Yes Yes Yes	No No No	Is the San	npled Area v a Wetla		X Yes		No	
Remarks: Plo	t I									
Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis	mary Indicators: mary Indicators (min or (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial Imag d Leaves (B9) a (B13) s: resent?: X	ery (B7)	True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in	ots (B14) Odor (C1) heres on Living uced Iron (C4) oction in Tilled Si e (C7) Remarks)			Soil Surface Sparsely Ve Drainage Pa Moss Trim L Dry-Season Crayfish Bur	e Cracks of getated (continues (B1)) Water Tarrows (C8) Visible on Stressed of Position (D3) aphic Relation (D3)	Concave Surface 310) 6) able (C2) 3) Aerial Imagery (Plants (D1) 1 (D2) 3) dief (D4)	e (B8)
Saturation Pro (includes capillar		res 🔀 I	No Depth (inches)):						
	ed Data (stream gau otos, previous inspe									
Remarks:										ľ

Tree Stratum	Plot size:	30 ft	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
				_	_	Total Number of Dominant		
						Species Across All Strata: Percent of Dominant Species	2	(B)
				_	<u>-</u>	That Are OBL, FACW, or FAC:	100	(A/B)
				_	_	Prevalence Index worksheet:		
				-	_	Total % Cover of:	Multiply b	<u>oy:</u> □
				-	_	OBL species: x1 =:	0	
				_	_	FACW species: x2 =:	0	
L	Tota	l Cover:	0	50% of total cover:	0	FAC species: x3 =:	0	
	_			20% of total cover:	0	FACU species: x4 =:	0	
Sapling Stratum	Plot size:	15 ft		55751.		UPL species: x5 =:	0	
	_			_	_	Column Totals: 0 (A)	0	(B)
				-	_	Prevalence Index = B/A =:	0	_
				-	_	Hydrophytic Vegetation Indica	itors:	
				_	_	1 - Rapid Test for Hydrophytic	> Vegetatio	n
				_	_	2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0*		
						4 – Morphological Adaptation (Provide supporting data	s* in Remark	·e)
	Toto	I Cover:	0	50% of total	0	Problematic Hydrophytic Veg *Indicators of hydric soil and wetlan	xplain)	
	Tota	i Cover.		cover: 20% of total		be present, unless disturbed or pro		gy maon
Shrub Stratum	Plot size:	15 ft		cover:	0	Definitions of Five Vegetation St Woody plants, excluding woody v Tree - ft (6 m) or more in height and 3 in diameter at breast height (DBH).		
				_	_	Woody plants, excluding we approximately 20 ft (6 m) or		ght and
				_	_	less than 3 in. (7.6 cm) DBI Shrub - Woody plants, excluding wood		roximately
				_	_	3 to 20 ft (1 to 6 m) in neight.	lanta inaludi:	
				_	_	Herb - All herbaceous (non-woody) p herbaceous vines, regardless plants, except woody vines, le	of size, and v	voody
				-	_	ft (1 m) in height. Woody Vine - All woody vines, rega	rdless of heiç	ght.
				_		=		
	Tota	I Cover:	0	50% of total cover:	0		X	Yes
				20% of total	0	Hydrophytic Vegetation Present	_	
				cover:				No

Herb Stratum	ve Strata) - L Plot size:	5 ft	Absolute % Cover	Dominant Species?	Indicator Status
Arthraxon hispidu	us		55	Yes	FAC
Symphyotrichum	racemosum		25	Yes	FACW
Microstegium vin	nineum		20	No	FAC
Scirpus cyperinu	s		10	No	FACW
Verbesina alterni	ifolia		5	No	FAC
				-	-
				-	-
				_	_
				_	_
				_	_
				-	
	Total	Cover:	115	50% of total cover:	
Mandy Vina Chrote	Plot			20% of total cover:	23
Woody Vine Strati	um size:	30 ft			
				_	
				-	
				_	-
				_	-
				- 50% of total	_
	Total	Cover:	0	cover:	
				cover:	0
Remarks:					
clude photo ers here or on a arate sheet.)					
,					

	ile Des	cription:	(Desc	ribe to the depth n	eede	d to do	cume	nt the indic	cator or	CC	onfirm the abse	nce	of indicators	.)			
	Depth inches)			<u>Li</u>	tholog	ay					Hue		Color (m Value	oist) Chron	na	%	_
	0-12	Ma	ıtrix:		Silty	Clay L	oam				10YR		5	2		80	7
		Red Featu		Concentrati	on			Matrix			7.5YR		4	6		20	i
		ı Red Featu		_				_			_		_	_			1
		Ма	ıtrix:			_					_		_	_			
		Red Featu		_				_			_		-	_			
		Red Featu		_				_			_		_	_			
		Ма	ıtrix:			_					_		_	_			
		Red Featu		_				_			_		_	_			
. <u></u>		Red Featu		_				_			_		_	_			
		Mat	trix:			_					_		_	_			
		Redox								_		_	_				
		Red Featu		_				_			_		_	_			
Hyd	ric Soil	Indicator	s:										Indicators f	or Proble	ematic	Hydric Soi	ils**:
	Histos	ol (A1)				Dark S	Surfac	e (S7)					2 cm Muck	(A10) (MLRA	147)	
	Histic I	Epipedon	(A2)			Polyva	alue B	Below Surfac	ce (S8)	(1	MLRA 147, 148)		Coast Prairi		(A16)		
	Black I	Histic (A3))			Thin D	Dark S	Surface (S9)	(MLR	A 1	47, 148)		-	l 47, 148) 	.	(F.10)	
	Hydrog	gen Sulfid	e (A4))		Loam	y Gley	ved Matrix (F	F2)			Ш	Piedmont F (MLRA 1	136, 147)	Soils (F19)	
	Stratifi	ed Layers	(A5)		\boxtimes	Deple	ted M	atrix (F3)					Other (Expl	ain in Rer	narks)		
	2 cm N	Muck (A10) (L	RR N)		Redox	x Dark	Surface (F	6)				Very Shallo	w Dark S	urface	(TF12)	
	Deplet	ed Below	Dark	Surface (A11)		Deple	ted Da	ark Surface	(F7)								
	Thick [Dark Surfa	ace (A	12)		Redox	x Depr	ressions (F8	3)							c vegetation e present, u	
	Sandy	Mucky M	ineral	(S _{MLR} , LR, P, N, 48)		Iron-M	/langa	nese Masse	es (F12)		(LRR N, MLRA	136)	disturbed	or proble	matic.		
	Sandy	Gleyed M	latrix	(S4)		Umbri	ic Surf	face (F13)	(MLRA	13	86, 122)						
	Sandy	Redox (S	55)			Piedm	nont F	loodplain Sc	oils (F19)	(MLRA 148))					
	Strippe	ed Matrix ((S6)			Red P	Parent	Material (F2	21) (ИL	RA 127, 147)						
Res	trictive	Layer (if	obsei	rved):													
	Тур	Type: Gravel fill								Hydric	Soil	Present?:	X	es	☐ No		
		Depth nches):															
	Remark	arks: Plot located on old logging road.															



Photograph Direction WNW

Comments:	

Project/Site:	Mountain Valley F	Harrison	arrison				te:	October 21, 2014				
Applicant/ Owner:	MVP		State:	WV	Samplir	ng Point:		W-B1a-L	JP1			
Investigator(s)	SR CM KL			Section	n, Township	, Range:	: [N/A				
Landform (hillslope, terrace, etc.):	Hillslope		Local Relief (c	oncave, convex	x, none):	Slope	L			Slop	oe (%):	35
Subregion:	LRR	Lat: 39	.360075	Long	: -8	0.49245	53		Datun	n: [NAD 83	
Soil Map Unit Name:	Gilpin-Upshur complex, 3	35 to 70 percent slop	es, severely eroded	NWI classi	fication:	N/A						
Are Vegetation Are Vegetation SUMMARY O	n , Soil , or FINDINGS	Hydrolog Hydrolog	y significantly dist y naturally probler e map showing	urbed? matic?	Are "Norma (If needed,	al Circun explain	nstand any ar	nswers in	ent?: Remark	Ks.)	Yes] No
Hyd	etation Present?: ric Soil Present?: drology Present?:	Yes Yes Yes	No No No	Is the San	npled Area a Wet			Yes	×	No		
Remarks:												
Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	y Indicators: mary Indicators (min (A1) ble (A2) (B1) posits (B2) (B3) crust (B4) (B5) dible on Aerial Image (Leaves (B9) (B13)		required: check a True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in	ts (B14) Odor (C1) heres on Living uced Iron (C4) ction in Tilled S e (C7)	, ,		Solution Sp. Sp. Mod Dry Cra Sad Stu Ge Sh. Mid	il Surface arsely Ve ainage Pa oss Trim L y-Season ayfish Bu	e Cracks egetated atterns (I Lines (B1 Vater T rrows (C Visible or Stressed C Position uitard (D raphic Re	(B6) Concar B10) 16) Table (Cass) A Aerial Plants n (D2) 3) elief (D4)	Imagery (C	(B8)
	esent?: Yesent?: Yese	es X I):		We	etland	Hydrolo Presen] Ye	s D	₫ No
aerial pho	otos, previous inspe	ections), if avail	lable:									

Plot size:	30 ft	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species		(.)						
0.20.			·		That Are OBL, FACW, or FAC:	1	(A)						
		35	Yes	FAC	Total Number of Dominant Species Across All Strata:	3	(B)						
		30	Yes	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC:	33.33	(A/B						
		15	No	FACU	Prevalence Index worksheet:		<u> </u>						
		10	No	FACU	Total % Cover of: Multiply by								
		5	No	FAC	OBL species: x1 =:	0							
			-	_	FACW species: x2 =:	0							
Tota	al Cover:	95	50% of total cover:	47.5	FAC species: x3 =:	0	_						
_			20% of total cover:	19	FACU species: x4 =:	0							
Plot size:	15 ft				UPL species: x5 =:	0							
			_	_	Column Totals: 0 (A)	0	(B)						
			_	_	Prevalence Index = B/A =:	0							
			-	_	Hydrophytic Vegetation Indica	tors:							
			-	_		: Vegetatior	1						
			_	_	3 - Prevalence Index is ≤3.0*								
			-	_	(Provide supporting data	in Remarks							
Tota	al Cover:	0	50% of total cover:	0	*Indicators of hydric soil and wetlar	nd hydrolog	. ,						
_			20% of total cover:	0									
Plot size:	15 ft	- 1											
		3	No	FACU	Sapling - approximately 20 ft (6 m) or	more in heigh	nt and						
			_	_	Shrub - Woody plants, excluding wood		oximately						
				_	All herbaceous (non-woody) pl	ants, including	g						
			_	_									
			_	_	Woody Vine - All woody vines, regar	dless of heigh	nt.						
			_	_									
Tota	al Cover:	3	50% of total cover:	1.5		Y	es						
			20% of total cover:	0.6	Hydrophytic Vegetation Present	?: ⊠ N							
	Total Plot size: Total Plot size:	Total Cover: Plot size: 15 ft Total Cover:	Size: 30 ft % Cover 35 35 30 30 30 30 30 30 30 30 30 30 30 30 30	size: 30 tt % Cover Species? 35 Yes 1 30 Yes 1 15 No 1 10 No 1 5 No 1 7 95 50% of total cover: 20% of total cover: 3 7 7 7 7 7 7 7 7 8 7 7 7 9 7 7 7 15 ft 15 ft 15 ft 15 ft	Size: 30 π % Cover Species? Status	Size: 30 1	Size: Sult % Cover Species? Status That Are OBL, FACW, or FAC: 1 Total Number of Dominant Species Across All Strata: Species Across All All All All All All All All All A						

Herb Stratum	Plot size:	5 ft	Absolute % Cover	Dominant Species?	Indicator Status
				_	_
				_	_
				_	-
				_	_
				_	_
				_	_
				_	_
				_	_
				_	_
				_	_
				_	_
	Tota	al Cover:	0	50% of total cover:	0
Woody Vine Stratu	ım Plot	30 ft		20% of total cover:	0
Smilax rotundifoli	5126.		20	Yes	FAC
				_	
				_	
				_	
				_	_
	Tota	al Cover:	20	50% of total cover:	10
				20% of total cover:	4
r					
Remarks: nclude photo					
pers here or on a parate sheet.)					
<i>'</i>					
,					

SOI Profil	L le Desc	ription: (Des	cribe to the depth n	eeded 1	to docum	ent the indicate	or or co	on	firm the abse	nce (of indicators	.)			
	Depth nches)		<u>Li</u>	ithology	,						Color (m				
$\overline{}$	$\stackrel{\cdot}{=}$			0:11				Γ	Hue	7	Value	Chroma	a 	%	٦
)-2	Matrix:		Silt	t Loam			Ļ	10YR		4	4	_ <u> </u> _	100	╛
		Redox Feature:	_			_		L	_		_	_			
		Redox Feature:	_			_			_		_	_			
2	-20	Matrix:		Silt	t Loam				7.5YR		4	4		100	
		Redox Feature:	_			_			_		_	_			
		Redox Feature:	_			_		Ī	_		_	_			٦
		Matrix:			_				_	Ī	_	_			7
		Redox Feature:	_			_			_		_	_			
		Redox Feature:	_			_			_		_	_			
		Matrix:			_				_		_	_			
		Redox Feature:	_						_		_	_			
		Redox Feature:	_			_			_		_	_			
Hydri	ic Soil I	ndicators:									Indicators f	or Probler	natic l	Hydric Soi	ils**:
	Histoso	I (A1)			Dark Surfa	ce (S7)					2 cm Muck	(A10) (N	ILRA ·	147)	
	Histic E	pipedon (A2)		F	Polyvalue	Below Surface ((S8) (ML	_RA 147, 148)		Coast Prairi		A16)		
	Black H	istic (A3)			Thin Dark	Surface (S9) (I	MLRA	14	7, 148)	\Box	Piedmont F	147, 148)	cile (E	:10)	
	Hydroge	en Sulfide (A4	-)	<u> </u>	Loamy Gle	yed Matrix (F2))			ш	(MLRA 1	136, 147)	00115 (1	19)	
	Stratifie	d Layers (A5)			Depleted N	Matrix (F3)					Other (Expl	ain in Rem	arks)		
	2 cm M	uck (A10) (I	_RR N)	☐ F	Redox Dar	k Surface (F6)					Very Shallo	w Dark Sur	face (TF12)	
	Deplete	d Below Dark	Surface (A11)		Depleted D	Oark Surface (F7	7)				**!!!				
	Thick D	ark Surface (A	A12)	F	Redox Dep	oressions (F8)					wetland h	rs of hydro ydrology m	ust be		
	Sandy M	Mucky Minera	(SMLRALP, N,48)		Iron-Manga	anese Masses ((F12)	(l	LRR N, MLRA	136)	disturbed	or problem	atic.		
	Sandy (Gleyed Matrix	(S4)		Umbric Su	rface (F13) (M	ILRA 1	36,	, 122)						
	Sandy F	Redox (S5)		F	Piedmont I	loodplain Soils	(F19)		(MLRA 148)						
	Stripped	d Matrix (S6)		F	Red Paren	t Material (F21)	(MI	_R	A 127, 147)						
Restr	rictive L	ayer (if obse	rved):												
	Туре	e:							Hydric	Soil	Present?:	Ye	S	No No	
	Dept (inches	· I													
F	Remark	s:													

Project/Site:	Mountain Valley F	Harrison	arrison				te:	October 21, 2014				
Applicant/ Owner:	MVP		State:	WV	Samplir	ng Point:		W-B1a-L	JP1			
Investigator(s)	SR CM KL			Section	n, Township	, Range:	: [N/A				
Landform (hillslope, terrace, etc.):	Hillslope		Local Relief (c	oncave, convex	x, none):	Slope	L			Slop	oe (%):	35
Subregion:	LRR	Lat: 39	.360075	Long	: -8	0.49245	53		Datun	n: [NAD 83	
Soil Map Unit Name:	Gilpin-Upshur complex, 3	35 to 70 percent slop	es, severely eroded	NWI classi	fication:	N/A						
Are Vegetation Are Vegetation SUMMARY O	n , Soil , or FINDINGS	Hydrolog Hydrolog	y significantly dist y naturally probler e map showing	urbed? matic?	Are "Norma (If needed,	al Circun explain	nstand any ar	nswers in	ent?: Remark	Ks.)	Yes] No
Hyd	etation Present?: ric Soil Present?: drology Present?:	Yes Yes Yes	No No No	Is the San	npled Area a Wet			Yes	×	No		
Remarks:												
Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	y Indicators: mary Indicators (min (A1) ble (A2) (B1) posits (B2) (B3) crust (B4) (B5) dible on Aerial Image (Leaves (B9) (B13)		required: check a True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in	ts (B14) Odor (C1) heres on Living uced Iron (C4) ction in Tilled S e (C7)	, ,		Solution Sp. Sp. Mod Dry Cra Sad Stu Ge Sh. Mid	il Surface arsely Ve ainage Pa oss Trim L y-Season ayfish Bu	e Cracks egetated atterns (I Lines (B1 Vater T rrows (C Visible or Stressed C Position uitard (D raphic Re	(B6) Concar B10) 16) Table (Cass) A Aerial Plants n (D2) 3) elief (D4)	Imagery (C	(B8)
	esent?: Yesent?: Yese	es X I):		We	etland	Hydrolo Presen] Ye	s D	▼ No
aerial pho	otos, previous inspe	ections), if avail	lable:									

Plot size:	30 ft	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species		(.)
0.20.			·		That Are OBL, FACW, or FAC:	1	(A)
		35	Yes	FAC	Total Number of Dominant Species Across All Strata:	3	(B)
		30	Yes	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC:	33.33	(A/B
		15	No	FACU	Prevalence Index worksheet:		<u> </u>
		10	No	FACU	Total % Cover of:	Multiply by	<u>y:</u> 1
		5	No	FAC	OBL species: x1 =:	0	
			-	_	FACW species: x2 =:	0	
Tota	al Cover:	95	50% of total cover:	47.5	FAC species: x3 =:	0	_
_			20% of total cover:	19	FACU species: x4 =:	0	
Plot size:	15 ft				UPL species: x5 =:	0	
			_	_	Column Totals: 0 (A)	0	(B)
			_	_	Prevalence Index = B/A =:	0	
			-	_	Hydrophytic Vegetation Indica	tors:	
			-	_		: Vegetatior	1
			_	_	3 - Prevalence Index is ≤3.0*		
			-	_	(Provide supporting data	in Remarks	
Tota	al Cover:	0	50% of total cover:	0	*Indicators of hydric soil and wetlar	nd hydrolog	. ,
_			20% of total cover:	0			
Plot size:	15 ft	- 1					
		3	No	FACU	Sapling - approximately 20 ft (6 m) or	more in heigh	nt and
			_	_	Shrub - Woody plants, excluding wood		oximately
				_	All herbaceous (non-woody) pl	ants, including	g
			_	_			
			_	_	Woody Vine - All woody vines, regar	dless of heigh	nt.
			_	_			
Tota	al Cover:	3	50% of total cover:	1.5		Y	es
			20% of total cover:	0.6	Hydrophytic Vegetation Present	?: ⊠ N	
	Total Plot size: Total Plot size:	Total Cover: Plot size: 15 ft Total Cover:	Size: 30 ft % Cover 35 35 30 30 30 30 30 30 30 30 30 30 30 30 30	size: 30 tt % Cover Species? 35 Yes 1 30 Yes 1 15 No 1 10 No 1 5 No 1 7 95 50% of total cover: 20% of total cover: 3 7 7 7 7 7 7 7 7 8 7 7 7 9 7 7 7 15 ft 15 ft 15 ft 15 ft	Size: 30 π % Cover Species? Status	Size: 30 1	Size: Sult % Cover Species? Status That Are OBL, FACW, or FAC: 1 Total Number of Dominant Species Across All Strata: Species Across All All All All All All All All All A

Herb Stratum	Plot size:	5 ft	Absolute % Cover	Dominant Species?	Indicator Status
				_	_
				_	_
				_	-
				_	_
				_	_
				_	_
				_	_
				_	_
				_	_
				_	_
				_	_
	Tota	al Cover:	0	50% of total cover:	0
Woody Vine Stratu	ım Plot	30 ft		20% of total cover:	0
Smilax rotundifoli	5126.		20	Yes	FAC
				_	
				_	_
				_	
				_	_
	Tota	al Cover:	20	50% of total cover:	10
				20% of total cover:	4
r					
Remarks: nclude photo					
pers here or on a parate sheet.)					
, i					
,					

SOI Profil	L le Desc	ription: (Des	cribe to the depth n	eeded 1	to docum	ent the indicate	or or co	on	firm the abse	nce (of indicators	.)			
	Depth nches)		<u>L</u> i	ithology	,						Color (m				
$\overline{}$	$\stackrel{\cdot}{=}$			0:11				Γ	Hue	7	Value	Chroma	a 	%	٦
)-2	Matrix:		Silt	t Loam			Ļ	10YR		4	4	_ <u> </u> _	100	╛
		Redox Feature:	_			_		L	_		_	_			
		Redox Feature:	_			_			_		_	_			
2	-20	Matrix:		Silt	t Loam				7.5YR		4	4		100	
		Redox Feature:	_			_			_		_	_			
		Redox Feature:	_			_		Ī	_		_	_			٦
		Matrix:			_				_	Ī	_	_			7
		Redox Feature:	_			_			_		_	_			
		Redox Feature:	_			_			_		_	_			
		Matrix:			_				_		_	_			
		Redox Feature:	_			_			_		_	_			
		Redox Feature:	_			_			_		_	_			
Hydri	ic Soil I	ndicators:									Indicators f	or Probler	natic l	Hydric Soi	ils**:
	Histoso	I (A1)			Dark Surfa	ce (S7)					2 cm Muck	(A10) (N	ILRA ·	147)	
	Histic E	pipedon (A2)		F	Polyvalue	Below Surface ((S8) (ML	_RA 147, 148)		Coast Prairi		A16)		
	Black H	istic (A3)			Thin Dark	Surface (S9) (I	MLRA	14	7, 148)	\Box	Piedmont F	147, 148)	cile (E	:10)	
	Hydroge	en Sulfide (A4	-)	<u> </u>	Loamy Gle	yed Matrix (F2))			ш	(MLRA 1	136, 147)	00115 (1	19)	
	Stratifie	d Layers (A5)			Depleted N	Matrix (F3)					Other (Expl	ain in Rem	arks)		
	2 cm M	uck (A10) (I	_RR N)	☐ F	Redox Dar	k Surface (F6)					Very Shallo	w Dark Sur	face (TF12)	
	Deplete	d Below Dark	Surface (A11)		Depleted D	Oark Surface (F7	7)				**!!!				
	Thick D	ark Surface (A	A12)	F	Redox Dep	oressions (F8)					wetland h	rs of hydro ydrology m	ust be		
	Sandy M	Mucky Minera	(SMLRALP, N,48)		Iron-Manga	anese Masses ((F12)	(l	LRR N, MLRA	136)	disturbed	or problem	atic.		
	Sandy (Gleyed Matrix	(S4)		Umbric Su	rface (F13) (M	ILRA 1	36,	, 122)						
	Sandy F	Redox (S5)		F	Piedmont I	loodplain Soils	(F19)		(MLRA 148)						
	Stripped	d Matrix (S6)		F	Red Paren	t Material (F21)	(MI	_R	A 127, 147)						
Restr	rictive L	ayer (if obse	rved):												
	Туре	e:							Hydric	Soil	Present?:	Ye	S	No No	
	Dept (inches														
F	Remark	s:													

Project/Site:	Mountain Valley	Pipeline	City/County:	Harrison		9	Sampling Dat	te:	October 21, 2	2014
Applicant/ Owner:	MVP		State:	WV	Samplin	g Point:	W-B1a-W	/P1		
Investigator(s)	SR CM KL			Section	n, Township,	Range:	N/A			
Landform (hillslope, terrace, etc.):	Terrace		Local Relief (co	oncave, convex	, none):	Concave)		Slope (%):	35
Subregion:	LRR	Lat: 39	.360092	Long	: -80.4	92534		Datum	: NAD83	
Soil Map Unit Name:	Gilpin-Upshur complex,	35 to 70 percent slop	es, severely eroded	NWI classi	fication:	PEM				
Are Vegetation Are Vegetation SUMMARY C	on, Soil, or	Hydrolog Hydrolog Attach sit	y significantly dist y naturally probler e map showing	rurbed?	Are "Norma (If needed, e	explain an	tances" prese	ent?: Remarks	Yes [□ No
Нус	getation Present?: dric Soil Present?: drology Present?:	Yes Yes Yes	No No No	Is the San	npled Area v a Wetla		X Yes		No	
Remarks: Plo	t I									
Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis	mary Indicators: mary Indicators (min or (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial Imag d Leaves (B9) a (B13) s: resent?: X	ery (B7)	True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in	ots (B14) Odor (C1) heres on Living uced Iron (C4) oction in Tilled Si e (C7) Remarks)			Soil Surface Sparsely Ve Drainage Pa Moss Trim L Dry-Season Crayfish Bur	e Cracks of getated (continues (B1)) Water Tarrows (C8) Visible on Stressed of Position (D3) aphic Relation (D3)	Concave Surface 310) 6) able (C2) 3) Aerial Imagery (Plants (D1) 1 (D2) 3) dief (D4)	e (B8)
Saturation Pro (includes capillar		res 🔀 I	No Depth (inches)):						
	ed Data (stream gau otos, previous inspe									
Remarks:										ľ

Tree Stratum	Plot size:	30 ft	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
				_	_	Total Number of Dominant		
						Species Across All Strata: Percent of Dominant Species	2	(B)
				_	<u>-</u>	That Are OBL, FACW, or FAC:	100	(A/B)
				_	_	Prevalence Index worksheet:		
				-	_	Total % Cover of:	Multiply b	<u>oy:</u> □
				-	_	OBL species: x1 =:	0	
				_	_	FACW species: x2 =:	0	
L	Tota	l Cover:	0	50% of total cover:	0	FAC species: x3 =:	0	
	_			20% of total cover:	0	FACU species: x4 =:	0	
Sapling Stratum	Plot size:	15 ft		55751.		UPL species: x5 =:	0	
	_			_	_	Column Totals: 0 (A)	0	(B)
				-	_	Prevalence Index = B/A =:	0	_
				-	_	Hydrophytic Vegetation Indica	itors:	
				_	_	1 - Rapid Test for Hydrophytic	> Vegetatio	n
				_	_	2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0*		
						4 – Morphological Adaptation (Provide supporting data	s* in Remark	re)
	Toto	I Cover:	0	50% of total	0	Problematic Hydrophytic Veg *Indicators of hydric soil and wetlan	etation* (E	xplain)
	Tota	i Cover.		cover: 20% of total		be present, unless disturbed or pro		gy maon
Shrub Stratum	Plot size:	15 ft		cover:	0	Definitions of Five Vegetation St Woody plants, excluding woody v Tree - ft (6 m) or more in height and 3 in diameter at breast height (DBH).		
				_	_	Woody plants, excluding we approximately 20 ft (6 m) or		ght and
				_	_	less than 3 in. (7.6 cm) DBI Shrub - Woody plants, excluding wood		roximately
				_	_	3 to 20 ft (1 to 6 m) in neight.	lanta inaludis	
				_	_	Herb - All herbaceous (non-woody) p herbaceous vines, regardless plants, except woody vines, le	of size, and v	voody
				-	_	ft (1 m) in height. Woody Vine - All woody vines, rega	rdless of heiç	ght.
				_		=		
	Tota	I Cover:	0	50% of total cover:	0		X	Yes
				20% of total	0	Hydrophytic Vegetation Present	_	
				cover:				No

Herb Stratum	ve Strata) - L Plot size:	5 ft	Absolute % Cover	Dominant Species?	Indicator Status
Arthraxon hispidu	us		55	Yes	FAC
Symphyotrichum	racemosum		25	Yes	FACW
Microstegium vin	nineum		20	No	FAC
Scirpus cyperinu	s		10	No	FACW
Verbesina alterni	ifolia		5	No	FAC
				-	-
				-	-
				_	_
				_	_
				_	_
				-	
	Total	Cover:	115	50% of total cover:	
Mandy Vina Chrote	Plot			20% of total cover:	23
Woody Vine Strati	um size:	30 ft			
				_	
				-	
				_	-
				_	-
				- 50% of total	_
	Total	Cover:	0	cover:	
				cover:	0
Remarks:					
clude photo ers here or on a arate sheet.)					
,					

Depth	cription: (Des			o docume	ent the indicat	tor or o	0	onfirm the absend			
(inches)		<u>Li</u>	thology				-	Hue	Color (m Value	noist) Chroma	%
0-12	Matrix:		Silty Cl	ay Loam				10YR	5	2	80
	Redox Feature:	Concentrati	ion		Matrix			7.5YR	4	6	20
	Redox Feature:	_			_			_	_	_	
	Matrix:							_	_	_	
	Redox Feature:	_		_			_		_	_	
	Redox Feature:	_		_				_	_	_	
	Matrix:			_				_	_	_	
	Redox Feature:	_			_			_	_	_	
	Redox Feature:	_			_			_	_	_	
	Matrix:							_	_	_	
	Redox Feature:	_			_			_	_	_	
	Redox Feature:	_			_			_	_	_	
Hydric Soil	I Indicators:								Indicators	for Problemati	c Hydric Soils**:
Histos	sol (A1)			ark Surfac	ce (S7)				2 cm Muck	(A10) (MLR	A 147)
Histic	Epipedon (A2)		□ P	olyvalue E	Below Surface	(S8)	(1	MLRA 147, 148)		rie Redox (A16))
Black	Histic (A3)		П	hin Dark S	Surface (S9)	(MLRA	1	47, 148)	_	147, 148) - Floodplain Soils	(E10)
Hydro	gen Sulfide (A	1)		oamy Gley	yed Matrix (F2	2)		L		136, 147)	(1 19)
Stratif	ied Layers (A5))		epleted M	latrix (F3)				Other (Exp	lain in Remarks	3)
2 cm l	Muck (A10) (LRR N)	F	Redox Dark	Surface (F6))			Very Shallo	ow Dark Surface	e (TF12)
Deplet Deplet	ted Below Dark	Surface (A11)		epleted D	ark Surface (F	- 7)					
Thick	Dark Surface (A12)	F	Redox Dep	ressions (F8)				wetland h	ydrology must	tic vegetation and be present, unles
Sandy	/ Mucky Minera	I (SMLRALPP, N,48)	Ir	on-Manga	nese Masses	(F12)		(LRR N, MLRA 1	36) disturbed	or problematic	
Sandy	/ Gleyed Matrix	(S4)	□ r	Imbric Sur	face (F13) (F	MLRA 1	13	36, 122)			
Sandy	Redox (S5)		□ P	edmont F	loodplain Soil	s (F19)		(MLRA 148)			
Strippe	ed Matrix (S6)		□ F	Red Parent	: Material (F21) (M	IL	RA 127, 147)			
Restrictive	Layer (if obse	erved):									
Ту	pe:	Gravel fil	I					Hydric S	Soil Present?:	Yes	☐ No
De (inche	epth es):	12									
Remar	rks: Plot lo	ocated on old logging	road.								



Photograph Direction WNW

Comments:	

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.358924	Lon.	-80.493367
STREAM/SITE ID AND SITE DESCR	IPTION:					W-A40, Pipeline ROW/ATWS		
(% stream slope, watershed size {a	creage}, unaltered	or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-A40	Emergent	0.3111	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.3111						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.3111			\$40.000.00		
Total Scrub-Shrub			0			\$18,666.00	,	
Total Forested			0					
Total Open Water			0					

Project/Site: MVP			City/C	county: Harrison		Sampling Date: 06/05/2015		
Applicant/Owner: MVP			,	•		Sampling Point: W-A40		
Investigator(s): S. Yarbroug	jh, R. Sparha	wk, W	. Shattenber Section	on, Township, Range: N				
Landform (hillslope, terrace, etc				· · · · · · —		Slone (%): 0		
Subregion (LRR or MLRA): LI				Long: <u>-80</u>				
Soil Map Unit Name: Philo si		Lat						
					NWI classific			
Are climatic / hydrologic conditi			•		•	,		
Are Vegetation, Soil	, or Hydrok	ду	significantly distur	bed? Are "Norma	l Circumstances" p	oresent? Yes No		
Are Vegetation, Soil	, or Hydrok	ду	naturally problema	atic? (If needed, e	explain any answe	ers in Remarks.)		
SUMMARY OF FINDING	GS – Attach	site n	nap showing san	npling point location	ons, transects	s, important features, etc.		
		-						
Hydrophytic Vegetation Prese			No	Is the Sampled Area				
Hydric Soil Present?	Yes		No	within a Wetland?	Yes	No		
Wetland Hydrology Present?	Yes		No					
Remarks: Cowardin Code: PEM								
HGM: DEPRESSIONAL								
WT: RPWWN								
Wetland extended in a 2	018 survey.							
HYDROLOGY								
Wetland Hydrology Indicato	ors:				Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum	of one is require	d; chec	k all that apply)	_	Surface Soil	` ,		
Surface Water (A1)			True Aquatic Plants (getated Concave Surface (B8)		
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)								
Saturation (A3)			·	es on Living Roots (C3)	Moss Trim L			
Water Marks (B1)			Presence of Reduced			Water Table (C2)		
Sediment Deposits (B2)		_	Recent Iron Reduction		Crayfish Bur			
Drift Deposits (B3)		_	Thin Muck Surface (C			isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)			Other (Explain in Rer	narks)		tressed Plants (D1)		
Iron Deposits (B5)						Position (D2)		
Inundation Visible on Aer					Shallow Aqu			
✓ Water-Stained Leaves (B	,9)					aphic Relief (D4)		
Aquatic Fauna (B13)					FAC-Neutral	Test (D5)		
Field Observations:		./						
Surface Water Present?			Depth (inches):					
Water Table Present?			Depth (inches):	_				
Saturation Present? (includes capillary fringe)	Yes N	·	Depth (inches):	Wetland H	Hydrology Preser	nt? Yes <u>/</u> No		
Describe Recorded Data (stre	eam gauge, mor	itoring v	well, aerial photos, pre	vious inspections), if ava	ilable:			
Remarks:								

VEGETATION (Four Strata) – Use scientific

Tree Stratum (Plot size: 30')

Sapling/Shrub Stratum (Plot size: 15')

Herb Stratum (Plot size: 5')

2. Juncus effusus

4. Carex vulpinoidea 5. Eleocharis obtusa____

_{7.} Poa pratensis

Woody Vine Stratum (Plot size: 15')

6. Phalaris arundinacea

1. Carex scoparia

3. Carex frankii

	Absolute	Dominant	Indicator	Dominance Test workshee	et:	
30')		Species?		Number of Dominant Specie That Are OBL, FACW, or FA	es	_ (A)
			·	Total Number of Dominant Species Across All Strata:	4	_ (B)
				Percent of Dominant Specie That Are OBL, FACW, or FA		_ (A/B)
				Prevalence Index workshe	et:	
	0	= Total Cov	er er	Total % Cover of:	Multiply by:	
50% of total cover:0				OBL species	_ x 1 =	
lot size: 15'				FACW species	_ x 2 =	_
				FAC species	_ x 3 =	_
				FACU species	_ x 4 =	
				UPL species	_ x 5 =	
				Column Totals:	_ (A)	(B)
				Prevalence Index = B	/A =	
				Hydrophytic Vegetation In	dicators:	
	-			1 - Rapid Test for Hydro	ophytic Vegetation	
	-			v 2 - Dominance Test is >	-50%	
				3 - Prevalence Index is	≤3.0 ¹	
		= Total Cov	_	4 - Morphological Adapt	tations ¹ (Provide su	pporting
50% of total cover: 0	20% of	total cover:		data in Remarks or o	on a separate sheet	t)
)	20	~	EA C) A /	Problematic Hydrophytic	c Vegetation ¹ (Expl	ain)
	20		FACW_			
	20		F <u>ACW</u>	¹ Indicators of hydric soil and		must
	20		OBL	be present, unless disturbed	•	
	15		OBL OBL	Definitions of Four Vegeta	tion Strata:	
 ea	15		OBL	Tree – Woody plants, exclud	ding vines, 3 in. (7.6	6 cm) o
, a	5		F <u>ACU</u>	more in diameter at breast h height.		
			·	Sapling/Shrub – Woody plathan 3 in. DBH and greater tm) tall.		
		= Total Cov		Herb – All herbaceous (non- of size, and woody plants les		ardless
50% of total cover: <u>57.5</u> ot size: <u>15'</u>)	20% of	total cover:	23	Woody vine – All woody vin height.	nes greater than 3.2	28 ft in
				Hydrophytic		
				Hydrophytic Vegetation		
	0	= Total Cov	er	Present? Yes	✓ No	
		total cover:	. 0	1		

Remarks: (Include photo numbers here or on a separate

Wet meadow depression

SOIL Sampling Point: W-A40

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	the abser	nce of indicators.)
Depth	Matrix		Redo	x Features	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR 3/3	90	7.5YR 5/6	10	С	M/PL	CL	
		·			-			
			_					
			_					
¹ Type: C=Ce	oncentration, D=Depl	etion, RM=Re	educed Matrix, MS	S=Masked	Sand Gr	ains.		: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Inc	dicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)				_ 2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be	. ,	ce (S8) (I	MLRA 147,		Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Sເ	ırface (S9)	(MLRA	147, 148)		(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix (F2)			Piedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Ma	trix (F3)				(MLRA 136, 147)
	ıck (A10) (LRR N)		Redox Dark				_	_ Very Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Da				_	Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) ((LRR N,		
	A 147, 148)		MLRA 13					
	Sleyed Matrix (S4)		Umbric Surfa					Indicators of hydrophytic vegetation and
-	Redox (S5)		Piedmont Flo					wetland hydrology must be present,
	Matrix (S6)		Red Parent N	Material (F	21) (ML R	RA 127, 147	7)	unless disturbed or problematic.
Restrictive I	Layer (if observed):							
Type:			_					_
Depth (in	ches):		_				Hydric S	Soil Present? Yes No
Remarks:								



Photograph Direction SE

Comments:			

Project/Site: MVP		City/C	County: Harrison		Sampling Date: 06/05/2015		
Applicant/Owner: MVP					Sampling Point: W-A40/A41 U		
Investigator(s): S. Yarbrough, R. Sp	arhawk, W						
Landform (hillslope, terrace, etc.): Hillslo					Slope (%): 2		
Subregion (LRR or MLRA): LRRN							
Soil Map Unit Name: Philo silt loam (
Are climatic / hydrologic conditions on the							
Are Vegetation, Soil, or H		*					
Are Vegetation, Soil, or H				explain any answe			
SUMMARY OF FINDINGS – Att							
Command of Thebreso Acc				, , , , , , , , , , , , , , , , , , , ,	, important reatures, etc.		
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area				
Hydric Soil Present?	Yes		within a Wetland?	Yes	No		
Wetland Hydrology Present? Remarks:	Yes	No					
UPLAND							
HYDROLOGY							
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum of one is re	eauired: chec	k all that apply)		Surface Soil			
Surface Water (A1)	•	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Patterns (B10)			
Saturation (A3)			es on Living Roots (C3)	Moss Trim L			
Water Marks (B1)		Presence of Reduced	-		Water Table (C2)		
Sediment Deposits (B2)		Recent Iron Reduction	on in Tilled Soils (C6)	Crayfish Bur	rows (C8)		
Drift Deposits (B3)	_	Thin Muck Surface (C	C7)	Saturation V	isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		Other (Explain in Rer	marks)	Stunted or S	tressed Plants (D1)		
Iron Deposits (B5)				Geomorphic	Position (D2)		
Inundation Visible on Aerial Imagery	y (B7)			Shallow Aqu	itard (D3)		
Water-Stained Leaves (B9)					aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)		
Field Observations:	🗸	5 (
Surface Water Present? Yes	No	Depth (inches):					
		Depth (inches):					
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland F	lydrology Preser	nt? Yes No		
Describe Recorded Data (stream gauge	, monitoring v	well, aerial photos, pre	evious inspections), if ava	ilable:			
Damada							
Remarks: No indicators for wetland hydrological remarks:	oav						
Welland Hydroic	yy.						
1							

Sampling Point: W-A40/A41 UP

,	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:0 (A)
2				
3				Total Number of Dominant Species Across All Strata:3 (B)
				Opecies Across Air Otrata.
4				Percent of Dominant Species That Are OBL_FACW_or FAC: 0% (A/B)
5			-	That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
/	0			Total % Cover of: Multiply by:
500/ (/ /)		= Total Co		OBL species x 1 =
50% of total cover: 0	20% of	total cover	:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				
1				FAC species x 3 =
2	-			FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Dravalance Index D/A
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
J	0	= Total Co		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		total cover	_	4 - Morphological Adaptations ¹ (Provide supporting
E!	20 /6 01	total cover		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5) 1. Plantago lanceolata	20	~	LIDI	Problematic Hydrophytic Vegetation ¹ (Explain)
	20	<u> </u>	UPL	
2. Poa pratensis			F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Trifolium pratense	20		F <u>ACU</u>	be present, unless disturbed or problematic.
4. Bromus sp.	15		ND	Definitions of Four Vegetation Strata:
5. Dactylis glomerata	15		FACU_	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
				,
11	90	T-1-1-0		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		= Total Cover total cover		of size, and woody plants less than 3.20 it tall.
Woody Vine Stratum (Plot size: 15')	20 % 01	iolai covei		Woody vine - All woody vines greater than 3.28 ft in
				height.
1				
2		·		
3				
4				Hydrophytic
5				Vegetation
	0	= Total Co	ver	Present? Yes No
50% of total cover:0	20% of	total cover	:0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
ND - Not Determined.				

Sampling Point: W-A40/A41 UP

SOIL

Depth	Matrix		Redox Features	2 - .			
nches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc			Remarks	
0-14	10YR 3/3	100		<u>C</u>	<u> </u>		
							
 -							
	ncentration D-Den	etion PM-P	educed Matrix, MS=Masked Sand Grains.	² l ocat	ion: PL=Pore Lin	ina M-Matrix	,
ype. C=Coi ∕dric Soil In		elion, Kivi=K	educed Matrix, MO=Masked Sand Grains.	LUCAL	Indicators for P		
_ Histosol (Dark Surface (S7)			A10) (MLRA	
_ ,	pedon (A2)		Polyvalue Below Surface (S8) (MLRA	147 148)	Coast Prairie		
_ Black His			Thin Dark Surface (S9) (MLRA 147, 14		(MLRA 14		,
	Sulfide (A4)		Loamy Gleyed Matrix (F2)	10)		oodplain Soils	s (F19)
	Layers (A5)		Depleted Matrix (F3)		(MLRA 13		(* 10)
	ck (A10) (LRR N)		Redox Dark Surface (F6)			v Dark Surfac	e (TF12)
	Below Dark Surface	e (A11)	Depleted Dark Surface (F7)		Other (Expla	in in Remarks	s)
	k Surface (A12)		Redox Depressions (F8)				
	ucky Mineral (S1) (L	.RR N,	Iron-Manganese Masses (F12) (LRR I	٧,			
	147, 148)		MLRA 136)				
	eyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122		³ Indicators of h		-
Sandy Re			Piedmont Floodplain Soils (F19) (MLR		wetland hydro		
	Matrix (S6)		Red Parent Material (F21) (MLRA 127	', 147 <u>)</u>	unless disturb	ed or problen	natic.
Restrictive La	ayer (if observed):						
Type:			_				,
	hes).		<u> </u>	Hydr	ic Soil Present?	Yes	_ No <u> </u>
Depth (inch	100).						
emarks:	e for hydric soil						
emarks:							
emarks:							
lemarks:							
emarks:							
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emarks:							

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.358865	Lon.	-80.490797
STREAM/SITE ID AND SITE DESCRIPTION:					٧	V-A39, Permanent Access Road		
(% stream slope, watershed size {a	creage}, unaltered	d or impairments)						
FORM OF MITIGATION:								
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-A39	Emergent	0.028	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.028						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.028					
Total Scrub-Shrub			0			\$1,680.00		
Total Forested			0	_				
Total Open Water			0	_				

Project/Site: MVP	City/C	_{ounty:} Harrison		Sampling Date: 06/05/2015			
Applicant/Owner: MVP				Sampling Point: W-A39			
Investigator(s): S. Yarbrough, R. Sparhawk, W. Shattenber Section, Township, Range: N/A							
Landform (hillslope, terrace, etc.): Depressional	al Local reli	ef (concave, convex, non	e): Concave	Slope (%): 2-5%			
Subregion (LRR or MLRA): LRRN Lat: 39.358846 Long: -80.490747 Datum: NAD 83							
Soil Map Unit Name: Gilpin-Upshur complex							
Are climatic / hydrologic conditions on the site typi	cal for this time of year? Ye	es <u>/</u> No (If no, explain in R	emarks.)			
Are Vegetation, Soil, or Hydrology	significantly disturb	ped? Are "Normal	Circumstances" p	oresent? Yes No			
Are Vegetation, Soil, or Hydrology	-		xplain any answe				
SUMMARY OF FINDINGS – Attach sit				,			
Hydrophytic Vegetation Present? Yes	✓ No			-			
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		Is the Sampled Area	🗸				
Wetland Hydrology Present? Yes	No	within a Wetland?	Yes	No			
Remarks: Cowardin Code: PEM HGM: Slope WT	<u> </u>						
Information listed on this form represent presence of wetland hydrology, hydroph was obstructed by timber matting.	s the data collected ir	n 2015. The wetland hydric soils was unab	was revisited ble to be confi	on 09/17/2019. The med because the wetland			
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)			
Primary Indicators (minimum of one is required;	check all that apply)		Surface Soil	Cracks (B6)			
Surface Water (A1)	True Aquatic Plants (I		Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odd	or (C1)	Drainage Pa	tterns (B10)			
Saturation (A3)	✓ Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Li	nes (B16)			
Water Marks (B1)	Presence of Reduced	Iron (C4)	Dry-Season	Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Buri	rows (C8)			
Drift Deposits (B3)	Thin Muck Surface (C	57)	Saturation Vi	sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Rem	narks)	Stunted or St	tressed Plants (D1)			
Iron Deposits (B5)			Geomorphic	Position (D2)			
Inundation Visible on Aerial Imagery (B7)			Shallow Aqui	itard (D3)			
<u>✓</u> Water-Stained Leaves (B9)				phic Relief (D4)			
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)			
Field Observations:							
	Depth (inches):						
	Depth (inches):						
Saturation Present? Yes No _ (includes capillary fringe)	Depth (inches):	Wetland H	ydrology Presen	t? Yes <u>/</u> No			
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, pre	vious inspections), if avai	lable:				
Remarks:							
Old access road.							

VEGETATION (Four Strata) - Use scientific names of plants.

2. Liriodendron tulipifera 5 ✓ FACU

2. Carex lurida 30 ✓ OBL 3. Microstegium vimineium 20 ✓ FAC

Tree Stratum (Plot size: 30')

Sapling/Shrub Stratum (Plot size: 15') 1. Ulmus americana

1. Osmundastrum cinnamomeum

Herb Stratum (Plot size: ___5'

mes of	plants.		Sampling Po	oint: <u>W-A39</u>	
Absolute			Dominance Test worksheet:		
% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
			Total Number of Dominant Species Across All Strata:	6	(B)
			Percent of Dominant Species That Are OBL, FACW, or FAC:	83.30%	(A/E
			Prevalence Index worksheet:		
0 .			Total % Cover of:	Multiply by:	
	Total Cov total cover:		OBL species x	1 =	
_ 20% 01	iolai covei.			2 =	
10	/	FACW	· ———	3 =	_
5			· ———	4 =	_
		F <u>ACU</u>	· ———	5 =	_
				A)	(B)
			Prevalence Index = B/A =	:	
			Hydrophytic Vegetation Indica		_
			1 - Rapid Test for Hydrophy		
			2 - Dominance Test is >509	_	
			3 - Prevalence Index is ≤3.0		
<u>15</u> .	= Total Cov	_	4 - Morphological Adaptation		portin
_ 20% of	total cover:	3	data in Remarks or on a		
50			Problematic Hydrophytic Ve		
50		FACW_		ogotation (Explo	,
30 20	<u> </u>	OBL FAC	¹ Indicators of hydric soil and we be present, unless disturbed or		must
			Definitions of Four Vegetation	•	
			Tree – Woody plants, excluding more in diameter at breast height.		
			Sapling/Shrub – Woody plants than 3 in. DBH and greater than m) tall.		
100	Total Cov	 er	Herb – All herbaceous (non-wood size, and woody plants less to		ardless
	total cover:	00	Woody vine – All woody vines	greater than 3.28	3 ft in
_ 20% of	total cover:		of size, and woody plants less the	han 3.28 ft tall.	

Remarks: (Include photo numbers here or on a separate sheet.)

Woody Vine Stratum (Plot size: 15')

Called this a PEM because the red maple is in an upland position with dry soils. The maples merely overhang the wetland; they are not rooted in the delineated wetland area.

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

50% of total cover: $7.5 \overline{)20\%}$ of total cover: 3

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

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

SOIL Sampling Point: W-A39

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirm	the absen	ce of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-1								Leaf litter
2-4"	10YR 4/3	90	7.5YR 5/8	10	С	M/PL	С	
4-10"	10YR 4/6	95	7.5YR 5/8	5	С	M	С	
					-			_
								_
								_
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I							Ind	icators for Problematic Hydric Soils ³ :
Histosol			Dark Surface		(00) (1)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				148)	Coast Prairie Redox (A16)
Black His	stic (A3) n Sulfide (A4)		Thin Dark Su Loamy Gleye			47, 148)		(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	l Layers (A5)		Depleted Ma		r2)		_	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		-6)			Very Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Da					Other (Explain in Remarks)
	ark Surface (A12)	,	Redox Depre					,
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) (_RR N,		
	\ 147, 148)		MLRA 13					
	ileyed Matrix (S4)		Umbric Surfa					ndicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					wetland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7) (unless disturbed or problematic.
	_ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric So	oil Present? Yes No
Remarks:								

Wetland Photograph Page

Wetland ID W-A39 Cowardin Code PEM



Photograph Direction SSE

Date: <u>06/05/20</u>15

Comments: 2015 wetland delineation.



Photograph Direction North

Date: 09/17/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	county: Harrison		Sampling Date: 06/05/2015		
Applicant/Owner: MVP			,		Sampling Point: W-A39 UP		
Investigator(s): S. Yarbrough, R. Sparhawk, W. Shattenberg, K. Lugo Section, Township, Range: N/A							
Landform (hillslope, terrace, etc.): Hill			·		Slope (%): 2-5		
Subregion (LRR or MLRA): LRRN					Slope (%) 0		
Soil Map Unit Name: Gilpin-Upshur							
Are climatic / hydrologic conditions on t	7.7	-					
Are Vegetation, Soil, or	Hydrology	significantly distur	bed? Are "Normal	Circumstances"	present? Yes V No No		
Are Vegetation, Soil, or	Hydrology	naturally problema	atic? (If needed, e	explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS - A	ttach site m	ap showing sam	pling point location	ns, transects	s, important features, etc.		
Lhydrophytic Vagatation Dracont?	Vac	No. 🗸					
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No V	Is the Sampled Area				
Wetland Hydrology Present?	Yes	No V	within a Wetland?	Yes	No		
Remarks:							
UPLAND							
HYDROLOGY							
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum of one is	required; check	all that apply)		Surface Soil	Cracks (B6)		
Surface Water (A1)	<u> </u>	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)		Hydrogen Sulfide Od	or (C1)	Drainage Pa	atterns (B10)		
Saturation (A3)		Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim L	ines (B16)		
Water Marks (B1)		Presence of Reduced	l Iron (C4)	Dry-Season	Water Table (C2)		
Sediment Deposits (B2)		Recent Iron Reductio	n in Tilled Soils (C6)	Crayfish Bur	rows (C8)		
Drift Deposits (B3)		Thin Muck Surface (C	27)	Saturation V	isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		Other (Explain in Rer	narks)	Stunted or S	Stressed Plants (D1)		
Iron Deposits (B5)				Geomorphic	Position (D2)		
Inundation Visible on Aerial Imag	ery (B7)			Shallow Aqu	iitard (D3)		
Water-Stained Leaves (B9)				Microtopogra	aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutra	l Test (D5)		
Field Observations:							
Surface Water Present? Yes _	No	Depth (inches):					
		Depth (inches):					
	No	Depth (inches):	Wetland H	lydrology Prese	nt? Yes No		
(includes capillary fringe) Describe Recorded Data (stream gau	ge, monitoring w	rell, aerial photos, pre	 vious inspections), if ava	ilable:			
Remarks: No indicators of wetland hydrol	logy						
indicators of wetland hydrol	logy.						

Sampling	Point:	W-A39	UP

	Absolute	Dominant	Indicator	Deminance Test worksheet:
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1 Acer rubrum	85	<u> </u>	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
2. Populus grandidentata	15			That Are OBL, FACW, or FAC:3 (A)
			FACU_	Total Number of Dominant
3				Species Across All Strata: 6* (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50% (A/B)
6				
7.				Prevalence Index worksheet:
	100	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover: 50		total cover		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	2070 0.	10101 00101		FACW species x 2 =
1 Ulmus americana	20	~	FACW	FAC species x 3 =
·· ·		·	IACVV	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Description on Index. D/A
6				Prevalence Index = B/A =
		-		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 10	20% of	total cover	:4	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				,
1. Fragaria virginiana	10	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Quercus rubra	10	V	FACU	
3. Carya ovata	10		FACU	¹ Indicators of hydric soil and wetland hydrology must
4. Panicum sp.	10			be present, unless disturbed or problematic.
			ND	Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				my can
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 20	20% of	total cover	:8	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				height.
1. Smilax rotundifolia	10		FAC	
2				
3			<u> </u>	
4				Hydrophytic
5	4.0	-		Vegetation
_		= Total Cov	_	Present? Yes No
50% of total cover:5	20% of	total cover	:2	
Remarks: (Include photo numbers here or on a separate s	heet.)			
ND - Not Determined.				
* Vegetation and IDId to an exical level and include	ممائمات	.:	4	
* Vegetation not ID'd to species level not include	ea in don	iinance te	est.	

Sampling Point: W-A39 UP

Profile Desc	ription: (Describe t	o the depth	n needed to docum	nent the ir	dicator	or confirm	the absenc	e of indica	tors.)		
Depth	Matrix		Redo	x Features							
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Remar	ks	
0-1									Leaf	litter	
1-12	10YR 5/4	100					CL				
	10111014										
1	·						2				
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.			ning, M=Mat		3
Hydric Soil I	ndicators:						Indi	cators for F	Problemation	Hydric S	oils":
Histosol			Dark Surface						(A10) (MLR		
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfac	e (S8) (N	ILRA 147,	148)	Coast Prair	ie Redox (A	16)	
Black His	stic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 1	47, 148)		
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (F	2)		_	Piedmont F	Toodplain So	oils (F19)	
Stratified	l Layers (A5)		Depleted Mat	rix (F3)				(MLRA 1	36, 147)		
2 cm Mu	ck (A10) (LRR N)		Redox Dark S	Surface (F6	3)			Very Shallo	w Dark Surf	ace (TF12)
Depleted	Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)		_	Other (Expl	ain in Rema	ırks)	
Thick Da	ark Surface (A12)		Redox Depre	ssions (F8)						
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Masse	s (F12) (I	_RR N,					
MLRA	147, 148)		MLRA 13	6)							
	leyed Matrix (S4)		Umbric Surfa	ce (F13) (I	MLRA 13	6, 122)	³ lr	dicators of	hydrophytic	vegetation	and
	edox (S5)		Piedmont Flo						ology must	-	
	Matrix (S6)		Red Parent N					-	bed or prob		•
	ayer (if observed):				, ,		<u>, </u>		<u> </u>		
Type:	,										
	shaa).		<u>——</u>				Usalaia Ca	il Present?	Vac	Na	✓
Depth (inc	nes):		_				nyaric 30	ii Present?	Yes	No _	
Remarks:											
ino evidend	e of a hydric soil	nere.									

Mountain Valley Pipeline			COORDINATES:	Lat.	39.338239	Lon.	-80.519656
PTION:				W-S	T11, Temporary Acces Road/ATWS		
reage}, unaltered	or impairments)						
8/10/	2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetla	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0228	Emergent					
							n
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
	0.0228						
	Init Scores						
essification					ILF Costs		
			_		¢4 260 00		
		-			\$1,366.00		
			-				
	PART I - Wetling Impact Wetland Classification Emergent	PTION: sreage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0228 PART II - Unit Scores	PTION: reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0228 Emergent 0.0228 PART II - Unit Scores	PTION: Preage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland Classification Classification Emergent 0.0228 Emergent	PTION: preage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland Classification Classification Emergent 0.0228 Emergent	PTION: reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Methand (acreage) Wetland Classification Emergent 0.0228 Emergent Description of the property	PTION: reage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0228 Emergent PART II - Unit Scores PART II - Unit Scores Selfication Replacement Unit(s) 0.0228 1.1,368.00

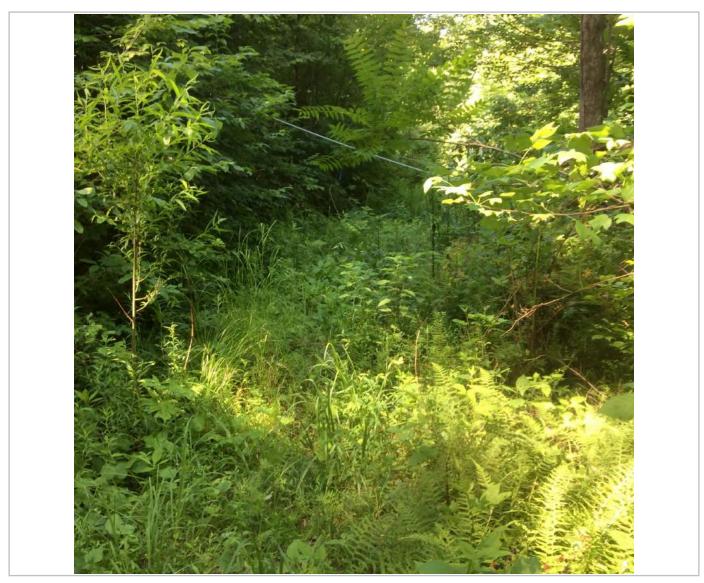
Project/Site: MVP	City/C	ounty: Harrison		Sampling Date: 07/14/2016
Applicant/Owner: MVP				Sampling Point: W-ST11
• •	Section			_
Landform (hillslope, terrace, etc.): Slope				Slone (%)· 8-10
Subregion (LRR or MLRA): LRR N			Datum: NAD 83	
Soil Map Unit Name: Gilpin-Upshur comple				
Are climatic / hydrologic conditions on the sit				
Are Vegetation, Soil, or Hydro			ircumstances" p	resent? Yes No
Are Vegetation, Soil, or Hydro	ology naturally problema	atic? (If needed, exp	olain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attac	h site map showing sam	pling point location	s, transects	, important features, etc.
Hydrophytic Vegetation Present? Y	es No			
Hydric Soil Present? Y	′es No_ ✓	Is the Sampled Area within a Wetland?	Yes 🗸	No
Wetland Hydrology Present? Y	res No	within a wettand?	162	NO
Remarks: Cowardin Code: PEM	HGM: Slope	Water Type: N	RPWW	
Comarain Code: EN	Trom Glopo	Water Type: M		
HYDROLOGY				
Wetland Hydrology Indicators:		·		tors (minimum of two required)
Primary Indicators (minimum of one is requ			Surface Soil	` '
Surface Water (A1)	True Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Pat	
Saturation (A3)		es on Living Roots (C3)	Moss Trim Li	
Water Marks (B1)	Presence of Reduced Recent Iron Reduction		Dry-Season Crayfish Buri	Water Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)	Thin Muck Surface (C		-	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rer			tressed Plants (D1)
Iron Deposits (B5)	Outer (Explain in reci	<u></u>	Geomorphic	
Inundation Visible on Aerial Imagery (E	37)	_	Shallow Aqui	
Water-Stained Leaves (B9)	,	_		phic Relief (D4)
Aquatic Fauna (B13)		<u>.</u>	FAC-Neutral	
Field Observations:				
	No Depth (inches):			
Water Table Present? Yes	No Depth (inches):	0		
Saturation Present? Yes	No Depth (inches):	0 Wetland Hye	drology Presen	t? Yes <u>/</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, m	onitoring well perial photos pre	vious inspections) if availa	phle:	
Beschbe Recorded Bata (stream gauge, m	ormoring wen, aeriai priotos, pre	vious irispections), ir availa	ioic.	
Remarks:				
Within old roadbed				

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

Sampling Point: W-ST11

20'	Absolute	Dominant		Dominance Test worksheet:		
Tree Stratum (Plot size:30')	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:4 (A)		
2				Total Number of Dominant		
3				Species Across All Strata: 4 (B)		
4						
5		-		Percent of Dominant Species That Are OBL FACW or FAC: 100 (A/B)		
			-	That Are OBL, FACW, or FAC:(A/B)		
6		-		Prevalence Index worksheet:		
7	0			Total % Cover of: Multiply by:		
500/ - () - () - () - ()		= Total Co		OBL species x 1 =		
4.51	20% of	total cover	:	FACW species x 2 =		
Caping/Onitab Stratum (1 lot 3/26)	_	,				
1. Salix nigra	5		OBL	FAC species x 3 =		
2				FACU species x 4 =		
3				UPL species x 5 =		
4				Column Totals: (A) (B)		
5				5		
6				Prevalence Index = B/A =		
7		'		Hydrophytic Vegetation Indicators:		
		-		1 - Rapid Test for Hydrophytic Vegetation		
8				2 - Dominance Test is >50%		
9	_			3 - Prevalence Index is ≤3.0 ¹		
4		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting		
50% of total cover: 2.5	20% of	total cover	:!	data in Remarks or on a separate sheet)		
Heib Stratum (Flot Size)	4-			Problematic Hydrophytic Vegetation ¹ (Explain)		
1. Onoclea sensibilis	15		F <u>ACW</u>	1 Toblematio Trydrophytio Vegetation (Explain)		
2. Boehmeria cylindrica	25		FACW_	11 office term of hoods's and an element of hoods are seen		
3. Dichanthelium scabriusculum	20		OBL	 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 		
4. Carex lurida	10		OBL	Definitions of Four Vegetation Strata:		
5. Carex vulpinoidea	10		OBL	Definitions of Four Vegetation Strata.		
6. Dichanthelium clandestinum	15	V	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or		
7 Agrimonia parviflora	10		FACW	more in diameter at breast height (DBH), regardless of height.		
8 Microstegium vimineum	10		FAC	neight.		
-		-	1710	Sapling/Shrub – Woody plants, excluding vines, less		
9				than 3 in. DBH and greater than or equal to 3.28 ft (1		
10				m) tall.		
11				Herb - All herbaceous (non-woody) plants, regardless		
		= Total Cov		of size, and woody plants less than 3.28 ft tall.		
50% of total cover:57.	20% of	total cover	: <u>23</u>	Woody vine – All woody vines greater than 3.28 ft in		
Woody Vine Stratum (Plot size: 15')				height.		
1						
2						
3						
4						
5.				Hydrophytic		
J	0	= Total Cov		Vegetation Present? Yes ✓ No		
50% of total cover: 0		total cover	_			
		total cover				
Remarks: (Include photo numbers here or on a separate s	sneet.)					

Depth inches)	Matrix Color (moist)	%	Redo Color (moist)	x Features	Type ¹	Loc ²	Texture		Remar	ko	
0-12	7.5YR 4/2	50	7.5YR 5/6	·	C	M/PL	SAL		Kemai	KS	
0-12	-		7.518.5/0		<u> </u>	IVI/FL	<u> </u>				
	10YR 4/2	35									
/pe: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked S	and Grai	ns.	² Location: PL=				
dric Soil	Indicators:						Indicate	ors for Pr	oblematic	Hydric So	oils ³ :
Histosol	, ,		Dark Surface	(S7)			2 cı	m Muck (A	410) (MLR	A 147)	
	pipedon (A2)		Polyvalue Be						Redox (A	16)	
Black Hi			Thin Dark Su			7, 148)		MLRA 14			
	n Sulfide (A4)		Loamy Gleye		()				odplain So	oils (F19)	
	d Layers (A5)		Depleted Ma					MLRA 13		(TE 4.0)	
	ick (A10) (LRR N) d Below Dark Surface	(//1/	Redox Dark : Depleted Dark :						n in Rema	ace (TF12)	.)
	ark Surface (A12)	(A11)	Redox Depre		7)		Ou	iei (Expiai	III III Kellia	iks)	
	fucky Mineral (S1) (L	RR N.	Iron-Mangan		(F12) (I	RR N					
-	147, 148)	,	MLRA 13		(1 12) (1	,					
	Gleyed Matrix (S4)		Umbric Surfa	•	LRA 136	, 122)	³ Indica	ators of hy	drophytic	vegetation	and
	Redox (S5)		Piedmont Flo							be present	
	Matrix (S6)		Red Parent N					-	ed or probl		
estrictive l	Layer (if observed):										
Type: Re	efusal CF										
Depth (in	ches): 12						Hydric Soil P	resent?	Yes	No_	~
marks:											



Photograph Direction NE

Comments:	

Project/Site: MVP		City/County	_{r:} Harrison		Sampling Date: 07/14/2016		
Applicant/Owner: MVP				Sampling Point: W-ST10 & 1			
Investigator(s): JMM DNQ		Section, To	wnship. Range: N				
Landform (hillslope, terrace, et			-		Slope (%): 5		
Subregion (LRR or MLRA): L	,		Long: <u>-80</u>		Datum: NAD 83		
Soil Map Unit Name: Gilpin-L							
				<u>-</u>			
Are climatic / hydrologic condit		•		•	· · · · · · · · · · · · · · · · · · ·		
Are Vegetation, Soil					present? Yes No		
Are Vegetation, Soil	, or Hydrology	naturally problematic?	(If needed, e	explain any answe	ers in Remarks.)		
SUMMARY OF FINDIN	GS – Attach site	map showing samplin	g point location	ons, transects	s, important features, etc.		
Hydrophytic Vegetation Pres	ent? Yes	No_ V					
Hydric Soil Present?		No 🗸	ne Sampled Area nin a Wetland?	Vos	No <u>✓</u>		
Wetland Hydrology Present?		No	iii a wellaliu:	165			
Remarks: Cowardin C	ode: UPLAND	HGM:	Water Type:				
HYDROLOGY							
Wetland Hydrology Indicat					ators (minimum of two required)		
Primary Indicators (minimum	of one is required; ch			Surface Soil Cracks (B6)			
Surface Water (A1)	_	True Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)			
High Water Table (A2)	-	Hydrogen Sulfide Odor (C1Oxidized Rhizospheres on		_			
Saturation (A3) Water Marks (B1)	_	Dridized Knizospheres on Presence of Reduced Iron	-	Moss Trim L	Water Table (C2)		
Sediment Deposits (B2)	_	Recent Iron Reduction in T	, ,	Crayfish Bu			
Drift Deposits (B3)	_	Thin Muck Surface (C7)		-	/isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	_	Other (Explain in Remarks))		Stressed Plants (D1)		
Iron Deposits (B5)				Geomorphic	Position (D2)		
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	uitard (D3)		
Water-Stained Leaves (E	39)			Microtopogr	aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutra	Il Test (D5)		
Field Observations:							
Surface Water Present?	Yes No	Depth (inches):	-				
Water Table Present?		Depth (inches):					
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	_ Wetland F	Hydrology Prese	nt? Yes No		
	eam gauge, monitoring	g well, aerial photos, previous	inspections), if ava	ailable:			
Damada							
Remarks:							

Sampling Point:	W-ST10 & 11	UP
-----------------	-------------	----

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	
1 Liriodendron tulipifera	30		FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2 Carya ovata	10	~		That Are OBE, I AGW, OF I AG (A)
		-	FACU_	Total Number of Dominant
3. Acer rubrum	10		FAC	Species Across All Strata:10(B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 40 (A/B)
6				
7.				Prevalence Index worksheet:
·	50	Tatal Cau		Total % Cover of: Multiply by:
500/ -{ 25		= Total Cov		OBL species x 1 =
50% of total cover: <u>25</u>	20% 01	total cover:	10	
Sapling/Shrub Stratum (Plot size: 15')	40			FACW species x 2 =
1. Prunus serotina	10		FACU_	FAC species x 3 =
2. Liriodendron tulipifera	25		FACU_	FACU species x 4 =
3. Rosa multiflora	10	✓	FACU	UPL species x 5 =
4. Carpinus caroliniana	10		FAC	Column Totals: (A) (B)
· ·			1 // /	
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
<u> </u>	55	Tatal Cau		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 27.5		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
- !	20% 01	total cover:	<u>'''</u>	data in Remarks or on a separate sheet)
(1 lot size.	00			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Parathelypteris noveboracensis	30		F <u>AC</u>	1 Toblematic Tryarophytic Vegetation (Explain)
2. Dichanthelium clandestinum	30		FAC	4
3. Onoclea sensibilis	5		FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	20		FACU	be present, unless disturbed or problematic.
		-	1/100	Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
•		-		m) tall.
10				Thy tall
11		-		Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>42.5</u>	20% of	total cover:	1/	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1.				
2.				
3.				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No
50% of total cover:0_	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate sl	heet.)			
	,			

Profile Desc	ription: (Describe to	the depth	needed to docun	nent the in	ndicator c	r confirm	the absence	of indicate	ors.)		
Depth	Matrix			K Features		1002	Tavetura		Domorle	•	
(inches) 0-6	Color (moist) 7.5YR 4/3		Color (moist)	<u></u> %	Type ¹	Loc ²	Texture SIL		Remark	<u>S</u>	
6-12	7.5YR 4/4	100					SIL				
0-12	7.51114/4	100	_				<u> </u>				
											-
	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	=Masked	Sand Gra	ins.	² Location: P				2
Hydric Soil I									roblematic	-	ils':
Histosol	(A1) pipedon (A2)		Dark Surface Polyvalue Be		o (SS) (M	I D A 147			A10) (MLR<i>A</i> e Redox (A1		
Black Hi			Thin Dark Su				140)	MLRA 14)		0)	
	n Sulfide (A4)		Loamy Gleye	. ,	•	,,	F		oodplain Soi	ls (F19)	
	I Layers (A5)		Depleted Mat					(MLRA 13			
	ck (A10) (LRR N)	(444)	Redox Dark S						v Dark Surfa		
	d Below Dark Surface ark Surface (A12)	(ATT)	Depleted Dar Redox Depre				_ `	Julei (Expla	in in Remar	KS)	
	lucky Mineral (S1) (Li	RR N,	Iron-Mangane			.RR N,					
	147, 148)		MLRA 136	-			2				
	leyed Matrix (S4)		Umbric Surfa						ydrophytic v		and
	edox (S5) Matrix (S6)		Piedmont Flo Red Parent M						ology must be ed or proble		
	ayer (if observed):		rear arener	iatoriai (i z	er) (MERC)	(127, 147		ilooo diotara	ed of proble	matio.	
Type:			<u>_</u>								
Depth (inc	ches):		<u> </u>				Hydric Soi	I Present?	Yes	No	✓
Remarks:							L				
Along old r	oad bed										

Project/Site: MVP City/County: Harrison Sampling Date: 1						
Applicant/Owner: MVP	State: WV					
Investigator(s): SR, CM, KL	Investigator(s): SR, CM, KL Section, Township, Range					
Landform (hillslope, terrace, etc.): Floodplain	Local relief	(concave, convex, none):	Concave Slope (%): 5-7			
Subregion (LRR or MLRA): LRRN	Lat: 39.316975	Long: <u>-</u> 80.52	25623			
Soil Map Unit Name: UF: Udifluvents and Flu			NWI classification: N/A			
Are climatic / hydrologic conditions on the site typic						
Are Vegetation, Soil, or Hydrology	significantly disturbe	d? Are "Normal Cir	rcumstances" present? Yes No			
Are Vegetation, Soil, or Hydrology	naturally problemation	c? (If needed, expl	ain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach sit						
Hydrophytic Vegetation Present? Yes	V No					
		s the Sampled Area				
Wetland Hydrology Present? Yes	No	vithin a Wetland?	Yes No			
Remarks: Cowardin Code: PEM	L	Water Type: RF	PWWD			
Information listed on this form represent of wetland hydrology, hydrophytic vegets Supplement delineation methodology.						
HYDROLOGY						
Wetland Hydrology Indicators:			condary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; of	heck all that apply)		_ Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plants (B1	4)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Odor		Drainage Patterns (B10)			
Saturation (A3)	Oxidized Rhizospheres		Moss Trim Lines (B16)			
Water Marks (B1)	Presence of Reduced Ir		Dry-Season Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reduction i	in Tilled Soils (C6)	Crayfish Burrows (C8)			
Drift Deposits (B3)	Thin Muck Surface (C7)		_ Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Rema	rks)	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)			Geomorphic Position (D2)			
Inundation Visible on Aerial Imagery (B7)			Shallow Aquitard (D3)			
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)			_ FAC-Neutral Test (D5)			
Field Observations:	1					
	Depth (inches):1					
	Depth (inches): 1		.1			
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):0	0 Wetland Hydrology Present? Yes <u>✓</u> No				
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previo	ous inspections), if availab	le:			
Remarks:						
2014 remark: Area farmed for hay. Wetl	and extends off corrido	or to the east beyond	mapped polygon.			
2011 Tomana 7 and Taminou Tol May: Trota	and oxionae on comae	i to the oder boyona	mapped perjagem			

Samr	olina	Point:	W-B2a

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:			
Tiec otratum (Flot size.	% Cover			Number of Dominant Species	3	(4)	
1				That Are OBL, FACW, or FAC:		(A)	
2				Total Number of Dominant	4	(D)	
3				Species Across All Strata:		(B)	
5				Percent of Dominant Species	75	(A (D)	
6				That Are OBL, FACW, or FAC:		(A/B)	
7				Prevalence Index worksheet:			
· ·	0 :	= Total Cov	/er	Total % Cover of:	Multiply by:		
50% of total cover:0	20% of	total cover	:0	OBL species x 1	1 =	_	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2			
1				FAC species x 3			
2				FACU species x 4			
3				UPL species x 5			
4				Column Totals: (A)		(B)	
5				Prevalence Index = B/A =			
6				Hydrophytic Vegetation Indicat		_	
7				1 - Rapid Test for Hydrophyti			
8				✓ 2 - Dominance Test is >50%			
9	^			3 - Prevalence Index is ≤3.0 ¹			
50% -(1.44)		= Total Co		4 - Morphological Adaptation	s¹ (Provide sup	porting	
50% of total cover: 0	20% of	total cover	:0	data in Remarks or on a s	separate sheet)		
Herb Stratum (Plot size: 5 1. Phalaris arundinacea	45	~	FACW	Problematic Hydrophytic Veg	getation ¹ (Expla	iin)	
2. Carex lurida	20		OBL				
3. Juncus effusus	20		FACW	¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
4. Trifolium pratense	20		FACU				
· · · · · · · · · · · · · · · · · · ·				Definitions of Four Vegetation	Strata:		
5				Tree - Woody plants, excluding v			
7				more in diameter at breast height height.	(DBH), regard	less of	
8							
9				Sapling/Shrub – Woody plants, of than 3 in. DBH and greater than of			
10				m) tall.	n equal to 5.20)) ()	
11.				Horb All borbacoous (non wood	du) plante roge	rdloce	
	105	= Total Cov	ver	Herb – All herbaceous (non-wood of size, and woody plants less that		liuless	
50% of total cover: <u>52.5</u>				Woody vine All woody vines or	rootor than 2 20	O ft in	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines gr height.	eater than 5.20	5 11 111	
1					,		
2							
3		-					
4				Hydrophytic			
5				Vegetation Present? Yes ✓	Na		
500/ // /		= Total Cov	_	Present? Yes	No		
50% of total cover: 0		total cover	:				
Remarks: (Include photo numbers here or on a separate s	neet.)						

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth Matrix Redox Features												
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Texture</u>	Remarks				
0-5	10YR 4/2	80	7.5YR 4/6	20	С	<u>M</u>	SiL					
5-20	10YR 4/3	30_	7.5YR 4/6	10	С	M	SiL					
			10YR 4/2	60	D	M						
-												
					-			-				
-												
1- 0.0							21 51					
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Location: PL=Pore Lining, M=Matrix.												
_			Dork Surface	(87)				cm Muck (A10) (MLRA 147)				
Histoso	pipedon (A2)		Dark Surface Polyvalue Be		ce (S8) (I	MI RΔ 147		coast Prairie Redox (A16)				
	listic (A3)		Tolyvalde Be				, 0	(MLRA 147, 148)				
	en Sulfide (A4)		Loamy Gleye			, ,	Р	riedmont Floodplain Soils (F19)				
	ed Layers (A5)		Depleted Mat		,			(MLRA 136, 147)				
2 cm M	uck (A10) (LRR N)		Redox Dark S	Surface (F	- 6)		V	ery Shallow Dark Surface (TF12)				
	ed Below Dark Surface	(A11)	Depleted Dar				0	Other (Explain in Remarks)				
	ark Surface (A12)		Redox Depre									
	Mucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12)	(LRR N,						
	A 147, 148) Gleyed Matrix (S4)		MLRA 130 Umbric Surfa		(MIDA 1	26 122)	3Ind	icators of hydrophytic vegetation and				
	Redox (S5)		Piedmont Flo					etland hydrology must be present,				
-	d Matrix (S6)		Red Parent M					less disturbed or problematic.				
	Layer (if observed):				, (Í					
Type:												
	nches):		<u></u>				Hydric Soil	Present? Yes _ V No				
Remarks:	,						<u> </u>					

Photograph Page

Wetland ID W-B2a Cowardin Code PEM Date 10/23/14



Photograph Number __1

Photograph Direction West

Comments: 2014 original delineation



Photograph Number 2

Photograph Direction West

Comments: 2018

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.3168564	Lon.	-80.5253152
STREAM/SITE ID AND SITE DESCR	RIPTION:					W-B2a, ATWS		
(% stream slope, watershed size {a	creage}, unaltered	or impairments)						
FORM OF MITIGATION:								
DATE:	8/10/	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-B2a	Emergent	0.1953	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.1953						
		Jnit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.1953			644 740 00		
Total Scrub-Shrub			0			\$11,718.00	1	
Total Forested			0					
Total Open Water			0					

Mountain Valley Pipeline			COORDINATES:	Lat.	39.316784	Lon.	-80.526129
STREAM/SITE ID AND SITE DESCRIPTION:					W-B4a, Timber Mat Crossing		
reage}, unaltered	or impairments)						
8/10/	2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetla	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0214	Emergent					
							n
					Advanced Mitigation (Y or N)		Y
	0.0214						
	Init Scores						
ssification					ILF Costs		
					¢4 204 00		
					\$1,284.00		
	8/10/ PART I - Wetland Unpact Wetland Classification Emergent	8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0214 0.0214 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0214 Emergent 0.0214 PART II - Unit Scores	B/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0214 Emergent 0.0214 PART II - Unit Scores sification Replacement Unit(s) 0 0 0	Reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0214 Emergent 0.0214 PART II - Unit Scores sistification Replacement Unit(s) 0 0 0	B/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0214 Emergent Description of the part of	B/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0214 Emergent PART II - Advanced Mitigation Yor N) PART III - Advanced Mitigation Y or N) PART III - Lunit Scores Siffication Replacement Unit(s) 0.0214 1.17 Costs 1.17 Costs 1.17 Costs 1.17 Costs 1.17 Costs 1.17 Costs

Project/Site: MVP	City/County: Harrison	Sampling Date: 10/23/14									
Applicant/Owner: MVP	State: WV Sampling Point: W-B4a										
Investigator(s): SR CM KL Section, Township, Range: N/A											
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, no	one): Concave Slope (%): 1									
Subregion (LRR or MLRA): LRRN	Lat: 39.316837 Long: -80	0.526047 Datum: NAD 83									
Soil Map Unit Name: Udifluvents and F	Tuvaquents	NWI classification: N/A									
•	oical for this time of year? Yes No										
	y significantly disturbed?										
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS – Attach si		explain any answers in Remarks.) ons, transects, important features, etc.									
		, , , ,									
Hydrophytic Vegetation Present? Yes	Is the Sampled Area	,									
_	No within a Wetland?	Yes No									
Domorko											
Information listed on this form represents the	Remarks: Cowardin Code: PEM HGM: Riverine Water Type: RPWWD Information listed on this form represents the data collected in 2015. The wetland was revisited on 10/02/2019. The wetland is located outside the current construction LOD and 2019 surveys were limited to the LOD. Due to access restrictions, wetland criteria could not be evaluated using USACE Regional Supplement methods; however, the presence of wetland hydrology & hydrophytic vegetation was confirmed visually from within the construction LOD.										
HYDROLOGY											
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)									
Primary Indicators (minimum of one is required;	check all that apply)	Surface Soil Cracks (B6)									
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)									
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)									
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)										
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)									
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)									
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)									
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)									
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)		✓ Geomorphic Position (D2)									
		Shallow Aquitard (D3)									
Water-Stained Leaves (B9)Aquatic Fauna (B13)		Microtopographic Relief (D4) ✓ FAC-Neutral Test (D5)									
Field Observations:		- TAC-Neutral Test (D3)									
	Depth (inches):										
	Depth (inches):										
		Hydrology Present? Yes <u>✓</u> No									
(includes capillary fringe)	Deptif (inches) wetland	nydrology Present? Tes No									
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previous inspections), if av	ailable:									
Remarks:											
İ											

Sampling	Point:	W-	B4a

30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:30') 1	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2	-		· ·	
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	_	OBL species x 1 =
50% of total cover: 0	20% of	total cover:	0	
Japhing/Sitrab Stratum (1 lot size)				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				I —
	0	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:0	20% of	total cover:	0	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Phalaris arundinacea	40	✓	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Carex lurida	25		OBL	
3. Trifolium pratense	15		FACU	¹ Indicators of hydric soil and wetland hydrology must
4 Polygonum sagittatum	10		OBL	be present, unless disturbed or problematic.
5. Juncus effusus	10		FACW	Definitions of Four Vegetation Strata:
6. Bidens sp.	5		ND	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
-				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11	105			Herb – All herbaceous (non-woody) plants, regardless
50.4		= Total Cov	~ 4	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 52.5	20% of	total cover:	21	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
•		= Total Cov	_	Present? Yes No
50% of total cover:0		total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: W-B4a

SOIL

Profile Desc	ription: (Describe to	o the depth	needed to docum	ent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox	c Features	3			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-14	10YR 4/2	85	7.5.YR 4/6	15	С	M	SIL	
14-20	10YR 4/1	97	7.5.YR 4/6	3	С	M	SIL	
					-			
			_					
			_					
					-			
	-					·	-	
¹ Type: C=Co	oncentration, D=Deple	etion. RM=F	Reduced Matrix, MS	=Masked	Sand Gr	ains.	² Location: Pl	L=Pore Lining, M=Matrix.
Hydric Soil		540H, 14W-1	toddood matrix, me		Carra Cr	uo.		ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Bel		ce (S8) (N	ILRA 147,		oast Prairie Redox (A16)
Black Hi			Thin Dark Su					(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			, ,	Pi	iedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		ŕ		· 	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S		6)		V	ery Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)		0	ther (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	lucky Mineral (S1) (L l	RR N,	Iron-Mangane		es (F12) (LRR N,		
	\ 147, 148)		MLRA 136	•			2	
	Gleyed Matrix (S4)		Umbric Surfa					icators of hydrophytic vegetation and
	ledox (S5)		Piedmont Flo					tland hydrology must be present,
	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) unl	ess disturbed or problematic.
	_ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:								

Wetland Photograph Page

Wetland ID W-B4a Cowardin Code PEM



Photograph Direction East

Date: 10/23/14

Comments: 2015 wetland delineation.



Photograph Direction WSW

Date: 10/02/2019

Comments: 2019 wetland delineation confirmation.

Application
Section, Township, Range: NA Section, Township, Range: NA Section, Township, Range: NA Subregion (LRR or MLRA): LRRN Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): LRRN Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): LRRN Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): LARN Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): LARN Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Subregion (LRR or MLRA): Lat: 39.316848 Long: 80.526199 Datum: NAD 83 Long: 80.526199 Datum: NAD 84 Long: 80.526199
Local relief (concave, corvex, none); Convex Slope (%); 1
Subregion (LRR or MLRA): LRRN
Soil Map Unit Name: Udifluvents and Fluvaquents
Are climatic / hydrologic conditions on the site typical for this time of year? Yes
Are "Normal Circumstances" present? Yes No naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Wetland Hydrology Indicators: Remarks: Cowardin Code: UPLAND HGM: Water Type: Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86) Surface Water (A1) True Aquatic Plants (814) Sparsely Vegetated Concave Surface (88) Hydrogen Sulfice Odor (C1) Drainage Patterns (810) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (816) Water Marks (81) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B3) Stunted or Stressed Plants (D1) Hord Deposits (B3) FAC-Neutral Test (D5) Hord Deposits (B3)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Well and Hydrology Present? Yes No Well and Hydrology Present? Yes No Well and Hydrology Indicators: Remarks: Cowardin Code: UPLAND HGM: Water Type: Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Sturtator (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquatic Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Alexandrian By Aguater Sturation Hydrology Present? Yes No Depth (inches): Water Type: Is the Sampled Area within a Wetland? Yes No Depth (inches): Water Type: Is the Sampled Area within a Wetland? Yes No Depth (inches): Wetland Hydrology Present? Yes No Present P
Summary OF Findings - Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Water Type: No Water Type: No
Hydric Soil Present? Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Iron Deposits (B5) Indudation Visible on Aerial Imagery (B7) Water Staired Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Water Mayology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Water Mayology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Presence of Reductions in Special Present? Yes No Present (Inches): Wetland Hydrology Present? Yes No Present (Inches): Wet
Hydric Soil Present? Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Iron Deposits (B5) Indudation Visible on Aerial Imagery (B7) Water Staired Leaves (B9) Aquatic Faune (B13) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Water May Water Table (R2) Wetland Hydrology Present? Yes No Depth (inches):
Wetland Hydrology Present? Yes No Water Type: No Water Type: No Water Type: No Water Type: No Water Type: No Water Type: No Water Type: No Water Type: No Water Marks (B6) No Water Marks (B6) No Water Marks (B1) No Water Marks (B1) No Water Marks (B1) No Water Marks (B1) No Water Marks (B3) No Water Marks (B4) No Water Marks (B5) No Water Marks (B6) No Water Marks (B7) No Water
AYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Moss Trim Lines (B16) Moss Trim Lines (B16) Moss Trim Lines (B16) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Moss Trim Lines (C7) Saturation (V5) Saturat
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (i
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) Pack-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) Pack-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) Pack-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Sediment Deposits (B2) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Surface Water Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Surface Water (A1)
Surface Water (A1)
High Water Table (A2)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Dryft Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Shallow Aquitard (D3) FAC-Neutral Test (D5) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Shallow Aquitard (D3) Shallow Aquitard (D3) Water-Stained Leaves (B9) Aquatic Fauna (B13) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Shallow Aquitard (D3) Wicrotopographic Relief (D4) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Shallow Aquitard (D3) Wicrotopographic Relief (D4) FAC-Neutral Test (D5) Shallow Aquitard (D3) Wicrotopographic Relief (D4) FAC-Neutral Test (D5) Shallow Aquitard (D3) Wicrotopographic Relief (D4) FAC-Neutral Test (D5) Shallow Aquitard (D3) Wicrotopographic Relief (D4) FAC-Neutral Test (D5) Shallow Aquitard (D3) Wicrotopographic Relief (D4) FAC-Neutral Test (D5) Shallow Aquitard (D3) Wicrotopographic Relief (D4) FAC-Neutral Test (D5) Shallow Aquitard (D3) Wicrotopographic Relief (D4) FAC-Neutral Test (D5) Shallow Aquitard (D3) Wicrotopographic Relief (D4) Shallow Aquitard (D3) Shallow Aquitard
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Aquatic Fauna (B13) Microtopographic Relief (D4) FAC-Neutral Test (D5) Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Saturation Present? Geomorphic Relief (D4) FAC-Neutral Test (D5) Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Personal Present? Yes No No Personal Present? Yes No Personal Present? Yes No No Personal Present? Yes No Personal Present? Yes No No Personal Present? Yes No Personal Present? Yes No
Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Aquatic Fauna (B13) FAC-Neutral Test (D5) Factoreactions: Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No ✓ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Operation
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:

Sampling Point: W-B4a-UP

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:0 (A)
2				Total Number of Deminerat
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				Openies / toross / tir etrata.
				Percent of Dominant Species That Are ORL FACW or FAC: (A/B)
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				
		= Total Cov		
50% of total cover:0	20% of	f total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
				UPL species x 5 =
3		-		Column Totals: (A) (B)
4				Column rotals (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
9	_	T		3 - Prevalence Index is ≤3.0 ¹
500/ - (1-1-1-)		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% 01	total cover	0	data in Remarks or on a separate sheet)
Terb Stratum (Flot Size)	20		EACH.	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Trifolium pratense	30		FACU	1 Toblematic Trydrophytic Vegetation (Explain)
2. Poa pratensis	25		FACU	1
3. Plantago lanceolata	15		UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4 Plantago major	10		FACU	
5 Achillea millefolium	10		FACU	Definitions of Four Vegetation Strata:
6. Daucus carota	10	-	UPL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
	5		ND	more in diameter at breast height (DBH), regardless of
7. Setaria sp.			ואט	height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
	105	Total Co.		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 52.		= Total Cov f total cover:		or size, and woody plants less than 3.20 it tall.
4 F1	20% 0	i total cover.		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				
5.				Hydrophytic
J	0	T-1-1-0		Vegetation Present? Yes No _ ✓
500/ - (1-1-1-)		= Total Cov	_	
50% of total cover:0		f total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: W-B4a-UP

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the ir	ndicator o	or confirm	the absen	nce of indicato	ors.)	
Depth	Matrix		Redo	x Features	1		_			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	<u> </u>	Remarks	
0-5	7.5YR 4/3	100%					SIL			
5+									Gravel	fill
										_
		·								
		· 								
¹ Type: C=Ce	oncentration, D=Dep	letion, RM=R	educed Matrix, MS	S=Masked	Sand Gra	ins.		: PL=Pore Lini		
Hydric Soil	Indicators:						Inc	dicators for Pr	oblematic H	lydric Soils³:
Histosol	(A1)		Dark Surface	(S7)				_ 2 cm Muck (/	A10) (MLRA	147)
Histic Ep	oipedon (A2)		Polyvalue Be				148)	Coast Prairie	Redox (A16)
Black Hi			Thin Dark Su	, ,	•	47, 148)		(MLRA 14		
	n Sulfide (A4)		Loamy Gleye		-2)			_ Piedmont Flo		s (F19)
	Layers (A5)		Depleted Mar		2)			(MLRA 13		- (TE40)
	ick (A10) (LRR N) d Below Dark Surface	o (A11)	Redox Dark S Depleted Dar					Very ShallowOther (Expla		, ,
	ark Surface (A12)	5 (ATT)	Redox Depre					_ Other (Expla	III III IXCIIIAIK	5)
	lucky Mineral (S1) (L	.RR N.	Iron-Mangan			.RR N.				
	A 147, 148)	,	MLRA 13		- () (,				
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ce (F13) (MLRA 13	6, 122)	3	Indicators of h	ydrophytic ve	getation and
Sandy R	ledox (S5)		Piedmont Flo	odplain Sc	oils (F19)	MLRA 14	8)	wetland hydro	logy must be	present,
	Matrix (S6)		Red Parent N	1aterial (F2	21) (MLR	127, 147	')	unless disturb	ed or probler	natic.
	_ayer (if observed):									
Type: Fil			_							_
Depth (in	ches): <u>5</u>		_				Hydric S	Soil Present?	Yes	_ No
Remarks:							•			

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.253101	Lon.	-80.540498
STREAM/SITE ID AND SITE DESCR	IPTION:					W-UU4a, Pipeline ROW/ATWS		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-UU4	Emergent	0.1268	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.1268						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.1268			\$7.000.00		
Total Scrub-Shrub			0			\$7,608.00		
Total Forested			0					
Total Open Water			0	_				

Project/Site: MVP	City/County: Harrison	Sampling Date: 09/18/2019
Applicant/Owner: MVP	State: W	/V Sampling Point: W-UU4a
Investigator(s): JMM, HS, JL	Section, Township, Range: N/A	
	Local relief (concave, convex, none): River	terrace Slope (%): 0%
Subregion (LRR or MLRA): LRRN La		
Soil Map Unit Name: Udifluvents and Fluvaque		
	for this time of year? Yes No (If no, expla	·
Are Vegetation, Soil, or Hydrology		nces" present? Yes No
Are Vegetation, Soil, or Hydrology		
SUMMARY OF FINDINGS – Attach site i	nap showing sampling point locations, trans	sects, important features, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area	
Hydric Soil Present? Yes <u>✓</u>	Is the Sampled Area No within a Wetland? Yes	No
Wetland Hydrology Present? Yes	No	<u> </u>
Remarks: Cowardin Code: PEM HGM: Riverine WT	: RPWWN	
3 Sections delineated in 2019 from origina	2015 surveys due to timbermats and change of	of land use of surrounding field
(grazing to fallow) that allowed wetland to	meet criteria.	· ·
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary	Indicators (minimum of two required)
Primary Indicators (minimum of one is required; che		e Soil Cracks (B6)
Surface Water (A1)		ely Vegetated Concave Surface (B8)
High Water Table (A2)		age Patterns (B10)
		Trim Lines (B16)
<u> </u>	• • • • • • • • • • • • • • • • • • • •	eason Water Table (C2)
		sh Burrows (C8)
Drift Deposits (B3)		ation Visible on Aerial Imagery (C9)
		ed or Stressed Plants (D1)
Iron Deposits (B5)	<u>✓</u> Geom	orphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallo	w Aquitard (D3)
Water-Stained Leaves (B9)	Microt	opographic Relief (D4)
Aquatic Fauna (B13)	<u>✓</u> FAC-N	leutral Test (D5)
Field Observations:		
	_ Depth (inches):	
	_ Depth (inches):	
	_ Depth (inches): Wetland Hydrology F	Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspections), if available:	
Remarks:		
Remarks.		

VEGETATION (Four Strata) - Use scientific names of plants.

____)

50% of total cover: ___0

% Cover Species? Status

_ = Total Cover

0 = Total Cover

15

15

5

5

10

15

10

50% of total cover: ____50___ 20% of total cover: ___20

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

20% of total cover:_ 0

F<u>ACW</u>

✓ OBL

OBL

OBL

100 = Total Cover

0 = Total Cover

OBL

_ FACW

__ F<u>ACU</u>

OBL

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

30'

Sapling/Shrub Stratum (Plot size: 15')

Tree Stratum (Plot size: __

Herb Stratum (Plot size: _ 1. Cyperus esculentus

3. Scirpus atrovirens

5. Persicaria pensylvanicum

6. Symphyotrichum ericoides

8. Microstegium vimineum

10. Lysimachia nummularia

Woody Vine Stratum (Plot size: 15'

4. Carex vulpinoidea

2. Glyceria striata

7. Carex frankii

9. Carex lurida

	Sampling Poi	nt: <u>W-UU4a</u>	
	Dominance Test worksheet:		
	Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
	Total Number of Dominant Species Across All Strata:	3	(B)
	Percent of Dominant Species That Are OBL, FACW, or FAC:	100%	(A/B)
-	Prevalence Index worksheet:		
-	Total % Cover of:	Multiply by:	
	OBL species x 1		
-	FACW species x 2		
		3 =	
-		1 =	
-	UPL species x 5		
-	Column Totals: (A)		
			_ , ,
	Prevalence Index = B/A =		_
	Hydrophytic Vegetation Indicat		
_	1 - Rapid Test for Hydrophyti	c vegetation	
	2 - Dominance Test is >50%		
-	3 - Prevalence Index is ≤3.0 ¹	1.0	
-	4 - Morphological Adaptation		porting
	data in Remarks or on a s		
	Problematic Hydrophytic Veg	jetation (Expia	in)
-	¹ Indicators of hydric soil and wetle be present, unless disturbed or p		must
-	Definitions of Four Vegetation	Strata:	
	Tree – Woody plants, excluding wore in diameter at breast height height.	rines, 3 in. (7.6 (DBH), regardl	cm) or less of
1 1	Sapling/Shrub – Woody plants, of than 3 in. DBH and greater than 6 m) tall.		
ı	Herb – All herbaceous (non-wood of size, and woody plants less that		rdless
	Woody vine – All woody vines gr height.	eater than 3.28	3 ft in
-			
-			
-			
-	Hydrophytic		
	Vegetation Present? Yes	No	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: W-UU4a

Profile Desc	ription: (Describe t	to the dept	h needed to docun	nent the	indicator	or confirm	the abso	ence of indicators.)
Depth	Matrix			x Feature	s			
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Textu	
0-8	7.5YR 4/2	95	7.5YR 5/8	5	<u>C</u>	M/PL	CL	
8-16	10 YR 4/3	95				· ———	GRS	<u> </u>
+16	10YR 6/6	100					CL	
				-				
						. ———		
					-			
				-			-	
¹Type: C=Co	oncentration, D=Depl	etion RM-	-Reduced Matrix MS	S-Masker	d Sand Gr	aine	² l ocatio	on: PL=Pore Lining, M=Matrix.
Hydric Soil		etion, ixivi–	reduced Matrix, Mc)—IVIASKE	J Sand Gr	airis.		ndicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be	. ,	ice (S8) (N	ILRA 147,		Coast Prairie Redox (A16)
Black Hi			Thin Dark Su					(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix	(F2)		_	Piedmont Floodplain Soils (F19)
	l Layers (A5)		Depleted Mat	trix (F3)				(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	•	,		_	Very Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar				-	Other (Explain in Remarks)
	ark Surface (A12)	DD N	Redox Depre			LDDN		
	lucky Mineral (S1) (L \ 147, 148)	.KK N,	Iron-Mangan		es (F12) (LKK N,		
	lleyed Matrix (S4)		Umbric Surfa	-	(MIRA 13	6. 122)		³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				8)	wetland hydrology must be present,
-	Matrix (S6)		Red Parent N					unless disturbed or problematic.
	_ayer (if observed):				, ,		ĺ	·
Type:								
Depth (inc	ches):						Hydric	Soil Present? Yes V No No
Remarks:								

Wetland ID W-UU4a Cowardin Code PEM Date 09/18/2019



Photograph Number __1_ Photograph Direction NW

Comments:



Photograph Number 2

Photograph Direction West

Comments:

Project/Site: MVP		City/0	County: Harrison		_ Sampling Date: 09/18/19
Applicant/Owner: MVP			,	State: PA	Sampling Point: W-UU4a-UPL
Investigator(s): JMM, HS, J	 L				
Landform (hillslope, terrace, et					Slope (%): 0%
Subregion (LRR or MLRA): L		t: 39.253086	Long: <u>-80</u>	.540562	Datum: NAD 83
Soil Map Unit Name: Udifluve					ication: None
Are climatic / hydrologic condit					
· · · · · · · · · · · · · · · · · · ·					present? Yes No
Are Vegetation, Soil					vers in Remarks.)
				•	•
SUMINIARY OF FINDIN	GS – Attach site i	nap snowing san	npling point location	ons, transect	s, important features, etc.
Hydrophytic Vegetation Prese			Is the Sampled Area		
Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u> </u>
Wetland Hydrology Present?	Yes 🗸	No			
Remarks: Cowardin Co	ode: UPLAND	HGM:	Water Type:		
LIVEROLOGY					
HYDROLOGY Wetland Hydrology Indicate	ore:			Socondary India	cators (minimum of two required)
Primary Indicators (minimum		ok all that apply)		Surface So	-
Surface Water (A1)	or one is required, chec	True Aquatic Plants	(D14)		egetated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od			atterns (B10)
Saturation (A3)	<u></u>		es on Living Roots (C3)	=	Lines (B16)
Water Marks (B1)		Presence of Reduce			n Water Table (C2)
Sediment Deposits (B2)			on in Tilled Soils (C6)	Crayfish Bu	
Drift Deposits (B3)	_	Thin Muck Surface (-	Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Re	marks)	Stunted or	Stressed Plants (D1)
Iron Deposits (B5)				Geomorphi	c Position (D2)
Inundation Visible on Ae				Shallow Aq	
Water-Stained Leaves (E	39)				raphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	al Test (D5)
Field Observations:	Van Na 🗸	Donath (in the co)			
Surface Water Present?		_ Depth (inches): Depth (inches):			
Water Table Present?					
Saturation Present? (includes capillary fringe)	Yes No	_ Depth (inches):	wetland i	Hydrology Prese	ent? Yes V No
Describe Recorded Data (stre	eam gauge, monitoring	well, aerial photos, pre	evious inspections), if ava	ailable:	
Demodes					
Remarks:					

Sampling P	oint: W-l	JU4a-	UPL
Sallibilliu F	Ullit. * * `	a	· -

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Descions
3				Total Number of Dominant Species Across All Strata:3 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 33% (A/B)
		-		That Are OBL, FACW, or FAC: 33% (A/B)
6				Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	20 /6 01	total cover		FACW species x 2 =
Saping/Snrub Stratum (Plot size)				FAC species x 3 =
1		-		FACU species x 4 =
2		-		
3				
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	0	= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		total cover	_	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Dactylis glomerata	25	/	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Trifolium pratense	20		FACU	
3. Microstegium vimineum	15		FAC	¹ Indicators of hydric soil and wetland hydrology must
4. Apocynum cannabinum	10		FACU	be present, unless disturbed or problematic.
5. Solanum carolinense				Definitions of Four Vegetation Strata:
			FACU FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Taraxicum officinal			- ——	more in diameter at breast height (DBH), regardless of
7. Trifolium repens	5		FACU	height.
8. Symphyotrichum ericoides	5		FACU	Sapling/Shrub – Woody plants, excluding vines, less
9. Cyperus esculentus	5		FACW_	than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Cov	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1.				neight.
2.				
3				
_				
· ·		-		Hydrophytic
5	0			Vegetation Present? Yes No ✓
50% of total cover: 0		= Total Cover	_	· · · · · · · · · · · · · · · · · · ·
		total cover		
Remarks: (Include photo numbers here or on a separate s	neet.)			

Sampling Point: W-UU4a-UPL

SOIL

Profile Desc	cription: (Describe t	to the dept	h needed to docur	ment the	indicator	or confirm	the absence	e of indicators.)
Depth	Matrix			x Feature			- .	5 .
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-8	10YR 4/4	100			<u> </u>		SiL	·
8-14	7.5YR 4/2	95	7.5YR 4/6	5	С	M/PL	SiL	
				_	-			
					•			
					-		-	
	·							
	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Maske	d Sand Gr	ains.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indic	cators for Problematic Hydric Soils ³ :
Histosol			Dark Surface					2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				148) (Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su			147, 148)	-	(MLRA 147, 148)
	en Sulfide (A4) d Layers (A5)		Loamy Gleye		(F2)		<u> </u>	Piedmont Floodplain Soils (F19)
	uck (A10) (LRR N)		Depleted Ma Redox Dark		E6)		,	(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Da	,	,			Other (Explain in Remarks)
	ark Surface (A12)	, (, (, ,)	Redox Depre					etror (Explain in remaine)
	Mucky Mineral (S1) (L	.RR N,	Iron-Mangan			LRR N,		
	A 147, 148)		MLRA 13		` , ,			
Sandy C	Gleyed Matrix (S4)		Umbric Surfa	ace (F13)	(MLRA 13	6, 122)	³ Inc	dicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					etland hydrology must be present,
	d Matrix (S6)		Red Parent I	Material (F	-21) (MLR	A 127, 147	7) ur	nless disturbed or problematic.
Restrictive	Layer (if observed):							
Type:								,
Depth (in	ches):						Hydric Soi	il Present? Yes No
Remarks:							1	
1								

USACE FILE NO./Project Name:	ne: Mountain Valley Pipeline			COORDINATES:	Lat.	39.250487	Lon.	-80.551891
STREAM/SITE ID AND SITE DESCR	RIPTION:				٧	V-F52, Temporary Access Road		
(% stream slope, watershed size {a	creage}, unaltered	d or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-F52	Emergent	0.0625	Emergent					
						PART III - Advanced I		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Υ
Total Impact		0.0625						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
						\$2.750.00		
					ļ	\$3,750.00		
Total Emergent Total Scrub-Shrub Total Forested Total Open Water			0.0625 0 0 0			\$3,750.00		

Project/Site: MVP		City/C	ounty: Harrison		Sampling Date: 05/30/2015			
Applicant/Owner: MVP					Sampling Point: W-F52			
Investigator(s): Ed Strohmaier, D	วลพท McCulloเ				_ ,			
Landform (hillslope, terrace, etc.): te					Slope (%): 0-1			
Subregion (LRR or MLRA): LRRN					Datum: NAD 83			
Soil Map Unit Name: Gilpin-Upshur compl								
Are climatic / hydrologic conditions or	n the site typical fo	or this time of year? Y	es <u>/</u> No (If no, explain in R	temarks.)			
Are Vegetation, Soil,	or Hydrology	significantly disturl	bed? Are "Normal	Circumstances"	present? Yes No			
Are Vegetation, Soil,								
SUMMARY OF FINDINGS -								
Hydrophytic Vegetation Present?	Yes	No						
Hydric Soil Present?		No	Is the Sampled Area	V	No			
Wetland Hydrology Present?	Yes 🗸	No	within a Wetland?	res	NO			
Remarks: Cowardin Code: PEM HGM:	Slope WT: N	RPWW						
Information listed on this form presence of wetland hydrolog was obstructed by timber ma	av. hvdrophytic	ne data collected in collected	n 2015. The wetland nydric soils was unal	l was revisited ble to be confi	on 09/18/2019. The rmed because the wetland			
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum of one	is required: checl	k all that apply)		Surface Soil				
Surface Water (A1)	-	True Aquatic Plants (Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)		Hydrogen Sulfide Odd		Drainage Patterns (B10)				
Saturation (A3)			es on Living Roots (C3)					
Water Marks (B1)		Presence of Reduced	= : : :	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	_	Recent Iron Reductio	n in Tilled Soils (C6)	Crayfish Bur				
Drift Deposits (B3)		Thin Muck Surface (C	27)	Saturation V	isible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Ren	narks)	Stunted or S	tressed Plants (D1)			
Iron Deposits (B5)				Geomorphic	Position (D2)			
Inundation Visible on Aerial Image	agery (B7)			✓ Shallow Aqu	itard (D3)			
Water-Stained Leaves (B9)				Microtopogra	aphic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)			
Field Observations:								
	No							
Water Table Present? Yes	. No	Depth (inches):	12					
Saturation Present? Yes	. No	Depth (inches):	4 Wetland H	ydrology Preser	nt? Yes <u>/</u> No			
(includes capillary fringe) Describe Recorded Data (stream ga	auge, monitoring v	well, aerial photos, pre	I vious inspections), if avai	ilable:				
Demonto								
Remarks:								

VEGETATION (Four Strata) - Use scientific names of plants.

30'

Sapling/Shrub Stratum (Plot size: 15')

3. Microstigium vimineum

Tree Stratum (Plot size: __

2. Juncus tenuis

4. Trifolium repens

___)

4.______ ____ _____

50% of total cover: ___0

% Cover Species? Status

0 = Total Cover

0 = Total Cover

5

10

50% of total cover: <u>32.5</u> 20% of total cover: <u>13</u>

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

20% of total cover:_ 0

65 = Total Cover

0 = Total Cover

FACW FAC

✓ FAC

Hydrophytic Vegetation

Present?

___ FACU

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

	Sampling Poir	nt: <u>W-F52</u>	
	Dominance Test worksheet:		
1	Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
1	Total Number of Dominant Species Across All Strata:	3	(B)
1	Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)
-	Prevalence Index worksheet:		
-	Total % Cover of:	Multiply by:	
	OBL species x 1		
-	FACW species x 2		
		S =	
-		=	
-	UPL species x 5	i =	
-	Column Totals: (A)		(B)
	Prevalence Index = B/A = _		_
-	Hydrophytic Vegetation Indicate	ors:	
-	1 - Rapid Test for Hydrophyti	c Vegetation	
-	✓ 2 - Dominance Test is >50%		
-	3 - Prevalence Index is ≤3.0 ¹		
	4 - Morphological Adaptations	s ¹ (Provide sup	porting
-	data in Remarks or on a s	eparate sheet)	
ı	Problematic Hydrophytic Veg	etation ¹ (Expla	in)
1	¹ Indicators of hydric soil and wetla be present, unless disturbed or pr	and hydrology i oblematic.	must
-	Definitions of Four Vegetation S	Strata:	
-	Tree – Woody plants, excluding v	ines, 3 in. (7.6	cm) or
-	more in diameter at breast height	(DBH), regard	less of
-	height.		
-	Sapling/Shrub – Woody plants, e		
-	than 3 in. DBH and greater than c m) tall.	or equal to 3.28	3 ft (1
-			
	Herb – All herbaceous (non-wood of size, and woody plants less that		rdless
-	Woody vine – All woody vines gr height.	eater than 3.28	3 ft in
-			
-			
_			

Remarks: (Include photo numbers here or on a separate sheet.)

Woody Vine Stratum (Plot size: ____15' ____)

Yes V No ____

SOIL Sampling Point: W-F52

Profile Desc	ription: (Describe t	o the dept				or confirn	the ab	sence of ir	ndicators.)
Depth	Matrix	0/		x Features	-	1 - 2	.	4	Damada
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type'	Loc ²	Tex		Remarks
0-12	5YR 3/3	100						; <u> </u>	
							-		
							·		
		ation DM	Dadwaad Matrix M	C Maalaa			21		and Limina BA BAntaire
	oncentration, D=Deplementation D=Deplement D=Deplement	etion, RM=	Reduced Matrix, Mi	S=Masked	Sand Gra	ains.	Loca		ore Lining, M=Matrix. s for Problematic Hydric Soils ³ :
•			D	(07)					•
Histosol			Dark Surface		(00) (1)		4.40\		Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				148)		Prairie Redox (A16)
	stic (A3)		Thin Dark Su			47, 148)		•	RA 147, 148)
	n Sulfide (A4)		Loamy Gleye	,	F2)				ont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma					•	RA 136, 147)
	ick (A10) (LRR N)		Redox Dark		•				Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dai					Other	(Explain in Remarks)
	ark Surface (A12)		Redox Depre						
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (I	LRR N,			
	A 147, 148)		MLRA 13					2	
	Bleyed Matrix (S4)		Umbric Surfa						rs of hydrophytic vegetation and
-	ledox (S5)		Piedmont Flo						hydrology must be present,
	Matrix (S6)		Red Parent N	Material (F	21) (MLR	A 127, 147	7)	unless	disturbed or problematic.
	_ayer (if observed):								
	ense clay								
Depth (in	_{ches):} <u>12</u>						Hydr	ic Soil Pres	sent? Yes 🖍 No
Remarks:									

Wetland ID W-F52 Cowardin Code PEM



Photograph Direction SSW

Date: 05/30/2015

Comments: 2015 wetland delineation.



Photograph Direction South

Date: 09/18/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/Co	_{ounty:} Harrison		Sampling Date: 05/30/2015
Applicant/Owner: MVP		, <u></u>		Sampling Point: W-F52-UP
Investigator(s): Ed Strohmaier, Dawn McCullou				_ 1 3
Landform (hillslope, terrace, etc.): hillside				Slope (%):
Subregion (LRR or MLRA): LRRN Lat				Datum: NAD 83
Soil Map Unit Name: Gilpin-Upshur complex, 35		-		
Are climatic / hydrologic conditions on the site typical for				·
Are Vegetation, Soil, or Hydrology	_			resent? Yes 🗸 No
Are Vegetation, Soil, or Hydrology	•		plain any answer	
SUMMARY OF FINDINGS – Attach site m				
SOMMAN OF THE IT	ap showing same	pinig point location	13, (141136613,	important reatures, etc.
Hydrophytic Vegetation Present? Yes		Is the Sampled Area		
Hydric Soil Present? Yes	No <u></u>	within a Wetland?	Yes	No <u> </u>
Wetland Hydrology Present? Yes	No /			
Remarks:				
Upland				
HYDROLOGY				
Wetland Hydrology Indicators:		C	Secondary Indicat	cors (minimum of two required)
Primary Indicators (minimum of one is required; chec	k all that annly)	<u> </u>	Surface Soil (•
1	• • •	-14)		
	True Aquatic Plants (B Hydrogen Sulfide Odor		Sparsely veg Drainage Patt	etated Concave Surface (B8)
	Oxidized Rhizospheres		Drainage Fatt Moss Trim Lir	
	Presence of Reduced	-		Vater Table (C2)
	Recent Iron Reduction		Crayfish Burro	
Drift Deposits (B3)	Thin Muck Surface (C7			sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rema			ressed Plants (D1)
Iron Deposits (B5)		, _	Geomorphic F	
Inundation Visible on Aerial Imagery (B7)			Shallow Aquit	
Water-Stained Leaves (B9)		_	Microtopograp	phic Relief (D4)
Aquatic Fauna (B13)		_	FAC-Neutral	Test (D5)
Field Observations:				
	_ Depth (inches):			
	_ Depth (inches):			,
Saturation Present? Yes No	_ Depth (inches):	Wetland Hy	drology Present	t? Yes No✓
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring v	well, aerial photos, prev	ious inspections), if availa	able:	
Remarks:				
Plot is located on the downhill side of the ac	ccess road.			

VEGETATION (Four Strata) - Use scientific names of plants.

EGETATION (Four Strata) – Use scientific na	ames of	•		Sampling Po	oint: <u>W-F52-U</u>	<u> </u>
	Absolute			Dominance Test worksheet:		
<u>Free Stratum</u> (Plot size: <u>50</u>) Ailanthus altissima	<u>% Cover</u>	Species?	<u>Status</u> FACU	Number of Dominant Species	1	(4)
'			FACO_	That Are OBL, FACW, or FAC:		_ (A)
				Total Number of Dominant	2	
3				Species Across All Strata:	3	_ (B)
ł				Percent of Dominant Species	220/	
				That Are OBL, FACW, or FAC:	33%	_ (A/B)
				Prevalence Index worksheet:		
	20			Total % Cover of:	Multiply by:	
50% of total cover:15	30% of	= Total Cov	/er : 6	OBL species x		
	20% 01	total cover:		FACW species x		
Sapling/Shrub Stratum (Plot size: 15') Rubus allegheniensis	15	./	FACU	FAC species x		
		. <u> </u>	FACU_	FACU species x		
					(4 = (5 =	
3				.	·	
l				Column Totals: (A	4)	— (D)
5				Prevalence Index = B/A =	·	_
S				Hydrophytic Vegetation Indica		
7				1 - Rapid Test for Hydrophy		
3				2 - Dominance Test is >50%	-	
9				3 - Prevalence Index is ≤3.0	_	
7.5		= Total Cov		4 - Morphological Adaptation		nitroac
50% of total cover: 7.5	20% or	total cover:	:3	data in Remarks or on a		
TIEID Stratum (Flot Size)	90	,		Problematic Hydrophytic Ve	•	
1. Microstegium vimineum	80		F <u>AC</u>		/g	,
2				¹ Indicators of hydric soil and wet	tland hvdrology	must
3				be present, unless disturbed or p	problematic.	1116.
4				Definitions of Four Vegetation	1 Strata:	
5				Tree – Woody plants, excluding	wines 2 in (7.6	, vw) U
3			,	more in diameter at breast heigh	onnes, م ۱۱۱۰ رم ht (DBH), regard	lless o
7			,	height.		
8		- ——		Sapling/Shrub – Woody plants,	excluding vines	s less
9				than 3 in. DBH and greater than		
10				m) tall.		
11		<u> </u>		Herb – All herbaceous (non-woo	ody) plants, rega	ardless
		= Total Cov	4.0	of size, and woody plants less th		
50% of total cover: 40	20% of	f total cover:	: 16	Woody vine – All woody vines of	greater than 3.2	ጻ ft in
Woody Vine Stratum (Plot size:15')				height.		J 10
1						
2						
3						
4				Hydrophytic		
5				Vegetation		
	0	= Total Cov	er er		_ No <u></u> ✓	
50% of total cover: 0		f total cover:	_			

Sampling Point: W-F52-UP

epth	Matrix		Redox Features	1 . 9	- .	
nches)	Color (moist)	%	Color (moist) % Ty	pe ¹ Loc ²	<u>Texture</u>	Remarks
<u>0-16 </u>	5YR 3/3	100			<u>GrC</u>	
		. <u> </u>				
			- durand Matrix, NAC, Manhad Cara		21	Dana Linina M Makrin
ype: C=Cond ydric Soil Ind		ietion, RIVI=Re	educed Matrix, MS=Masked San	d Grains.		_=Pore Lining, M=Matrix. Itors for Problematic Hydric Soils ³ :
=			Dayle Confess (C7)			
_ Histosol (A			Dark Surface (S7) Polyvalue Below Surface (S	O) (MI DA 147		cm Muck (A10) (MLRA 147)
Histic EpipBlack Histig			Thin Dark Surface (S9) (ML		146) C	oast Prairie Redox (A16) (MLRA 147, 148)
_	Sulfide (A4)		Loamy Gleyed Matrix (F2)	.KA 147, 140)	Di	iedmont Floodplain Soils (F19)
_ rrydrogen Stratified L			Depleted Matrix (F3)		<u> </u>	(MLRA 136, 147)
	(A10) (LRR N)		Redox Dark Surface (F6)		Ve	ery Shallow Dark Surface (TF12)
_	Below Dark Surfac	e (A11)	Depleted Dark Surface (F7)			ther (Explain in Remarks)
	Surface (A12)	- (,	Redox Depressions (F8)		<u> </u>	, , , , , , , , , , , , , , , , , , , ,
	cky Mineral (S1) (L	_RR N,	Iron-Manganese Masses (F	12) (LRR N,		
	47, 148)		MLRA 136)	, ,		
	yed Matrix (S4)		Umbric Surface (F13) (MLR	A 136, 122)	³ Indi	cators of hydrophytic vegetation and
_ Sandy Rec			Piedmont Floodplain Soils (F19) (MLRA 14	8) we	tland hydrology must be present,
_ Stripped M	latrix (S6)		Red Parent Material (F21) (MLRA 127, 147) unl	ess disturbed or problematic.
estrictive La	yer (if observed):	!				
Type:			<u>_</u>			
Depth (inche	es):		_		Hydric Soil	Present? Yes No _✓
emarks:					_	

USACE FILE NO./Project Name:		Valley Pipeline	COORDINATES:	Lat.	39.24964	Lon.	-80.550121	
STREAM/SITE ID AND SITE DESCR	RIPTION:				•	W-F54, Timber Mat Crossing		
(% stream slope, watershed size {a								
FORM OF MITIGATION:								
DATE:	8/10	2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-F54	Emergent	0.0042	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0042						
		Init Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0042			¢050.00		
Total Scrub-Shrub			0			\$252.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	City/C	ounty: Harrison		Sampling Date: 05/30/2015					
plicant/Owner: MVP State: WV Sampling Point: W-F54									
Investigator(s): Ed Strohmaier, Dawn McCullough Section, Township, Range: N/A									
Landform (hillslope, terrace, etc.): hilltop Local relief (concave, convex, none): convex Slope (%): 0-1									
Subregion (LRR or MLRA): LRRN Lat: 39.249656 Long: -80.550112 Datum: NAD 83									
Soil Map Unit Name: Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded (GuE3) NWI classification: None									
Are climatic / hydrologic conditions on the site typical for	or this time of year? Y	es No (If	no, explain in Re	marks.)					
Are Vegetation, Soil, or Hydrology	significantly distur	bed? Are "Normal C	ircumstances" pr	esent? Yes No					
Are Vegetation, Soil, or Hydrology			olain any answers						
SUMMARY OF FINDINGS – Attach site m			-						
Hydrophytic Vegetation Present? Yes	_ No								
Hydric Soil Present?		Is the Sampled Area	V V	No					
Wetland Hydrology Present? Yes	No	within a Wetland?	res	_ NO					
Remarks: Cowardin Code : PEM HGM: Slope WT: N	RPWW								
Information listed on this form represents the data collected in 2015. The wetland was revisited on 09/18/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation methodology.									
HYDROLOGY									
Wetland Hydrology Indicators:		<u>S</u>	econdary Indicate	ors (minimum of two required)					
Primary Indicators (minimum of one is required; check	(all that apply)		_ Surface Soil C	Cracks (B6)					
, , , <u> </u>	True Aquatic Plants (F		_ Sparsely Vege	etated Concave Surface (B8)					
	Hydrogen Sulfide Odd		_ Drainage Patte	•					
		es on Living Roots (C3) _	_ Moss Trim Lin						
<u> </u>	Presence of Reduced	` '	-	/ater Table (C2)					
	Recent Iron Reduction		_ Crayfish Burro						
	Thin Muck Surface (C			ible on Aerial Imagery (C9)					
	Other (Explain in Rem	narks)		essed Plants (D1)					
Iron Deposits (B5)		_	Geomorphic F	` '					
Inundation Visible on Aerial Imagery (B7)		_	Shallow Aquitard (D3) Microtopographic Relief (D4)						
Water-Stained Leaves (B9)		_	Microtopograp FAC-Neutral T						
Aquatic Fauna (B13)		_	FAC-Neutral I	Test (D3)					
Field Observations:	Denth (Seekee)								
Surface Water Present? Yes No	Depth (inches):								
Water Table Present? Yes No									
Saturation Present? Yes No	Depth (inches):	Wetland Hy	drology Present	? Yes <u>/</u> No					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									
Shared upland plot W-F53-UP.									
Charca apiana piet vv i ee ei .									

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

Sampling Point: W-F54

201	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30')	% Cover	Species?	<u>Status</u>	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:	2	(A)
2				T. IN 1 (5)		
3				Total Number of Dominant Species Across All Strata:	3	(B)
				Species Across Air Strata.		(D)
4				Percent of Dominant Species	400	
5				That Are OBL, FACW, or FAC:	100	(A/B)
6				Prevalence Index worksheet:		
7						
	0	= Total Co	ver	Total % Cover of:		
50% of total cover:0	20% of	total cove	r: <u> </u>	OBL species x		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2	2 =	_
1				FAC species x 3	3 =	_
				FACU species x 4	4 =	
2				UPL species x :		
3						
4		-	- ——	Column Totals: (A))	_ (D)
5				Prevalence Index = B/A =		
6				Hydrophytic Vegetation Indicat		<u> </u>
7						
8				1 - Rapid Test for Hydrophyt	-	
				2 - Dominance Test is >50%		
9	_	Total Ca		3 - Prevalence Index is ≤3.0¹	l	
50% of total cover: 0		= Total Co		4 - Morphological Adaptation	ns¹ (Provide sup	porting
F!	20% 01	total cove		data in Remarks or on a s	separate sheet)	
(Field Statem)	20	.,		Problematic Hydrophytic Veg	getation ¹ (Explai	n)
1. Microstegium vimineum	30		F <u>AC</u>			,
2. Carex lurida	20		<u>OBL</u>	¹ Indicators of hydric soil and wetl	and hydrology r	nuet
3. Arthraxon hispidis	25		F <u>AC</u>	be present, unless disturbed or p		iiust
4. Juncus tenuis	5		FACW_	Definitions of Four Vegetation		
5				Zemmiene en regetation	on ata.	
6				Tree – Woody plants, excluding v	vines, 3 in. (7.6	cm) or
7				more in diameter at breast height height.	t (DBH), regardl	ess of
				neight.		
8				Sapling/Shrub – Woody plants,		
9		-		than 3 in. DBH and greater than o	or equal to 3.28	ft (1
10		-		m) tall.		
11				Herb - All herbaceous (non-wood	dy) plants, rega	rdless
		= Total Co		of size, and woody plants less that	an 3.28 ft tall.	
50% of total cover: 40	20% of	total cove	r: <u>16</u>	Woody vine – All woody vines gr	reater than 3 28	ft in
Woody Vine Stratum (Plot size:15')				height.	reater than 5.20	10 111
1				9		
2						
3						
		-				
4		-		Hydrophytic		
5				Vegetation Present? Yes <u>✓</u>	No	
		= Total Co	_	Tresent: Tes	NO	
50% of total cover:0		total cove	:0			
Remarks: (Include photo numbers here or on a separate s	sheet.)					
20% bare ground.						

Sampling Point: W-F54

Profile Desc	ription: (Describe t	o the dept	h needed to docum	nent the	indicator	or confirm	m the absence of inc	dicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-6	7.5 YR 4/2	80	10 YR 4/4	20	С	<u>M</u>	SiCL	
7-12	7.5 YR 4/2	70	5 YR 4/4	15	С	M	SiCL	_
			5 YR 5/6	15	С	М	SiCL	
13-16	10 YR 4/3	95	10 YR 5/6	5	С	М	SiL	
						_		
						· ———	·	
						<u> </u>		
¹ Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gi	rains.		e Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2 cm M	uck (A10) (MLRA 147)
Histic Ep	ipedon (A2)		Polyvalue Be	low Surfa	ice (S8) (I	MLRA 147	, 148) Coast F	Prairie Redox (A16)
Black His	stic (A3)		Thin Dark Su			147, 148)	(MLI	RA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		Piedmo	ont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma				•	RA 136, 147)
	ck (A10) (LRR N)		Redox Dark	•	,			nallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar				Other (Explain in Remarks)
	rk Surface (A12)		Redox Depre					
	ucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12)	(LRR N,		
	147, 148)		MLRA 13	•	/MI DA 44	00 400)	31	a of building building and a
	leyed Matrix (S4) edox (S5)		Umbric Surfa					s of hydrophytic vegetation and
	Matrix (S6)		Piedmont Floor Red Parent N					hydrology must be present, isturbed or problematic.
	.ayer (if observed):		Neu Faleili N	nateriai (i	ZI) (WILI	XA 127, 14	uniess u	isturbed of problematic.
Type:	ayer (ii observeu).							
• • • • • • • • • • • • • • • • • • • •	shoo).						Undria Cail Drag	ent? Yes 🗸 No
Depth (inc	nes)						Hydric Soil Pres	ent? Yes V No
Remarks:								

Wetland Photograph Page

Wetland ID W-F54 Cowardin Code PEM



Photograph Direction WSW

Date: 05/30/2015

Comments: 2015 wetland delineation.



Photograph Direction ENE

Date: 09/18/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	ounty: Harrison		Sampling Date: 05/30/2015				
Applicant/Owner: MVP									
Investigator(s): Ed Strohmaier, Dawn McCullough Section, Township, Range: N/A									
Landform (hillslope, terrace, etc.): hilltop Local relief (concave, convex, none): convex Slope (%): 0-1									
Subregion (LRR or MLRA): LRRN Lat: 39.249587 Long: -80.55006 Datum: NAD 83									
Soil Map Unit Name: Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded (GuE3) NWI classification: None									
Are climatic / hydrologic condition	ons on the site typical fo	r this time of year? Ye	es 🗸 No	(If no, explain in Re	emarks.)				
	* *	· ·			resent? Yes No				
Are Vegetation, Soil				explain any answer					
-					important features, etc.				
			<u> </u>						
Hydrophytic Vegetation Prese Hydric Soil Present?	nt? Yes	-	Is the Sampled Area						
Wetland Hydrology Present?		No No	within a Wetland?	Yes	No				
Remarks:									
Cowardin Code : PEM F	IGM: Slope WT: NI	RPWW							
Information listed on this form represents the data collected in 2015. The wetland was revisited on 09/18/2019. The presence of wetland hydrology, hydrophytic vegetation, and hydric soils was unable to be confirmed because the wetland was obstructed by timber matting.									
HYDROLOGY									
Wetland Hydrology Indicato	rs:			Secondary Indicat	ors (minimum of two required)				
Primary Indicators (minimum o	of one is required; check	all that apply)		Surface Soil (Cracks (B6)				
Surface Water (A1)	<u> </u>	True Aquatic Plants (F	B14)	Sparsely Veg	etated Concave Surface (B8)				
High Water Table (A2)	!	Hydrogen Sulfide Odd	or (C1)	✓ Drainage Pat	terns (B10)				
Saturation (A3)	(Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Lir	nes (B16)				
Water Marks (B1)	!	Presence of Reduced	Iron (C4)	Dry-Season V	Vater Table (C2)				
Sediment Deposits (B2)	!	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Burre	ows (C8)				
Drift Deposits (B3)		Thin Muck Surface (C	37)	Saturation Vis	sible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	(Other (Explain in Rem	narks)	Stunted or St	ressed Plants (D1)				
Iron Deposits (B5)				Geomorphic I	, ,				
Inundation Visible on Aeri	al Imagery (B7)			Shallow Aquitard (D3)					
Water-Stained Leaves (B	9)			Microtopographic Relief (D4)					
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)				
Field Observations:									
Surface Water Present?	Yes No								
Water Table Present?	Yes No	Depth (inches):							
Saturation Present?	Yes No	Depth (inches):	4 Wetland H	lydrology Present	t? Yes <u>/</u> No				
(includes capillary fringe) Describe Recorded Data (stre	am gauge monitoring w	all aerial photos pre	vious inspections) if ava	ilable:					
Describe Necorded Data (site	am gauge, monitoring w	cii, acriai priotos, pro	vious irispections), ii ava	mabic.					
Remarks:									
Saturation is present with	nin upper 4 inches o	of soil profile from	recent heavy preci	pitation.					
				-					

VEGETATION (Four Strata) - Use scientific names of plants.

30'

Sapling/Shrub Stratum (Plot size: 15')

3. Microstigium vimineum

Woody Vine Stratum (Plot size: 15')

Tree Stratum (Plot size: __

Herb Stratum (Plot size: 5'

4. Carex vulpinoidea

1. Carex lurida

2. Juncus effucus

____)

% Cover Species? Status

0 = Total Cover

0 = Total Cover

✓ OBL

✓ F<u>AC</u>

___ FACW

15 <u>OBL</u>

100__ = Total Cover

0 = Total Cover

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

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

50% of total cover: ______ 20% of total cover:____ 20

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

55

	Sampling P	oint	:W-F53				
	Dominance Test worksheet:						
	Number of Dominant Species That Are OBL, FACW, or FAC	: <u> </u>	2	(A)			
	Fotal Number of Dominant Species Across All Strata:	_	2	(B)			
	Percent of Dominant Species That Are OBL, FACW, or FAC	: _	100	(A/B)			
F	Prevalence Index worksheet	:					
	Total % Cover of:	Ν	Multiply by:				
(OBL species						
	ACW species						
			·				
			:				
	JPL species						
	Column Totals:	(A)		(B)			
	Prevalence Index = B/A	=					
-	Hydrophytic Vegetation Indi		·c·	_			
Ι.	1 - Rapid Test for Hydroph						
١-		•	vegetation				
2 - Dominance Test is >50%							
3 - Prevalence Index is ≤3.0¹							
4 - Morphological Adaptations ¹ (Provide supporting							
-		ions ¹		porting			
-	data in Remarks or on	ions¹ a sep	parate sheet)				
-		ions¹ a sep	parate sheet)				
1 b	data in Remarks or on	ions ¹ a sep /eget	parate sheet) ation ¹ (Expla	in)			
b	data in Remarks or on Problematic Hydrophytic \ Indicators of hydric soil and w	ions ¹ a sep /eget retlan r prol	parate sheet) ation ¹ (Expla d hydrology rolematic.	in)			
1 1	data in Remarks or on Problematic Hydrophytic \ Indicators of hydric soil and we present, unless disturbed o	ions ¹ a sep /eget retlan r prol on St	parate sheet) ation ¹ (Expla d hydrology rolematic. rata: es, 3 in. (7.6	in) must cm) or			
T rr	data in Remarks or on Problematic Hydrophytic \ Indicators of hydric soil and we present, unless disturbed of the problematic free — Woody plants, excluding the problematic free in diameter at breast height	ions ¹ a sep /eget retlan r prol on St ag vin ght (E	d hydrology rolematic. rata: es, 3 in. (7.6 DBH), regardl	cm) or less of			
T rr h	data in Remarks or on Problematic Hydrophytic \ Indicators of hydric soil and we present, unless disturbed or Definitions of Four Vegetation Free – Woody plants, excluding nore in diameter at breast height. Sapling/Shrub – Woody plant han 3 in. DBH and greater that	ions ¹ a sep /eget etlan r prol on St ag vin gght (E	cluding vines equal to 3.28	cm) or less of			
the state of the s	data in Remarks or on Problematic Hydrophytic \ Indicators of hydric soil and we present, unless disturbed or Definitions of Four Vegetation Free – Woody plants, excluding nore in diameter at breast height. Sapling/Shrub – Woody plant han 3 in. DBH and greater than 1 tall. Herb – All herbaceous (non-weight)	ions ¹ a sep /eget retlan r prob St g vin gght ([ss, ex oody] than	d hydrology rolematic. rata: es, 3 in. (7.6 DBH), regardle cluding vines equal to 3.28) plants, rega 3.28 ft tall.	cm) or less of less of the fit (1) rdless			

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: W-F53

Profile Desc	ription: (Describe t	to the dep	th needed to docun	nent the	indicator	or confirr	n the abse	ence of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Textur	
0-4	7.5 YR 4/2	90	10 YR 3/6	10	С	M	SiCL	<u> </u>
5-12	7.5 YR 4/2	90	10 YR 3/6	5	С	М	SiCL	<u> </u>
			10 GY 4/1	5			SiCL	<u>-</u>
13-20	7.5 YR 4/2	100					SiL	
				-				
¹Type: C=Co	oncentration, D=Depl	etion, RM:	=Reduced Matrix, MS	=S=Masked	d Sand Gr	ains.	² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil I		,	,				lı	ndicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be		ice (S8) (N	ILRA 147		Coast Prairie Redox (A16)
Black Hi			Thin Dark Su				_	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			,		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		(i Z)		_	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S		- 6)			Very Shallow Dark Surface (TF12)
	d Below Dark Surface	Δ (Δ11)	Depleted Dar	•	,		_	Other (Explain in Remarks)
	ark Surface (A12)	5 (A11)	Redox Depre				_	Other (Explain in Kemarks)
		DD N	Iron-Mangan			I DD N		
	lucky Mineral (S1) (L	.KK N,	-		es (F12) (LKK N,		
	147, 148)		MLRA 130		/MI D A 43	c 422\		3Indicators of hydrophytic vegetation and
	lleyed Matrix (S4)		Umbric Surfa				40)	³ Indicators of hydrophytic vegetation and
-	edox (S5)		Piedmont Flo					wetland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	-21) (MLR	A 127, 14	7)	unless disturbed or problematic.
Restrictive I	_ayer (if observed):							
Туре:								
Depth (inc	ches):						Hydric	Soil Present? Yes No
Remarks:							•	

Wetland ID W-F53 Cowardin Code PEM



Photograph Direction WSW

Date: 05/30/2015

Comments: 2015 wetland delineation.



Photograph Direction WSW

Date: 09/18/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP				City/	County: Harrisc	n		Sampling Date: 05/3	30/2015
Applicant/Owner: MVP								Sampling Point: V	
Investigator(s): Ed Strohm	aier, Daw	n McCullo	ugh	Sect	tion. Township. Ra			_ , , , _	
Landform (hillslope, terrace, e						-		Slope (%): 5
Subregion (LRR or MLRA): L					Loi			Datum: N	
Soil Map Unit Name: Gilpin-						-			
Are climatic / hydrologic condi								•	
Are Vegetation, Soil _				-				present? Yes	No
				•					_ NO
Are Vegetation, Soil _							·	ers in Remarks.)	
SUMMARY OF FINDIN	iGS – Att	ach site n	nap sh	owing sar	mpling point	location	s, transects	s, important featu	ıres, etc.
Hydrophytic Vegetation Pres	sent?	Yes	No	✓	la tha Cammia				
Hydric Soil Present?		Yes		✓	Is the Sample within a Wetla		Yes	No 🗸	
Wetland Hydrology Present?	>	Yes		<u> </u>	Within a Wetla	iiiu:	163		
Remarks: upland									
иріани									
HYDROLOGY									
Wetland Hydrology Indicat	ors:					S	econdary Indica	ators (minimum of two	required)
Primary Indicators (minimum		equired; chec	ck all that	apply)		_	Surface Soil		
Surface Water (A1)				quatic Plants	(B14)			getated Concave Surf	ace (B8)
High Water Table (A2)				en Sulfide Oo				=	, ,
Saturation (A3)			-		res on Living Roo	ots (C3)	Moss Trim L		
Water Marks (B1)				ce of Reduce	_			Water Table (C2)	
Sediment Deposits (B2)			Recent	Iron Reducti	ion in Tilled Soils ((C6) _	Crayfish Bur	rows (C8)	
Drift Deposits (B3)			Thin Mu	uck Surface ((C7)	_	Saturation V	isible on Aerial Image	ry (C9)
Algal Mat or Crust (B4)			Other (I	Explain in Re	emarks)	_	Stunted or S	Stressed Plants (D1)	
Iron Deposits (B5)						_	Geomorphic	Position (D2)	
Inundation Visible on Ae	rial Imagery	y (B7)				_	Shallow Aqu	uitard (D3)	
Water-Stained Leaves (B9)					_		aphic Relief (D4)	
Aquatic Fauna (B13)					<u>, </u>	_	FAC-Neutra	I Test (D5)	
Field Observations:		1							
Surface Water Present?		No							
Water Table Present?		No							
Saturation Present? (includes capillary fringe)	Yes	No	_ Depth	(inches):	w	etland Hy	drology Presei	nt? YesN	°
Describe Recorded Data (str	ream gauge	, monitoring	well, aeri	al photos, pr	evious inspection	s), if availa	able:		
Remarks:					_			_	
Upland plot is located S	W of the	wetland w	hich lie	s adjacent	t to and across	s the exi	sting access	road.	

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1. Lirodendron tulipifera	70		FACU_	That Are OBL, FACW, or FAC: (A)
2. Acer rubrum	15		FAC	T. 111 (5)
3				Total Number of Dominant Species Across All Strata: 4 (B)
4			·	
5				Percent of Dominant Species That Are OBL FACW, or FAC: 50 (A/B)
6.			· ——	That Are OBL, FACW, or FAC: (A/B)
7				Prevalence Index worksheet:
·· <u> </u>	85	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 42.5				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	2070 01	10101 00101		FACW species x 2 =
1. Elaegus umbellata	10	~	UPL	FAC species x 3 =
	-		OI L	FACU species x 4 =
2		· -		UPL species x 5 =
3				
4			· ——	Column Totals: (A) (B)
5		. <u></u>		Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8	-			2 - Dominance Test is >50%
9				
	10	= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:5	20% of	total cover	: 2	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5'				data in Remarks or on a separate sheet)
1. Packera aurea	15	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Microstegium viminium	20		FAC	
3	-		1710	¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6	-	· <u></u>		more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		. <u></u>		m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov	_	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>17.5</u>	20% of	total cover	:7	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2	-			
3				
4				Harbardarda
5.				Hydrophytic Vegetation
	0	= Total Cov	/er	Present? Yes No V
50% of total cover: 0		total cover	_	
Remarks: (Include photo numbers here or on a separate si				
Bare ground 15%	,			

Sampling Point: W-F53/F54-UP

SOIL

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirm	the absence	of indicato	rs.)		
Depth	Matrix		Redo	x Features	3						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remark	S	
0-12	5YR 4/3	75	2.5 YR 4/6	25			SiCL	-			
13-16	10 YR 4/2	90	5 YR 4/6	5			SiL				
			10 YR 6/4	5			SiL				
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location: P				
Hydric Soil	Indicators:									Hydric Soils	³:
Histosol			Dark Surface					cm Muck (A			
	pipedon (A2)		Polyvalue Be				148) C	oast Prairie		6)	
	stic (A3)		Thin Dark Su	, ,	•	47, 148)		(MLRA 14		:I- (F40)	
	en Sulfide (A4) d Layers (A5)		Loamy Gleye Depleted Ma		F2)		P	iedmont Flo (MLRA 13		iis (F19)	
	ick (A10) (LRR N)		Redox Dark	. ,	·6)		V	ery Shallow		ice (TF12)	
	d Below Dark Surface	e (A11)	Depleted Da					ther (Explai			
	ark Surface (A12)	, ,	Redox Depre							,	
	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Masse	es (F12) (I	_RR N,					
	A 147, 148)		MLRA 13	-			2				
	Gleyed Matrix (S4)		Umbric Surfa							egetation and	d
	Redox (S5)		Piedmont Flo					tland hydrol			
	Matrix (S6) Layer (if observed):		Red Parent N	viateriai (F	21) (WLR	4 127, 147) un	less disturbe	ea or proble	ematic.	
	Layer (ii observeu).										
Type:	-h).						Ukadala Call	D=====40	V	No 🗸	,
	ches):						Hydric Soil	Present?	Yes	NO	_
Remarks:											

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.249629	Lon.	-80.549909
STREAM/SITE ID AND SITE DESCR	RIPTION:				<u> </u>	W-F53, Timber Mat Crossing		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-F53	Emergent	0.008	Emergent					
				-				
					ĺ	PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on		
						Advanced Mitigation		Υ
						(Y or N)		
Total Impact		0.008						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.008					
Total Scrub-Shrub			0			\$480.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP		City/C	_{ounty:} Harrison		Sampling Date: 05/30/2015
Applicant/Owner: MVP					Sampling Point: W-F53
Investigator(s): Ed Strohmai	er, Dawn McCullou			<u> </u>	
Landform (hillslope, terrace, etc					Slope (%): 0-1
Subregion (LRR or MLRA): LF					Datum: NAD 83
Soil Map Unit Name: Gilpin-Up			-		
Are climatic / hydrologic condition	ons on the site typical for	r this time of year? Ye	es 🗸 No	(If no, explain in Re	emarks.)
·					resent? Yes No
Are Vegetation, Soil				explain any answe	
-					, important features, etc.
					, ,
Hydrophytic Vegetation Prese			Is the Sampled Area		
Hydric Soil Present? Wetland Hydrology Present?	Yes	No No	within a Wetland?	Yes	No
Remarks:	res_ 				
Cowardin Code : PEM F	IGM: Slope WT: NI	RPWW			
Information listed on this presence of wetland hyd was obstructed by timber	rology, hydrophytic	e data collected ir vegetation, and h	n 2015. The wetland hydric soils was una	d was revisited ble to be confii	on 09/18/2019. The med because the wetland
HYDROLOGY					
Wetland Hydrology Indicato	rs:				tors (minimum of two required)
Primary Indicators (minimum o	of one is required; check	all that apply)		Surface Soil	
Surface Water (A1)		True Aquatic Plants (F	•		etated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Odd		✓ Drainage Pat	` ,
Saturation (A3)			es on Living Roots (C3)	Moss Trim Li	, ,
Water Marks (B1)		Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burr	` ,
Drift Deposits (B3)		Thin Muck Surface (C Other (Explain in Rem			sible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Iron Deposits (B5)	 '	Other (Explain in Ren	iaiks)	Geomorphic	ressed Plants (D1)
Inundation Visible on Aeri	al Imagery (R7)			Shallow Aqui	, ,
Water-Stained Leaves (B)	• • • •				phic Relief (D4)
Aquatic Fauna (B13)	-,			FAC-Neutral	
Field Observations:					
Surface Water Present?	Yes No	Depth (inches):			
Water Table Present?	Yes No				
Saturation Present?	Yes No		4 Wetland H	lydrology Presen	t? Yes ✔ No
(includes capillary fringe)					ti les No
Describe Recorded Data (stre	am gauge, monitoring w	rell, aerial photos, pre	vious inspections), if ava	ilable:	
Remarks:					
Saturation is present with	nin upper 4 inches o	of soil profile from	recent heavy precip	pitation.	
'		•	, , ,	•	

VEGETATION (Four Strata) - Use scientific names of plants.

30'

Sapling/Shrub Stratum (Plot size: 15')

3. Microstigium vimineum

Woody Vine Stratum (Plot size: ____15' ____)

Tree Stratum (Plot size: __

Herb Stratum (Plot size: 5'

4. Carex vulpinoidea

1. Carex lurida

2. Juncus effucus

____)

% Cover Species? Status

0 = Total Cover

0 = Total Cover

✓ OBL

✓ F<u>AC</u>

___ FACW

15 <u>OBL</u>

100__ = Total Cover

0 = Total Cover

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

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

50% of total cover: ______ 20% of total cover:____ 20

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

55

	Sampling Po	oint:	W-F53	
Ī	Dominance Test worksheet:			
	Number of Dominant Species That Are OBL, FACW, or FAC:		2	(A)
	Total Number of Dominant Species Across All Strata:		2	(B)
	Percent of Dominant Species That Are OBL, FACW, or FAC:		100	(A/B)
F	Prevalence Index worksheet:			
	Total % Cover of:	М	ultiply by:	
	OBL species			
	FACW species			
	UPL species			
	Column Totals: (A)		(B)
	Prevalence Index = B/A =	=		
H	Hydrophytic Vegetation Indic			_
	1 - Rapid Test for Hydroph			
		•	egetation	
	2 - Dominance Test is >50			
	3 - Prevalence Index is ≤3.			
	4 - Morphological Adaptation			
1				
	data in Remarks or on a	a sepa	arate sheet)	
	data in Remarks or on a Problematic Hydrophytic V	a sepa	arate sheet)	
		a sepa egeta	arate sheet) ition ¹ (Expla	in)
	Problematic Hydrophytic V Indicators of hydric soil and we	egeta etland probl	arate sheet) tion¹ (Expla hydrology i	in)
	Problematic Hydrophytic V Indicators of hydric soil and we be present, unless disturbed or	egeta egeta etland probl n Stra	hydrology of lematic. s, 3 in. (7.6	in) must cm) or
	Problematic Hydrophytic V Indicators of hydric soil and we be present, unless disturbed or Pefinitions of Four Vegetatio Tree – Woody plants, excluding more in diameter at breast height	etland problem Strage vine that (Diese, exc	hydrology rematic. ata: s, 3 in. (7.6 BH), regard	cm) or less of
	Problematic Hydrophytic V Indicators of hydric soil and we be present, unless disturbed or Definitions of Four Vegetatio Tree – Woody plants, excluding more in diameter at breast heigheight. Sapling/Shrub – Woody plants than 3 in. DBH and greater than	estland problem Strage vine that (Disas, except or e	hydrology rematic. ata: s, 3 in. (7.6 BH), regard luding vines qual to 3.28 plants, rega	cm) or less of
	Problematic Hydrophytic V Indicators of hydric soil and we be present, unless disturbed or Pefinitions of Four Vegetatio Tree – Woody plants, excluding more in diameter at breast heigheight. Sapling/Shrub – Woody plants than 3 in. DBH and greater that m) tall. Herb – All herbaceous (non-woods)	a separate s	hydrology in the state of the s	cm) or less of s, less s ft (1

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: W-F53

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirn	the abse	ence of indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Textu</u>	_
0-4	7.5 YR 4/2	90	10 YR 3/6	10	С	M	SiCl	<u> </u>
5-12	7.5 YR 4/2	90	10 YR 3/6	5	С	M	SiCl	<u> </u>
			10 GY 4/1	5			SiCl	<u>-</u>
13-20	7.5 YR 4/2	100					SiL	
					-		-	
					-			
					r		-	
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Soil I							lı	ndicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface				_	2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be		. , .		148) _	Coast Prairie Redox (A16)
Black His			Thin Dark Su			47, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye Depleted Ma		F2)		_	Piedmont Floodplain Soils (F19)
	Layers (A5) ck (A10) (LRR N)		Redox Dark S		. 6)			(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dark	•			_	Other (Explain in Remarks)
	rk Surface (A12)	, (,)	Redox Depre				_	
	ucky Mineral (S1) (L	RR N,	Iron-Mangan			LRR N,		
	147, 148)	·	MLRA 13		· , ,	·		
	leyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 13	6, 122)		³ Indicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	l8)	wetland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7)	unless disturbed or problematic.
Restrictive L	.ayer (if observed):							
Туре:			<u></u>					
Depth (inc	ches):						Hydric	Soil Present? Yes 🔽 No
Remarks:							· I	

Wetland ID W-F53 Cowardin Code PEM



Photograph Direction WSW

Date: 05/30/2015

Comments: 2015 wetland delineation.



Photograph Direction WSW

Date: 09/18/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP				City/	County: Harrisc	Sampling Date: 05/30/2015					
Applicant/Owner: MVP								Sampling Point: W-F53/F5			
Investigator(s): Ed Strohm	aier, Daw	n McCullo	ugh	Sect	tion. Township. Ra						
Landform (hillslope, terrace, e						_		Slope (%): 5			
Subregion (LRR or MLRA): _L					Lo			Datum: NAD 83			
Soil Map Unit Name: Gilpin-						-					
Are climatic / hydrologic condi								·			
Are Vegetation, Soil _				-				present? Yes No			
				•							
Are Vegetation, Soil _								ers in Remarks.)			
SUMMARY OF FINDIN	iGS – Att	ach site n	nap sh	owing sai	mpling point	location	s, transects	s, important features, etc.			
Hydrophytic Vegetation Pres	sent?	Yes	No	✓	le the Commis	-l A					
Hydric Soil Present?		Yes		✓	Is the Sample within a Wetla		Yes	No 🗸			
Wetland Hydrology Present?	>	Yes		<u> </u>	Within a Wetta	iiid:	163				
Remarks: upland											
иріани											
HYDROLOGY											
Wetland Hydrology Indicat	ors:					S	Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum		equired; ched	ck all that	apply)		_	Surface Soil				
Surface Water (A1)				quatic Plants	(B14)			getated Concave Surface (B8)			
High Water Table (A2)				en Sulfide O			Drainage Patterns (B10)				
Saturation (A3)			-		res on Living Roo	ots (C3)	Moss Trim L				
Water Marks (B1)				ce of Reduce	_	· · · _		Water Table (C2)			
Sediment Deposits (B2)			Recent	Iron Reducti	on in Tilled Soils	(C6) _	Crayfish Bur	rows (C8)			
Drift Deposits (B3)			Thin Mu	uck Surface ((C7)	_	Saturation V	isible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)			Other (I	Explain in Re	emarks)	_	Stunted or S	tressed Plants (D1)			
Iron Deposits (B5)						_	Geomorphic	Position (D2)			
Inundation Visible on Ae	rial Imagery	y (B7)				_	Shallow Aqu	itard (D3)			
Water-Stained Leaves (B9)					_		aphic Relief (D4)			
Aquatic Fauna (B13)						_	FAC-Neutra	Test (D5)			
Field Observations:		/									
Surface Water Present?		No									
Water Table Present?		No						.,			
Saturation Present? (includes capillary fringe)	Yes	No	_ Depth	(inches):	W	etland Hy	drology Presei	nt? Yes No			
Describe Recorded Data (str	ream gauge	, monitoring	well, aeri	al photos, pr	evious inspection	s), if availa	able:				
Remarks:											
Upland plot is located S	W of the	wetland w	hich lie	s adjacen	t to and across	s the exi	sting access	road.			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:)		Species?		Number of Dominant Species
1. Lirodendron tulipifera	70		<u>FACU</u>	That Are OBL, FACW, or FAC: (A)
2. Acer rubrum	15		FAC	T. 111 (5)
3				Total Number of Dominant Species Across All Strata: 4 (B)
4			·	
5				Percent of Dominant Species That Are OBL FACW, or FAC: 50 (A/B)
6.			· ——	That Are OBL, FACW, or FAC: (A/B)
7				Prevalence Index worksheet:
·· <u> </u>	85	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 42.5				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	2070 01	10101 00101		FACW species x 2 =
1. Elaegus umbellata	10	/	UPL	FAC species x 3 =
	-		<u> </u>	FACU species x 4 =
2				UPL species x 5 =
3				
4			· ——	Column Totals: (A) (B)
5		. <u></u>		Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8	-			2 - Dominance Test is >50%
9				
	10	= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:5	20% of	total cover	: 2	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5'				data in Remarks or on a separate sheet)
1. Packera aurea	15	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Microstegium viminium	20		FAC	
3	-		1710	¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6	-	· <u></u>		more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10			·	m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov	_	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>17.5</u>	20% of	total cover	:7	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2	-			
3				
4				Harbardarda
5.				Hydrophytic Vegetation
	0	= Total Cov	/er	Present? Yes No V
50% of total cover: 0		total cover	_	
Remarks: (Include photo numbers here or on a separate si				
Bare ground 15%	,			

Sampling Point: W-F53/F54-UP

SOIL

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirm	the absence	of indicato	rs.)		
Depth	Matrix		Redo	x Features	3						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remark	S	
0-12	5YR 4/3	75	2.5 YR 4/6	25			SiCL	-			
13-16	10 YR 4/2	90	5 YR 4/6	5			SiL				
			10 YR 6/4	5			SiL				
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location: P				
Hydric Soil	Indicators:									Hydric Soils	³:
Histosol			Dark Surface					cm Muck (A			
	pipedon (A2)		Polyvalue Be				148) C	oast Prairie		6)	
	stic (A3)		Thin Dark Su	, ,	•	47, 148)		(MLRA 14		:I- (F40)	
	en Sulfide (A4) d Layers (A5)		Loamy Gleye Depleted Ma		F2)		P	iedmont Flo (MLRA 13		iis (F19)	
	ick (A10) (LRR N)		Redox Dark	. ,	·6)		V	ery Shallow		ice (TF12)	
	d Below Dark Surface	e (A11)	Depleted Da					ther (Explai			
	ark Surface (A12)	, ,	Redox Depre							,	
	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Masse	es (F12) (I	_RR N,					
	A 147, 148)		MLRA 13	-			2				
	Gleyed Matrix (S4)		Umbric Surfa							egetation and	d
	Redox (S5)		Piedmont Flo					tland hydrol			
	Matrix (S6) Layer (if observed):		Red Parent N	viateriai (F	21) (WLR	4 127, 147) un	less disturbe	ea or proble	ematic.	
	Layer (ii observeu).										
Type:	-h).						Ukadala Call	D=====40	V	No 🗸	,
	ches):						Hydric Soil	Present?	Yes	NO	_
Remarks:											

	Mountain	Valley Pipeline	COORDINATES:	Lat.	39.249464	Lon.	-80.55104
RIPTION:					W-F55, Timber Mat Crossing		
acreage}, unaltered	or impairments)						
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0173	Emergent					
							n
					Advanced Mitigation (Y or N)		Y
·	0.0173						
	Jnit Scores						
iassification					ILF Costs		
					\$1.038.00		
					φ1,030.00		
	PART I - Wetl Impact Wetland Classification Emergent	RIPTION: acreage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0173 0.0173 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0173 Emergent 0.0173 PART II - Unit Scores	RIPTION: acreage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0173 Emergent 0.0173 PART II - Unit Scores lassification Replacement Unit(s) 0 0 0	RIPTION: Increages, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0173 Emergent 0.0173 Emergent 1. Unit Scores PART II - Unit Scores Replacement Unit(s) 0 0 0	RPTION: Creage}, unaltered or impairments) References Reflection Reflection Reflection Replacement Unit(s) 0.0173 Replacement Unit(s) 0.0173 Replacement Unit(s) 0.0173 Reflection Replacement Unit(s) 0.0173 Stationard Reflection W-F55, Timber Mat Crossing PRECIPITATION PAST 48 HRS: PART II - Advanced Sustainable Determination Made on Advanced Mitigation (Y or N) Sustainable Determination Made on Advanced Mitigation (Y or N) Sustainable Determination Made on Advanced Mitigation (Y or N) Sustainable Determination Made on Advanced Mitigation (Y or N) Sustainable Determination Made on Advanced Mitigation (Y or N) Sustainable Determination Made on Advanced Mitigation (Y or N) Sustainable Determination Made on Advanced Mitigation (Y or N) Sustainable Determination Made on Advanced Mitigation (Y or N) Sustainable Determination Made on Advanced Mitigation (Y or N)	RPTION: Coreage), unaltered or impairments) Reflected prices and indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0173 Emergent PART II - Wetland Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores Impact Impacts (acreage) Wetland Classification Emergent 0.0173 Emergent PART III - Advanced Mitigation (Y or N) Estimated ILF Costs 0.0173 Replacement Unit(s) 0.0173 \$1,038.00

Project/Site: MVP		City/C	_{ounty:} Harrison		Sampling Date: 05/30/2015			
Applicant/Owner: MVP					Sampling Point: W-F55			
Investigator(s): Ed Strohmai	er, Dawn McCullou							
Landform (hillslope, terrace, etc					Slope (%): 0-1			
Subregion (LRR or MLRA): LR					Datum: NAD 83			
Soil Map Unit Name: Gilpin-Up								
Are climatic / hydrologic condition			_		·			
, ,	* *	•		•	resent? Yes No			
Are Vegetation, Soil								
_				explain any answei	, important features, etc.			
			pinig point locatio	ino, transcoto	, important reatures, etc.			
Hydrophytic Vegetation Preser			Is the Sampled Area					
Hydric Soil Present?	Yes	_ No	within a Wetland?	Yes	No			
Wetland Hydrology Present?	Yes							
Remarks: Cowardin Code : PEM H	IGM: Slope WT: N	RPWW						
was obstructed by timber	rology, hydrophytic	e data collected ir vegetation, and h	n 2015. The wetland hydric soils was una	d was revisited ble to be confii	on 09/18/2019. The med because the wetland			
HYDROLOGY								
Wetland Hydrology Indicator					tors (minimum of two required)			
Primary Indicators (minimum c	-			Surface Soil				
Surface Water (A1)		True Aquatic Plants (•	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)		Hydrogen Sulfide Odd		Drainage Patterns (B10) C3) Moss Trim Lines (B16)				
Saturation (A3)		Oxidized Rhizosphere Presence of Reduced	es on Living Roots (C3)					
Water Marks (B1) Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burr	Nater Table (C2)			
Drift Deposits (B3)		Thin Muck Surface (C			sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Rem			ressed Plants (D1)			
Iron Deposits (B5)		(=		Geomorphic	` ,			
Inundation Visible on Aeria	al Imagery (B7)			Shallow Aqui				
Water-Stained Leaves (BS					phic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)			
Field Observations:								
Surface Water Present?	Yes No	Depth (inches):						
Water Table Present?	Yes No	Depth (inches):						
Saturation Present?	Yes No	Depth (inches):	3 Wetland H	lydrology Presen	t? Yes <u> </u>			
(includes capillary fringe) Describe Recorded Data (stream)	am gauge, monitoring w	voll porial photos prov	vious inspections) if ava	ilable:				
Describe Recorded Data (silea	an gauge, monitoring w	eli, aeriai priotos, pre	vious irispections), ii ava	ilable.				
Remarks:								
Wetland is located on the	existing access ro	ad surface. Satur	ated in the upper 3	inches from re	cent heavy precipitation.			
	· ·		• •		, , ,			

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30'	Absolute			Dominance Test worksheet:		
ree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
				Total Number of Dominant Species Across All Strata:	2	(B)
				Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/E
		·	· ——	Prevalence Index worksheet:		
	0			Total % Cover of:	Multiply by:	
50% of total cover: 0		= Total Cov		OBL species x 1	=	
apling/Shrub Stratum (Plot size: 15')	20% 01	ioiai covei.		FACW species x 2		
				FAC species x 3		
				FACU species x 4		
		-		UPL species x 5		
				Column Totals: (A)		(B)
				Prevalence Index = B/A =		_
			· ——	Hydrophytic Vegetation Indicat	ors:	
				1 - Rapid Test for Hydrophyti	c Vegetation	
		-		2 - Dominance Test is >50%	-	
				3 - Prevalence Index is ≤3.0 ¹		
		= Total Cov	_	4 - Morphological Adaptation		oportin
50% of total cover:0	20% of	total cover		data in Remarks or on a s		
lerb Stratum (Plot size: 5')				Problematic Hydrophytic Veg	•	
Microstegium vimineum	75		F <u>AC</u>		otation (Expla	,
Carex lurida	20		<u>OBL</u>	¹ Indicators of hydric soil and wetla	and hydrology	muet
_ Juncus effusus	5		F <u>AC</u>	be present, unless disturbed or pr		must
				Definitions of Four Vegetation	Strata:	
	_			The NAME of the Lord of the Control	·	
				Tree – Woody plants, excluding war more in diameter at breast height		
·				height.	(22), .ega.a	.000 0
•	_			Sanling/Shrub Waadu planta	مردمان طائم مريام م	
·				Sapling/Shrub – Woody plants, e than 3 in. DBH and greater than of		
0				m) tall.		
1.	- '-			Herb – All herbaceous (non-wood	du) plante roge	ordloca
	100	= Total Cov	er	of size, and woody plants less that		ii uies:
50% of total cover: 50%	20% of	total cover	20			0 (1)
Voody Vine Stratum (Plot size: 15')				Woody vine – All woody vines gr height.	eater than 3.28	3 ft in
				noight.		
			·			
·				Hydrophytic		
•	0	Tatal Car		Vegetation Present? Yes ✓	No	
50% of total cover:0		= Total Cov total cover:	_			
		total cover.				
Remarks: (Include photo numbers here or on a separate	sneet.)					

SOIL Sampling Point: W-F55

Depth	Matrix			x Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-3	7.5 YR 4/2	60	5 YR 4/4	20	С	M	SiCL	
			7.5 YR 4/3	10	С	M	SiCL	
			2.5 YR 5/6	5	С	M	SiCL	
			10 YR 4/6	5	С	M	SiCL	
4-20	5 YR 4/3	90	7.5 YR 5/6	10	С	М	SiL	
Type: C-Co	oncentration, D=Depl	etion RM-	Reduced Matrix MS	S-Masker	d Sand Gr	aine	² Location: PI	=Pore Lining, M=Matrix.
	Indicators:	elion, Kivi=	Neduced Matrix, Mc	3=IVIASKE	J Sanu Gi	airis.		tors for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed):			Dark Surface Polyvalue Be Thin Dark Su Loamy Gleye Depleted Ma Redox Dark Depleted Dan Redox Depre Iron-Mangan MLRA 13 Umbric Surfa Piedmont Flo	elow Surface (S9 ed Matrix (F3) Surface (F S	(MLRA 1) (MLRA 1) (F2) (F6) (F7) (8) (es (F12) (MLRA 13) (GIIS (F19)	LRR N, 66, 122) (MLRA 14	. 148) Co Pi Ve Ot 3India 48) wet	cm Muck (A10) (MLRA 147) coast Prairie Redox (A16) (MLRA 147, 148) edmont Floodplain Soils (F19) (MLRA 136, 147) ery Shallow Dark Surface (TF12) ther (Explain in Remarks) cators of hydrophytic vegetation and land hydrology must be present, ess disturbed or problematic.
Туре:			<u>—</u>					_
Depth (inc	ches):						Hydric Soil	Present? Yes 🗸 No



Photograph Direction WNW

Date: 05/30/2015

Comments: 2015 wetland delineation.



Photograph Direction NW

Date: 09/18/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/	County: Harrison		Sampling Date: 05/30/2015
Applicant/Owner: MVP					Sampling Point: W-F55-UP
Investigator(s): Ed Strohmaier, Da	wn McCullou				_ ,
Landform (hillslope, terrace, etc.): road					Slope (%): 5
Subregion (LRR or MLRA): LRRN					Datum: NAD 83
Soil Map Unit Name: Gilpin-Upshur			-		
Are climatic / hydrologic conditions on the	he site typical fo	or this time of year?	Yes No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or					_
Are Vegetation, Soil, or					
SUMMARY OF FINDINGS – A					
					· · ·
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes		Is the Sampled Area		
Wetland Hydrology Present?	Yes		within a Wetland?	Yes	No
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:					tors (minimum of two required)
Primary Indicators (minimum of one is			· · ·	Surface Soil	
Surface Water (A1)		True Aquatic Plants			getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od	dor (C1) res on Living Roots (C3)	Drainage Pat	
Saturation (A3) Water Marks (B1)		Presence of Reduce	= : :	Moss Trim Li	Water Table (C2)
Sediment Deposits (B2)			on in Tilled Soils (C6)	Crayfish Burr	
Drift Deposits (B3)		Thin Muck Surface (· ·	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Re			tressed Plants (D1)
Iron Deposits (B5)		, .	•	Geomorphic	
Inundation Visible on Aerial Image	ery (B7)			Shallow Aqui	tard (D3)
Water-Stained Leaves (B9)					phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present? Yes _	No	Depth (inches):			
		Depth (inches):			
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland F	lydrology Presen	t? Yes No
Describe Recorded Data (stream gaug	ge, monitoring w	ell, aerial photos, pr	evious inspections), if ava	ilable:	
Remarks:					
Upland plot is located to the so	uth on the for	rested slope abo	ove the wetland.		
opiana piet le lecateu te tile ce		. cotou ciopo asc	vo ino voliana.		

VEGETATION (Four Strata) - Use scientific names of plants.

2. Acer rubrum 20

Tree Stratum (Plot size: 30' %

1. Carya tomentosa

Sapling/Shrub Stratum (Plot size: 15')

2. Fagus grandifolia

4. Carya tomentosa 5

5._____ ____

1. Acer rubrum

3. Crataegus crus-galli

Herb Stratum (Plot size: 5')

,	Absolute	Dominant	Indicator	Dominance Test worksheet:	
)	% Cover 75	Species? ✓	Status UPL	Number of Dominant Species That Are OBL, FACW, or FAC: 2	(A)
	20	V	FAC	Total Number of Dominant Species Across All Strata: 4	(B)
				Percent of Dominant Species That Are OBL, FACW, or FAC:	(A/B
			· <u></u>	Prevalence Index worksheet:	
				Total % Cover of: Multiply by:	
4.7		= Total Cov		OBL species x 1 =	
50% of total cover: 47.	. <u>5</u> 20% of	total cover:	19	FACW species x 2 =	-
e:)	25		E40	FAC species x 3 =	-
	50		FAC	FACU species x 4 =	-
	5		FACU_	UPL species x 5 =	-
	5		FACU FACU	Column Totals: (A)	
				Prevalence Index = B/A =	_
				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vegetation	
		-		2 - Dominance Test is >50%	
				3 - Prevalence Index is ≤3.0 ¹	
50% of total cover: 42.		= Total Cov		4 - Morphological Adaptations ¹ (Provide supp	oortin
50% of total cover:	<u>.J </u>	total cover		data in Remarks or on a separate sheet)	
)				Problematic Hydrophytic Vegetation ¹ (Explai	n)
			·	¹ Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic.	nust
				Definitions of Four Vegetation Strata:	
			·	Tree – Woody plants, excluding vines, 3 in. (7.6 of more in diameter at breast height (DBH), regardle height.	
				Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than or equal to 3.28 m) tall.	
	0	= Total Cov	er	Herb – All herbaceous (non-woody) plants, regar of size, and woody plants less than 3.28 ft tall.	dless
50% of total cover: 0	20% of	total cover:	. 0	Woody vine – All woody vines greater than 3.28 height.	ft in
				Hydrophytic	
	0	Total Oss		Vegetation Present? Yes No	
50% of total cover: 0		= Total Cov total cover:	^		

Remarks: (Include photo numbers here or on a separate sheet.)

Woody Vine Stratum (Plot size: 15')

Sampling Point: W-F55-UP

SOIL

Depth	Matrix		Redo	x Features	1 . 2				
inches)	Color (moist)	<u>%</u>	Color (moist)	<u> % Ty</u>	rpe ¹ Loc ²	Texture	. ———	Remarks	S
0-3	7.5YR 4/2	100				SiL			
4-20	5YR 4/4	95	10 YR 6/6	<u>5</u> <u>C</u>	<u>M</u>	SiCL			
					<u></u>				
		 							
	-								
_					-		-		
vne: C=Cc	ncentration D=Den	letion RM=	Reduced Matrix, MS	S=Masked Sar	nd Grains	² Location: F	PI =Pore I ini	ng M=Matri	x
	ndicators:	70001, 1001	rtoddod Matrix, Me	5-Macroa Car	id Oranio.	Indic	ators for Pr	oblematic I	Hydric Soils
Histosol			Dark Surface	(S7)			2 cm Muck (
	pipedon (A2)				88) (MLRA 147		Coast Prairie	, .	•
_ Black His	stic (A3)		Thin Dark Su	rface (S9) (MI	RA 147, 148)		(MLRA 14	7, 148)	
	n Sulfide (A4)		Loamy Gleye	, ,		ا	Piedmont Flo		ls (F19)
_	Layers (A5)		Depleted Mat				(MLRA 13		
	ck (A10) (LRR N)	- (0.4.4)	Redox Dark S	, ,			Very Shallow		, ,
	l Below Dark Surfac ark Surface (A12)	e (A11)	Depleted Dar	k Surface (F7)	— '	Other (Expla	ın ın Remarı	KS)
	lucky Mineral (S1) (I	I RR N		ese Masses (F	12) (I RR N				
	147, 148)		MLRA 13		12) (2111111,				
	leyed Matrix (S4)			ce (F13) (MLF	RA 136, 122)	3In	dicators of h	ydrophytic ve	egetation and
	edox (S5)				(F19) (MLRA 1		etland hydro		-
	Matrix (S6)		Red Parent N	Naterial (F21)	(MLRA 127, 14	7) uı	nless disturb	ed or proble	matic.
4-1-41		•							
estrictive L	_ayer (if observed):	-							
Type:	_ayer (if observed):	•							
			<u> </u>			Hydric Soi	I Present?	Yes	No
Type:			<u> </u>			Hydric Soi	I Present?	Yes	No
Type: Depth (inc			_			Hydric Soi	I Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	il Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	il Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	il Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	il Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	il Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	Il Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	il Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	il Present?	Yes	No
Type: Depth (inc						Hydric Soi	il Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	il Present?	Yes	No <u></u>
Type: Depth (inc						Hydric Soi	il Present?	Yes	No
Type: Depth (inc						Hydric Soi	il Present?	Yes	No
Type: Depth (inc						Hydric Soi	il Present?	Yes	No
Type:						Hydric Soi	il Present?	Yes	No
Туре:						Hydric Soi	il Present?	Yes	No
Type:						Hydric Soi	il Present?	Yes	No
Type: Depth (inc						Hydric Soi	il Present?	Yes	No
Type: Depth (inc						Hydric Soi	il Present?	Yes	No
Type: Depth (inc						Hydric Soi	il Present?	Yes	No
Type:						Hydric Soi	il Present?	Yes	No

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.243915	Lon.	-80.553961
STREAM/SITE ID AND SITE DESCR	IPTION:					W-K43, Pipeline ROW		
(% stream slope, watershed size {a	creage}, unaltered	or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-K43	Emergent	0.2086	Emergent					
					ı			
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
					'			
Total Impact		0.2086			ı			
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.2086			\$40.54C.00		
Total Scrub-Shrub			0			\$12,516.00)	
Total Forested			0					
Total Open Water			0					

Project/Site: MVP		City/C	county: Harrison		Sampling Date: 06/01/2015
Applicant/Owner: MVP					Sampling Point: W-K43
Investigator(s): J. Hart, D. S	Santillo, J. Potrik	us Section	on, Township, Range: N/A	4	
Landform (hillslope, terrace, et					Slope (%): 1
Subregion (LRR or MLRA): L			Long: -80.5		Datum: NAD 83
Soil Map Unit Name: Vanda					
Are climatic / hydrologic condit					
·		-			esent? Yes <u> </u>
Are Vegetation, Soil					
Are Vegetation, Soil SUMMARY OF FINDIN				plain any answers	in Remarks.) important features, etc.
				<u> </u>	·
Hydrophytic Vegetation Pres		No	Is the Sampled Area	•	
Hydric Soil Present? Wetland Hydrology Present?	Yes Yes	No No	within a Wetland?	Yes	No
Remarks:	162	NO			
Cowardin Code: PEM HGM: 2015 Notes: Wetland plot paired with W-K4 table is likely higher closer to Information listed on this form hydrophytic vegetation, and h	13UP. Riverine wetla the stream (S-K73)	and occurs in floodplain of			
HYDROLOGY	, 4.1.0 00.10 1140 001.11.		rogional Cappionion		
Wetland Hydrology Indicate	ors:			Secondary Indicat	ors (minimum of two required)
Primary Indicators (minimum	of one is required; of	heck all that apply)	- -	Surface Soil C	Cracks (B6)
Surface Water (A1)		True Aquatic Plants (etated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Ode		Drainage Patt	
Saturation (A3)			es on Living Roots (C3)	Moss Trim Lir	
Water Marks (B1)		Presence of Reduced	• , ,		Vater Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio	` '	Crayfish Burro	` ,
Drift Deposits (B3)		Thin Muck Surface (C			ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			ressed Plants (D1)
Iron Deposits (B5)		_ ` '		Geomorphic F	` ,
Inundation Visible on Ae	rial Imagery (B7)		- -	 Shallow Aquit	
Water-Stained Leaves (E	39)		-	Microtopogran	ohic Relief (D4)
Aquatic Fauna (B13)	,			FAC-Neutral	` '
Field Observations:					· ,
Surface Water Present?	Yes No	✓ Depth (inches):			
Water Table Present?	Yes No	Depth (inches):			
Saturation Present?		Depth (inches):		drology Present	? Yes ✔ No
(includes capillary fringe)					
Describe Recorded Data (str	eam gauge, monitori	ng well, aerial photos, pre	vious inspections), if avail	able:	
Remarks:					
rtomanto.					

ames of	-		Sampling Poi	III. <u>VV 1140</u>	
			Dominance Test worksheet:		
		Status	Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
			Total Number of Dominant		
			Species Across All Strata:	6	(B)
			Percent of Deminent Species		
				100	(A/B)
				,	-
0	= Total Co	ver			
20% of	total cover	:0			
			•		
			UPL species x 5	5 =	_
			Column Totals: (A))	(B)
			Drevelence Index D/A		
		-			_
	-				
0	= Total Co	ver			
<u></u>				•	
20	~	OBL	Problematic Hydrophytic Veg	getation (Expla	ain)
20	~	FACW			
10	~				must
10	~		•		
10	~		Definitions of Four Vegetation	Strata:	
10	~				
5				t (DBH), regard	dless of
5	-		noight.		
		17100			
				or equal to 3.2	8 п (1
			,		
90	Total Co				ardless
20,0 0.	10100070.			reater than 3.2	8 ft in
			neight.		
· 			Hydrophytic		
0	T-1-1-0		Present? Yes	No	
	= Total Co	_			
200/ 64	total cover	. 0			
	Absolute % Cover	Absolute % Cover Species? O = Total Cover 20% of total cover 20	Absolute % Cover Species? Status O = Total Cover 20% of total cover: 0 20	Absolute % Cover Species? Status Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: OBL species FACW species FACW species FACW species FACU species V: FACW species FACU species V: FACW spec	Absolute % Cover Species? Status Dominant Indicator Species? Status

SOIL Sampling Point: W-K43

Profile Desc	ription: (Describe to	o the dept	h needed to docur	nent the	indicator	or confirn	n the ab	sence of indicators.)	
Depth	Matrix			x Feature	s				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²		ture Remarks	
0-14	10YR 4/2	97	10YR 4/6	3	С	M/PL	Silty	Clay	
-	-								
					· 		-		
				-	· 		-		
				-	-	-			_
							-		
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gr	ains.	² Locat	tion: PL=Pore Lining, M=Matrix.	3
Hydric Soil			_					Indicators for Problematic Hydric Soils	s~:
Histosol			Dark Surface	. ,				2 cm Muck (A10) (MLRA 147)	
	oipedon (A2)		Polyvalue Be				, 148)	Coast Prairie Redox (A16)	
	stic (A3)		Thin Dark Su			147, 148)		(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye		(F2)			Piedmont Floodplain Soils (F19)	
	d Layers (A5)		Depleted Ma		- C)			(MLRA 136, 147)	
	ıck (A10) (LRR N) d Below Dark Surface	(111)	Redox Dark : Depleted Dark :					Very Shallow Dark Surface (TF12)Other (Explain in Remarks)	
	ark Surface (A12)	(A11)	Redox Depre		. ,			Other (Explain in Kemarks)	
	Mucky Mineral (S1) (L l	RR N	Iron-Mangan			I RR N			
	A 147, 148)	, , , , , , , , , , , , , , , , , , ,	MLRA 13		700 (1 12) (,			
	Gleyed Matrix (S4)		Umbric Surfa	-	(MLRA 1	36. 122)		³ Indicators of hydrophytic vegetation an	nd
	Redox (S5)		Piedmont Flo				48)	wetland hydrology must be present,	
-	Matrix (S6)		Red Parent N					unless disturbed or problematic.	
Restrictive	Layer (if observed):							•	
Type:									
	ches):						Hvdr	ric Soil Present? Yes 🖊 No	
Remarks:							, ,		
rtomanto.									



Photograph Direction West

Date: 06/01/2015

Comments: 2015 wetland delineation.



Photograph Direction NW

Date: 09/18/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/Co	_{unty:} Harrison	Sampling Date: 06/01/2015
Applicant/Owner: MVP			V Sampling Point: W-K43UP
Investigator(s): J. Hart, D. Santillo, J. Potrik			
Landform (hillslope, terrace, etc.): Hillslope			ex Slope (%): 4
Subregion (LRR or MLRA): LRRN			Datum: NAD 83
Soil Map Unit Name: Vandalia silty clay loan			
Are climatic / hydrologic conditions on the site typic			
Are Vegetation, Soil, or Hydrology			_
Are Vegetation, Soil, or Hydrology			
SUMMARY OF FINDINGS – Attach sit			•
Attach sit		mig point locations, trails	scots, important reatures, etc.
	No	Is the Sampled Area	
	No		No <u> </u>
	No		
Remarks: Upland			
Upland plot paired with W-K43. Occurs	on hillside adjacent to	wetland in an area dominate	ed by upland vegetation.
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary	Indicators (minimum of two required)
Primary Indicators (minimum of one is required;	check all that apply)		e Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B		ely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor		ge Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres		Γrim Lines (B16)
Water Marks (B1)	Presence of Reduced		eason Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	in Tilled Soils (C6) Crayfis	sh Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7	") Satura	tion Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rema	arks) Stunte	d or Stressed Plants (D1)
Iron Deposits (B5)		Geomo	orphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallov	w Aquitard (D3)
Water-Stained Leaves (B9)		Microto	opographic Relief (D4)
Aquatic Fauna (B13)		FAC-N	leutral Test (D5)
Field Observations:	•		
	Depth (inches):		
	Depth (inches):		
	Depth (inches):	Wetland Hydrology P	Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previ	ous inspections), if available:	
Remarks:			
No hydrology			

% Cover	Species?	Status	
			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
			Total Number of Deminent
			Total Number of Dominant Species Across All Strata:3 (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B
			(745
			Prevalence Index worksheet:
0	= Total Cove	er	Total % Cover of: Multiply by:
20% of	total cover:	0	OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
			FACU species x 4 =
			UPL species x 5 =
			Column Totals: (A) (B)
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
0	– Total Cov		3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations ¹ (Provide supporting
			data in Remarks or on a separate sheet)
20	✓	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
20			
15			¹ Indicators of hydric soil and wetland hydrology must
10			be present, unless disturbed or problematic.
10			Definitions of Four Vegetation Strata:
5			Tree - Woody plants, excluding vines, 3 in. (7.6 cm) o
5			more in diameter at breast height (DBH), regardless of height.
5			noight.
			Sapling/Shrub – Woody plants, excluding vines, less
			than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		I <u>ACW</u>	
100	Tatal Cau		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
			or size, and woody plants less than 3.20 it tall.
2070 01	total oover.		Woody vine – All woody vines greater than 3.28 ft in
			height.
· 			Hydrophytic
			Vegetation Present? Yes No✓
		_	rieseitt: iesito
	total cover:		
sheet.)			
	0 20% of 20% of 20 15 10 10 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	0 = Total Cover: 20% of total cover: 20	

SOIL Sampling Point: W-K43UP

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the	indicator	or confirr	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-16	10YR 4/3	99	10YR 6/6	1	С	M	SCL	
								_
				-	· 			
				-	·			
					· 			
1T C. C.		-tion DM	Dadwaad Matrix M	- Maalaa			21	N. Deve Lining M. Matrix
Hydric Soil	oncentration, D=Depl	etion, Rivi=	Reduced Matrix, Mis	s=Maske	d Sand Gi	ains.		L=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
•			5 10 ((07)				
Histosol			Dark Surface		(65)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				, 148) (Coast Prairie Redox (A16)
Black Hi			Thin Dark Su			147, 148)	_	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(►2)		F	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark					/ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dai				_ (Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		ses (F12)	(LRR N,		
	\ 147, 148)		MLRA 13	•			2	
	lleyed Matrix (S4)		Umbric Surfa					dicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	-21) (MLF	RA 127, 14	7) ur	lless disturbed or problematic.
Restrictive I	_ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soi	I Present? Yes No ✔
Remarks:	,							
No hydric i	ndicators							
to riyano r	idioatoro							

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES: Lat. 39.243493 Lon80.55			-80.554033	
STREAM/SITE ID AND SITE DESCR	RIPTION:					W-K44, Pipeline ROW		
(% stream slope, watershed size {a	creage}, unaltered	d or impairments)						
FORM OF MITIGATION:								
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-K44	Emergent	0.0671	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0671						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0671	-		¢4.000.00		
Total Scrub-Shrub			0	_		\$4,026.00		
Total Forested			0	=				
Total Open Water			0	1				

Project/Site: MVP	City/County: Harrison Sampling Date: 06/01/2					
Applicant/Owner: MVP	,	Stat	e: WV Sampling Point: W-K44			
	nvestigator(s): J. Hart, D. Santillo, J. Potrikus Section, Townshi					
Landform (hillslope, terrace, etc.): Drainageway		· · · · · · · · · · · · · · · · · · ·	concave Slope (%): 1			
Subregion (LRR or MLRA): LRRN	Long: -80.5546	049 Datum: NAD 83				
Soil Map Unit Name: Udifluvents and Fluvaq		Long N				
Are climatic / hydrologic conditions on the site typic						
Are Vegetation, Soil, or Hydrology			_			
Are Vegetation, Soil, or Hydrology	-		any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach sit						
	, ,	,	, , ,			
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No.	the Sampled Area				
Wetland Hydrology Present? Yes	<u>√</u> No w	ithin a Wetland?	Yes No			
Remarks: Cowardin Code: PEM HGM: Slope WT: RPWWD						
•	nd occurs in narrow vallev with a sh	allow groundwater table.Wetland a	ppears to be water source of adjacent pond. While			
2015 Notes: Wetland plot paired with W-K44UP. Slope wetla wetland is associated with adjacent intermittent stream S-K75 column down (NE) the small valley, this is the reason for an H	i, the primary hydrology source appe IGM classification of slope.	ears to be a shallow groundwater to	able caused by water moving laterally through the soil			
Information listed on this form represents the data collected ir was confirmed using the USACE EMP Regional Supplement	2015. The wetland was revisited or delineation methodology.	n 09/18/2019. Presence of wetland	hydrology, hydrophytic vegetation, and hydric soils			
HYDROLOGY						
Wetland Hydrology Indicators:		Secoi	ndary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; of	heck all that apply)	s	Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plants (B1		Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Odor (Orainage Patterns (B10)			
Saturation (A3)	✓ Oxidized Rhizospheres		Moss Trim Lines (B16)			
Water Marks (B1)	Presence of Reduced Iro	on (C4) C	Pry-Season Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reduction in	n Tilled Soils (C6) C	Crayfish Burrows (C8)			
Drift Deposits (B3)	Thin Muck Surface (C7)	s	Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Remar	ks) S	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)		<u>*</u> 0	Geomorphic Position (D2)			
Inundation Visible on Aerial Imagery (B7)		s	Shallow Aquitard (D3)			
Water-Stained Leaves (B9)		N	licrotopographic Relief (D4)			
Aquatic Fauna (B13)		<u> </u>	AC-Neutral Test (D5)			
Field Observations:						
Surface Water Present? Yes No _	Depth (inches):					
	Depth (inches):					
	Depth (inches):		ogy Present? Yes No			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor	ing well serial photos previo	us inspections) if available:				
Describe Recorded Data (Stream gauge, monitor	ing well, derial photos, previo	us mapeenons), ii avanabie.				
Remarks:						

VEGETATION (Four Strata) - Use scientific names of plants.

30'

Sapling/Shrub Stratum (Plot size: 15')

Tree Stratum (Plot size: __

Herb Stratum (Plot size: ___

3. Panicum dichotomiflorum

4. Dicanthelium clandestinum

Woody Vine Stratum (Plot size: 15'

5. Persicaria sagittata

1. Carex lurida

2. Carex scoparia

6. Carex vulpinoidea

7. Scirpus cyperinus

8. Mentha spicata

____)

50% of total cover: ___0

50% of total cover: ____50___ 20% of total cover:___ 20

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

50% of total cover: ___0 __ 20% of total cover: ___0

nes of p	olants.		Sampling	Poir	nt: W-K44	
	Dominant		Dominance Test worksheet	:		
% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC		3	(A)
			Total Number of Dominant Species Across All Strata:	_	3	(B)
			Percent of Dominant Species That Are OBL, FACW, or FAC		100	(A/B
			Prevalence Index workshee	et:		
0 -			Total % Cover of:		Multiply by:	
	= Total Cov	•	OBL species	x 1	=	
20% 011	total cover:		FACW species			_
			FAC species		=	_
			· —		=	_
			UPL species		- <u></u>	_
			Column Totals:			_ (B)
			Prevalence Index = B/A	A = _		_
			Hydrophytic Vegetation Ind	licato	ors:	
			1 - Rapid Test for Hydron	ohytic	Vegetation	
			2 - Dominance Test is >5		•	
			3 - Prevalence Index is ≤	3.0 ¹		
_	Total Cov	_	4 - Morphological Adapta	ations	1 (Provide sur	portin
20% of t	total cover:	0	data in Remarks or or			
			Problematic Hydrophytic		. ,	
25		OBL	1 Toblematio Tryarophytio	veg	Station (Expla)
20		<u>OBL</u>	¹ Indicators of hydric soil and	wotla	nd bydrology	muct
15		F <u>ACW</u>	be present, unless disturbed			iiiuSt
10		F <u>AC</u>	Definitions of Four Vegetat			
10		OBL	_			
10		F <u>AC</u>	Tree – Woody plants, excludi			
5		OBL	more in diameter at breast he height.	igni	(DBH), Tegatu	1622 0
5		FACU				
			Sapling/Shrub – Woody plar than 3 in. DBH and greater th m) tall.			
	Total Cov	- 00	Herb – All herbaceous (non-vof size, and woody plants less			ırdless
20% of t	total cover:	20	Woody vine – All woody vine height.	es gre	eater than 3.28	3 ft in
	- Total Cov	^	Hydrophytic Vegetation Present? Yes <u>V</u>	<u>, </u>	No	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: W-K44

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the	indicator	or confirn	n the ab	sence of indi	cators.)	
Depth	Matrix		Redo	x Feature	es.					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text		Remarks	
0-6	10YR 4/1	96	10YR 4/6	4	С	M/PL	Silty (Clay		
6-14	10YR 6/2	92	10YR 4/6	8	С	M/PL	Silty (Clay		
					<u> </u>	· 				-
					· 					
										_
										-
										<u> </u>
¹ Type: C=Co	oncentration, D=Depl	etion, RM=	=Reduced Matrix, MS	S=Maske	d Sand Gr	ains.	² Locati	on: PL=Pore	Lining, M=Matrix.	
Hydric Soil I		,	,						or Problematic Hydr	ic Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Mu	ck (A10) (MLRA 147))
	pipedon (A2)		Polyvalue Be		ace (S8) (N	ILRA 147,	, 148)		airie Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su	rface (S9) (MLRA 1	147, 148)		(MLRA	A 147, 148)	
	n Sulfide (A4)		Loamy Gleye		(F2)			Piedmon	t Floodplain Soils (F1	19)
	l Layers (A5)		Depleted Ma						A 136, 147)	
	ick (A10) (LRR N)	(4.4.4)	Redox Dark						allow Dark Surface (T	F12)
	d Below Dark Surface	(A11)	Depleted Dar					Other (Ex	xplain in Remarks)	
	ark Surface (A12) lucky Mineral (S1) (L	RR N	Redox Depre			IRRN				
	147, 148)	ixix i v ,	MLRA 13		663 (1 12) (LIXIX IV,				
	lleyed Matrix (S4)		Umbric Surfa	•	(MLRA 13	6, 122)		³ Indicators	of hydrophytic vegeta	ation and
	edox (S5)		Piedmont Flo				48)		ydrology must be pre	
Stripped	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 14	7)	unless dis	turbed or problemation	э.
Restrictive I	ayer (if observed):									
Type:										
Depth (ind	ches):						Hydri	c Soil Preser	nt? Yes 🔽	No
Remarks:							I			

Wetland ID W-K44 Cowardin Code PEM



Photograph Direction NNW

Date: <u>06/01/2015</u>

Comments: 2015 wetland delineation.



Photograph Direction North

Date: 09/18/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County: D	Ooddridge	Sampling Date: 06/01/2015
Applicant/Owner: MVP			Sampling Point: W-K44UP
Investigator(s): J. Hart, D. Santillo, J. Potrikus			
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ave, convex, none): Convex	Slope (%): 3
Subregion (LRR or MLRA): LRRN Lat:		Long: -80.554632	
Soil Map Unit Name: Udifluvents and Fluvaquer		NWI classi	
Are climatic / hydrologic conditions on the site typical for	i e		
Are Vegetation, Soil, or Hydrology			" present? Yes No
Are Vegetation, Soil, or Hydrology		(If needed, explain any answ	
SUMMARY OF FINDINGS – Attach site m			
.,			
Hydrophytic Vegetation Present? Yes	is the S	Sampled Area	
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	4	a Wetland? Yes	No
Remarks:			
Upland			
Upland plot paired with W-K44. Occurs on I	nillside adjacent to wetlar	nd. The sample plot occu	irs on a north facing slope in
mesic forest and as such possesses a hydr	ophytic vegetation comm	nunity primarily composed	of FAC and FACU species.
The sample plot lacked positive indicators f	or hydric soils and wetlar	nd hydrology and was det	ermined not to be a wetland.
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required; chec	k all that apply)	Surface So	oil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely V	egetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage F	Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres on Livi	ing Roots (C3) Moss Trim	Lines (B16)
	Presence of Reduced Iron (C4		n Water Table (C2)
1	Recent Iron Reduction in Tilled		urrows (C8)
	Thin Muck Surface (C7)		Visible on Aerial Imagery (C9)
	Other (Explain in Remarks)		Stressed Plants (D1)
Iron Deposits (B5)			ic Position (D2)
Inundation Visible on Aerial Imagery (B7)			quitard (D3)
Water-Stained Leaves (B9)			graphic Relief (D4)
Aquatic Fauna (B13)		FAC-Neuti	ai resi (D5)
Field Observations: Surface Water Present? Yes No	Depth (inches):		
	Depth (inches):		
	Depth (inches):	Wetland Hydrology Pres	ent? Yes No_ 🗸
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring v	vell, aerial photos, previous ins	pections), if available:	
Remarks:			
No hydrology			

Sampling	Point:	W-K44UP
Januania	I OIIII.	

Troo Stratum (Plot cizo: 30'	Absolute	Dominant		Dominance Test worksheet:
Tiee Stiatum (Fiot Size.		Species?		Number of Dominant Species
1. Acer saccharum	30		<u>FACU</u>	That Are OBL, FACW, or FAC:6 (A)
2. Liriodendron tulipifera	15	✓	FACU_	Total Number of Dominant
3. Carpinus caroliniana	15	✓	FAC	Species Across All Strata: 9 (B)
4. Robinia pseudoacacia	5		FACU	
5				Percent of Dominant Species That Are OBL FACW or FAC: 67
•				That Are OBL, FACW, or FAC:(A/B)
6		-		Prevalence Index worksheet:
<i>1</i>	65			Total % Cover of: Multiply by:
500/ - () -		= Total Cov		OBL species x 1 =
50% of total cover: 32.5	20% of	total cover:		FACW species x 2 =
Sapinig/Sinus Stratum (Flot Size)	0.5	,		
1. Acer saccharum	25		F <u>ACU</u>	FAC species x 3 =
2. Carpinus caroliniana	15		FAC	FACU species x 4 =
3. Lindera benzoin	5		FAC	UPL species x 5 =
4. Rosa multiflora	5		FACU	Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
7		-		1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9		-		3 - Prevalence Index is ≤3.0 ¹
0.5		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 25	20% of	total cover:	10	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstigeum vinimeum	20		F <u>AC</u>	1 Toblematic Trydrophytic Vegetation (Explain)
2. Athyrium asplenoides	20		F <u>AC</u>	1
3. Verbesina alternifolia	15	~	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Dicanthelium clandestinum	10	'	FAC	
5. Polystichum athrostichoides	10		FAC	Definitions of Four Vegetation Strata:
6. Fragaria virginiana	5	(FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Senecio vulgaris	5			more in diameter at breast height (DBH), regardless of
8. Agrimonia parviflora			FACU	height.
			F <u>AC</u>	Sapling/Shrub – Woody plants, excluding vines, less
9		-		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	90 ,	= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45	20% of	total cover:	18	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1. Toxicodendron radicans	20		FAC	
2				
3.				
4.				
				Hydrophytic
5	20	T		Vegetation Present? Yes ✓ No ———
50% of total cover: 10		= Total Cov		1000
		total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL Sampling Point: W-K44UP

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the	indicator	or confirr	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-16	10YR 4/3	99	10YR 6/6	1	С	M	SCL	
								_
				-	· 			
				-	·			
					· 			
1T C. C.		-tion DM	Dadwaad Matrix M	- Maalaa			21	N. Deve Lining M. Matrix
Hydric Soil	oncentration, D=Depl	etion, Rivi=	Reduced Matrix, Mis	s=Maske	d Sand Gi	ains.		L=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
•			5 10 ((07)				
Histosol			Dark Surface		(65)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				, 148) (Coast Prairie Redox (A16)
Black Hi			Thin Dark Su			147, 148)	_	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(►2)		F	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark					/ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dai				_ (Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		ses (F12)	(LRR N,		
	\ 147, 148)		MLRA 13	•			2	
	lleyed Matrix (S4)		Umbric Surfa					dicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	-21) (MLF	RA 127, 14	7) ur	lless disturbed or problematic.
Restrictive I	_ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soi	I Present? Yes No ✔
Remarks:	,							
No hydric i	ndicators							
to riyano r	idioatoro							

	Mountain Valley Pipeline				39.22349	Lon.	-80.548109
ΓΙΟΝ:				, i	W-CV15, Timber Mat Crossing		
eage}, unaltered	or impairments)						
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.05116	Emergent					
					PART III - Advanced	Mitigatio	n
							Υ
	0.05116			ŗ			
	Jnit Scores						
sification					ILF Costs		
					¢3 060 60		
		<u> </u>		l	\$3,003.00		
	8/10 PART I - Wetl Impact Wetland Classification Emergent	8/10/2015 PART I - Wetland Indicators Impact (acreage) Classification Emergent 0.05116 0.05116 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.05116 Emergent 0.05116 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.05116 Emergent 0.05116 PART II - Unit Scores Sification Replacement Unit(s) 0 0 0	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.05116 Emergent 0.05116 PART II - Unit Scores iffication Replacement Unit(s) 0 0 0	PART II - Unit Scores Image), unaltered or impairments) WEATHER CONDITIONS: PRECIPITATION PAST 48 HRS: PART II - Advanced Sustainable Determination Made on Advanced Mitigation (Y or N) PART III - Unit Scores In a control of the part of the pa	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.05116 Emergent PART III - Advanced Mitigation Sustainable Determination Made on Advanced Mitigation (Y or N) PART III - Unit Scores Impact Wetland (acreage) Wetland Classification Emergent 0.05116 Emergent PART III - Advanced Mitigation (Y or N) Estimated ILF Costs 1.05116

Project/Site: MVP	City/C	_{County:} Harrison		Sampling Date: 12/19/2017
Applicant/Owner: MVP				Sampling Point: W-CV15
	Section	on, Township, Range: N/	<u>-</u>	_
Landform (hillslope, terrace, etc.): Floodpla				Slope (%): 0-4
Subregion (LRR or MLRA): LRR N	Lat. 39 223385			
Soil Map Unit Name: Lindside silt loam, 0 to				
Are climatic / hydrologic conditions on the site				
Are Vegetation, Soil, or Hydro			Circumstances" p	present? Yes No
Are Vegetation, Soil, or Hydro	logynaturally problemate	atic? (If needed, e	xplain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attack	site map showing san	npling point locatio	ns, transects	, important features, etc.
Hydrophytic Vegetation Present? Ye	s No			
, , , , , , , , , , , , , , , , , , , ,	s <u>/</u> No	Is the Sampled Area	Yes 🗸	Ma
	s / No	within a Wetland?	res	No
Remarks: Cowardin Code: PEM	HGM: Slope	Water Type: [RPWWD	
Cowardin Code. 1 Elvi	TIOM. Clope	vvator Typo. I	II VVVD	
HYDROLOGY				
Wetland Hydrology Indicators:			•	tors (minimum of two required)
Primary Indicators (minimum of one is required)		<u> </u>	Surface Soil	` '
Surface Water (A1)	True Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Pa	
Saturation (A3)		es on Living Roots (C3)	Moss Trim Li	
Water Marks (B1)	Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction		Crayfish Bur	
Drift Deposits (B3)	Thin Muck Surface (0			sible on Aerial Imagery (C9) tressed Plants (D1)
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Rer	ilaiks)		Position (D2)
Inundation Visible on Aerial Imagery (B7	' \		Shallow Aqui	
Water-Stained Leaves (B9)	,		✓ Microtopogra	
Aquatic Fauna (B13)			FAC-Neutral	. ,
Field Observations:				
	No Depth (inches):			
Water Table Present? Yes	No Pepth (inches):			
	No Depth (inches):		vdrology Preser	nt? Yes 🗸 No
(includes capillary fringe)				
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, pre	vious inspections), if avai	lable:	
Remarks:				

VEGETATION (Four Strata) - Use scientific name

Tree Stratum (Plot size: 30')

Sapling/Shrub Stratum (Plot size: 15')

Herb Stratum (Plot size: 5') 1. Dactylis glomerata

2. Phalaris arundinacea 3. Juncus effusus 4. Dichanthelium clandestinum 5. Cyperus esculentus

2._____

0.01	Absolute	Dominant	Indicator	Sampling Point: W-CV15 Dominance Test worksheet:
ot size:)	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
				Total Number of Dominant Species Across All Strata: 2 (B)
				Percent of Dominant Species That Are OBL, FACW, or FAC:50 (A/E
				Prevalence Index worksheet:
	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover:0		total cover:	^	OBL species x 1 =
atum (Plot size: 15')				FACW species50 x 2 =100
				FAC species15 x 3 =45
				FACU species 25 x 4 = 100
				UPL species x 5 =
				Column Totals:90 (A)245 (B)
				Prevalence Index = B/A =2.72
_				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
	0	Tatal Car		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		= Total Cov total cover:	^	4 - Morphological Adaptations ¹ (Provide supporting
ot size: 5'	2070 01	total oover.		data in Remarks or on a separate sheet)
erata	25	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
dinacea	25		FACW	
s	15		FACW	¹ Indicators of hydric soil and wetland hydrology must
clandestinum	15		FAC	be present, unless disturbed or problematic.
entus	10		FACW	Definitions of Four Vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of
				more in diameter at breast height (DBH), regardless of height.
				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
				Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 45		= Total Cov	4.0	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45 um (Plot size: 15')	ZU% Of	total cover:		Woody vine – All woody vines greater than 3.28 ft in height.
				Hydrophytic
	0	= Total Cov		Vegetation Present? Yes V
		— LOtal ('ov/	Ωr	100

Remarks: (Include photo numbers here or on a separate sheet.

Woody Vine Stratum (Plot size: 15')

Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Features %	Type ¹	Loc²	Texture		Remarks	
0-16	5YR 4/2	90	7.5YR 5/6	10	C	M	CL	•	INCIIIAINS	
0-10	31114/2		7.5111 5/0			IVI				
								-		
								-		
			·							
	-		_							
								-		
	oncentration, D=Depl	etion, RM=	=Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location: P			
ydric Soil I									oblematic H	
_ Histosol (Dark Surface		(00) (1)				\10) (MLRA 1	
	ipedon (A2)		Polyvalue Be				148) C		Redox (A16)	
_ Black His	stic (A3) n Sulfide (A4)		Thin Dark Su Loamy Gleye	, ,	•	47, 148)	Б	(MLRA 14	7, 148) odplain Soils	(E10)
	Layers (A5)		Depleted Ma		2)			(MLRA 13	•	(119)
	ck (A10) (LRR N)		Redox Dark		5)		V		Dark Surface	e (TF12)
	Below Dark Surface	e (A11)	Depleted Dar					•	n in Remarks	. ,
	rk Surface (A12)	, ,	Redox Depre	essions (F8)					
_ Sandy M	ucky Mineral (S1) (L	.RR N,	Iron-Mangan	ese Masse	s (F12) (I	_RR N,				
	147, 148)		MLRA 13	•			•			
	leyed Matrix (S4)		Umbric Surfa						drophytic ve	-
	edox (S5)		Piedmont Flo					-	logy must be	
Stripped	Matrix (S6)		Red Parent N	Material (F2	(MLR)	A 127, 147	<u>')</u> un	less disturb	ed or problem	natic.
estrictive L	ayer (if observed):									
estrictive L Type:	.ayer (if observed):									
estrictive L Type: Depth (inc	.ayer (if observed):		<u> </u>				Hydric Soil	Present?	Yes 🗸	No
estrictive L Type: Depth (inc	.ayer (if observed):		_				Hydric Soil	Present?	Yes 🗸	No
Type:	.ayer (if observed):		_				Hydric Soil	Present?	Yes 🗸	_ No
Type:	ayer (if observed):						Hydric Soil	Present?	Yes 🗸	_ No
Type:	ayer (if observed):						Hydric Soil	Present?	Yes <u> </u>	No
estrictive L Type: Depth (inc	ayer (if observed):						Hydric Soil	Present?	Yes	_ No
Type: Depth (inc	ayer (if observed):						Hydric Soil	Present?	Yes	_ No
Type:	ayer (if observed):						Hydric Soil	Present?	Yes 🗸	_ No
Type:	ayer (if observed):						Hydric Soil	Present?	Yes 🗸	_ No
Type:	ayer (if observed):						Hydric Soil	Present?	Yes	_ No
Type: Depth (inc	ayer (if observed):						Hydric Soil	Present?	Yes	_ No
Type:	ayer (if observed):						Hydric Soil	Present?	Yes 🗸	No
Type:	ayer (if observed):						Hydric Soil	Present?	Yes 🗸	_ No
Type: Depth (inc	.ayer (if observed):						Hydric Soil	Present?	Yes 🗸	_ No
Type: Depth (inc	.ayer (if observed):						Hydric Soil	Present?	Yes_V	_ No
Type:	.ayer (if observed):						Hydric Soil	Present?	Yes	_ No
estrictive L Type: Depth (inc	.ayer (if observed):						Hydric Soil	Present?	Yes 🗸	No
estrictive L Type: Depth (inc	.ayer (if observed):						Hydric Soil	Present?	Yes 🗸	No
estrictive L Type: Depth (inc	.ayer (if observed):						Hydric Soil	Present?	Yes 🗸	No
estrictive L Type: Depth (inc	.ayer (if observed):						Hydric Soil	Present?	Yes 🗸	No
estrictive L Type: Depth (inc	.ayer (if observed):						Hydric Soil	Present?	Yes	No
estrictive L Type: Depth (inc	.ayer (if observed):						Hydric Soil	Present?	Yes	_ No
estrictive L Type:	.ayer (if observed):						Hydric Soil	Present?	Yes	No

Wetland Photograph Page

Wetland ID <u>W-CV15</u> Date <u>12/19/201</u>7



Photograph Direction SW

Comments:	