



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	182		
Environmental Auditor	Beth Burdette	Date/Time	8/21/2023 5:53 PM		
Stream ID	S-L1	Crossing Start Date	8/29/2023	Crossing Completion Date	9/6/2023
Milepost	172.74	Pre-Con Assessment Date	8/22/2023	Post-Con Assessment Date	9/6/2023
Station	9120+55	Bankfull Width (ft.)	5.1	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Summers	303(d) Impairment Listing	No		

Resource Post-Crossing Conditions

1	Were all applicable resource specific crossing conditions satisfied?	N/A
	Time of Year Restrictions (TOYR)? <u> N/A </u> Mussel Relocation? <u> N/A </u>	
2	This question is not applicable in WV.	
3	Which crossing methods were utilized during the stream crossing? (If so select one or more) Dam & Pump <input checked="" type="checkbox"/> Flume <input checked="" type="checkbox"/> Cofferdam <input type="checkbox"/> Conventional Bore <input type="checkbox"/> Horizontal Directional Drill (HDD) Bore <input type="checkbox"/>	
4	Was the top 1-foot (12-inches) of streambed substrate segregated and stockpiled separate from trench spoils?	Yes
5	Was excess material not needed for backfill removed and disposed of in an upland area?	Yes
6	Was the top 12-inches of backfill made with clean native stream substrate?	Yes
7	Was the pre-construction survey data utilized during restoration in attempt to re-establish pre-construction contours?	Yes
8	Were any field modifications to the stream implemented by project or regulatory personnel to address potential drainage or bank restoration limitations?	Yes
9	Were impervious trench breakers/plugs properly installed within 25-feet of top-of-bank to prevent subsurface erosion to or from the resource area?	Yes
10	Was permanent seed and stabilization material (straw or matting) applied to riparian areas and stream banks prior to re-establishing flow to the impact area of the channel?	Yes
11	Was the time of disturbance minimized by conducting resource work continuously to completion?	Yes
12	Have civil surveys been scheduled to verify as-built conditions meet pre-construction conditions in accordance with the project Mitigation Framework and federal/state permit requirements?	Yes
13	Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 - 4/30)?	N/A
14	Did any unauthorized discharges to unpermitted resources occur during the crossing? If so, explain the corrective actions implemented in the Comments section and include additional photos.	No

Biological Conditions

		Pre-Con	Post-Con
15	Predominant Substrate Type (select one): Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Gravel (0.1-2")	Gravel (0.1-2")
16	Channel Conditions: Rating: 1-Optimal (80-100% stable banks), 2-Sub-optimal (60-80% stable banks), 3-Marginal (40-60% stable banks), 4-Poor (20-40% stable banks), 5-Severe (0-20% stable banks, highly eroded or unvegetated banks)	3	2
17	Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank: Rating: 1-Optimal (60-100% heavy vegetative cover), 2-Sub-optimal (30-60% mixed vegetated coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetated coverage, etc.)	1	2

AFE	124300135	Date/Time	8/21/2023 5:53 PM	Report #	182	
Biological Conditions Continued					Pre-Con	Post-Con
18	Instream Habitat Conditions: Examples: Varied substrate sizes, varied combination of water velocities & depths, presence of woody/leafy debris, stable substrate with low amount of mobile particles, low embeddedness, shade protection, undercut banks, root mats, Varied combination of water velocities, submerged aquatic vegetation Rating: 1-Optimal (Habitat conditions present in >50% of resource), 2-Suboptimal (Habitat conditions in 30-50% of resource), 3-Marginal (Habitat conditions in 10-30% of resource), 4-Poor (Habitat conditions in 0-10% of resource)			2	4	
19	Channel Alterations: Examples: Straightened channel, non-MVP stream crossings, non-native riprap/rock along banks, concrete/gabions/concrete block, manmade embankments, constrictions w/in channel, livestock or agricultural impacts Rating: 1-Negligible (unaltered/natural stream), 2-Minor (20-40% of resource disrupted by channel alterations), 3-Moderate (40-80% of resource disrupted), 4-Severe (>80% of resource disrupted)			1	1	
Additional Notes						
<p>Pre-Construction Notes</p> <p>*Bankfull Width measured at OHWM stakes within proposed trench area.</p> <p>18. Habitat score affected by stagnant water in channel and poor flow.</p> <p>Pre-Construction Meeting at 1100 (08/22/2023)</p> <p>Pre-Construction Assessment Completed: EI for Crossing is Mark Howard.</p> <p>Day 1 (8/29/2023)</p> <p>Rain yesterday/overnight. Stream substrate removed (Photo1), segregated, and stored in upland area (Photo 2).</p> <p>Day 2 (8/30/2023)</p> <p>Rain overnight. Small amount of pumping and trenching began in resource location (Photo 3). Blasting also occurred in resource.</p> <p>Day 3 (8/31/2023)</p> <p>Trenching completed on LDB. Additional trenching with pipe placed in trench on RDB and welding completed on this section.</p> <p>Day 4 (9/1/2023)</p> <p>Pipe placed in trench on LDB (Photo 4); welding and ditch padding (in trench) ongoing.</p> <p>Day 5 (9/2/2023)</p> <p>Additional section of pipe placed in trench. Welding completed and trench breakers installed. Trench breakers installed on both sides of resource (Photo 5). Backfilling of trench in the resource area completed. Stream substrate restored (Photo 6).</p> <p>Day 7 (9/5/2023)</p> <p>Survey completed for final contouring of resource (Photo 7). Hand shoveling and raking to contour streambed and banks. Additional backfilling of trench outside of resource area.</p> <p>Day 8 (9/6/2023)</p> <p>Seed and Curlex within 10-foot buffer (Photo 8). Post Construction Assessment completed.</p> <p>Post Construction Notes</p> <p>16., 17. Crossing and riparian areas have been recently restored. These areas will be monitored until 80% vegetative coverage has been achieved and areas that do not have 80% vegetative cover within 30 days will be reseeded.</p> <p>18. Low habitat score due to lack of stream flow.</p> <p>19. Does not include timber mats that remain in place for travel lane.</p>						
<p>In accordance with the Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework, this independent report was completed to document the on-site monitoring of instream invertebrate and fisheries resources during all construction activity related to waterbody and wetland crossings, and document instream conditions and any impacts to the resources.</p>						
Name		Signature		Company		
Beth Burdette				Potesta & Associates, Inc.		
				Date		
				9/6/2023		

AFE	124300135	Date/Time	8/21/2023 5:53 PM	Report #	182
Required Photos					
 <p><small>Date & Time: Tue, Aug 22, 2023 at 11:48:18 EDT Position: 037.668201° N / 080.723401° W (12.777778° N, 79.982222° W) Altitude: 1563ft (+43.4m) Datum: WGS 84 Azimuth Bearing: 285° SWSW 300mils True (+12°) Elevation Angle: -02.8° Horizon Angle: -00.3° Zoom: 1.0X S-L1 DS VIEW FROM US EDGE ROW Mountain Valley</small></p>		 <p><small>Date & Time: Tue, Aug 22, 2023 at 11:57:04 EDT Position: 037.668197° N / 080.723559° W (12.777778° N, 79.982222° W) Altitude: 1563ft (+43.4m) Datum: WGS 84 Azimuth Bearing: 121° NNE 310mils True (+11°) Elevation Angle: -02.7° Horizon Angle: -00.3° Zoom: 1.0X S-L1 DS VIEW DS EDGE ROW Mountain Valley</small></p>			
GPS Location	See Photo	GPS Location	See Photo		
Description	Downstream view of permitted impact area during pre-construction assessment. Overview of S-L1 facing DS from US edge of ROW	Description	Downstream view of unimpacted area during pre-construction assessment. Overview of SL-1 facing DS from DS edge of ROW		
 <p><small>Date & Time: Wed, Sep 06, 2023 at 10:58:52 EDT Position: 037.668221° N / 080.723401° W (12.777778° N, 79.982222° W) Altitude: 1563ft (+43.4m) Datum: WGS 84 Azimuth Bearing: 218° S38W 387mils True (+12°) Elevation Angle: -12.6° Horizon Angle: -01.6° Zoom: 1.0X S-L1 DS VIEW FROM US EDGE ROW Mountain Valley</small></p>		 <p><small>Date & Time: Wed, Sep 06, 2023 at 10:58:52 EDT Position: 037.668197° N / 080.723559° W (12.777778° N, 79.982222° W) Altitude: 1563ft (+43.4m) Datum: WGS 84 Azimuth Bearing: 121° NNE 310mils True (+11°) Elevation Angle: -02.7° Horizon Angle: -00.3° Zoom: 1.0X S-L1 DS VIEW FROM DS EDGE VIEW Mountain Valley</small></p>			
GPS Location	See Photo	GPS Location	See Photo		
Description	Downstream view of permitted impact area during post-construction assessment. Overview of S-L1 facing DS from US edge of ROW	Description	Downstream view of unimpacted area during post-construction assessment. Overview of SL-1 facing DS from DS edge of ROW		
 <p><small>Date & Time: Tue, Aug 29, 2023 at 15:15:01 EDT Position: 037.669165° N / 080.723282° W (12.777778° N, 79.982222° W) Altitude: 1568ft (+43.2m) Datum: WGS 84 Azimuth Bearing: 218° S38W 4622mils True (+12°) Elevation Angle: -01.8° Horizon Angle: -00.3° Zoom: 1.0X Removing 12' topsoil from S-L1 MVP - S-L1/W-K2-PEM</small></p>		 <p><small>Date & Time: Tue, Aug 29, 2023 at 15:15:04 EDT Position: 037.669323° N / 080.722979° W (12.777778° N, 79.982222° W) Altitude: 1746ft (+53.2m) Datum: WGS 84 Azimuth Bearing: 314° N46W 3562mils True (+12°) Elevation Angle: -08.3° Horizon Angle: -00.3° Zoom: 1.0X S-L1 topsoil storage MVP - S-L1/W-K2-PEM</small></p>			
GPS Location	See Photo	GPS Location	See Photo		
Description	Photo 1. Removing stream substrate.	Description	Photo 2. Stream substrate stockpiled in Maruka.		

Optional Photos					
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 <p style="font-size: small; margin-top: 5px;">Date & Time: Wed, Aug 30, 2023 at 13:55:12 EDT Position: +037.668276° N, -080.723337° W (-32.5m) Altitude: 1569ft (-478.2m) Datum: WGS-84 Azimuth/Bearing: 300° N60W 533m (1.57km) True (+12°) Elevation Angle: -22.2° Horizon Angle: +01.4° Zoom: 1.0X Crosshair: Center of view MVP: S-L1/W-K2-PEM</p>	 <p style="font-size: small; margin-top: 5px;">Date & Time: Fri, Sep 01, 2023 at 16:10:46 EDT Position: +037.668357° N, -080.723858° W (-32.5m) Altitude: 1564ft (-480.4m) Datum: WGS-84 Azimuth/Bearing: 128° S84E 220m (0.72km) True (+12°) Elevation Angle: -21.5° Horizon Angle: -01.7° Zoom: 1.0X Crosshair: Center of view MVP: S-L1/W-K2-PEM</p>		
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 3. Resource trench.	Description	Photo 4. Pipe section and bedding in resource area.
 <p style="font-size: small; margin-top: 5px;">Date & Time: Sat, Sep 02, 2023 at 13:58:29 EDT Position: +037.668276° N, -080.723337° W (-32.5m) Altitude: 1569ft (-478.2m) Datum: WGS-84 Azimuth/Bearing: 195° S85E 275m (0.87km) True (+12°) Elevation Angle: -22.0° Horizon Angle: -00.2° Zoom: 1.0X Trench breakers installed on both sides of resource. MVP: S-L1/W-K2-PEM</p>	 <p style="font-size: small; margin-top: 5px;">Date & Time: Sat, Sep 02, 2023 at 16:11:04 EDT Position: +037.668357° N, -080.723858° W (-32.5m) Altitude: 1573ft (-479.2m) Datum: WGS-84 Azimuth/Bearing: 270° S31W 375m (1.15km) True (+12°) Elevation Angle: -21.2° Horizon Angle: -00.0° Zoom: 1.0X Stream substrate and topsoil in place survey on site. MVP: S-L1/W-K2-PEM</p>		
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 5. Trench breakers.	Description	Photo 6. Restored stream substrate and contour survey.
 <p style="font-size: small; margin-top: 5px;">Date & Time: Tue, Sep 05, 2023 at 12:25:02 EDT Position: 037.651361° N, -080.731874° W (-32.5m) Altitude: 1566ft (-478.0m) Datum: WGS-84 Azimuth/Bearing: 344° S56W 503m (1.63km) True (+12°) Elevation Angle: -09.5° Horizon Angle: +00.0° Zoom: 1.0X S-L1/W-K2-PEM SURVEY AND RESTORATION Mountain Valley</p>	 <p style="font-size: small; margin-top: 5px;">Date & Time: Wed, Sep 06, 2023 at 13:52:11 EDT Position: 037.668191° N, -080.723611° W (-32.5m) Altitude: 1564ft (-480.3m) Datum: WGS-84 Azimuth/Bearing: 222° S42W 374m (1.12km) True (+12°) Elevation Angle: -21.0° Horizon Angle: +00.0° Zoom: 1.0X S-L1/RDB CURLEX Mountain Valley</p>		
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 7. Final survey and contouring of stream resource.	Description	Photo 8. Installing Curlex to stream banks post-seeding.