



Stream Biological Conditions EA Report

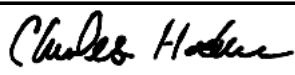
Project Name	H-600 Pipeline Spread E	AFE	124300134	Spread	H-600 Pipeline Spread E
Contractor	Price Gregory	Report #	30		
Environmental Auditor	Charles Haden	Date/Time	8/8/2023 10:04 AM		
Stream ID	S-EF41	Crossing Start Date	8/8/2023	Crossing Completion Date	9/20/2023
Milepost	133.20	Pre-Con Assessment Date	8/8/2023	Post-Con Assessment Date	9/20/2023
Station	7032+84	Bankfull Width (ft.)	4.6	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Intermittent		
County	Nicholas	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?	No
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	Mud/Silt/Clay	Mud/Silt/Clay
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)	1	5
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.)	2	4

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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)			3	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</p> <p>15. Substrate is primarily composed of silt and clay (Photo 1).</p> <p>18. Pre-Con - Timber mat present (travel lane)</p> <p>Day 1 (8/8/2023)</p> <p>Pre-Construction meeting at 0900. EI for crossing is Johnny Graham. 0.69" of precipitation recorded in previous 24-hours. Both wetland topsoil and stream substrate were removed to upland area and segregated separately (Photo 2).</p> <p>Day 2 (8/9/2023)</p> <p>Crossing location prepped and marked for trenching. Trenching to crossing on LDB (Photo 3).</p> <p>Day 3 (8/10/2023)</p> <p>Continuation of trench hammering and soil/rock removal. Trench completed, additional soil removal around pipe ends, and end plate cut and pipe end grinded/cleaned. Intermittent heavy rain all day.</p> <p>Day 4 (8/11/2023)</p> <p>Move and lower pipe into trench.</p> <p>Day 5 (8/14/2023)</p> <p>Light Rain Pipe is installed with appropriate trench breakers. Trench backfilled (Photo 6). Upland areas have been backfilled and brought to grade. Top 12" of stream substrate was replaced and graded to original stream topography. Permanent seed was applied.</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. 19. Does not include timber mats that remain in place for travel lane.</p> <p>Discovered stream and wetland have sunken, yet flow was still present (8/24/2023).</p> <p>9/19/2023</p> <p>Stream substrate was removed stream above trenched area and placed in an upland area for storage (Photo 7). Some vegetative growth was noted. Additional fill placed in stream. Stream surveyed and restored with original substrate.</p> <p>9/20/2023</p> <p>Area seeded and riparian zone completed (Photo 8). Post Construction Assessment completed.</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		
Charles Haden				Potesta & Associates		
				Date		
				9/24/2023		

AFE	124300134	Date/Time	8/8/2023 10:04 AM	Report #	30
Required Photos					
					
GPS Location	See Photo	GPS Location	See Photo		
Description	Downstream view of permitted impact area during pre-construction assessment.	Description	Downstream view of unimpacted area during pre-construction assessment.		
					
GPS Location	See Photo	GPS Location	See Photo		
Description	Downstream view of permitted impact area during post-construction assessment. Original Post Construction Photo	Description	Downstream view of unimpacted area during post-construction assessment. Original Post Construction Photo		
					
GPS Location	See Photo	GPS Location	See Photo		
Description	Photo 1: Pre-construction stream substrate.	Description	Photo 2: Segregated stream substrate.		

Optional Photos		
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GPS Location See Photo	GPS Location See Photo
Description Photo 3: Trench on LDB	Description Photo 4: Trench breaks installed.



GPS Location See Photo	GPS Location See Photo
Description Photo 5: Surveyed and restored stream.	Description Photo 6: Sinking stream (8/24/2023)



GPS Location See Photo	GPS Location See Photo
Description Photo 7: Stream substrate removed and segregated (9/19/2023).	Description Photo 8: Stream surveyed and restored (9/20/2023).