



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread F	AFE		Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	296		
Environmental Auditor	Luke Fultz	Date/Time	10/23/2023 9:45 AM		
Stream ID	S-K17	Crossing Start Date	10/23/2023	Crossing Completion Date	11/1/2023
Milepost	155.06	Pre-Con Assessment Date	10/18/2023	Post-Con Assessment Date	11/1/2023
Station	B187+17	Bankfull Width (ft.)	13.1	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Greenbrier	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 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	3
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	1

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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	3	
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	4	
Additional Notes				
<p>Pre-Construction Notes Pre-Construction Meeting - 10/17/2023 @ 1000 EI - Andrew Hopson Bankfull Width measured at OHWM states within proposed trench area. Flow was present in S-K17; travel lane was not included in assessment. 18. Habitat was uniform with little substrate diversity and only one flow regime.</p> <p>10/23/2023 - Removal of topsoil in upland area (adjacent to S-K17) and stream banks. Steel plates inserted for damming of aquatic resources. Pumping initiated. Stream substrate removed (Photo 1) and segregated. Drilling and preparing for blasting. Rock blasted in resource area.</p> <p>10/24/2023 - Continued removal of stream substrate and segregated to containment area (Photo 2). Excavation of resource area (Photo 3) and of upland areas adjacent to aquatic resource on both sites. Pumping of trench. Staging pipe near resource area.</p> <p>10/25/2023 - Pumping initiated in trench. Sandbags added to trench for padding. Pipe placed in trench. Pipe lined up for welding.</p> <p>10/26/2023 - Pumping water ongoing. Additional sandbags added to the trench. Stop work due to vehicular accident. Resumed after additional safety discussions. Trench breakers adjacent to resource constructed (Photo 5). Padding and fill dirt added to trench.</p> <p>10/27/2023 - Pumping water ongoing. Padding and fill dirt added to trench in and around aquatic resource (Photo 6).</p> <p>10/28/2023 - Pumping water ongoing. Additional height added to trench breakers. Survey onsite. Filling of trench with subsoils. Began adding topsoil and grading of stream banks. Banks covered with plastic to protect from anticipated rainfall.</p> <p>10/30/2023-10/31/2023 - Pumping water ongoing. Work occurred primarily outside of resource area. Survey onsite to mark elevation and OHWM.</p> <p>11/1/2023 - Pumping water ongoing. Contouring of streambed (Photo 7). Survey approved subgrade elevations. Stream substrate restored. Environmental crew seeded and placed curlex. Steel plates and pump-around system removed (Photo 8). Flow restored.</p> <p>Post Construction Notes 16., 17. Crossing and riparian areas have been recently restored. These areas will be monitored until 80% vegetative cover 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>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	Date	
Luke Fultz		Potesta	11/1/2023	

Required Photos			
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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.	Description Downstream view of unimpacted area during post-construction assessment.



GPS Location See Photo	GPS Location See Photo
Description Photo 1: Stream substrate removed.	Description Photo 2: Placement of substrate

Optional Photos					
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GPS Location	See Photo	GPS Location	See Photo
Description	Photo 3: Excavating through aquatic resource and upland area.	Description	Photo 4: Staging of pipe through aquatic resource.



GPS Location	See Photo	GPS Location	See Photo
Description	Photo 5: Trench breakers being constructed around aquatic resource.	Description	Photo 6: Filling trench.



GPS Location	See Photo	GPS Location	See Photo
Description	Photo 7. Contouring and achieving correct subgrade.	Description	Photo 8. Removing of steel plates and restoring flow.