



Stream Biological Conditions EA Report

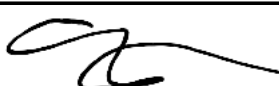
Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	318		
Environmental Auditor	Tim Ferguson	Date/Time	10/26/2023 12:05 PM		
Stream ID	S-UV6	Crossing Start Date	10/31/2023	Crossing Completion Date	11/9/2023
Milepost	155.75	Pre-Con Assessment Date	10/26/2023	Post-Con Assessment Date	11/9/2023
Station	8223+50	Bankfull Width (ft.)	10.0	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 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)	2	4
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	10/26/2023 12:05 PM	Report #	318	
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)			4	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>Pre-Construction Meeting - 10/26/2026</p> <p>17. Outside growing season. Plant die-back and coverage by leaf debris.</p> <p>18. Minimal flow, lacks defined bed/bank thru wetland area. Lacks substrate and habitat. Standing water in depressions.</p> <p>10/31/2023 - Minor precipitation in previous 24 hours (<0.1 inches). Dam and pumping system installed in stream. Top 12 inches of stream substrate removed (Photo 10). Substrate segregated and stored in upland area (Photo 2). Light rain. Excavation of trench and hammering in aquatic resource area (Photo 3). Drilling for blasting through resource and placement of blasting mats. Blasting. Welding ongoing outside of aquatic resource area.</p> <p>11/1/2023 - No Flow. Light Snow. Pumping from trench in aquatic resource area. Preparation for second series of blast. Second blast. Welding and coating ongoing outside of aquatic resource area.</p> <p>11/2/2023 - No Flow. Pumping from trench in aquatic resource area. Drilling and hammering of rock in resource area (Photo 4). Trench excavation and spoil relayed to upland area.</p> <p>11/3/2023 - No Flow. Pumping from trench in aquatic resource area. Drilling and hammering of rock in aquatic resource area. Trench excavation and spoil relayed to upland area. Coating of pipe ongoing outside of aquatic resource area.</p> <p>11/4/2023 - Minor amounts of flow in flume. Pumping from trench in aquatic resource area. Drilling and hammering of rock in resource area. Trench excavation and spoil relayed to upland area. Sandbag bedding placed in pipe. Prepping to move pipe. Finish applying rock shield. Transport and lower pipe into trench in resource area (Photo 5).</p> <p>11/6/2023 - Minor amounts of flow in flume. Pumping from trench in aquatic resource area. Pipe adjustments. Welding and x-ray outside of aquatic resource area.</p> <p>11/7/2023 - Minor amounts of flow in flume. Pumping from trench in aquatic resource area. Cutting pipe. Welding, sandblasting, coating, and x-ray outside of resource area.</p> <p>11/8/2023 - Flow in Flume. Trench breakers installed (Photo 6). Backfilling around trench breakers (Photo 7). Shaker bucket used for padding. Sand blasting and coating outside of aquatic resource area. Survey onsite to evaluate resource elevations. Stream substrate restored. Dam removed. OHWM staked.</p> <p>11/9/2023 - Jute installed on LDB of stream and seeded (Photo 8). Stream contoured (smoothed). Stream restoration 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 score partially due to lack of flow and habitat features/narrow channel</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		
Tim Ferguson				Potesta & Associates, Inc.		
				Date		
				11/9/2023		

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: Removal of top 12-inches of stream substrate.	Description Photo 2: Stream substrate segregated in upland.

Optional Photos					
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GPS Location	See Photo	GPS Location	See Photo
Description	Photo 3: Trenching through aquatic resource.	Description	Photo 4: Hammering rock in aquatic resource area.



GPS Location	See Photo	GPS Location	See Photo
Description	Photo 5: Lowering pipe into trench.	Description	Photo 6: Building trench breakers adjacent to aquatic resource area.



GPS Location	See Photo	GPS Location	See Photo
Description	Photo 7: Backfilling of resource area.	Description	Photo 8: Jute installed on LDB of stream.