



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread B	AFE	124300130	Spread	H-600 Pipeline Spread B
Contractor	Precision	Report #	231		
Environmental Auditor	Elyse Johnston	Date/Time	9/13/2023 11:40 AM		
Stream ID	S-UV11	Crossing Start Date	9/13/2023	Crossing Completion Date	9/16/2023
Milepost	62.35	Pre-Con Assessment Date	9/13/2023	Post-Con Assessment Date	9/18/2023
Station	3291+89	Bankfull Width (ft.)	15.0	Riffle:Pool Complexes Present?	Yes
State	WV	Stream Classification	Perennial		
County	Lewis	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	Cobble (2-10")	Cobble (2-10")
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.)	1	4

AFE	124300130	Date/Time	9/13/2023 11:40 AM	Report #	231	
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)			1	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>9/13 Following conclusion of the pre-construction meeting and civil survey of riffle pool complex and boulders within the stream crossing to aid in restoration effort, the contractor installed the dam and pump and removed/relocated 3 large boulders from the proposed crossing area, which were temporarily placed within the staked workspace limits in an upland area adjacent to the stream. The stream comprised a 91.3SF riffle (thalweg at elevation of 808LF) adjacent to a 59.8SF pool (thalweg at elevation of 807.4LF). Pebble count D50 value of 58mm. In-stream invertebrates and fisheries resources were removed from the area of the stream isolated by the dam and pump and relocated downstream (immediately downstream of pump outlets/discharge) by crews. The contractor then worked on installing sheet piling through stream S-UV11.</p> <p>9/14 The contractor removed the top 12" of stream substrate from the stream crossing, staged the removed substrate in a designated upland area within the staked workspace limits, and labeled it with proper signage. Following removal of the substrate, the contractor began work on excavating the trench. During the excavation efforts, the sheet piling within the stream crossing partially collapsed, resulting in some sloughing of the excavated trench and a halt to construction progress.</p> <p>9/15 Following the partial sheet piling failure and resulting sloughing of the trench, to facilitate safe excavation of the trench, the contractor removed additional substrate from within the permitted impact area of the stream. The additional substrate was stockpiled, labeled, and stabilized with filter sock accordingly. The contractor subsequently modified the installed sheet piling where it had collapsed through the stream. A representative from WVDEP made a site visit, no compliance issues were communicated to the EA. The contractor worked on installing and welding the pipe.</p> <p>9/16 The contractor backfilled the stream crossing and worked on restoration of the stream, including replacing removed substrate, reseeding, and stabilization of the banks. Pre-crossing civil survey data was used to ensure that as-built conditions met pre-construction conditions, including bank and channel contours, placement of boulders, and riffle pool structure. Following satisfactory restoration of the stream bed and bank, the contractor removed the dam and pump and restored flow to the stream.</p> <p>9/18 The EA conducted the post-construction assessment. Numbers 16, 17, and 18 were rated as "severe", "poor", and "severe" (respectively) due to the lack of vegetation in the disturbed permitted impact area following the completion of the crossing and restoration efforts. The S-UV11 stream bank and stream bed substrates have been properly stabilized and the disturbed area has been seeded with the appropriate permanent seed mix in accordance with Appendix B: Restoration Work Plan of the MVP Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework.</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.						
Name		Signature		Company		
Elyse Johnston				ERM		
				Date		
				9/18/2023		

AFE 124300130	Date/Time 9/13/2023 11:40 AM	Report # 231
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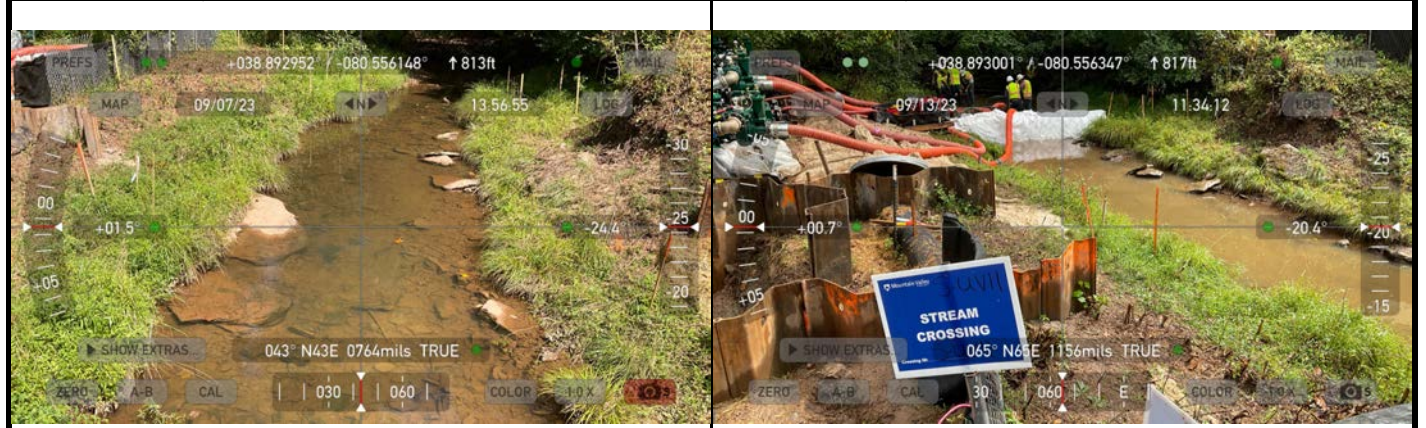
Required Photos



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



GPS Location	See photo.	GPS Location	See photo.
Description	Alternate view of stream, facing upstream from the equipment crossing	Description	View of dam and pump installation

Optional Photos

			
GPS Location	See photo.	GPS Location	See photo.
Description	View of downstream discharge/outlet of the pump-around	Description	Contractor removing in-stream invertebrates and fisheries resources from crossing area after installation of dam and pump
			
GPS Location	See photo.	GPS Location	See photo.
Description	View of installed sheet piling	Description	View of stockpiled and stabilized stream substrate.
			
GPS Location	See photo.	GPS Location	See photo.
Description	View of stockpiled and stabilized additional stream substrate (after sheet piling failure)	Description	View of stream restoration activities, specifically readdition of the top 12" of stream substrate.