



Stream Biological Conditions EA Report

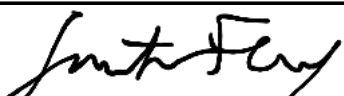
Project Name	H-600 Pipeline Spread A	AFE	124300129	Spread	H-600 Pipeline Spread A
Contractor	Precision	Report #	210		
Environmental Auditor	Samantha Felix	Date/Time	8/26/2023 2:07 PM		
Stream ID	S-A1a	Crossing Start Date	8/26/2023	Crossing Completion Date	9/2/2023
Milepost	0.65	Pre-Con Assessment Date	8/22/2023	Post-Con Assessment Date	9/5/2023
Station	34+19	Bankfull Width (ft.)	35.0	Riffle:Pool Complexes Present?	Yes
State	WV	Stream Classification	Perennial		
County	Wetzel	303(d) Impairment Listing	Biological, Fecal, Iron		

Resource Post-Crossing Conditions

1	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? <u> N/A </u> Mussel Relocation? <u> N/A </u>	N/A
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

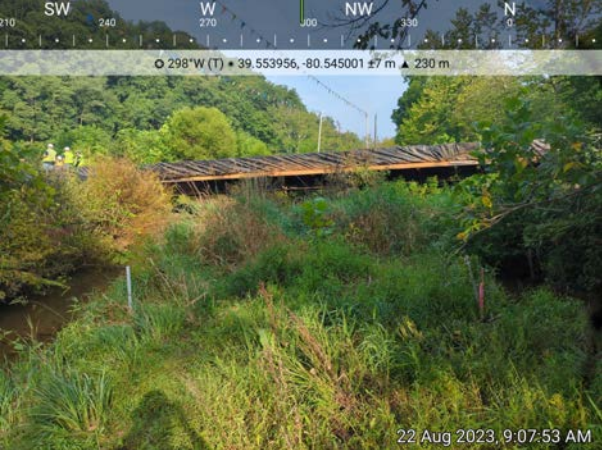





Biological Conditions

		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	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)	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

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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)			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>8/22/23 - Pre-construction meeting and took pre-construction pictures of site. -S.Felix</p> <p>8/26/23 - Dam and pump was installed. Two dams were created to catch water. Aquatic organisms were caught and released downstream from construction. -S.Felix</p> <p>8/27/23 - Commenced sheet pile installation after checking again for aquatic organisms. Before each section of sheet pile was installed, 12" of waterbody substrate was segregated and stockpiled in a designated upland area separate from the other spoil. S.Felix</p> <p>8/28/23 - Continued sheet pile installation. The top 12" of waterbody substrate was segregated and stockpiled in a designated upland area separate from the other spoil before each section of sheet pile was installed. -S.Felix</p> <p>8/29/23 - Finished sheet pile installation. Commenced the extraction of subsoil. -S.Felix</p> <p>8/30/23 - Installed pipe and started welding. -S.Felix</p> <p>8/31/23 - Finished welding and started filling the trench with subsoil. -S.Felix</p> <p>9/1/23 - Continued filling the trench with subsoil. -S.Felix</p> <p>9/2/23 - After the subsoil was properly compacted, the sheet piling was removed. The 12" of segregated waterbody substrate was placed back into the stream bank to match pre-construction contours using survey data and pre-construction pictures. -S.Felix</p> <p>9/5/23 - Post-construction pictures taken.</p> <p>Numbers 16, 17, and 18 were rated "poor", "severe", and "poor" (respectively) due to lack of vegetation in the disturbed permitted impact area following the completion of the crossing and restoration efforts. The S-A1a 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 Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework</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	
Samantha Felix				ERM	9/5/2023	

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Required Photos

			
GPS Location	See above.	GPS Location	See above.
Description	Downstream view of permitted impact area during pre-construction assessment.	Description	Downstream view of unimpacted area during pre-construction assessment.
			
GPS Location	See above.	GPS Location	See above.
Description	Downstream view of permitted impact area during post-construction assessment.	Description	Downstream view of unimpacted area during post-construction assessment.
			
GPS Location	See above.	GPS Location	See above.
Description	This photo shows the dam and pump installed for the stream and wetland crossing.	Description	This photo shows the contractor working on installing sheet piling.

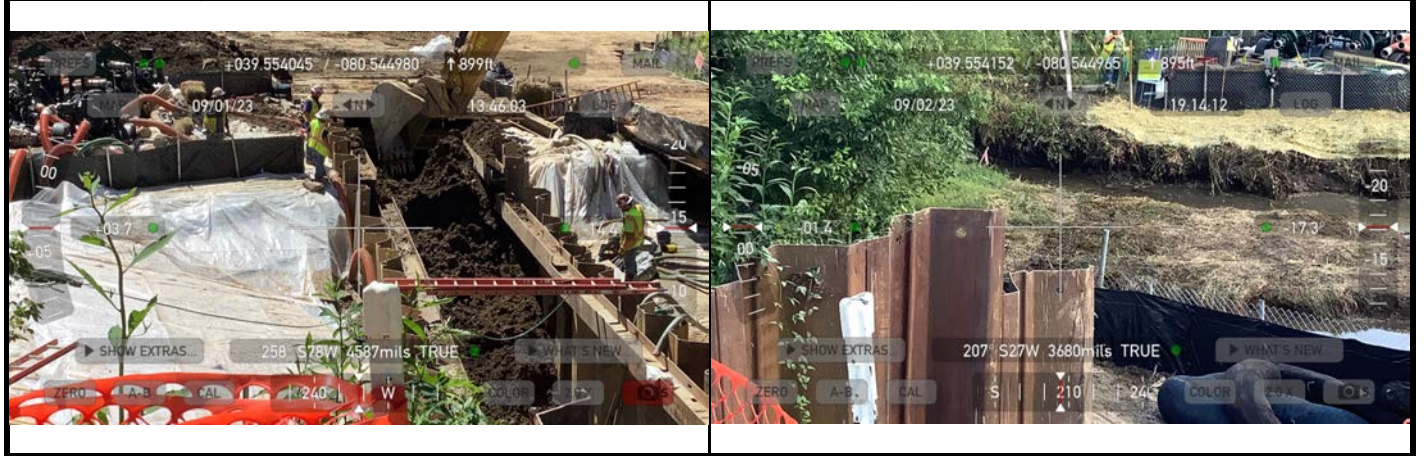
Optional Photos		
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GPS Location See above.	GPS Location See above.
Description This photo shows the contractor continuing working on sheet piling installation.	Description This photo shows the contractor continuing working on sheet piling installation.



GPS Location See above.	GPS Location See above.
Description This photo shows the contractor working on trench excavation.	Description This photo shows the contractor working on installing the pipe.



GPS Location See above.	GPS Location See above.
Description This photo shows the contractor working on backfilling the trench with soil.	Description This photo shows the completed crossing.