



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread A	AFE	124300129	Spread	H-600 Pipeline Spread A
Contractor	Precision	Report #	276		
Environmental Auditor	Jake Pokorny	Date/Time	10/3/2023 9:40 PM		
Stream ID	S-UU5	Crossing Start Date	10/2/2023	Crossing Completion Date	10/7/2023
Milepost	30.25	Pre-Con Assessment Date	9/27/2023	Post-Con Assessment Date	10/9/2023
Station	1597+15	Bankfull Width (ft.)	4.0	Riffle:Pool Complexes Present?	Yes
State	WV	Stream Classification	Perennial		
County	Harrison	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?	See Below
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?	See Below
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	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	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	3	
Additional Notes						
<p>Pre-Con Assessment - Stream embankments are steep but stable with adequate vegetative cover. No livestock or agricultural impacts. Slower water velocity with stable substrate.</p> <p>10/02/23 - Dam and pump was installed before disturbance in the stream. Topsoil and substrate were removed separately before trenching.</p> <p>10/03/23 - Trenching inside the LOD, dam and pump system was maintained and stream conditions monitored.</p> <p>10/04/23 - Pipe installation, welding, X-ray, coating, trench breakers installed and beginning to backfill shifted and padded dirt for backfill.</p> <p>10/05/23 - Continued with shifted and padded dirt backfill in the trench. Trench breakers on both sides of the steam are built with sandbags.</p> <p>10/06/23 - The stream continued to be backfilled as contours began to be reestablished.</p> <p>10/07/23 - 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 to the extent practicable, including bank and channel contours, placement of boulders, and riffle pool structure. Due to the steep angle of the banks prior to the construction, the contractor restored the banks at a shallower angle to facilitate stability and successful restoration. Following satisfactory restoration of the stream bed and bank, the contractor removed the dam and pump and restored flow to the stream.</p> <p>The EA conducted the post-construction assessment. Numbers 16, 17, and 18 were rated as "poor", "poor", and "poor" (respectively) due to the lack of vegetation in the disturbed permitted impact area following the completion of the crossing and restoration efforts. The S-UU5 stream bank and stream bed substrates have been stabilized (to the extent practicable without applying mulch due to the resource being located in a wetland) 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>						
<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		
Jake Pokorny				ERM		
				Date		
				10/13/2023		

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Required Photos

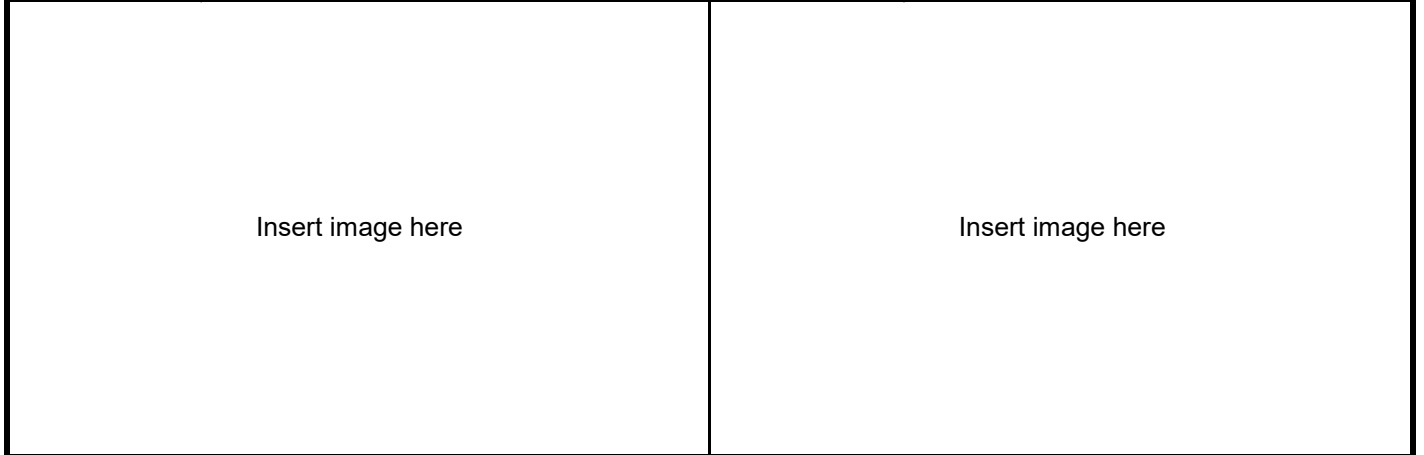
GPS Location See Above.	GPS Location See Above.
Description Downstream view of permitted impact area during pre-construction assessment.	Description Downstream view of unimpacted area during pre-construction assessment.
GPS Location See Above.	GPS Location See Above.
Description Downstream view of permitted 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 10/02/23 -Dam and excavation of stream.	Description 10/03/23 -Excavation to correct depth for pipeline installation.

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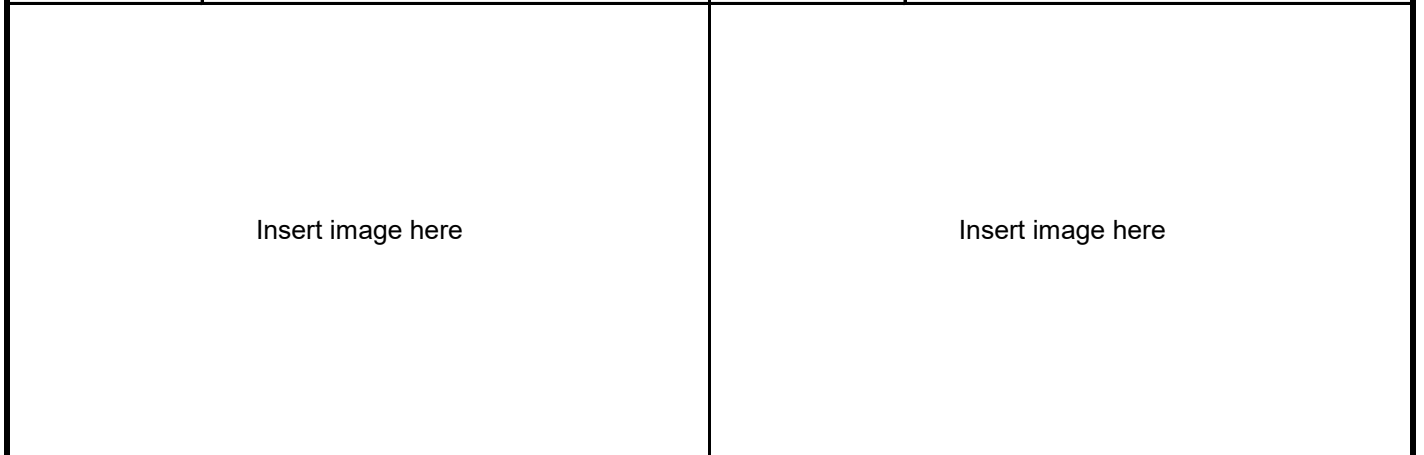
Optional Photos



GPS Location	See Above.	GPS Location	See Above.
Description	10/04/23 - Pipeline installed, trench breakers built and backfilling begun.	Description	10/05/23 - backfilling completed in stream area and trench breakers completed.



GPS Location		GPS Location	
Description		Description	



GPS Location		GPS Location	
Description		Description	