



Stream Biological Conditions EA Report

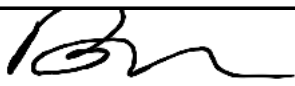
Project Name	H-600 Pipeline Spread C	AFE	124300131	Spread	H-600 Pipeline Spread C
Contractor	Precision	Report #	259		
Environmental Auditor	Brian Montgomery	Date/Time	9/28/2023 8:28 PM		
Stream ID	S-L44	Crossing Start Date	9/28/2023	Crossing Completion Date	9/30/2023
Milepost	78.25	Pre-Con Assessment Date	9/25/2023	Post-Con Assessment Date	10/2/2023
Station	4131+69	Bankfull Width (ft.)	8.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Braxton	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	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	2
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	2	
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	2	
Additional Notes						
<p>9-28-2023 – A dam and pump conveyance system was installed prior the contractor segregating prominent boulders from the stream channel onto plastic sheeting. The top 12 inches of stream substrate between the high-water marks was stored in 5 super sacks, as well an additional 4 super sacks were filled with clay mixed cobble from underneath the substrate. The banks 10-foot buffer zone topsoil was also segregated and stockpiled separately. Welding on the coming in side of the crossing commenced after completing excavation of the trench, installing sandbag pipe supports, and the lowering in of the pipe. Dewatering activities were required and were conducted throughout the crossing on as needed bases. A flume was installed at the end of the day to maintain stream flow over night.</p> <p>9-29-2023 - The contractor continued with welding operations throughout the day on both sides of the crossing.</p> <p>9-30-2023 – X-ray and coating operations were completed prior to padding the pipe and the installation of one river weight at station number 4131+74. The bentonite breakers were installed just past the high-water marks on either side of the crossing (station #'s 4131+63 and 4131+82). Additional concrete and sandbag breaks were installed at station # 4132+27 and 4131+29 respectively. The stream banks and channel were properly restored with emphasis on replacing the clay mix cobble prior to streambed substrate. All elevations, contours, and boulder locations were verified by survey prior to reestablishing stream flow. The stream banks were properly stabilized, and the disturbed areas were 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
Brian Montgomery				SWCA		10/2/2023

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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	Dam and pump spillway downstream of the Right of Way	Description	Stripping topsoil to the high water marks.

Optional Photos		
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GPS Location	See photo	GPS Location	See photo
Description	Removing GPS located boulders.	Description	Removing the stream bed substrate.
			
GPS Location	See photo	GPS Location	See photo
Description	Trenching across the stream.	Description	Overview of trench breaker installation.
			
GPS Location	See photo	GPS Location	See photo
Description	Re-established clay layer underneath the stream bed substrate.	Description	Installing GPS boulders and curlex.