



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread A	AFE	124300129	Spread	H-600 Pipeline Spread A
Contractor	Precision	Report #	254		
Environmental Auditor	Rachel Ellis	Date/Time	9/7/2023 11:23 AM		
Stream ID	S-B3a	Crossing Start Date	9/19/2023	Crossing Completion Date	9/23/2023
Milepost	18.92	Pre-Con Assessment Date	9/7/2023	Post-Con Assessment Date	10/3/2023
Station	998+83	Bankfull Width (ft.)	18.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Harrison	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?	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?	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)	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	4	
Additional Notes						
<p>9/7/23 - Pre-construction Assessment - Stream banks were well vegetated, and fisheries resources were observed in the proposed crossing area. A small island pictured in the pre-construction photos was in the permitted impact area of the crossing. This small island was not vegetated, and civil survey data was collected to facilitate restoration of contours.</p> <p>9/19/23 - Start of Crossing - The dam and pumps were installed and the contractor commenced pumping flow around the crossing area. The contractor removed aquatic invertebrates and other fisheries resources in the area and then pumped out the remaining water. The contractor then removed the substrate from the stream bed in the crossing, which was then stored in a designated area separate from other spoil. Excavation of the trench began.</p> <p>9/20/23 Trench excavation continued. The area underneath the stream was predominantly hard rock and the ground water was dewatered as needed.</p> <p>9/21/23 The excavation finished through the crossing. The construction continued as the pipe was lowered and tied in.</p> <p>9/22/23 The construction continued on the line until area was ready for backfilling.</p> <p>9/23/23 - Crossing Completion - The area was properly backfilled and the substrate was replaced. Area contours were surveyed and replaced to the extent practicable. Due to stability concerns, the bank on the south side of the crossing was restored at a shallower angle. The previously mentioned island, pictured in photos below, was also restored to the extent possible. Two large rocks were also replaced using the pre-construction photos and survey data as a guide. The banks had stabilized with erosion control fabric above the staked ordinary high-water mark and permanent seed planted as well. Afterwards, the dams and pumps were removed, and flow was restored. The weather also fluctuated throughout the day as rain went from a light drizzle to fully raining off and on a few times.</p> <p>10/3/23 - Post-construction Assessment - Numbers 16-19 were rated "severe", "poor", "poor" and "severe" (respectively) due to a lack of vegetation and temporary presence of a high level of soil particles in the disturbed permitted impact area following the completion of the crossing and restoration efforts. The S-B3a banks were stabilized, and area was seeded with the appropriate 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		
Rachel Ellis				ERM		
				Date		
				10/3/2023		

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Required Photos											
 <p><small>Date & Time: Thu, Sep 07, 2023, 09:46:46 EDT Position: +039.359007° / -080.492707° (±16.8 ft) Altitude: 1077 ft (±19.7 ft) Datum: WGS-84 Azimuth Bearing: 177° 41'00" (±10°) Elevation Angle: -02.2° Horizon Angle: +00.2° Zoom: 1.0X</small></p>		 <p><small>Date & Time: Thu, Sep 07, 2023, 09:41:02 EDT Position: +039.358897° / -080.492707° (±16.8 ft) Altitude: 1077 ft (±19.7 ft) Datum: WGS-84 Azimuth Bearing: 177° 41'00" (±10°) Elevation Angle: -02.2° Horizon Angle: +00.2° Zoom: 1.0X</small></p>		GPS Location	Refer to Photograph.	GPS Location	Refer to Photograph.				
Description	Downstream view of permitted impact area during pre-construction assessment.	Description	Downstream view of unimpacted area during pre-construction assessment.	 <p><small>Date & Time: Thu, Sep 07, 2023, 10:27:29 EDT Position: +039.359007° / -080.492707° (±16.8 ft) Altitude: 1077 ft (±19.7 ft) Datum: WGS-84 Azimuth Bearing: 177° 41'00" (±10°) Elevation Angle: -02.2° Horizon Angle: +01.3° Zoom: 1.0X</small></p>		 <p><small>Date & Time: Thu, Sep 07, 2023, 10:27:05 EDT Position: +039.358897° / -080.492707° (±16.8 ft) Altitude: 1077 ft (±19.7 ft) Datum: WGS-84 Azimuth Bearing: 177° 41'00" (±10°) Elevation Angle: -02.2° Horizon Angle: +01.3° Zoom: 1.0X</small></p>		GPS Location	Refer to Photograph.	GPS Location	Refer to Photograph.
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Description	The dams and pumps were placed into the permitted area.	Description	The excavation of the crossing continued.								

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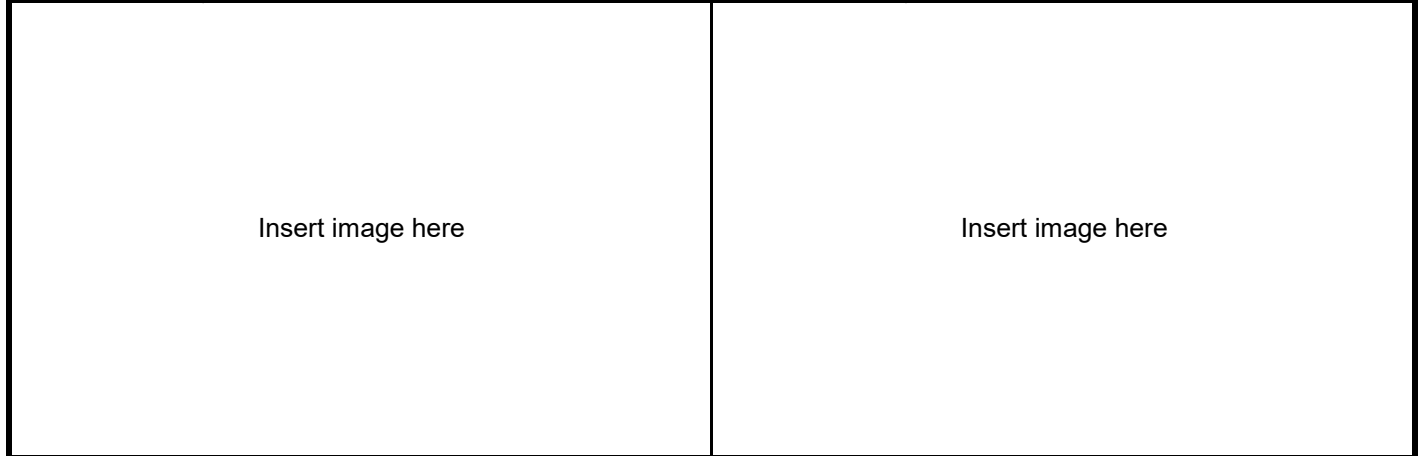
Optional Photos



GPS Location	Refer to Photograph.	GPS Location	Refer to Photograph.
Description	The excavation continued until pipe could be placed into crossing.	Description	The construction continued as the area was prepared for backfilling.



GPS Location	Refer to Photograph.	GPS Location	
Description	The stream crossing was backfilled and stabilized.	Description	



GPS Location		GPS Location	
Description		Description	