



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread D	AFE	124300132	Spread	H-600 Pipeline Spread D
Contractor	Precision	Report #	428		
Environmental Auditor	Scott Wessel	Date/Time	12/6/2023 8:13 PM		
Stream ID	S-A76	Crossing Start Date	12/6/2023	Crossing Completion Date	12/20/2023
Milepost	114.75	Pre-Con Assessment Date	11/27/2023	Post-Con Assessment Date	12/22/2023
Station	6058+96	Bankfull Width (ft.)	6.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Nicholas	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	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	1
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	3	
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>12/6/23 – At the commencement of S-A76 crossing, a dam and pump around were utilized during the day, and a flume was installed at the end of each workday for the streams conveyance method. A large boulder next to resource was removed and segregated prior to the removal of the top 12" of stream substrate. The boulder and substrate material were staged on plastic with proper signage on the coming in side (CIS) of resource. The topsoil for the stream banks was also removed and segregated from subsoil material in an upland area on the CIS of resource. Solid rock was hit soon after trenching started and a blasting crew was called in for the following day. All water entering the ditch was pumped to a dewatering structure staged on the going away side (GAS) of resource on an as needed basis throughout the crossing.</p> <p>12/7/23 – Blasting operations were conducted inside the 10' buffer zone of the stream throughout the day.</p> <p>12/8/23 to 12/11/23 – The spoils were removed from resource area while the contractor focused on welding, x-ray, and coating activities for the loose ends on the CIS and GAS of crossing. Sections of pipe were added to both the CIS and GAS loose ends before the stream section could be installed. No work was conducted on Sunday (12/10/23).</p> <p>12/12/23 to 12/15/23 - The pipe for S-A76 was lowered in and welding operations for the CIS and GAS commenced. Once x-ray cleared that all welds were good, coating and rock shields were added to the pipe.</p> <p>12/16/23 to 12/19/23 - Trench breakers were installed on the CIS and GAS of resource within 25 feet from the top of bank. The padding of the pipe began in and outside the resource area, this process was hampered due to the poor soil conditions for sifting soil.</p> <p>12/20/23 - Once the backfilling process was completed, the final topsoil adjustments were made to the stream banks and 10' buffer zone area. The top 12" of stream substrate material along with the large signature rock that was previously removed from the CIS stream bank were restored. Survey verified the pre-construction elevations and contours of the streambed, 10' buffer zones, and signature rock feature. The proper seed mix for the buffer zones was applied, and erosion control blankets were installed on the GAS, while straw was applied to the CIS. Triple stack 18" filter socks were installed above the high-water mark on both sides of crossing prior to the pump and dam being removed to establish natural stream flow.</p> <p>Numbers 17 and 18 were rated "4" and "3" due to lack of vegetation in the impact area following the completion of crossing and restoration efforts. The disturbed area for stream S-A76 was properly stabilized and 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		
Scott Wessel				SWCA		
				Date		
				12/22/2023		

Required Photos

 <p>11/27/2023 15:37:22 +38.329089,-80.671218 56° NE S-A76(pre-SW)</p>		 <p>11/27/2023 15:38:21 +38.329156,-80.671134 74° E S-A76(pre-SW)</p>	
GPS Location	See coordinated in above photo.	GPS Location	See coordinates in above photo.
Description	Downstream view of permitted impact area during pre-construction assessment.	Description	Downstream view of unimpacted area during pre-construction assessment.
 <p>12/22/2023 10:41:10 +38.329100,-80.671289 63° NE S-A76(post-SW)</p>		 <p>12/22/2023 10:43:11 +38.329158,-80.671197 79° E S-A76(post-SW)</p>	
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Downstream view of permitted impact area during post-construction assessment.	Description	Downstream view of unimpacted area during post-construction assessment.
 <p>12/06/2023 14:31:50 +38.328973,-80.671151 355° N S-A76(dur-SW)</p>		 <p>12/06/2023 15:03:38 +38.329934,-80.671349 297° NW S-A76(dur-SW)</p>	
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Topsoil from banks and substrate being removed from resource.	Description	Substrate material segregated and covered with plastic on the CIS of resource.

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Optional Photos

			
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Overnight flume being installed.	Description	Pipe section for stream crossing being welded inside of trench.
			
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Trench breaker on the GAS of resource installed and padding material being added to ditch.	Description	Substrate material being put back into crossing using original survey data.
			
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Buffer zone on the CIS stabilized with seed and straw.	Description	Buffer zone on the GAS stabilized with erosion blanket.