



Stream Biological Conditions EA Report

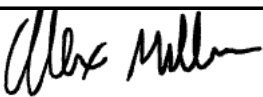
Project Name	H-600 Pipeline Spread C	AFE	124300131	Spread	H-600 Pipeline Spread C
Contractor	Precision	Report #	188		
Environmental Auditor	Alex Miller	Date/Time	8/15/2023 8:30 AM		
Stream ID	S-H123s	Crossing Start Date	8/15/2023	Crossing Completion Date	8/19/2023
Milepost	74.21	Pre-Con Assessment Date	8/11/2023	Post-Con Assessment Date	8/21/2023
Station	3918+49	Bankfull Width (ft.)	9.1	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? 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?	N/A
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?	Yes
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	1	
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>Dewatering of the trench was required throughout the crossing during the overnight and day; this same crew managed the pump around water as well.</p> <p>8/15/23 Prior to the construction crew entering the 10ft buffer of W-H90, the stream crossing S-H123s was dammed with sandbags and a pump around was installed. Excavation of the top 12" of stream S-H123s topsoil was removed and stored in super sacks to the right side of the coming in side (CIS) of the ROW beside W-H90 wetlands topsoil. The trench was excavated until hitting a hard rock layer and a blasting crew was brought in.</p> <p>8/16 /23 Excavation was complete through the wetland, stream, and going away side (GAS) of the crossing and a large section of pipe was lower into the trench. Welding operations started tying in the GAS of the pipe.</p> <p>8/17/23 Welding continued on the GAS of the cross while the excavation of the trench on the CIS was completed. The segment of pipe on the CIS was lowered into the trench and welding operations commenced.</p> <p>8/18/23 Welding operations on the CIS and GAS continued in the morning. A section of pipe was required to be cut out on the CIS, but by the end of the day both the CIS and GAS welds and X-rays were completed.</p> <p>8/19/23 Sand blasting and coating of the pipe was completed first thing in the morning and trench breaker was installed within 25' of the wetland boundary. The trench was backfilled by padding the pipe using a sifting bucket on an excavator up to the 10' buffer zone of the wetland. The top 12" of segregated soil was replaced in wetland (W-H90) and stream (S-H123s) to the surveyor pre-construction specifications. The pump and dam were removed, and stream flow was restored. Super-silt was installed on both sides of the wetland, but seeding and the installation of jute was only completed on the CIS due to the running out of daylight.</p> <p>8/21/23 The remaining section of W-H90 was completed with the installation jute and seeding on the GAS. Curlex was installed within the 50ft riparian zone outside of the wetland.</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		
Alex Miller				SWCA		
				Date		
				8/21/2023		

AFE 124300131		Date/Time 8/15/2023 8:30 AM		Report # 188	
Required Photos					
<p>8/15/23 8:16 AM +38.7604N -80.5136W 138° SE S-H123 (AMf)</p> 		<p>8/15/23 8:17 AM +38.7605N -80.5136W 112° E S-H123 (AMf)</p> 			
GPS Location See photo		GPS Location See photo			
Description Downstream view of permitted impact area during pre-construction assessment. Pre-construction view from bridge looking downstream.		Description Downstream view of unimpacted area during pre-construction assessment. Pre-construction view from LOD looking downstream.			
<p>8/19/23 8:10 PM +38.7604N -80.5137W 140° SE S-H123 (Post-AM)</p> 		<p>8/19/23 7:58 PM +38.7602N -80.5134W 130° SE S-H123 (Post-AM)</p> 			
GPS Location See photo		GPS Location See photo			
Description Downstream view of permitted impact area during post-construction assessment. Post-construction view from bridge looking downstream.		Description Downstream view of unimpacted area during post-construction assessment. Post-construction view from LOD looking downstream.			
<p>8/15/23 9:10 AM +38.7603N -80.5136W 31° NE S-H123 (AMf)</p> 		<p>8/15/23 9:49 AM +38.7605N -80.5137W 285° W S-H123 (AMf)</p> 			
GPS Location See photo		GPS Location See photo			
Description Rocks cobble sized or larger segregated from stream substrate and laid out in order from upstream (left) to downstream (right)		Description View from downstream of streambed after top 12" of substrate were removed and segregated.			

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Optional Photos

<p>8/16/23 6:08 PM +38.7607N -80.5143W 236° SW S-H123 (Dur-AM)</p> 	<p>8/19/23 6:21 PM +38.7603N -80.5138W 258° W S-H123 (Dur-AM)</p> 
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GPS Location	See photo	GPS Location	See photo
Description	Top 12" of stream substrate placed in super sack for segregation from other substrate.	Description	Stream reconstruction in progress. Stakes and string aiding in locating elevations quickly.

<p>Insert image here</p>	<p>Insert image here</p>
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GPS Location		GPS Location	
Description		Description	

<p>Insert image here</p>	<p>Insert image here</p>
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GPS Location		GPS Location	
Description		Description	