



## Stream Biological Conditions EA Report

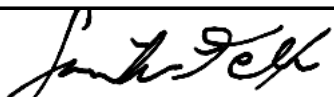
<b>Project Name</b>	H-600 Pipeline Spread A	<b>AFE</b>	124300129	<b>Spread</b>	H-600 Pipeline Spread A
<b>Contractor</b>	Precision	<b>Report #</b>	79		
<b>Environmental Auditor</b>	Samantha Felix	<b>Date/Time</b>	8/21/2023 10:09 AM		
<b>Stream ID</b>	S-A3a	<b>Crossing Start Date</b>	8/18/2023	<b>Crossing Completion Date</b>	8/20/2023
<b>Milepost</b>	0.81	<b>Pre-Con Assessment Date</b>	8/17/2023	<b>Post-Con Assessment Date</b>	8/20/2023
<b>Station</b>	42+62	<b>Bankfull Width (ft.)</b>	9.0	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Intermittent		
<b>County</b>	Wetzel	<b>303(d) Impairment Listing</b>	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?	N/A
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	<b>Predominant Substrate Type (select one):</b> Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Cobble (2-10")	Cobble (2-10")
16	<b>Channel Conditions: Rating:</b> 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	<b>Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank: Rating:</b> 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

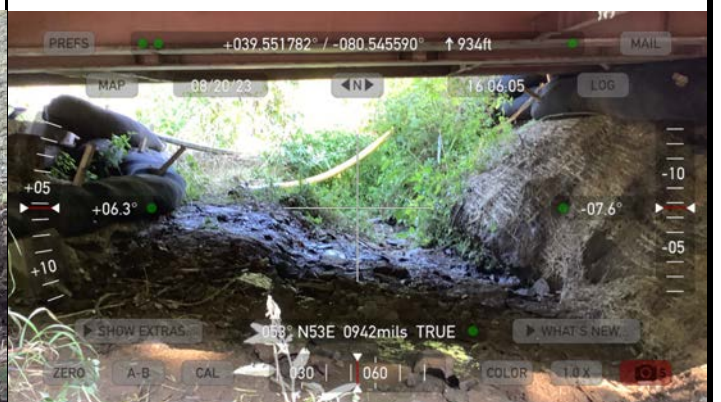
<b>AFE</b>	124300129	<b>Date/Time</b>	8/21/2023 10:09 AM	<b>Report #</b>	79	
<b>Biological Conditions Continued</b>					<b>Pre-Con</b>	<b>Post-Con</b>
18	<b>Instream Habitat Conditions:</b> Examples: Varied substrate sizes, varied combination of water velocities & depths, presence of woody/leafy debris, 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	<b>Channel Alterations:</b> 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	
<b>Additional Notes</b>						
<p>8/17/23 - Pre-construction meeting for crossing S-A3a. Pre-construction assessment conducted and pictures were taken. -S.Felix</p> <p>8/18/23 - Commenced crossing waterbody after installation of dam and pump. The 12" of waterbody substrate was segregated and stockpiled in a designated upland area separate from the other soil. Trench excavation was completed by the end of the day. -S. Felix</p> <p>8/19/23 - The pipe was welded and installed, contractor began to backfill the trench with subsoil and compacted it. -S. Felix</p> <p>8/20/23 - The crew finished backfilling and compacting the subsoil in the morning and then added the 12" of previously segregated waterbody substrate back onto the stream bank and stream bed to match pre-construction contours. All large rocks that were removed prior to construction were put back in place by the crew using pre-construction pictures as a guide. -S.Felix</p> <p>Numbers 16, 17, and 18 were rated "severe", "poor", and "severe" (respectively) due to lack of vegetation in the disturbed permitted impact area following the completion of the crossing and restoration efforts. The S-A3a stream bank and stream bed substrates have been properly stabilized and the disturbed area has been 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>						
<b>Name</b>		<b>Signature</b>		<b>Company</b>		<b>Date</b>
Samantha Felix				ERM		8/21/2023

**Required Photos**



**GPS Location** see photo  
**Description** Downstream view of permitted impact area during pre-construction assessment.

**GPS Location** see photo  
**Description** Downstream view of unimpacted area during pre-construction assessment.



**GPS Location** see photo  
**Description** Downstream view of permitted impact area during post-construction assessment.

**GPS Location** see photo  
**Description** Downstream view of unimpacted area during post-construction assessment.



**GPS Location** see photo  
**Description** This photo shows the pipe installed in the water body crossing

**GPS Location** see photo  
**Description** This photo shows the backfilled subsoil in the water body crossing prior to replacement of substrate

<b>AFE</b>	124300129	<b>Date/Time</b>	8/21/2023 10:09 AM	<b>Report #</b>	79
<b>Optional Photos</b>					
Insert image here			Insert image here		
<b>GPS Location</b>		<b>GPS Location</b>		<b>GPS Location</b>	
<b>Description</b>		<b>Description</b>		<b>Description</b>	
Insert image here			Insert image here		
<b>GPS Location</b>		<b>GPS Location</b>		<b>GPS Location</b>	
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Insert image here			Insert image here		
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<b>Description</b>		<b>Description</b>		<b>Description</b>	