



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread A	AFE	124300129	Spread	H-600 Pipeline Spread A
Contractor	Precision	Report #	306		
Environmental Auditor	Danielle Payne	Date/Time	10/17/2023 8:34 PM		
Stream ID	S-K94	Crossing Start Date	10/23/2023	Crossing Completion Date	10/27/2023
Milepost	38.18	Pre-Con Assessment Date	10/17/2023	Post-Con Assessment Date	10/27/2023
Station	2015+74	Bankfull Width (ft.)	20.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Lewis	303(d) Impairment Listing	Fecal, Iron		

Resource Post-Crossing Conditions







1	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? <u>Yes</u> Mussel Relocation? <u>N/A</u>	See Below
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?	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)?	No
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)	2	4
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	3	
Additional Notes						
<p>Expanded notes for question 1: Stream (S-K94) has a time of year restriction (TOYR) prohibiting construction between April 1st to June 30th Construction within this resource crossing began outside of this window.</p> <p>10/23/2023 The crew removed the top 12 inches of the stream substrate as well as the stream bank topsoil. Topsoil and stream substrate was segregated from subsoil. A dam and pump was installed so the flow would not be impeded during construction. Dewatering efforts were also in place. The crew began excavation of the trench.</p> <p>10/24/2023 The crew finished excavation and the pipe was placed in the trench.</p> <p>10/25/2023 The crew began welding and coating of the pipe.</p> <p>10/26/2023 The crew backfilled the trench with subsoil.</p> <p>10/27/2023 Post construction assessment The top 12 inches of clean native stream substrate and stream bank topsoil was restored to S-K94. 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>Conditions 18 and 19 were rated "poor" due to a lack of vegetation in the disturbed permitted impact area following the completion of the crossing and restoration efforts.</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		
Danielle Payne				ERM		
				Date		
				10/27/2023		

Required Photos	
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 <p><small>Date & Time: Fri, Oct 13, 2023, 14:13 EDT Position: +039.167507, -080.578194 (+16.4h) Altitude: 1102ft (+34m) Datum: WGS-84 Azimuth/Bearing: 274° N86°W 58.9mils True (+10°) Elevation Angle: +23° Horizon Angle: +01.7 Zoom: 1.0X</small></p>	 <p><small>Date & Time: Fri, Oct 13, 2023, 14:34 EDT Position: +039.167507, -080.578194 (+16.4h) Altitude: 1102ft (+34m) Datum: WGS-84 Azimuth/Bearing: 122° S58E 216mils True (+10°) Elevation Angle: +09.7 Horizon Angle: +01.7 Zoom: 1.0X</small></p>
GPS Location See above photo.	GPS Location See above photo.
Description Downstream view of permitted impact area during pre-construction assessment. Downstream view of the permitted impact area during pre-construction assessment.	Description Downstream view of unimpacted area during pre-construction assessment. Downstream view of unimpacted area during pre-construction assessment.
 <p><small>Date & Time: Fri, Oct 13, 2023, 17:49 EDT Position: +039.167507, -080.578194 (+16.4h) Altitude: 1124ft (+34m) Datum: WGS-84 Azimuth/Bearing: 301° N63°W 54.8mils True (+10°) Elevation Angle: +08.9 Horizon Angle: +00.2 Zoom: 1.0X</small></p>	 <p><small>Date & Time: Fri, Oct 13, 2023, 17:52 EDT Position: +039.167507, -080.578171 (+16.4h) Altitude: 1128ft (+34m) Datum: WGS-84 Azimuth/Bearing: 136° S44E 2418mils True (+10°) Elevation Angle: +13.9° Horizon Angle: +00.5 Zoom: 1.0X</small></p>
GPS Location See above photo.	GPS Location See above photo.
Description Downstream view of permitted impact area during post-construction assessment. Downstream view of the permitted impact area during post-construction assessment.	Description Downstream view of unimpacted area during post-construction assessment. Downstream view of unimpacted area during post-construction assessment.
 <p><small>Date & Time: Mon, Oct 29, 2023, 18:03 EDT Position: +039.167567, -080.577947 (+16.4h) Altitude: 1292ft (+390ft) Datum: WGS-84 Azimuth/Bearing: 298° N62°W 52.8mils True (+21°) Elevation Angle: +08.9 Horizon Angle: -01.0 Zoom: 1.0X</small></p>	 <p><small>Date & Time: Sat, Oct 14, 2023, 17:29 EDT Position: +039.167507, -080.577947 (+16.4h) Altitude: 1102ft (+34m) Datum: WGS-84 Azimuth/Bearing: 136° S44E 2418mils True (+10°) Elevation Angle: +13.9° Horizon Angle: +00.5 Zoom: 1.0X</small></p>
GPS Location See above photo.	GPS Location See above photo.
Description View of trench excavation.	Description View of resource during construction and downstream dam(s)

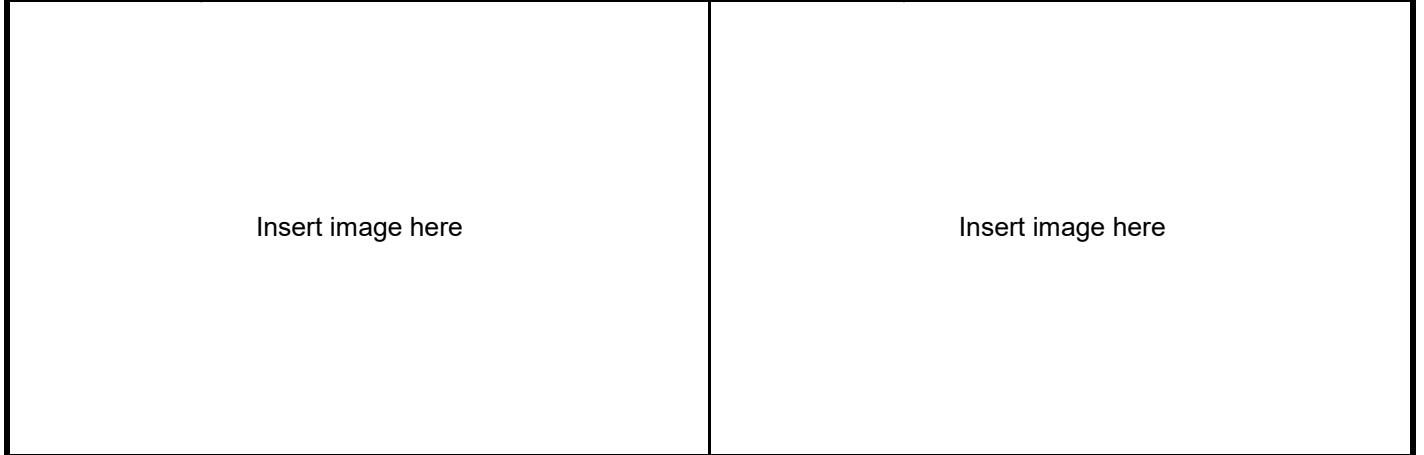
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Optional Photos



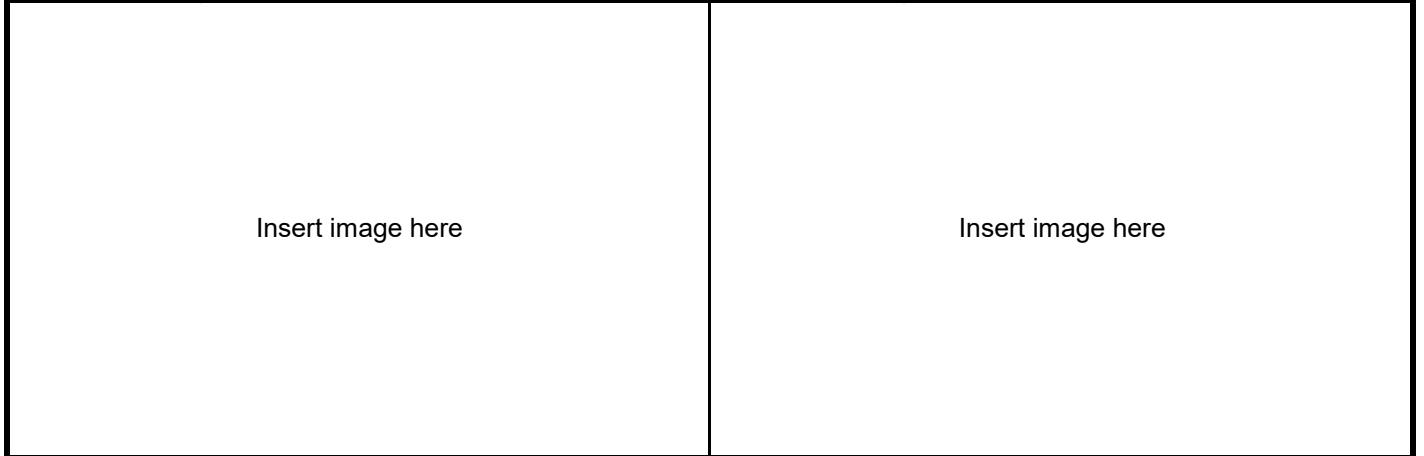
GPS Location	See above photo.	GPS Location	See above photo.
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Description	View of resource as construction continued.	Description	View of resource as backfilling progressed.
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GPS Location		GPS Location	
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Description		Description	
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