



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread A	AFE	124300129	Spread	H-600 Pipeline Spread A
Contractor	Precision	Report #	237		
Environmental Auditor	Devin Jen	Date/Time	9/18/2023 11:10 AM		
Stream ID	S-K73	Crossing Start Date	9/21/2023	Crossing Completion Date	10/26/2023
Milepost	31.41	Pre-Con Assessment Date	9/18/2023	Post-Con Assessment Date	10/26/2023
Station	1658+47	Bankfull Width (ft.)	5.0	Riffle:Pool Complexes Present?	Yes
State	WV	Stream Classification	Perennial		
County	Harrison	303(d) Impairment Listing	Biological, Fecal, Iron		

Resource Post-Crossing Conditions

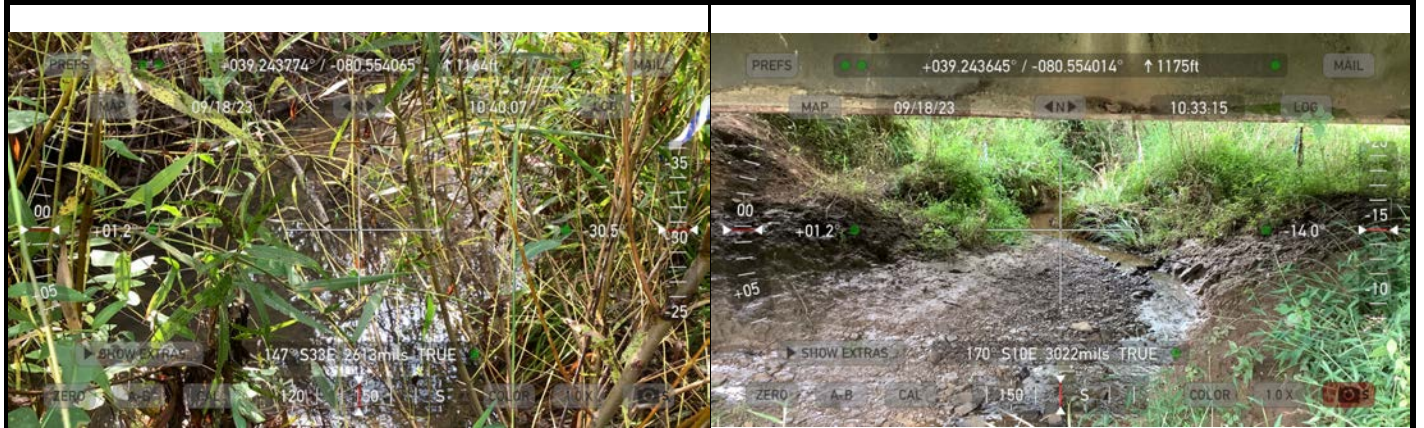
1	Were all applicable resource specific crossing conditions satisfied?	Yes
	Time of Year Restrictions (TOYR)? <u>Yes</u> Mussel Relocation? <u>N/A</u>	
2	This question is not applicable in WV.	
3	Which crossing methods were utilized during the stream crossing? (If so select one or more) Dam & Pump <input 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?	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	Cobble (2-10")	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	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)			2	2	
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>9/16/2023 The pre-construction meeting was held and pre-construction assessment took place. The stream has time of year restrictions from April 1 to June 30. -D. Jen</p> <p>9/20/2023 The contractor installed the dam and pump.</p> <p>9/21/2023 The contractor removed the topsoil from the stream and stockpiled it in a designated upland area and began work on sheetpiling installation. -A. Dunn</p> <p>9/22/2023-10/5/2023 The contractor continued work on installation of the sheet piling and dewatering of groundwater as necessary. -A. Dunn, M. Kastan</p> <p>10/6/2023-10/9/2023 The contractor worked on excavating the trench through the stream/wetland complex. -M. Kastan</p> <p>10/10/2023-10/17/2023 The contractor worked on installing the pipe through the stream/wetland complex crossing, including welding, x-ray, and coating. -M. Kastan</p> <p>10/18/2023-10/25/2023 The contractor worked on backfilling the trench and removing sheetpiling. -M. Kastan</p> <p>10/26/2023 The contractor finished replacing the original 12" of segregated stream substrate and graded it to the correct contour, including the riffle pool complexes, using pre-construction survey data. Bank stabilization measures, and erosion and sediment controls were then installed and the dam and pump were removed. -M. Kastan</p> <p>Post construction assessment Conditions 16 and 17 were given a rating of 4 during post-construction assessment due to lack of vegetation in the disturbed permitted impact area following the completion of the crossing efforts. The S-K73 stream banks have been properly restored and 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. -M. Kastan</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		
Devin Jen				ERM		
				Date		
				10/26/2023		

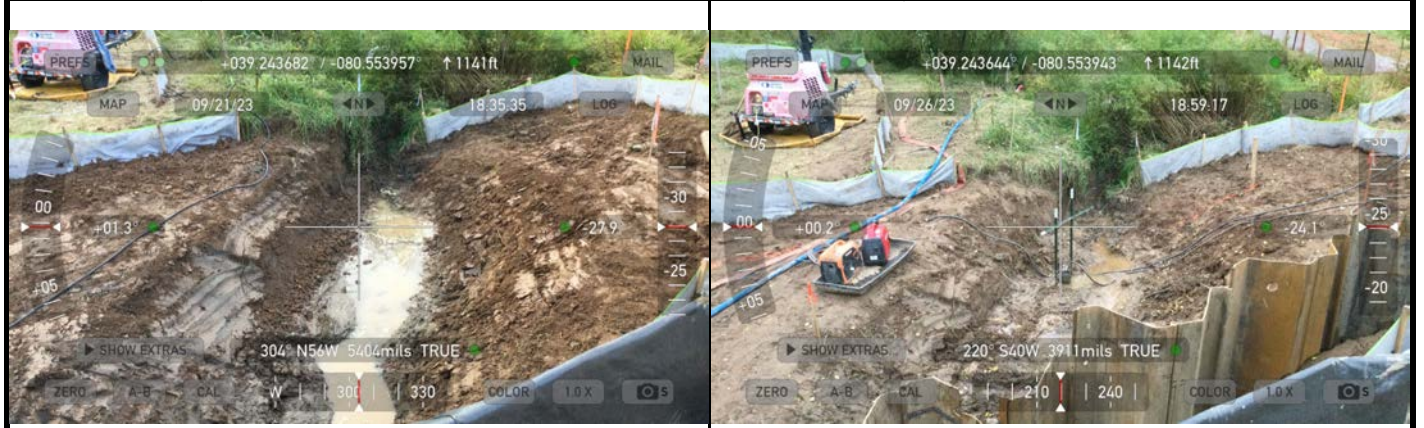
Required Photos



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

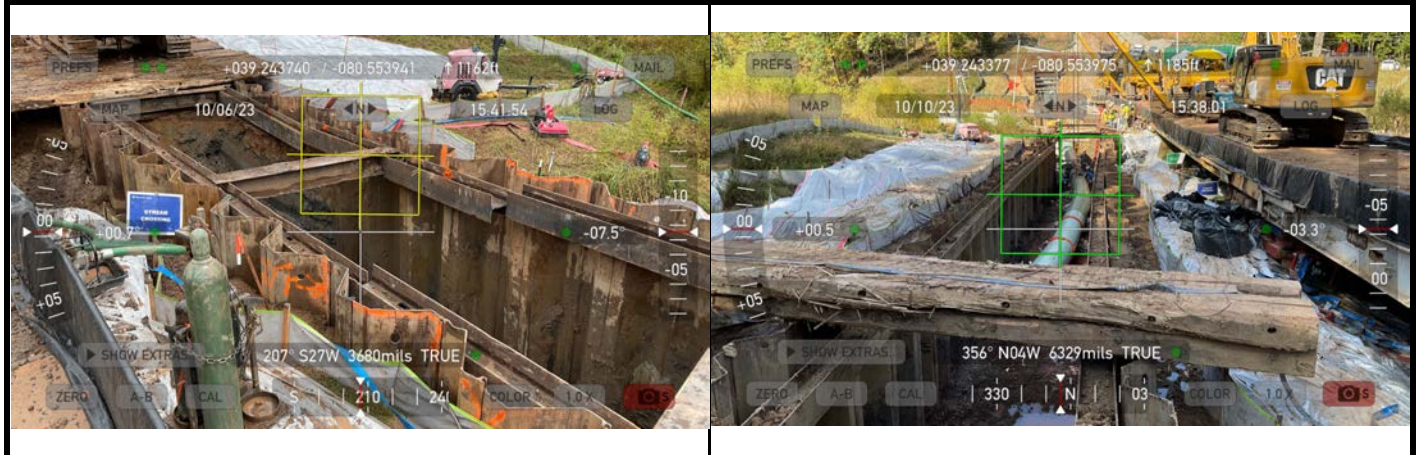


GPS Location	See photo	GPS Location	See photo
Description	Downstream view of permitted impact area during post-construction assessment.	Description	Downstream view of unimpacted area during post-construction assessment.

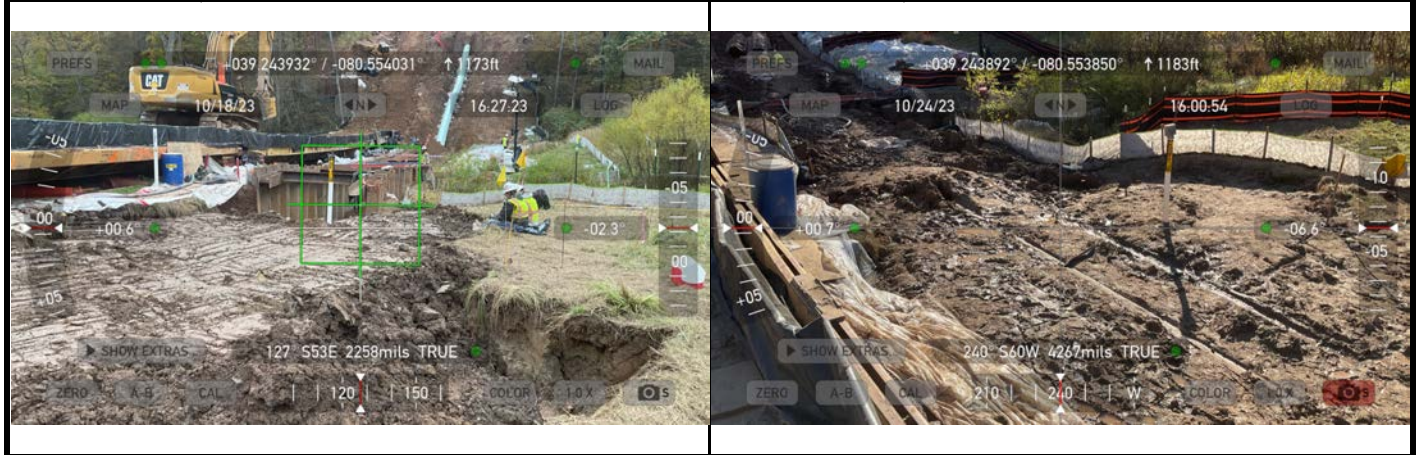


GPS Location	See photo	GPS Location	See photo
Description	This photo shows the stream following removal of the stream substrate	Description	This photo shows sheet piling installed in the stream crossing

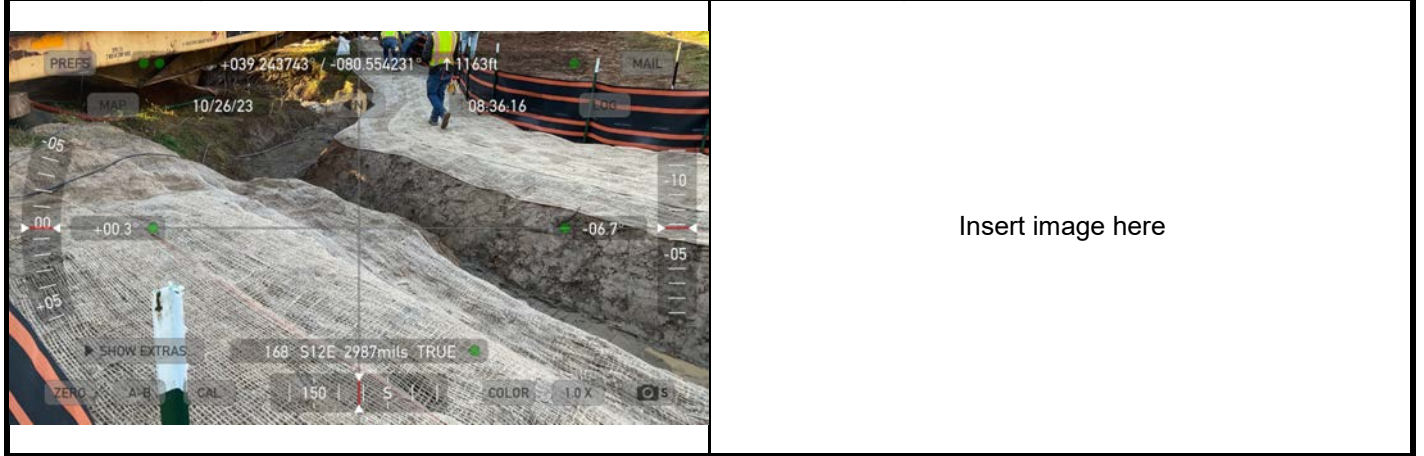
Optional Photos	
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GPS Location See photo	GPS Location See photo
Description This photo shows the trench excavated through the stream crossing	Description This photo shows the pipe installed in the stream crossing



GPS Location See photo	GPS Location See photo
Description This photo shows the contractor working on backfilling the trench	Description This photo shows the contractor working on removing sheet piling



GPS Location See photo	GPS Location
Description This photo shows the restored stream crossing	Description