



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread B	AFE	124300130	Spread	H-600 Pipeline Spread B
Contractor	Precision	Report #	268		
Environmental Auditor	Elyse Johnston	Date/Time	10/4/2023 12:04 PM		
Stream ID	S-A111	Crossing Start Date	10/4/2023	Crossing Completion Date	10/26/2023
Milepost	34.80	Pre-Con Assessment Date	10/4/2023	Post-Con Assessment Date	10/27/2023
Station	1837+44	Bankfull Width (ft.)	14.0	Riffle:Pool Complexes Present?	Yes
State	WV	Stream Classification	Perennial		
County	Doddridge	303(d) Impairment Listing	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?	See Below
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.	N/A

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	Gravel (0.1-2")	Gravel (0.1-2")
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	5
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)			2	4	
Additional Notes						
<p>10/4 Pre-construction meeting occurred, all representative parties in concurrence. Time of year restrictions apply to this stream from 1 April to 30 June. No work occurred in this stream today.</p> <p>10/14 Work in-stream began today. Sheet piling removal through wetland W-A23 occurred. Topsoil (12" of stream substrate) was removed, stockpiled, segregated, and labeled with proper signage accordingly. Dam and pump operation for stream S-A111/K63 installed, and pump around was initiated. In-stream fisheries and macroinvertebrate resources in the isolated crossing area were properly removed by crews with buckets and nets/shovels during drainage effort. Excavation of upland ROW immediately upslope and within the 50' aquatic resource buffer of stream S-A111 occurred. Stream crossing was timber matted during this excavation to enable safe excavation.</p> <p>10/16-17 Stream subsoil excavation (for trench) occurred. Stream was timber matted while equipment utilized this area to safely dig the trench. Crews took the extra precaution of stockpiling, segregating, and labeling the stream bank topsoil to aid in restoration.</p> <p>10/18 Welding, X-ray and coating of the occurred.</p> <p>10/19 Same work occurred as 10/18. Crews set up 2 extra 6" pumps to prepare for forecasted precipitation overnight and on 10/20.</p> <p>10/20 Trench breaker installed.</p> <p>10/21 No work occurred in this stream today due to ongoing precipitation.</p> <p>10/23 Trench breakers installation completed. Backfilling occurred. Welding, X-ray and coating of the pipe occurred.</p> <p>10/24 Backfill of stream subsoil occurred. Rough grading with survey prior to adding top 12" substrate occurred. Welding, X-ray and coating of the pipe occurred. 2 extra pumps broken down.</p> <p>10/25 Flowfill added to trench south of stream to support pipe and the trench breakers were reinforced. The Lead EI, site EI, foreman, Equitrans representative, and FERC monitor reviewed the pre-construction data and resolved not replace island created by sloughed bank in stream present during immediate pre-construction conditions. Stream will instead be restored in an altered state without the slough (i.e. not restored to pre-construction conditions) in order to maintain bank stability and integrity, reduce erosion, and enable non-restrictive flow.</p> <p>10/26 Stream bank and bed substrates restored. Banks restored and stabilized (seeded up to OHWM and erosion control fabric installed). All parties in agreement. Survey verified. Dam pulled at 3PM. Stream considered in-compliance.</p> <p>10/27 Post-construction assessment occurred.</p> <p>Stream was rated as "minor" for channel alterations due to an existing pipe bisecting left bank of stream. Stream was rated as "severe" "poor" "marginal" (due to channel alteration discussed on 10/25, not replacing sloughed off substrate on north bank) "severe" respectively due to lack of vegetation in the disturbed permitted impact area following the completion of the crossing and restoration efforts. The S-A111 stream bank and stream bed substrates have been properly stabilized and the disturbed area has been stabilized 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		Date
Elyse Johnston				ERM		10/27/2023

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 Alternate view of pre construction conditions of stream, facing upstream.	Description This photo shows the dam and pump installed in the stream to maintain flow during the crossing.

Optional Photos

 <p><small>Date & Time: Mon, Oct 16, 2023, 18:20:12 EDT Position: +039 200795 / -080 553323 (+19.6ft) Altitude: 934ft (+287.4ft) Datum: WGS-84 Azimuth Bearing: 252° S22W 4480mils True (+12°) Elevation Angle: -15.4° Horizon Angle: -02.1° Zoom: 1.0X</small></p>	 <p><small>Date & Time: Mon, Oct 17, 2023, 09:37:59 EDT Position: +039 201821 / -080 553124 (+24.4ft) Altitude: 942ft (+287.7ft) Datum: WGS-84 Azimuth Bearing: 204° S24W 3627mils True (+28°) Elevation Angle: -10.9° Horizon Angle: -00.9° Zoom: 1.0X</small></p>
GPS Location See photo	GPS Location See photo
Description This photo shows the dam and pump discharge downstream of the crossing	Description This photo shows the contractor working on excavating the trench
 <p><small>Date & Time: Wed, Oct 18, 2023, 07:45:44 EDT Position: +039 200758 / -080 553247 (+16.8ft) Altitude: 934ft (+28.2ft) Datum: WGS-84 Azimuth Bearing: 252° S22W 4480mils True (+20°) Elevation Angle: -20.2° Horizon Angle: -00.9° Zoom: 1.0X</small></p>	 <p><small>Date & Time: Tue, Oct 17, 2023, 16:07:59 EDT Position: +039 201572 / -080 552150 (+65.2ft) Altitude: 887ft (+270.3ft) Datum: WGS-84 Azimuth Bearing: 220° S00W 3911mils True (+38°) Elevation Angle: -01.8° Horizon Angle: -03.0° Zoom: 2.0X</small></p>
GPS Location See photo	GPS Location See photo
Description This photo shows downstream dam in place at the crossing	Description This photo shows the contractor working on installing the pipe
 <p><small>Date & Time: Wed, Oct 25, 2023, 14:21:02 EDT Position: +039 200719 / -080 553324 (+21.9ft) Altitude: 957ft (+291.0ft) Datum: WGS-84 Azimuth Bearing: 205° S26W 3662mils True (+12°) Elevation Angle: -18.9° Horizon Angle: -00.9° Zoom: 1.0X</small></p>	 <p><small>Date & Time: Thu, Oct 26, 2023, 14:13:37 EDT Position: +039 200754 / -080 553315 (+19.0ft) Altitude: 950ft (+290.0ft) Datum: WGS-84 Azimuth Bearing: 151° S29E 2684mils True (+13°) Elevation Angle: -12.2° Horizon Angle: -01.3° Zoom: 1.0X</small></p>
GPS Location See photo	GPS Location See photo
Description View of survey verifying grade conditions.	Description View of crew stabilizing banks.