



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	305		
Environmental Auditor	Luke Fultz	Date/Time	10/23/2023 11:15 AM		
Stream ID	S-K19	Crossing Start Date	11/9/2023	Crossing Completion Date	11/17/2023
Milepost	155.19	Pre-Con Assessment Date	10/26/2023	Post-Con Assessment Date	11/17/2023
Station	B194+28	Bankfull Width (ft.)	2.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Greenbrier	303(d) Impairment Listing	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 Flume <input checked="" type="checkbox"/> Cofferdam Conventional Bore Horizontal Directional Drill (HDD) Bore	
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	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)	1	1
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.)	2	3

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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	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	2	
Additional Notes						
<p>Pre-Construction Notes Pre-Construction Meeting - 10/26/2023 18. Low score due to lack of instream variability and poor substrate characteristics. 19. Ag. livestock, mowing, previously constructed drainage swall. Timber mat present.</p> <p>11/9/2023 - Reviewed Pre-Construction Assessment completed on 10/26/2023. No changes observed. Excavated stream substrate (Photo 1) and segregated in upland area. Installed flume. Work ongoing at other locations at this site.</p> <p>11/10/2023 -11/11/2023 - No work in resource. Work ongoing at other locations at this site.</p> <p>11/13/2023 - Timber mats put in place to begin excavation of aquatic resource. Excavation of trench through aquatic resource (Photo 2). Pumped water from trench in aquatic resource area and then repeated as needed. Sandbags for padding added in trench (Photo 3). Pipe placed in trench through aquatic resource area and prepared for welding (Photo 4). Welding and x-ray of connection outside of aquatic resource area.</p> <p>11/14/2023 - Pumping water from trench in aquatic resource area. Construction of trench breaker on the southern side of the aquatic resource area (Photo 5). Began backfilling.</p> <p>11/15/2023 - Pumping water from trench in aquatic resource area. Work ongoing at other locations at this site including welding and x-ray.</p> <p>11/16/2023 - Pumping water from trench in aquatic resource area. Construction of trench breaker on the northern side of the aquatic resource area (Photo 6). Continued backfilling subsoils in aquatic resource area (Photo 7). Survey onsite shooting pre-restoration soil levels. Stream substrate restored. Riparian buffer is W-K9-PEM-1. This area was also restored. Seeding completed and jute added. Reseeding completed. Final check and assessment to be completed in the morning when visibility is better.</p> <p>11/17/2023 - Site evaluated to determine if restoration is complete. Post Construction Assessment completed.</p> <p>Post Construction Notes 16., 17. Crossing and riparian areas have been recently restored. These areas will be monitored until 80% vegetative coverage has been achieved and areas that do not have 80% vegetative cover within 30 days will be reseeded. 18. Low score due to lack of instream variability and poor substrate characteristics. 19. Does not include timber mats that remain in place for travel lane.</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		
Luke Fultz				Potesta		
				Date		
				11/17/2023		

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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	Photo 1: Removing stream substrate.	Description	Photo 2: Excavating trench through aquatic resource area.

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Optional Photos

 <p><small>Date & Time: Mon, Nov 13, 2023 at 11:05:54 EST Position: +037.860941° N, -080.757766° W (+15.4m) Altitude: 2450ft (+11.3ft) Datum: WGS-84 Azimuth/Bearing: 302° N63W 280mils True (+12°) Elevation Angle: -02.3° Horizon Angle: +07.8° Zoom: 0.5X S-K19 & W-K9-PEM-1 Sandbags added to lay pipe MVP</small></p>		 <p><small>Date & Time: Mon, Nov 13, 2023 at 13:02:56 EST Position: +037.861067° N, -080.757853° W (+15.4m) Altitude: 2457ft (+11.7ft) Datum: WGS-84 Azimuth/Bearing: 172° S00W 206mils True (+12°) Elevation Angle: +16.9° Horizon Angle: -02.3° Zoom: 0.5X S-K19 & W-K9-PEM-1 Preparing to weld pipe segment MVP</small></p>	
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 3: Adding sandbag padding in aquatic resource area.	Description	Photo 4: Lowering pipe into trench through aquatic resource area and preparing for welding.
 <p><small>Date & Time: Thu, Nov 16, 2023 at 10:05:06 EST Position: +037.860941° N, -080.757766° W (+15.4m) Altitude: 2461ft (+12.3ft) Datum: WGS-84 Azimuth/Bearing: 160° S20E 284mils True (+12°) Elevation Angle: -17.4° Horizon Angle: -02.1° Zoom: 0.5X S-K19 & W-K9-PEM-1 Completed trench breaker (south) MVP</small></p>		 <p><small>Date & Time: Thu, Nov 16, 2023 at 11:59:28 EST Position: +037.861067° N, -080.757878° W (+15.4m) Altitude: 2468ft (+12.6ft) Datum: WGS-84 Azimuth/Bearing: 149° S31E 264mils True (+15°) Elevation Angle: +29.3° Horizon Angle: -00.8° Zoom: 0.5X S-K19 & W-K9-PEM-1 Trench breaker (north) MVP</small></p>	
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 5: Construction of trench breaker on the southern side of aquatic resource area.	Description	Photo 6: Construction of trench breaker on the northern side of aquatic resource area.
 <p><small>Date & Time: Thu, Nov 16, 2023 at 13:51:08 EST Position: +037.861020° N, -080.757737° W (+15.4m) Altitude: 2468ft (+12.6ft) Datum: WGS-84 Azimuth/Bearing: 205° S25W 388mils True (+15°) Elevation Angle: -04.2° Horizon Angle: -01.7° Zoom: 0.5X S-K19 & W-K9-PEM-1 Backfilling subsoil (3) MVP</small></p>		<p>Insert image here</p>	
GPS Location	See Photo	GPS Location	
Description	Photo 7: Backfilling of trench in aquatic resource area.	Description	