



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	425		
Environmental Auditor	Mathew Huber	Date/Time	12/4/2023 7:56 AM		
Stream ID	S-C41	Crossing Start Date	12/6/2023	Crossing Completion Date	12/22/2023
Milepost	194.78	Pre-Con Assessment Date	12/4/2023	Post-Con Assessment Date	12/22/2023
Station	10284+12	Bankfull Width (ft.)	3.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Intermittent		
County	Monroe	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	Cobble (2-10")	Cobble (2-10")
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.)	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)			4	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	1	
Additional Notes						
<p>Pre-Construction Notes Pre-Construction Meeting - 11/29/2023 18. Stream was dry during assessment</p> <p>12/06/2023 - Top 12" of stream substrate from OHWM to OHWM was excavated (Photo 1) and segregated into upland area (Photo 2). Flume pipe along with upstream and downstream dams were constructed to accommodate any potential stream flow. Prepped for blasting outside resource area.</p> <p>12/07/2023 - No flow in stream. Resource area was blasted and excavation of trench in southern riparian buffer was started. Sandbags added to trench for padding in southern riparian buffer.</p> <p>12/8/2023 - No flow in stream. Flume pipe removed. Pipe lowered into trench in southern riparian buffer. Excavated through aquatic resource. Flume pipe replaced. Welding ongoing.</p> <p>12/9/2023 - No flow in stream. X-rayed. Excavating outside resource area. Sandbags added to trench for padding in northern riparian buffer (Photo 3).</p> <p>12/11/2023-12/12/2023 - No flow in stream. Flume pipe in place. Work ongoing outside of aquatic resource area.</p> <p>12/13/2023 - No flow in stream. Removed flume pipe. Lowered pipe into trench through aquatic resource (Photo 4). Welded. Inserted trench box. Work ongoing outside of aquatic resource area.</p> <p>12/14/2023-12/18/2023 - No flow in stream. Flume pipe in place. Work ongoing outside of aquatic resource area.</p> <p>12/19/2023 - No flow in stream. Flume pipe in place. Began constructing trench breakers (Photo 5).</p> <p>12/20/2023 - No flow in stream. Continued backfilling. Trench breaker complete. Flume pipe removed. Backfilling continued.</p> <p>12/21/2023 - Completed backfilling (Photo 6). Contoured/graded channel in subsoil by machine and hand (Photo 7). Added substrate. Removed the dam.</p> <p>12/22/2023 - Seeded (Photo 8). Jute added to banks. 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 cover has been achieved and areas that do not have 80% vegetative cover within 30 days will be reseeded. 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		
Mathew Huber				ERM		
				Date		
				12/22/2023		

Required Photos		
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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: Excavating top 12 inches of substrate.	Description	Photo 2: Substrate segregated and stored in upland area.

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Optional Photos					
 <p><small>Date & Time Wed, Dec 09, 2022 at 15:00:18 EST Position: +4027.427025° / -880.694628° (-118.200) Altitude: 1722ft (-527.00) Datum: WGS-84 Azimuth/Bearing: 110° S80W 187.8mils True (-14°) Elevation Angle: -0.04° Horizontal Angle: -0.04° Zoom: 1.0X S-C41 installing pipe Mountain Valley</small></p>		 <p><small>Date & Time Wed, Dec 14, 2023 at 10:16:30 EST Position: +4027.427025° / -880.694628° (-118.200) Altitude: 1722ft (-527.00) Datum: WGS-84 Azimuth/Bearing: 107° S80W 187.8mils True (-14°) Elevation Angle: -0.04° Horizontal Angle: -0.04° Zoom: 1.0X S-C41 installing pipe Mountain Valley</small></p>			
GPS Location	See Photo	GPS Location	See Photo		
Description	Photo 3: Trenched through aquatic resource and sandbags placed in northern riparian buffer.	Description	Photo 4: Pipe being lowered into trench through aquatic resource.		
 <p><small>Date & Time Thu, Dec 21, 2023 08:14:30 EST Position: +437.427025° / -880.694628° (-118.200) Altitude: 1514ft (-459.6m) Datum: WGS-84 Azimuth/Bearing: 221° S40W 192.9mils True (-4.0) Elevation Angle: -0.03° Horizontal Angle: -0.03° Zoom: 1.0X Trench Breakers Mountain Valley Pipeline</small></p>		 <p><small>Date & Time Thu, Dec 21, 2023 08:06:25 EST Position: +437.426059° / -880.694705° (-118.21h) Altitude: 1251ft (-387.6m) Datum: WGS-84 Azimuth/Bearing: 027° N37E 162.5mils True (-3.3) Elevation Angle: -0.03° Horizontal Angle: -0.03° Zoom: 1.0X S-C41 US EDGE OF LOD LOOKING DS Mountain Valley Pipeline</small></p>			
GPS Location	See Photo	GPS Location	See Photo		
Description	Photo 5: Constructing trench breakers.	Description	Photo 6: Backfilling completed.		
 <p><small>Date & Time Thu, Dec 21, 2023 12:18:01 EST Position: +437.451213° / -880.713888° (-129.6631h) Altitude: 1929ft (-524.90m) Datum: WGS-84 Azimuth/Bearing: 261° S81W 160.0mils True (-4.4) Elevation Angle: -12.5° Horizontal Angle: -02.6° Zoom: 1.0X S-C41 Subsoil contouring Mountain Valley Pipeline</small></p>		 <p><small>Date & Time Fri, Dec 22, 2023 09:06:45 EST Position: +437.442488° / -880.717179° (-129.4002h) Altitude: 1924ft (-524.59m) Datum: WGS-84 Azimuth/Bearing: 243° S63W 143.0mils True (-3.2) Elevation Angle: -0.51° Horizontal Angle: -01.3° Zoom: 1.0X S-C41 seeding Mountain Valley Pipeline</small></p>			
GPS Location	See Photo	GPS Location	See Photo		
Description	Photo 7: Contouring subsoil by hand.	Description	Photo 8: Seeding bank.		