



Stream Biological Conditions EA Report

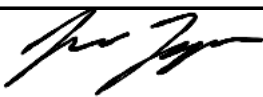
Project Name	H-600 Pipeline Spread F PG	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	412		
Environmental Auditor	Tim Ferguson	Date/Time	11/24/2023 10:19 AM		
Stream ID	S-CV19	Crossing Start Date	11/26/2023	Crossing Completion Date	11/30/2023
Milepost	187.80	Pre-Con Assessment Date	11/24/2023	Post-Con Assessment Date	11/30/2023
Station	9916+00	Bankfull Width (ft.)	28.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Monroe	303(d) Impairment Listing	No		

Resource Post-Crossing Conditions

1	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? <u> N/A </u> Mussel Relocation? <u> N/A </u>	N/A
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.	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	Bedrock, Boulder (>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	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	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	4	
Additional Notes						
<p>Pre-Construction Notes Pre-Construction Meeting - 11/24/2023 Timber mat in place for travel lane.</p> <p>11/25/2023 - EA onsite. EA met with foreman and EI to discuss steam work. Welding outside of water resource area and also working on trenching on the northern side of resource. No trenching within a 200 ft buffer of resource. No stream work or activity in general within stream.</p> <p>11/26/2023 - Constructed upstream and downstream dam (Photo 1).</p> <p>11/27/2023 - Pumped water out of resource (between upstream and downstream dams). Removed brush from the banks. Excavated first 12" of topsoil from banks and stockpiled in containment on ROW. Blasting crew onsite prepped to blast through the aquatic resource and up each side of the bank. Blasted area. Removed stream substrate (Photo 2) and stockpiled in containment on ROW. Continued trenching through OHWM.</p> <p>11/28/2023 - Significant water built up in the trench in the aquatic resource area over night. Pumped water from trench. Excavating trench (Photo 3). Sandbag "pillows" added to trench for padding. Placed pipe in trench (Photo 4). No welding. Began backfilling. Survey onsite and shot pipe and trench breaker placement locations.</p> <p>11/29/2023 - Water pumped from trench. Continued to backfill. Constructed trench breakers within 25 feet of each bank (of aquatic resource) (Photo 5). Additional backfilling and grading (Photo 6).</p> <p>11/30/2023 - Water in resource area froze overnight. Work could not begin until ice was broken and excess water pumped out. Survey onsite to working with crew to restore pre-construction elevations (Photo 7). North bank contoured. Topsoil restored. Stream substrate restored. South bank restored (see Item 8). Banks raked, seeded, and jute applied. Curlex installed above OHWM on both banks. P1 installed (Photo 8). Brush cut according to landowner agreement. Upstream dam removed then downstream dam removed and flow restored. Stream and 10-foot buffer restored.</p> <p>Post Construction Notes 8. Alterations made during stream bank restoration. Slope cut bank to reduce severity of bank angles and potential for bank failure. 15. The bedrock streambed was altered during the crossing and the dominant substrate that was returned is cobble. 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. 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		
Tim Ferguson				Potesta		
				Date		
				11/30/2023		

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Required Photos

 <p><small>Date & Time: Fri, Nov 24, 2023 at 10:50:28 EST Position: +037.500412 / -080.691391 (+375.1ft) Altitude: 1820ft (+523.9ft) Datum: WGS-84 Azimuth/Bearing: 215.535W 3822mils True (+12°) Elevation Angle: +0.6° Horizon Angle: +0.0° Zoom: 1.0X S-CV19 - Downstream view of permitted impact area during pre-construction assessment. Mountain Valley Pipeline</small></p>		 <p><small>Date & Time: Fri, Nov 24, 2023 at 10:50:28 EST Position: +037.500412 / -080.691391 (+375.1ft) Altitude: 1820ft (+523.9ft) Datum: WGS-84 Azimuth/Bearing: 192.512W 3413mils True (+3°) Elevation Angle: +0.6° Horizon Angle: +0.0° Zoom: 1.0X S-CV19 - Downstream view of unimpacted area during pre-construction assessment. Mountain Valley Pipeline</small></p>	
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.
 <p><small>Date & Time: Fri, Nov 24, 2023 at 11:07:55 EST Position: +037.500293 / -080.691385 (+375.1ft) Altitude: 1843ft (+562.1ft) Datum: WGS-84 Azimuth/Bearing: 229.539W 4071mils True (+12°) Elevation Angle: +0.2° Horizon Angle: -01.0° Zoom: 1.0X S-CV19 US viewing DS from edge of ROW (permitted impact). Mountain Valley</small></p>		 <p><small>Date & Time: Fri, Nov 24, 2023 at 11:07:55 EST Position: +037.500293 / -080.691385 (+375.1ft) Altitude: 1843ft (+562.1ft) Datum: WGS-84 Azimuth/Bearing: 187.507W 3324mils True (+12°) Elevation Angle: +0.6° Horizon Angle: +00.0° Zoom: 1.0X S-CV19 DS viewing DS from edge of ROW (non-impact). Mountain Valley</small></p>	
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.
 <p><small>Date & Time: Sun, Nov 26, 2023 at 16:14:02 EST Position: +037.500369 / -080.691391 (+372.0ft) Altitude: 1825ft (+566.0ft) Datum: WGS-84 Azimuth/Bearing: 240.540W 4267mils True (+12°) Elevation Angle: +11.1° Horizon Angle: -00.9° Zoom: 1.0X S-CV19 - Completed upstream dam, downstream view. Mountain Valley Pipeline</small></p>		 <p><small>Date & Time: Sun, Nov 26, 2023 at 16:21:35 EST Position: +037.500369 / -080.691508 (+372.0ft) Altitude: 1825ft (+566.0ft) Datum: WGS-84 Azimuth/Bearing: 111.511E 0807mils True (+17°) Elevation Angle: +0.5° Horizon Angle: +00.0° Zoom: 1.0X S-CV19 removing substrate. Mountain Valley</small></p>	
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 1: Upstream dam in aquatic resource.	Description	Photo 2: Removal of streambed following force assisted excavation.

Optional Photos

<p><small>Date & Time: Tue, Nov 28, 2023 at 06:47:19 EST Position: +037.500305, -080.689885 (-11.6ft) Altitude: 2007ft (+9.8ft) Datum: WGS-84 Azimuth Bearing: 287 N73W 5102mils True (+19.1) Elevation Angle: -19.2 Horizon Angle: -01.1 Zoom: 2.0X S-CV19 resource trenched Mountain Valley</small></p>	<p><small>Date & Time: Tue, Nov 28, 2023 at 14:57:04 EST Position: +037.500305, -080.689757 (-15.5ft) Altitude: 2007ft (+9.8ft) Datum: WGS-84 Azimuth Bearing: 270 N90W 4800mils True (+12.1) Elevation Angle: -19.2 Horizon Angle: -00.3 Zoom: 4.0X S-CV19 padded trench resource Mountain Valley</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 3: Excavating trench through aquatic resource.	Description Photo 4: Sandbag "pillows" placed in trench for padding and pipe being transported to trench.
<p><small>Date & Time: Wed, Nov 29, 2023 at 10:15:15 EST Position: +037.500248, -080.691988 (-16.8ft) Altitude: 1854ft (+11.2ft) Datum: WGS-84 Azimuth Bearing: 325 N35W 5778mils True (+12.1) Elevation Angle: -21.0 Horizon Angle: -01.0 Zoom: 1.0X S-CV19 North trench breaker Mountain Valley</small></p>	<p><small>Date & Time: Wed, Nov 29, 2023 at 16:34:16 EST Position: +037.500120, -080.691851 (-15.8ft) Altitude: 1827ft (+6.0ft) Datum: WGS-84 Azimuth Bearing: 072 N79E 1400mils True (+3.1) Elevation Angle: -12.0 Horizon Angle: -01.3 Zoom: 1.0X S-CV19 North trench breaker constructed Mountain Valley</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 5: Constructing northern trench breaker.	Description Photo 6: Backfilling and grading, trench breaker constructed.
<p><small>Date & Time: Thu, Nov 30, 2023 at 08:54:02 EST Position: +037.500222, -080.691355 (-11.0ft) Altitude: 1827ft (+13.2ft) Datum: WGS-84 Azimuth Bearing: 308 N65W 5422mils True (+12.1) Elevation Angle: -19.2 Horizon Angle: -01.1 Zoom: 1.0X S-CV19 survey pre restoration Mountain Valley</small></p>	<p><small>Date & Time: Thu, Nov 30, 2023 at 13:12:42 EST Position: +037.500284, -080.691375 (-11.2ft) Altitude: 1827ft (+7.8ft) Datum: WGS-84 Azimuth Bearing: 623 N31E 0587mils True (+13.1) Elevation Angle: -10.3 Horizon Angle: -00.3 Zoom: 1.0X S-CV19 restoration Mountain Valley</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 7: Survey onsite prior to restoration; ice formed in aquatic resource area overnight.	Description Photo 8: Bank restoration (curlexing, jute, seeding and P1 fencing).