



Wetland Biological Conditions EA Report

Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	116		
Environmental Auditor	Beth Burdette	Date/Time	11/2/2023 7:21 PM		
Wetland ID	W-UV8	Crossing Start Date	11/6/2023	Crossing Completion Date	12/4/2023
Milepost	155.96	Pre-Con Assessment Date	11/3/2023	Post-Con Assessment Date	12/4/2023
Station	8234+69	Cowardin Classification	PEM	Wetland Impact Area(acs)	0.4913
State	WV				
County	Greenbrier				

Resource Post-Crossing Conditions

1	Were equipment mats or other suitable methods utilized under heavy equipment to minimize soil compaction and disturbance in wetlands?	Yes
2	Was the existing vegetation removed prior to initiating land disturbance within the resource?	Yes
3	Was the top 1-foot (12-inches) of wetland soil segregated and stockpiled separate from trench spoils?	Yes
4	Was excess material not needed for backfill removed and disposed of in an upland area?	Yes
5	Was the top 12-inches of backfill made with clean native wetland topsoil?	Yes
6	Were standard decompaction practices (disking, plowing, cultivating, tilling, or incorporation of organic matter into the topsoil horizon) implemented prior to applying seed?	Yes
7	Was wetland topsoil replaced and temporarily seeded?	Yes
8	Was permanent seed applied to unsaturated wetlands?	Yes
9	Was equipment/timber matting removed from the wetland area properly by vertically lifting, and not pulling through the impact area?	Yes
10	Were impervious trench breakers/plugs properly installed within 25-feet of the resource to prevent subsurface erosion to or from the resource area?	Yes
11	Was the pre-construction survey data utilized during restoration in attempt to maintain the original surface hydrology, and were contours re-established to pre-construction conditions to maintain overland flow patterns?	See Below
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	Was the time of disturbance minimized by conducting resource work continuously to completion?	Yes
14	Does the post-construction square footage of wetland area appear to be restored to meet or exceed the pre-construction area square footage?	Yes
15	Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 – 4/30) in PFO classified wetlands?	N/A
16	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
17	Wetland Saturation: Are surface waters, the water table, and/or overall soil saturation present? (Select Yes or No)	Yes		Yes
18	Resource Alterations: Are the wetland soil conditions visibly disturbed? Examples: Livestock presence, haul roads, farm traffic, drain tiles, recent mowing/clear cutting, recent excavating/disking of soils, etc. Rating: 1-Negligible (undisturbed/natural resource), 2-Minor (20-40% of resource disturbed by alterations), 3-Moderate (40-80% of resource disturbed), 4-Poor (>80% of resource disturbed)	2		2
19	Is vegetation present within the permitted impact area prior to disturbance? (Pre-Con)Are areas properly seeded and stabilized after restoration? (Post-Con) Rating: 1-Optimal (60-100% heavy vegetative cover), 2-Sub-optimal (30-60% mixed vegetative coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetative coverage, etc.)	1		1

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Additional Notes

Pre-Construction Notes
 Pre-Construction Meeting - 11/3/2023
 15. Approx. 2" recharge on 12" soil pit. Vegetation indicators.
 18. Trench location has been mowed, in addition to seasonal die-back.

11/6/2023 - Wetland topsoil (12 inches) excavated and segregated (Photo 1). Stockpiled within aquatic resource boundary. Silt fence installed as barrier around wetland topsoil stockpile (Photo 2). Trench and relay subsoil.
 11/7/2023 - Set timber mats for welding pipe. Began welding. No other work in resource.
 11/8/2023 - Welded and x-rayed pipe. No other work in resource.
 11/9/2023-11/11/2023 - Welded, x-rayed, and coated pipe. Excavated bell hole outside of aquatic resource area.
 11/13/2023 - Continued to weld, x-ray, and coat pipe. Worked in adjacent aquatic resource (S-UV2).
 11/14/2023-11/15/2023 - Excavated subsoil in trench starting in southern most portion of aquatic resource (Photo 3). Additional work ongoing outside of aquatic resource area throughout the day.
 11/16/2023 - Minimal work onsite due to utilities issue. No work in aquatic resource.
 11/17/2023 - Trenching continued through aquatic resource. Additional work ongoing outside of aquatic resource area.
 11/18//2023 - Sandbag "pillows" added to the trenched portion of aquatic recourse. Continued to weld and x-ray pipe.
 11/20/2023 - Additional sandbag "pillows" for padding added to trench. Pipe walked to trench and lowered into trench through aquatic resource area (Photo 4). Additional work ongoing outside of aquatic resource area including welding, x-ray, sandblasting, and coating of pipe lowered into the trench.
 11/21/2023 - Rain event. No work in aquatic resource.
 11/22/2023 - Installed trench breaker south of aquatic resource. Backfilled portion of trench (Photo 5). Pumped water from trench.
 11/24/2023 - Backfilled southernmost portion of trench in aquatic resource. Excavating in northernmost portion of aquatic resource. Adjacent resource (S-UV2) restored.
 11/25/2023 - Pumped water from trench. Excavated and hammered in trench in northern portion of aquatic resource. Installed section of pipe in northern section which connects to upland. Welding ongoing. Continued to backfill southern section of trench upslope of aquatic resource.
 11/26/2023 - Pumped water from trench. Welded, x-rayed, sandblasted, and coated pipe. Continued to excavate subsoil in trench.
 11/27/2023 - Pumped water from trench. Excavated and hammered in trench in northern portion of aquatic resource. Jeoped and wrapped pipe. Added sandbag padding to trench. Installed portion of pipe in aquatic resource. Welded. Added padding.
 11/28/2023-11/30/2023 - Cutting, aligning, welding, x-ray, sandblasting, coating, and installing rock shield on remaining sections of pipe in the aquatic resource area.
 12/1/20231 - Snow flurries/rain. Pumped water from trench. Installed trench breaker (Photo 6) and padding dirt in northern end of aquatic resource. Backfilled upland trench and northern portion of wetland trench. Activities wrapped up early due to continuous rain.
 12/2/2023 - Pumped water from trench. Backfilled trench (Photo 7). Restored topsoil in backfilled area. Seed northern section of restored wetland.
 12/4/2023 - Pumped water from trench. Remaining trench backfilled and wetland topsoil restored. Apply wetland seed mix (Photo 8).

Post Construction Notes
 11. Survey crew not utilized during restoration, but contours restored as close as practicable to pre-construction contours based on unimpacted/surrounding area contours.
 17. Surface water and saturation present.
 19. Crossing has recently been restored. These areas will be monitored until 80% vegetative cover is achieved. Areas that do not have 80% vegetative cover within 30 days will be reseeded.

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.

Name	Signature	Company	Date
Beth Burdette		Potesta & Associates, Inc.	12/4/2023

Required Photos		
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<p><small>Date & Time: Fri, Nov 03, 2023 at 11:02:23 EDT Position: 37.85127 N, -080.752361 W (+1521.8m) Altitude: 267.7ft (+81.0m) Datum: WGS-84 Azimuth Bearing: 354.1 N08W 6256mils True (+29.1) Elevation Angle: +03.8 Horizon Angle: +02.4 Zoom: 1.0X W-UV8 Permitted Impact Area Facing North from 5-UR2 Mountain Valley Pipeline</small></p> 	<p><small>Date & Time: Fri, Nov 03, 2023 at 11:05:35 EDT Position: 37.851272 N, -080.753116 W (+1203.3h) Altitude: 267.7ft (+81.0m) Datum: WGS-84 Azimuth Bearing: 243.1 N7W 4096mils True (+12) Elevation Angle: +04.6 Horizon Angle: +01.6 Zoom: 1.0X W-UV8 Unimpacted Area Facing North from 00D Mountain Valley Pipeline</small></p> 
GPS Location See Photo	GPS Location See Photo
Description View of permitted resource impact area during pre-construction assessment.	Description At edge of LOD, view of unimpacted resource area conditions during pre-construction assessment.
<p><small>Date & Time: Sun, Dec 04, 2022 at 14:04:16 EST Position: 37.851247 N, -080.753087 W (+1521.8m) Altitude: 266.1ft (+81.0m) Datum: WGS-84 Azimuth Bearing: 354.1 N08W 6256mils True (+29.1) Elevation Angle: +00.5 Horizon Angle: +01.9 Zoom: 1.0X W-UV8 Impact Area facing North Mountain Valley Pipeline</small></p> 	<p><small>Date & Time: Sun, Dec 04, 2022 at 14:04:16 EST Position: 37.851247 N, -080.753087 W (+1521.8m) Altitude: 266.2ft (+81.0m) Datum: WGS-84 Azimuth Bearing: 352.1 N08W 6256mils True (+29.1) Elevation Angle: +00.6 Horizon Angle: +01.9 Zoom: 1.0X W-UV8 Unimpacted Area facing North Topsoil Stockpile Area Mountain Valley Pipeline</small></p> 
GPS Location See Photo	GPS Location See Photo
Description View of permitted resource impact area during post-construction assessment.	Description At edge of LOD, view of unimpacted resource area conditions during post-construction assessment.
<p><small>Date & Time: Mon, Nov 06, 2023 at 10:38:55 EST Position: 37.851270 N, -080.752278 W (+2027m) Altitude: 267.7ft (+81.0m) Datum: WGS-84 Azimuth Bearing: 354.1 N08W 6256mils True (+29.1) Elevation Angle: +02.9 Horizon Angle: +02.9 Zoom: 1.0X Removing top 12 inches of topsoil MVP W-UV8</small></p> 	<p><small>Date & Time: Mon, Nov 06, 2023 at 10:38:55 EST Position: 37.851270 N, -080.752278 W (+2027m) Altitude: 267.7ft (+81.0m) Datum: WGS-84 Azimuth Bearing: 354.1 N08W 6256mils True (+29.1) Elevation Angle: +03.3 Horizon Angle: +00.4 Zoom: 1.0X Installed silt fence around wetland topsoil to keep separated MVP W-UV8</small></p> 
GPS Location See Photo	GPS Location See Photo
Description Photo 1: Excavating top 12 inches of topsoil.	Description Photo 2: Segregated topsoil and silt fence barrier.

Optional Photos

<p><small>Date & Time: Wed, Nov 22, 2023 at 07:50:20 EST Position: 037.850660 N / 080.752339 W (-16.6 mi) Altitude: 2505ft (-764m) Datum: WGS-84 Azimuth/Bearing: 003 N01E 0018mils True (-14.1) Elevation Angle: -11.9 Horizon Angle: +02.3 Zoom: 2.0X W-LV8 Trenching stream, pumping water around Mountain Valley Pipeline</small></p>	<p><small>Date & Time: Mon, Nov 20, 2023 at 08:14:37 EST Position: 037.850616 N / 080.752977 W (-16.6 mi) Altitude: 2506ft (-763m) Datum: WGS-84 Azimuth/Bearing: 008 N09E 0722mils True (-16.1) Elevation Angle: -15.8 Horizon Angle: +00.7 Zoom: 2.0X W-LV8 W-LV8 Backfill Mountain Valley Pipeline</small></p>
<p>GPS Location See Photo</p>	<p>GPS Location See Photo</p>
<p>Description Photo 3: Excavating trench into southern portion of aquatic resource.</p>	<p>Description Photo 4: Trench last section of wetland.</p>
<p><small>Date & Time: Wed, Nov 22, 2023 at 07:50:20 EST Position: 037.850660 N / 080.752339 W (-16.6 mi) Altitude: 2505ft (-764m) Datum: WGS-84 Azimuth/Bearing: 351 N09W 6240mils True (-19.1) Elevation Angle: -11.9 Horizon Angle: +02.3 Zoom: 2.0X W-LV8 W-LV8 Backfill Mountain Valley Pipeline</small></p>	<p><small>Date & Time: Fri, Dec 01, 2023 at 08:16:29 EST Position: 037.851202 N / 080.751844 W (-16.6 mi) Altitude: 2479ft (-750m) Datum: WGS-84 Azimuth/Bearing: 333 N27W 5920mils True (-16.1) Elevation Angle: -02.4 Horizon Angle: +01.1 Zoom: 1.0X W-LV8 Trench Breaker Installation Mountain Valley Pipeline</small></p>
<p>GPS Location See Photo</p>	<p>GPS Location See Photo</p>
<p>Description Photo 5: Southern trench breakers constructed. Backfilling of trench in this portion of aquatic resource.</p>	<p>Description Photo 6: Installing northern trench breaker.</p>
<p><small>Date & Time: Sat, Dec 02, 2023 at 14:17:51 EST Position: 037.850889 N / 080.753033 W (-16.7 mi) Altitude: 2475ft (-753m) Datum: WGS-84 Azimuth/Bearing: 003 N03E 0051mils True (-12.1) Elevation Angle: +04.4 Horizon Angle: +01.6 Zoom: 2.0X W-LV8 Backfill Wetland Trench and Restore Topsoil Mountain Valley Pipeline</small></p>	<p><small>Date & Time: Mon, Dec 04, 2023 at 14:05:03 EST Position: 037.851100 N / 080.752974 W (-16.6 mi) Altitude: 2465ft (-750m) Datum: WGS-84 Azimuth/Bearing: 003 N03E 0057mils True (-12.1) Elevation Angle: +03.8 Horizon Angle: +01.7 Zoom: 1.0X W-LV8 Seeding Mountain Valley Pipeline</small></p>
<p>GPS Location See Photo</p>	<p>GPS Location See Photo</p>
<p>Description Photo 7: Backfill and restore wetland topsoil.</p>	<p>Description Photo 8: Apply wetland seed mix.</p>