



Wetland Biological Conditions EA Report

Project Name	H-600 Pipeline Spread E	AFE	124300134	Spread	H-600 Pipeline Spread E
Contractor	Price Gregory	Report #	41		
Environmental Auditor	Kristin Duty			Date/Time	9/6/2023 8:10 AM
Wetland ID	W-L19	Crossing Start Date	9/8/2023	Crossing Completion Date	10/11/2023
Milepost	147.00	Pre-Con Assessment Date	9/6/2023	Post-Con Assessment Date	10/11/2023
Station	7761+60	Cowardin Classification	PEM	Wetland Impact Area(acres)	0.1060
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?	N/A
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?	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	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)	No		No
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		4
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.)	2		4

AFE 124300134	Date/Time 9/6/2023 8:10 AM	Report # 41
----------------------	-----------------------------------	--------------------

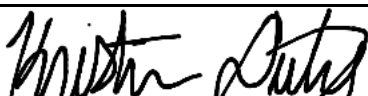
Additional Notes

Pre-Construction Notes
 Pre-Constuction Meeting - 9/5/2023
 Timber mat in place prior to assessment.
 17. No recharge and soils are not saturated.







(9/8/2023) - First 12" of wetland topsoil removed (Photo 1) and segregated in upland area (Photo 2). Trenching began in upland area. Approximately 0.1" of rain occurred.
 (9/9/2023) - Timber mats placed in wetland area to allow for additional topsoil removal.
 (9/11/2023) - Approximately 0.8 inches of rain occurred. Began trenching in aquatic resource. Welding on-going outside resource.
 (9/12/2023) - Welding outside of aquatic resource. Pumping of water out of trench in aquatic resource. Timber mats moved in aquatic resource.
 (9/13/2023 - 9/14/2023) - Continued pumping water from the resource area. Trenching ongoing (Photo 3 and Photo 4). Additional topsoil removed from wetland resource (9/14/2023). Rain event of approximately 0.1 inches of rain on 9/13/2023.
 (9/15/2023) - Bedding placed in trench in aquatic resource area. A portion of pipe lowered into trench running through aquatic resource area (Photo 5).
 (9/16/2023 - 9/19/2023) - Adjustments made in the trench including lifting pipe to place additional bedding. Welding and leveling on-going.
 (9/23/2023) - Morning showers. Welding of pipe that runs through aquatic resource. No other work in or adjacent to aquatic resource.
 (9/24/2023) - Welding and pumping ongoing.
 (9/25/2023) - Survey onsite to verify elevations. Additional padding placed in trench at aquatic resource.
 (9/26/2023) - Removed timber mats and began backfilling trench in aquatic resources. Survey present.
 (9/27/2023) - Trench breakers installed below aquatic resource and backfilling on-going.
 (9/28/2023) - Pumping from trench in aquatic resource area and continued backfilling aquatic resources.
 (9/29/2023) - Backfilling continued in aquatic resources area.
 (10/2/2023) - Second trench breaker established outside wetland, backfilling continued, and test pole station installed.
 (10/3/2023) - Backfilling ongoing around aquatic resource and survey established elevations. Prepping site for restoration activities in aquatic resource (Photo 6)
 (10/4/2023) - Subsoils restored in aquatic resource. Survey was present to work on elevations.
 (10/5/2023 - 10/6/2023) - Ongoing adjustments to elevation of aquatic resource. Substantial rain event late in the day on 10/6/2023.
 (10/7/2023) - Seeding occurred in aquatic resource (Photo 7).
 (10/09/2023) - Additional seeding and survey in wetland completed.
 (10/10/2023) - Test station in wetland must be removed, will require work in wetland boundaries.
 (10/11/2023) - Test station was removed from wetland boundary (Photo 8). Wetland topsoil and subsoil were properly excavated, segregated, and then wetland was restored.

Post Construction Notes
 17. Water did not recharge in post construction test pit.
 18. 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.
 Timber mat remains in place for travel lane.

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
Kristin Duty		POTESTA	10/13/2023

Required Photos	
------------------------	--

 <p><small>Date & Time: Wed, Sep 06, 2023 at 13:34:53 EDT Position: +037.954170° / -080.739797° (+15.41) Altitude: 2459ft (+11.3ft) Datum: WGS-84 Azimuth/Bearing: 192.533W (10.000mils True (+192)) Elevation Angle: +03.2° Horizon Angle: +00.0° Zoom: 1.0X W-L19 PERMITTED RESOURCE IMPACT AREA Mountain Valley</small></p>	 <p><small>Date & Time: Wed, Sep 06, 2023 at 13:36:05 EDT Position: +037.954173° / -080.739768° (+15.41) Altitude: 2270ft (+11.3ft) Datum: WGS-84 Azimuth/Bearing: 188.951E (10.000mils True (+189)) Elevation Angle: +04.1° Horizon Angle: +01.0° Zoom: 1.0X W-L19 RESOURCE NONIMPACT AREA Mountain Valley</small></p>
GPS Location See Photo	GPS Location See Photo
Description View of permitted resource impact area during pre-construction assessment. Overview of W-L19 proposed trench location facing North.	Description At edge of LOD, view of unimpacted resource area conditions during pre-construction assessment. Overview of W-L19 nonimpact facing North.
 <p><small>Date & Time: Wed, Oct 11, 2023 at 16:56:05 EDT Position: +037.954139° / -080.739797° (+15.41) Altitude: 2454ft (+11.2ft) Datum: WGS-84 Azimuth/Bearing: 024. N24E (0427mils True (+24)) Elevation Angle: +03.5° Horizon Angle: +00.9° Zoom: 1.0X W-L19 PERMITTED RESOURCE IMPACT AREA Mountain Valley</small></p>	 <p><small>Date & Time: Thu, Oct 12, 2023 at 09:28:31 EDT Position: +037.954126° / -080.739793° (+15.41) Altitude: 2459ft (+11.1ft) Datum: WGS-84 Azimuth/Bearing: 107. N107E (1080mils True (+107)) Elevation Angle: +03.9° Horizon Angle: +00.2° Zoom: 1.0X W-L19 RESOURCE NONIMPACT AREA Mountain Valley</small></p>
GPS Location See Photo	GPS Location See Photo
Description View of permitted resource impact area during post-construction assessment. Overview of W-L19 proposed trench location facing North.	Description At edge of LOD, view of unimpacted resource area conditions during post-construction assessment. Overview of W-L19 nonimpact facing North.
 <p><small>Date & Time: Fri, Sep 08, 2023 at 15:15:33 EDT Position: +037.954176° / -080.739768° (+15.5ft) Altitude: 2466ft (+11.2ft) Datum: WGS-84 Azimuth/Bearing: 018. N18E (0320mils True (+18)) Elevation Angle: +03.6° Horizon Angle: +00.3° Zoom: 1.0X W-L19 TOPSOIL REMOVAL AND TRANSPORT Mountain Valley</small></p>	 <p><small>Date & Time: Fri, Sep 08, 2023 at 18:07:38 EDT Position: +037.933676° / -080.739596° (+15.5ft) Altitude: 2458ft (+11.1ft) Datum: WGS-84 Azimuth/Bearing: 057. N57E (1049mils True (+57)) Elevation Angle: +08.4° Horizon Angle: +00.2° Zoom: 1.0X W-L19 TOPSOIL Mountain Valley</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 1. Wetland 12" of topsoil excavation and segregation onto morooka.	Description Photo 2. Wetland 12" topsoil segregated and stockpiled in upland area.

Optional Photos					
------------------------	--	--	--	--	--



GPS Location	See Photo	GPS Location	See Photo
Description	Photo 3: Adjusting timber mats for work in wetland.	Description	Photo 4: Trenching in aquatic resource from timber mats.



GPS Location	See Photo	GPS Location	See Photo
Description	Photo 5: Installation of south trench breaker between S-L22 and W-L19.	Description	Photo 6: Restoration of wetland 12" topsoil to resource.



GPS Location	See Photo	GPS Location	See Photo
Description	Photo 7: Seeding aquatic resources.	Description	Photo 8: Test station after removal from wetland (now outside of resource).