Wetland Biological Conditions EA Report

Project Name	H-600 Pipeline Spread E	**AFE**	124300134	**Spread**	H-600 Pipeline Spread E
Contractor	Price Gregory			**Report #**	12
Environmental Auditor	Charles Haden			**Date/Time**	8/8/2023 9:28 AM

Wetland ID	W-EF31	**Crossing Start Date**	8/8/2023	**Crossing Completion Date**	9/20/2023
Milepost	133.20	**Pre-Con Assessment Date**	8/8/2023	**Post-Con Assessment Date**	9/20/2023
Station	7032+96	**Cowardin Classification**	PEM	**Wetland Impact Area(acres)**	0.0208
State	WV				
County	Nicholas				

	Resource Post-Crossing Conditions	
1	Were equipment mats or other suitable methods utilized under heavy equipment to minimize soil compaction and disturbance in wetlands?	N/A
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?	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)	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)	1	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.)	1	4

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Additional Notes

Pre-Construction Notes
17. Pre-Con - Water recharged into the test pit and soils were saturated (A2 and A3) (Photo 1).
18. Pre-Con - Timber mat present (travel lane).

Day 1 (8/8/2023)
Pre-Construction meeting at 0900.
EI for crossing is Johnny Graham.
0.69” of precipitation recorded in previous 24-hours.
Both wetland topsoil and stream substrate were removed to upland area (Photo 2) and segregated separately.

Day 2 (8/9/2023)
Crossing location prepped and marked for trenching. Trenching to crossing on LDB.

Day 3 (8/10/2023)
Continuation of trench hammering and soil/rock removal (Photo 3).
Trench completed, additional soil removal around pipe ends, and end plate cut and pipe end grinded/cleaned.
Intermittent heavy rain all day.

Day 4 (8/11/2023)
Move and lower pipe into trench.

Day 5 (8/14/2023)
Pipe is installed with appropriate trench breakers (Photo 4).
Upland areas have been backfilled and brought to grade.
Top 12” of wetland topsoil was replaced and graded to original wetland topography (Photo 5).
Permanent wetland seed was applied (Photo 8).

Post Construction Notes
7. Permanent wetland seed was applied in-lieu of temporary seed after final wetland topography was confirmed by survey.
9. Additional equipment mats were not utilized due to the size of the resource (equipment completed work from outside the wetland boundary). Does not include timber mats that remain in place for travel lane.
19. 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.

Discovered stream and wetland have sunken, yet flow was still present (8/24/2023).

9/19/2023
Wetland has recharge and saturated soils (Photo 7). Some vegetative growth noted. Wetland topsoil was removed wetland above trench area and placed in an upland area. Additional fill placed in wetland. Wetland surveyed and restored with original wetland soils.

9/20/2023
Area seeded and riparian zone completed (Photo 8). Post Construction Assessment completed. Wetland test pit was saturated.

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
Charles Haden	Charles Haden	Potesta & Assiciates	9/24/2023

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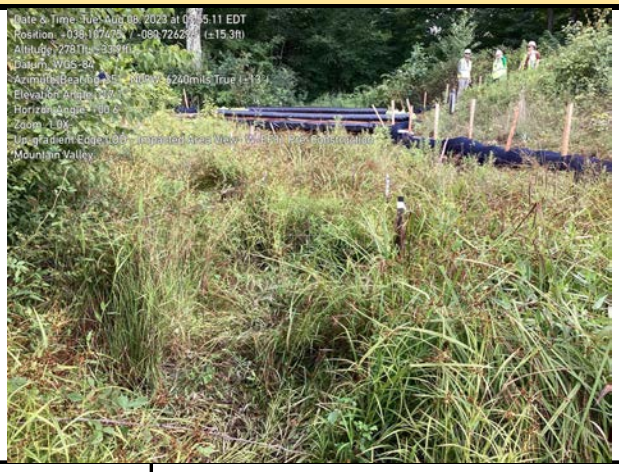
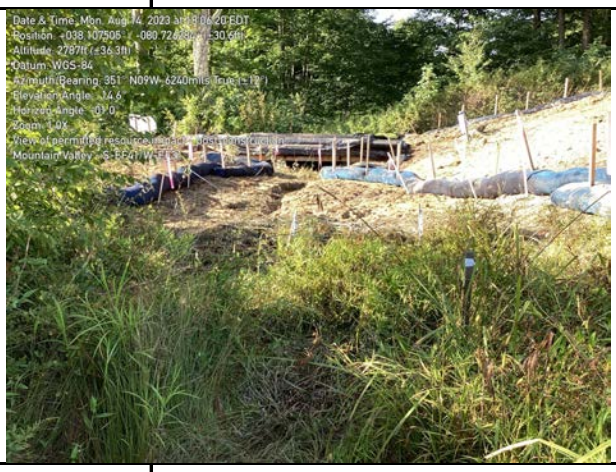
Required Photos



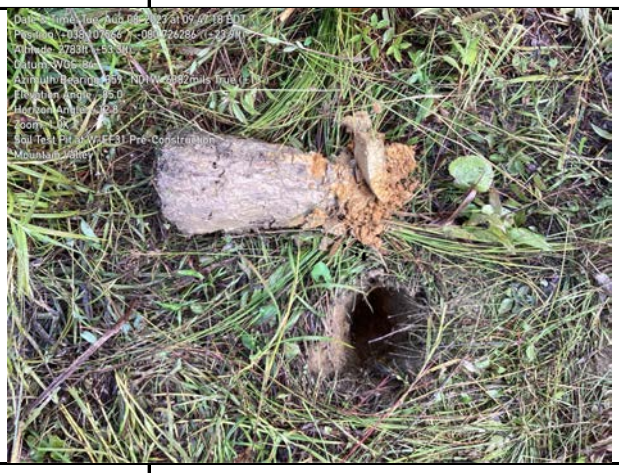
GPS Location	See Photo
Description	View of permitted resource impact area during pre-construction assessment.

GPS Location	See Photo
Description	At edge of LOD, view of unimpacted resource area conditions during pre-construction assessment.



GPS Location	See Photo
Description	View of permitted resource impact area during post-construction assessment. Original post construction photo.

GPS Location	See Photo
Description	At edge of LOD, view of unimpacted resource area conditions during post-construction assessment. Original post construction photo.



GPS Location	See Photo
Description	Photo 1. Soil Test Pit - Saturated Soils

GPS Location	See Photo
Description	Photo 2. Removal of wetland topsoil and stream substrate.

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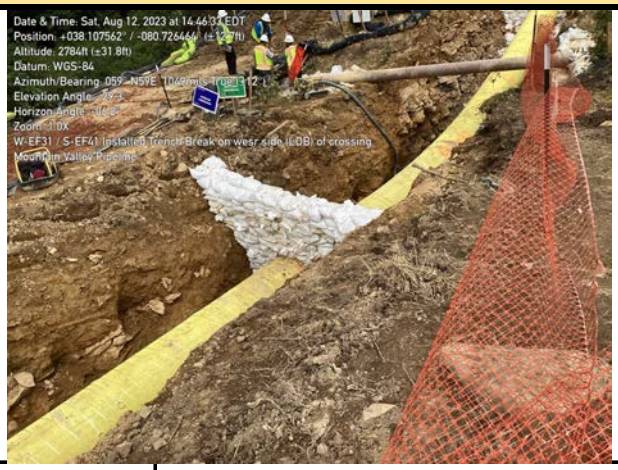
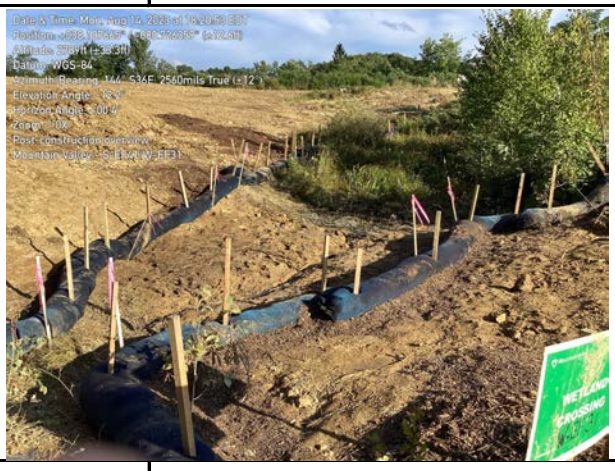
Optional Photos

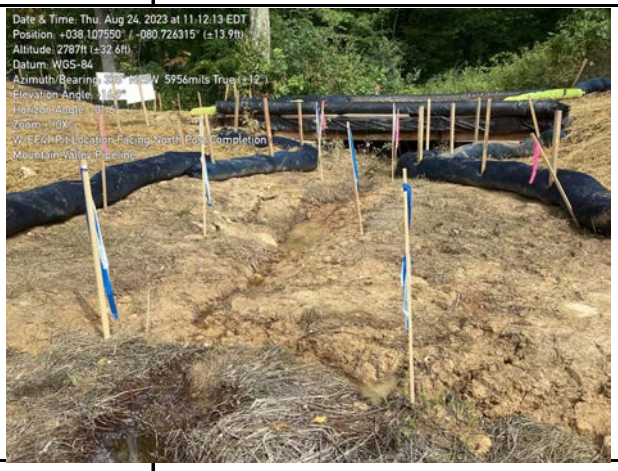
GPS Location	See Photo
Description	Photo 3. Excavating trench at crossing.



GPS Location	See Photo
Description	Photo 4: Trench Breakers

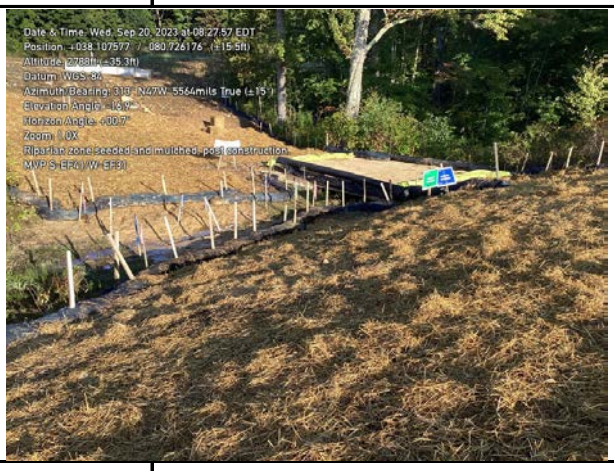


GPS Location	See Photo
Description	Photo 5: Regraded wetland.



GPS Location	See Photo
Description	Photo 6: Sinking wetland (8/24/2023).

GPS Location	See Photo
Description	Photo 7: Wetland test pit recharged and soils are saturated (9/19/2023).



GPS Location	See Photo
Description	Photo 8: Restored wetland and associated riparian area (9/20/2023).