



# Wetland Biological Conditions EA Report

<b>Project Name</b>	H-600 Pipeline Spread D	<b>AFE</b>	124300132	<b>Spread</b>	H-600 Pipeline Spread D
<b>Contractor</b>	Precision	<b>Report #</b>	100		
<b>Environmental Auditor</b>	Jeffrey Arbogast			<b>Date/Time</b>	10/24/2023 10:13 AM
<b>Wetland ID</b>	W-K23	<b>Crossing Start Date</b>	10/24/2023	<b>Crossing Completion Date</b>	10/28/2023
<b>Milepost</b>	111.50	<b>Pre-Con Assessment Date</b>	10/23/2023	<b>Post-Con Assessment Date</b>	10/28/2023
<b>Station</b>	5887+15	<b>Cowardin Classification</b>	PEM	<b>Wetland Impact Area(acs)</b>	0.0489
<b>State</b>	WV				
<b>County</b>	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?	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?	See Below
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	<b>Wetland Saturation:</b> Are surface waters, the water table, and/or overall soil saturation present? (Select Yes or No)	No		No
18	<b>Resource Alterations:</b> Are the wetland soil conditions visibly disturbed? <b>Examples:</b> Livestock presence, haul roads, farm traffic, drain tiles, recent mowing/clear cutting, recent excavating/disking of soils, etc. <b>Rating:</b> 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	<b>Is vegetation present within the permitted impact area prior to disturbance? (Pre-Con)Are areas properly seeded and stabilized after restoration? (Post-Con)</b> <b>Rating:</b> 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**

The erosion and sediment control plans indicates that the mainline crosses wetland W-K23 from station number 5887+15 to 5887+67.

Conditions 18 and 19 were given a rating of 4 due to the lack of vegetation in the disturbed permitted impact area following completion of the crossing and restoration efforts. Wetland W-K23 PEM topsoil has been properly stabilized and the disturbed area was seeded with the appropriate permanent seed mix in accordance with Appendix B: Restoration Work Plan of the Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework.

Expanded notes for question 10: A concrete trench breaker was built 12' from the coming in side (CIS) at station number 5887+03. A bentonite trench breaker was built 12' from the going away side (GAS) at station number 5887+79, and verified by the onsite civil survey crew.

10/24/2023: The upper 12 inches of topsoil were segregated and stockpiled separately on geo-tech fabric within the wetland boundary (Ref. Appendix B: Restoration Work Plan – MVP Section 3.2). The native subsoil removed during trench excavation was stored separately in an upland area to be used as wetland backfill. A section of pipe extending from the CIS was lowered into the wetland and the loose end on the CIS was welded in place.


10/25/2023: Another section of pipe was lowered in and a weld made within the wetland boundary at station number 5887+49. The county road was cut and timber mats and road plates were used to build a temporary bridge.

10/26/2023: Crews padded the pipe and built concrete breakers off the Fire Tower Rd. edge, on the CIS of wetland W-K23. Flowable fill was placed under the road crossing. Outside of the wetland boundary, the tie in section of pipe on GAS was lowered in and one weld was made. Backfilling was started in an upland area outside of wetland W-F11 on the CIS side of the road crossing.

10/27/2023: The tie in weld was made and the road cut was rebuilt with stone. A bentonite trench breaker was built on the GAS of wetland W-K23. The last trench box was removed from the CIS of Fire Tower Rd. and the trench was backfilled.

10/28/2023: Backfilling of the wetland was completed with native subsoil. The wetland topsoil was replaced, and all elevations were verified by civil survey. The approved seed mix was applied before the silt fence was replaced on the wetland boundary.

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
Jeffrey Arbogast		SWCA	10/28/2023

AFE 124300132		Date/Time 10/24/2023 10:13 AM	Report # 100
Required Photos			
 <p>10/23/2023 15:34:39 +38.355393,-80.633793 218° SW W-K23 (Pre-JA)</p>		 <p>10/23/2023 15:35:22 +38.355317,-80.633724 156° SE W-K23 (Pre-JA)</p>	
<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	View of permitted resource impact area during pre-construction assessment. Standing at edge of Fire Tower Road near the centerline.	<b>Description</b>	At edge of LOD, view of unimpacted resource area conditions during pre-construction assessment. Standing on travel lane on left side of LOD.
 <p>PAT 10/28/2023 16:10:56 +38.355382,-80.633794 219° SW W-K23 (Post-JA)</p>		 <p>10/28/2023 15:53:34 +38.355272,-80.633717 154° SE W-K23 (Post-JA)</p>	
<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	View of permitted resource impact area during post-construction assessment. Standing at edge of Fire Tower Road near the centerline.	<b>Description</b>	At edge of LOD, view of unimpacted resource area conditions during post-construction assessment. Standing on travel lane on left side of LOD.
 <p>10/24/2023 09:10:59 +38.355476,-80.633800 216° SW W-K23 (Dur-JA)</p>		 <p>10/24/2023 10:19:02 +38.355467,-80.633749 190° S W-K23 (Dur-JA)</p>	
<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	The upper 12 inches of topsoil were segregated and stockpiled separately on geotech fabric within the wetland boundary.	<b>Description</b>	Blasting crew drilling within the wetland.

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**Optional Photos**

<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	The native subsoil removed during trench excavation was stored separately in an upland area to be used as wetland backfill.	<b>Description</b>	Lowering in first section of pipe within the wetland.
<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	The second section of pipe being lowered into the wetland ditch.	<b>Description</b>	Standing on the CIS wetland boundary looking at the concrete trench breaker.
<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	View of bentonite trench breaker on the GAS of W-K23.	<b>Description</b>	Wetland topsoil being replaced.