



Wetland Biological Conditions EA Report

Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	105		
Environmental Auditor	Luke Fultz	Date/Time	10/23/2023 11:15 AM		
Wetland ID	W-IJ30	Crossing Start Date	10/23/2023	Crossing Completion Date	11/28/2023
Milepost	155.08	Pre-Con Assessment Date	10/23/2023	Post-Con Assessment Date	11/28/2023
Station	8188+00	Cowardin Classification	PEM	Wetland Impact Area(acres)	0.3236
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?	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)	3		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		1

AFE 124300135	Date/Time 10/23/2023 11:15 AM	Report # 105
----------------------	--------------------------------------	---------------------


Additional Notes

Pre-Construction Notes
 Pre-Construction Meeting - 10/17/2023
 17. Test pit did not contain water or saturated soils; however, soil exhibits hydric properties below the first 12 inches
 18. Ag field, livestock, mowing, previously developed drainage swall







10/23/2023 - Excavation of the first 12 inches topsoil from Northern (N) end of aquatic resource area (ARA) (Photo 1), separated and moved to containment. Labeled with signage. Halt removal of topsoil for blasting.
 10/24/2023 - Excavation of adjacent aquatic resource (AR) from timber mats (TM). Excavation of bell hole in ARA (Photo 2). Subsoil separated to containment. Staging pipe in ARA.
 10/25/2023 - Water pumped from trench in ARA. Sandbags "pillows" added to the trench for padding. Pipe placed N end of ARA.
 10/26/2023 - Water pumped from trench in ARA. Constructed northern most trench breaker.
 10/27/2023-10/28/2023 - Continue to pump on edge of ARA. No work in resource. Work ongoing in other areas of the site.
 10/30/2023 - Water pumped from trench in ARA. Backfilling of portion of ARA adjacent to S-K17.
 10/31/2023 - Water pumped from trench in ARA. Excavation of additional topsoil from AR, separated to containment and labeled with signage. Excavation of subsoil. Work ongoing in other areas of the site.
 11/1/2023 - Excavating trench and adding sandbag "pillows" for padding to trench through AR. Welding and x-ray ongoing. Work ongoing in other areas of the site.
 11/2/2023 - Water pumped from trench in ARA. Constructing trench breaker (Photo 3). Backfilling subsoil and padding pipe in ARA. Removal of topsoil in the southern (S) portion of the ARA. Sandblasting and coating pipe. Excavating in the S portion of the ARA. Continued backfilling N portions of the AR. Work ongoing in other areas of the site.
 11/3/2023 - Water pumped from trench in ARA. Continued excavating towards S end of ARA. Subsoil used to backfill and pad pipe in N end of ARA. Sandbags "pillows" added to the trench for padding. Pipe placed in trench. Welding ongoing. X-ray.
 11/4/2023 - Water pumped from trench in ARA. Replacing topsoil in N end of ARA. Excavation of first 12 inches of topsoil toward S end of ARA, separated, and moved to containments. Survey shooting and staking AR boundary. X-ray, sandblasting, and coating pipe ongoing. Backfilling and padding pipe in N end of ARA.
 11/6/2023 - Water pumped from trench in ARA. Continued excavating S end of ARA and backfilling more N portion of ARA. Additional pipe placed in trench. Welding ongoing
 11/7/2023 - Water pumped from trench in ARA. Welding, X-Ray, sandblasting, coating, backfilling and contouring (N) ongoing.
 11/8/2023 - Contouring, replacing topsoil, and seeding in N most portion of ARA. Backfilling in unrestored N portion of ARA. Excavating in S most portion of ARA (Photo 4).
 11/9/2023 - Backfilling over finished pipe in ARA. Adding sandbags to S end of ARA resource for pipe. Additional pipe placed in trench. Welding ongoing.
 11/10/2023 - Water pumped from trench in ARA. X-ray. Installing P1 fencing adjacent to restored ARA. Work ongoing in other areas of the site.
 11/11/2023 - Water pumped from trench in ARA. Welding, X-Ray, sandblasting, and coating ongoing
 11/13/2023-11/15/2023 - Water pumped from trench in ARA. No work in ARA. Work ongoing in other areas of the site.
 11/16/2023 - Water pumped from trench in ARA. Backfilling subsoil in ARA (Photo 5). Work ongoing in other areas of the site.
 11/17/2023 - Water pumped from trench in ARA. Constructed trench breaker and backfilling. Work ongoing in other areas of the site.
 11/18/2023 - Water pumped from trench in ARA. Backfilling subsoil in ARA. Work ongoing in other areas of the site.
 11/20/2023 - Contouring subsoil in resource area (Photo 6). Work ongoing in other areas of the site.
 11/21/2023 - Rain Event. No Work.
 11/22/2023 - 1.02" rain. Due to ground conditions from yesterday's precipitation event, no work is planned in resource for the day.
 11/24/2023 - Due to ground conditions no work in ARA. Standing water present (on subsoil) throughout mid-portion of the feature.
 11/25/2023 - Topsoil transported from storage area AR. Standing water present. TM utilized and moved as needed.
 11/26/2023 - Continued to transport and distribute topsoil (Photo 7).
 11/27/2023 - Finished transporting and distributing topsoil. Continued contouring and grading.
 11/28/2023 - Removed TM outside AR boundary. Completed grading and contouring. Applied seed (Photo 8). Installed P1 fencing. Reapplied seed as needed. Restoration complete.

Post Construction Notes
 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
Luke Fultz		Potesta	11/28/2023

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

	<p>Date & Time: Mon, Oct 23, 2023 at 14:24:39 EDT Position: +037.862806 / -080.757382 (+15.5ft) Altitude: 2422ft (+11.2ft) Datum: WGS-84 Azimuth/Bearing: 192 S12W 3413mils True (+12) Elevation Angle: +03.4 Horizon Angle: +02.9 Zoom: 0.5X W-130 Permitted resource area (pre-construction) MVP</p> 	<p>Date & Time: Mon, Oct 23, 2023 at 14:26:08 EDT Position: +037.862577 / -080.757430 (+15.3ft) Altitude: 2435ft (+11.3ft) Datum: WGS-84 Azimuth/Bearing: 098 S82E 1742mils True (+12) Elevation Angle: +01.0 Horizon Angle: -00.4 Zoom: 0.5X W-130 Outside LOD (east from resource area (pre-construction)) MVP</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>Date & Time: Tue, Nov 28, 2023 at 15:04:08 EST Position: +037.862806 / -080.757382 (+15.5ft) Altitude: 2447ft (+39.2ft) Datum: WGS-84 Azimuth/Bearing: 198 S18W 3520mils True (+12) Elevation Angle: +11.2 Horizon Angle: +00.4 Zoom: 1.0X View of permitted resource area during post-construction assessment MVP: W-130</p> 	<p>Date & Time: Tue, Nov 28, 2023 at 15:04:20 EST Position: +037.862767 / -080.757430 (+15.3ft) Altitude: 2450ft (+11.3ft) Datum: WGS-84 Azimuth/Bearing: 097 S88E 1779mils True (+12) Elevation Angle: +01.4 Horizon Angle: -00.5 Zoom: 1.0X At edge of LOD, view of unimpacted resource area conditions during post-construction assessment MVP: W-130</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>Date & Time: Mon, Oct 23, 2023 at 13:59:41 EDT Position: +037.863049 / -080.757474 (+15.4ft) Altitude: 2451ft (+11.3ft) Datum: WGS-84 Azimuth/Bearing: 144 S34E 2560mils True (+13) Elevation Angle: -1.1 Horizon Angle: +00.5 Zoom: 0.5X W-130 Removal of topsoil in resource area, moved to containment MVP</p> 	<p>Date & Time: Tue, Oct 24, 2023 at 16:48:06 EDT Position: +037.862914 / -080.757519 (+15.3ft) Altitude: 2459ft (+11.3ft) Datum: WGS-84 Azimuth/Bearing: 097 S81E 1760mils True (+13) Elevation Angle: -31.3 Horizon Angle: +00.5 Zoom: 1.0X W-130 Excavation into resource area MVP</p> 	
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 1: First 12 inches of topsoil removal in the northern most section of the aquatic resource.	Description	Photo 2: Excavation of bell hole in aquatic resource area.

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

 <p style="font-size: small; color: gray;">Date & Time: Thu, Nov 02, 2023 at 13:27:14 EDT Position: +037.862987° / -080.757396° (+23.3ft) Altitude: 2449ft (+46.3ft) Datum: WGS-84 Azimuth Bearing: 183° S03W 3253mils True (+12°) Elevation Angle: -04.2° Horizon Angle: -01.0° Zoom: 0.9x W-L130 Backfilling subsoil in resource area (1) MVP</p>	 <p style="font-size: small; color: gray;">Date & Time: Wed, Nov 08, 2023 at 12:56:47 EST Position: +037.861727° / -080.757759° (+15.4ft) Altitude: 2451ft (+11.2ft) Datum: WGS-84 Azimuth Bearing: 117° S63E 2080mils True (+17°) Elevation Angle: -11.8° Horizon Angle: -01.0° Zoom: 0.9x W-L130 Excavating subsoil (1) MVP</p>		
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 3: Constructing trench breaker.	Description	Photo 4: Excavating trench towards the southern end of aquatic resource.
 <p style="font-size: small; color: gray;">Date & Time: Thu, Nov 16, 2023 at 09:51:13 EST Position: +037.862128° / -080.757687° (+15.3ft) Altitude: 2452ft (+11.3ft) Datum: WGS-84 Azimuth Bearing: 165° S15E 2933mils True (+13°) Elevation Angle: -01.4° Horizon Angle: -00.1° Zoom: 0.8x W-L130 Backfilling subsoil in resource area (1) MVP</p>	 <p style="font-size: small; color: gray;">Date & Time: Mon, Nov 20, 2023 at 09:06:01 EST Position: +037.861777° / -080.757900° (+18.2ft) Altitude: 2458ft (+11.2ft) Datum: WGS-84 Azimuth Bearing: 66° N66° W060mils True (+10°) Elevation Angle: -11.1° Horizon Angle: -02.6° Zoom: 0.9x W-L130 Contouring subsoil grade (1) MVP</p>		
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 5: Backfilling in aquatic resource area.	Description	Photo 6: Contouring subsoils.
 <p style="font-size: small; color: gray;">Date & Time: Sun, Nov 26, 2023 at 08:20:08 EST Position: +037.861854° / -080.757636° (+39.1ft) Altitude: 2527ft (+258.2ft) Datum: WGS-84 Azimuth Bearing: 045° N45E 0800mils True (+20°) Elevation Angle: -02.5° Horizon Angle: -01.0° Zoom: 0.9x W-L130 MVP</p>	 <p style="font-size: small; color: gray;">Date & Time: Tue, Nov 28, 2023 at 13:21:12 EST Position: +037.862125° / -080.757466° (+16.3ft) Altitude: 2450ft (+37.2ft) Datum: WGS-84 Azimuth Bearing: 030° N30E 0533mils True (+12°) Elevation Angle: -12.2° Horizon Angle: -01.3° Zoom: 0.9x W-L130 Applying wetland seed mix (1) MVP</p>		
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 7: Distributing topsoil in aquatic resource area.	Description	Photo 8: Applying wetland seed mix.