Stream Biological Conditions EA Report

Project Name	H-600 Pipeline Spread F	**AFE**	124300135	**Spread**	H-600 Pipeline Spread F
Contractor	Price Gregory			**Report #**	440
Environmental Auditor	Eric Schicker			**Date/Time**	12/13/2023 3:01 PM

Stream ID	S-MN45	**Crossing Start Date**	12/14/2023	**Crossing Completion Date**	12/22/2023
Milepost	191.05	**Pre-Con Assessment Date**	11/28/2023	**Post-Con Assessment Date**	12/22/2023
Station	10087+52	**Bankfull Width (ft.)**	2.4	**Riffle:Pool Complexes Present?**	No
State	WV	**Stream Classification**	Ephemeral		
County	Monroe	**303(d) Impairment Listing**	No		

	Resource Post-Crossing Conditions	
1	Were all applicable resource specific crossing conditions satisfied?	N/A
	Time of Year Restrictions (TOYR)? N/A Mussel Relocation? N/A	
2	This question is not applicable in WV.	
3	Which crossing methods were utilized during the stream crossing? (If so select one or more) Dam & Pump Flume X Cofferdam Conventional Bore Horizontal Directional Drill (HDD) Bore	
4	Was the top 1-foot (12-inches) of streambed substrate segregated and stockpiled separate from trench spoils?	Yes
5	Was excess material not needed for backfill removed and disposed of in an upland area?	Yes
6	Was the top 12-inches of backfill made with clean native stream substrate?	Yes
7	Was the pre-construction survey data utilized during restoration in attempt to re-establish pre-construction contours?	Yes
8	Were any field modifications to the stream implemented by project or regulatory personnel to address potential drainage or bank restoration limitations?	No
9	Were impervious trench breakers/plugs properly installed within 25-feet of top-of-bank to prevent subsurface erosion to or from the resource area?	Yes
10	Was permanent seed and stabilization material (straw or matting) applied to riparian areas and stream banks prior to re-establishing flow to the impact area of the channel?	Yes
11	Was the time of disturbance minimized by conducting resource work continuously to completion?	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	Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 - 4/30)?	N/A
14	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
15	**Predominant Substrate Type (select one):** Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Mud/Silt/Clay	Mud/Silt/Clay
16	**Channel Conditions:Rating:** 1-Optimal (80-100% stable banks), 2-Sub-optimal (60-80% stable banks), 3-Marginal (40-60% stable banks), 4-Poor (20-40% stable banks), 5-Severe (0-20% stable banks, highly eroded or unvegetated banks	1	2
17	**Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank: Rating:** 1-Optimal (60-100% heavy vegetative cover), 2-Sub-optimal (30-60% mixed vegetated coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetated coverage, etc.)	1	3

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Biological Conditions Continued		Pre-Con	Post-Con
18	**Instream Habitat Conditions:** Examples: Varied substrate sizes, varied combination of water velocities & depths, presence of woody/leafy debris, stable substrate with low amount of mobile particles, low embeddedness, shade protection, undercut banks, root mats, Varied combination of water velocities, submerged aquatic vegetation Rating: 1-Optimal (Habitat conditions present in >50% of resource), 2-Suboptimal (Habitat conditions in 30-50% of resource), 3-Marginal (Habitat conditions in 10-30% of resource), 4-Poor (Habitat conditions in 0-10% of resource)	4	4
19	**Channel Alterations:** Examples: Straightened channel, non-MVP stream crossings, non-native riprap/rock along banks, concrete/gabions/concrete block, manmade embankments, constrictions w/in channel, livestock or agricultural impacts Rating: 1-Negligible (unaltered/natural stream), 2-Minor (20-40% of resource disrupted by channel alterations), 3-Moderate (40-80% of resource disrupted), 4-Severe (>80% of resource disrupted)	1	3

Additional Notes

Pre-Construction Notes
Pre-Construction Meeting - 11/28/2023
15. Predominate substrate noted as mud/silt/clay with sections of sand, gravel and cobble.
18. Low score due to lack of stream flow.
S-MN45 bordered by W-MN24

12/14/2023 - Crossing staked out by survey. Top 12 inches of substrate removed (Photo 1) and Morooka used to relay to containment area in upland for segregation. Sandbag dams built and flume installed.

12/15/2023 - No work in resource. Flume remained in place.

12/16/2023 - No work in resource. Flume remained in place.

12/18/2023 - Removed flume pipe. Trench through aquatic resource began (Photo 2) and completed. Sandbags added to trench for pipe padding and support (Photo 3). Pipe section transported and lowered into trench (Photo 4). Weld began to tie pipe into existing pipe. Restored flume pipe.

12/19/2023 - Finished welding. P1 repair along ROW where it was dislodged transporting pipe to resource.

12/20/2023 - Checked substrate stockpile, properly segregated. X-ray performed on weld at resource. Sandblasting and coating ongoing.

12/21/2023 - Welds being coated. Trench breakers installed (Photo 5) and trench padded and backfilled within trench breakers (Photo 6).

12/22/2023 - Completed backfilling into buffer areas. Survey shooting topos prior to topsoil being placed back into resource area. Topsoil placed, substrate restored (Photo 7), elevations checked (Photo 8), seeded and stabilized.

Post Construction Notes
16., 17. Crossing and riparian areas have been recently restored. These areas will be monitored until 80% vegetative cover has been achieved and areas that do not have 80% vegetative cover within 30 days will be reseeded.
18. No flow and habitat limitations.
19. Does not include timber mats that remain 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
Eric Schicker		Potesta	12/22/2023

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Required Photos

GPS Location	See Photo
Description	Downstream view of permitted impact area during pre-construction assessment.

GPS Location	See Photo
Description	Downstream view of unimpacted area during pre-construction assessment.

GPS Location	See Photo
Description	Downstream view of permitted impact area during post-construction assessment.

GPS Location	See Photo
Description	Downstream view of unimpacted area during post-construction assessment.

GPS Location	See Photo
Description	Photo 1: Removal of top 12 inches of substrate.

GPS Location	See Photo
Description	Photo 2: Trenching through aquatic resource.

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Optional Photos

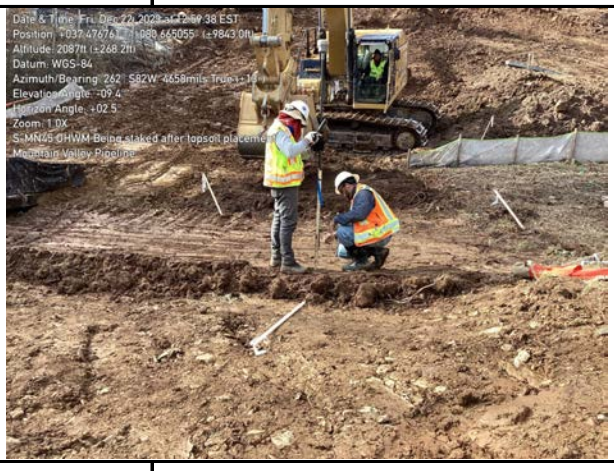
GPS Location	See Photo
Description	Photo 3: Sandbags added to trench for bedding and support.

GPS Location	See Photo
Description	Photo 4: Lowered pipe into trench.

GPS Location	See Photo
Description	Photo 5: Constructing trench breaker.

GPS Location	See Photo
Description	Photo 6: Backfilling between trench breakers.

GPS Location	See Photo
Description	Photo 7: Substrate restoration.



GPS Location	See Photo
Description	Photo 8: OHWM being surveyed in after substrate restored.