Stream Biological Conditions EA Report

Project Name	H-600 Pipeline Spread F	**AFE**	124300135	**Spread**	H-600 Pipeline Spread F
Contractor	Price Gregory			**Report #**	383
Environmental Auditor	O'Brien Jonathon			**Date/Time**	11/16/2023 8:59 AM

Stream ID	S-A60	**Crossing Start Date**	11/16/2023	**Crossing Completion Date**	11/20/2023
Milepost	182.63	**Pre-Con Assessment Date**	11/16/2023	**Post-Con Assessment Date**	11/20/2023
Station	9642+85	**Bankfull Width (ft.)**	9.9	**Riffle:Pool Complexes Present?**	No
State	WV	**Stream Classification**	Perennial		
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 X 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	Cobble (2-10")	Cobble (2-10")
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	2	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.)	2	3

AFE	124300135	Date/Time	11/16/2023 8:59 AM	Report #	383

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)	2	2
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	2

Additional Notes

Pre-Construction Notes
Pre-Construction Meeting - 11/6/2025
No Flow - Streambed dry. Timber mat travel lane present.

11/16/2023 - Excavated the first 12 inches of stream substrate (Photo 1) and segregated in work area. Prepped for blasting with the removal of one to two feet of subsoil. Blasting crew marked and began boring in the aquatic resource area (Photo 2). Bores loaded and blasting occurred. Began excavating blasted soil to allow for the placement of flume. Flume installed and pump-around system put in place.

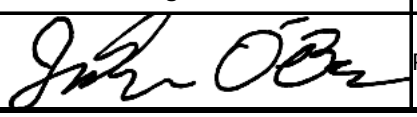
11/17/2023 - Flume removed. Excavated subsoil in trench through aquatic resource area (Photo 3). Sandbag "pillows" placed in trench for pipe bedding. Move pipe from staging area to trench in aquatic resource area. Prepping pipe for weld including heating and lining up pipe. Welding outside resource area. Installing pump-around system. Side booms finished lowering in pipes. Reinstalling flume.

11/18/2023 - X-ray welds from previous day. Lining up pipe on opposite end. Heating up then welding pipe outside resource area. Transporting padding dirt for backfilling. Sandblasting and coating outside of resource area. Putting up rock shield. Survey onsite to shoot pipe location.

11/20/2023 - Remove flume pipe. Build first trench breaker. Survey onsite to shoot locations of trench breakers and test leads. Second trench breakers constructed (Photo 4). Backfilling. Shaping subsoil to prepare for topsoil (Photo 5). Remove dams (no flow). Survey shot elevations (Photo 6). Adding topsoil and matching elevations (Photo 7). Reshooting elevations after topsoil added. Survey approved. Adding riparian seed to buffer (Photo 8). Adding curlex. Adding P1 fencing. Restoration complete.

Post Construction Notes
16., 17. 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.
18. Low habitat score due to lack of stream flow.
Timber mat bridge 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
O'Brien Jonathon		Potesta and Associates	11/28/2023

AFE	124300135	Date/Time	11/16/2023 8:59 AM	Report #	383

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: Removing top 12 inches of substrate from streambed.

GPS Location	See Photo
Description	Photo 2: Begin drilling boreholes.

AFE	124300135	Date/Time	11/16/2023 8:59 AM	Report #	383

Optional Photos

GPS Location	See Photo
Description	Photo 3: Begin excavation in aquatic resource area.

GPS Location	See Photo
Description	Photo 4: Building trench breaker adjacent to aquatic resource area.

GPS Location	See Photo
Description	Photo 5: Shaping subsoil.

GPS Location	See Photo
Description	Photo 6: Survey shooting elevations.

GPS Location	See Photo
Description	Photo 7: Adding topsoil and contouring to meet elevations.

GPS Location	See Photo
Description	Photo 8: Spreading seed in buffer.