Stream Biological Conditions EA Report

Project Name	H-600 Pipeline Spread F	**AFE**	124300135	**Spread**	H-600 Pipeline Spread F
Contractor	Price Gregory			**Report #**	304
Environmental Auditor	Allyson Kincaid			**Date/Time**	10/23/2023 8:39 AM

Stream ID	S-I17	**Crossing Start Date**	10/23/2023	**Crossing Completion Date**	10/28/2023
Milepost	162.62	**Pre-Con Assessment Date**	10/23/2023	**Post-Con Assessment Date**	10/28/2023
Station	8586+34	**Bankfull Width (ft.)**	5.8	**Riffle:Pool Complexes Present?**	No
State	WV	**Stream Classification**	Ephemeral		
County	Summers	**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	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	1
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)	4	4

Additional Notes

Pre-Construction Notes
Pre-Construction Meeting - 10/21/2023
18. No stream flow. Defined bed and banks not evident, stream substrate is indistinguishable from surrounding topsoil (Photo 1).
19. Resource is located in the bed of a logging road. Banks and channel manmade.
Timber mat present prior to construction. OHMW width measured in the field.

10-23-2023 - No difference in OHWM and streambed; no survey data available to distinguish bed features. Dams for flume constructed upstream and downstream of the proposed crossing. Topsoil was excavated from OHWM to OHWM (Photo 2) and segregated in upland area (Photo 3). Welding, X-ray, coating and blasting occurring downslope out of aquatic resource buffer. Trenching begun around aquatic resource area; mats utilized to prevent compaction.

10-24-2023 - No flow. Excavation of trench in aquatic resource area (Photo 4) and downslope, sandbags placed in trench for pipe support, pipe lowered into trench (Photo 5).

10-25-2023 - No flow. Welding and X-ray outside of aquatic resource area.

10-26-2023 - No flow. Welding ongoing outside of aquatic resource area.

10-27-2023 - No flow. Trench breakers construction within 25 feet of aquatic resource area on both sides. Padding dirt added into trench (Photo 6). Welding and X-ray work completed in trench outside of aquatic resource. Backfilled occurred in aquatic resource area.

10-28-2023 - No flow. Additional padding dirt and backfilling into trench. Trench breaker construction completed. Additional backfill completed in aquatic resource area. Dams for flumes removed (no flow during crossing process). Survey onsite (Photo 7). Top 12 inches of topsoil was returned to aquatic resource area and adjusted as need to achieve proper elevations based on survey data. Aquatic resource was seeded (Photo 8) and curlex was applied for stabilization. Crossing remained dry throughout construction process.

Post Construction Notes
Site was an old logging road and grass covered prior to construction. The OHWM were the only survey data available. The substrate could not be differentiated from adjacent soils and bed and bank features were not present. Post construction channel was restored within the OHWM with segregated soils and then curlex was applied to promote stability while site revegetates.
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 score partially due to lack of flow as well as lack of instream substrate and associated physical habitat.
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
Allyson Kincaid		POTESTA	10/28/2023

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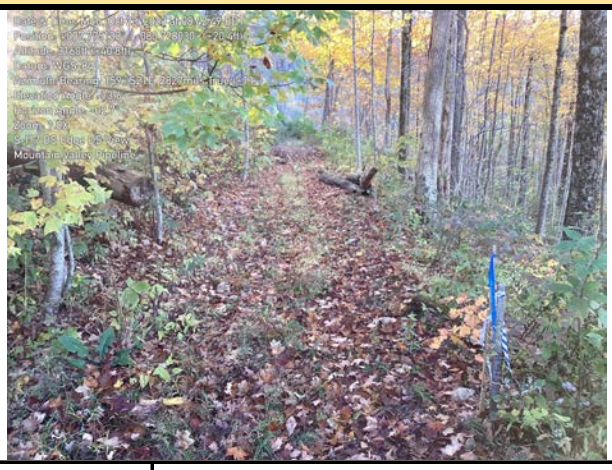
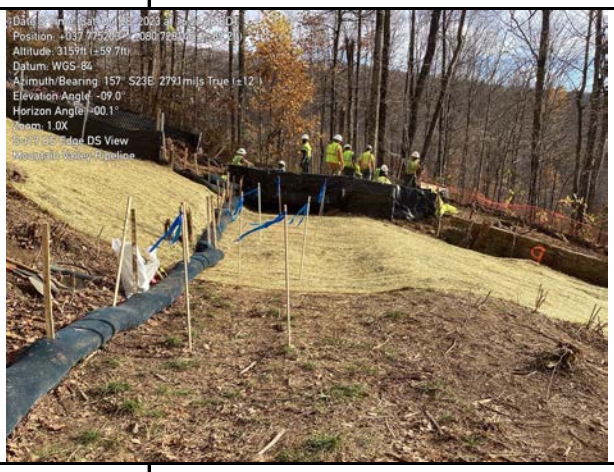
Required Photos

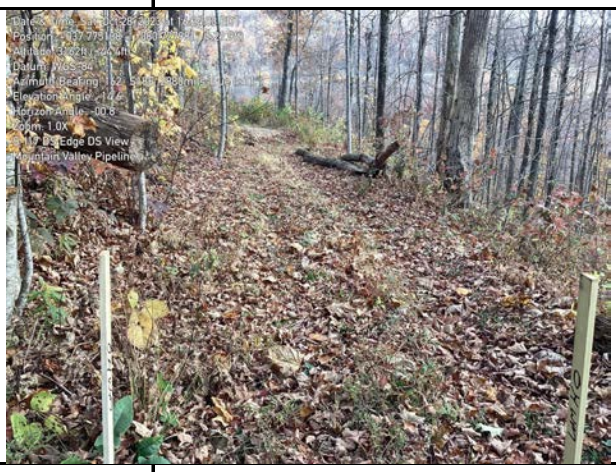
GPS Location	See photo
Description	Downstream view of permitted impact area during pre-construction assessment.



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

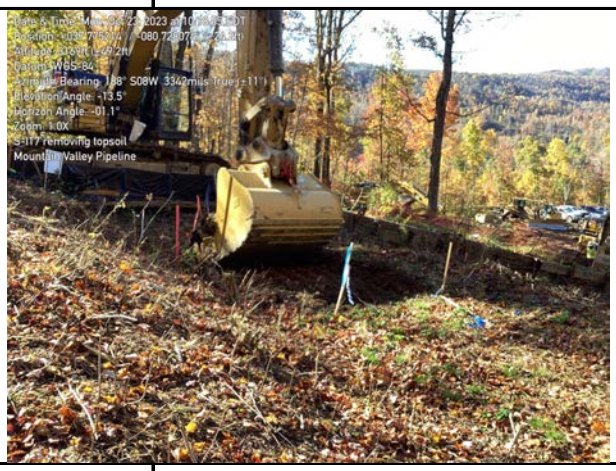


GPS Location	See photo
Description	Downstream view of permitted impact area during post-construction assessment.



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

GPS Location	See photo
Description	Photo 1: OHWM stakes. Stream substrate.



GPS Location	See photo
Description	Photo 2: Topsoil removal in aquatic resource.

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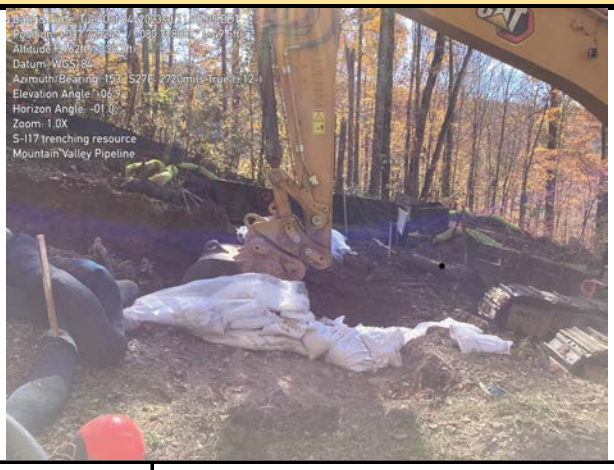
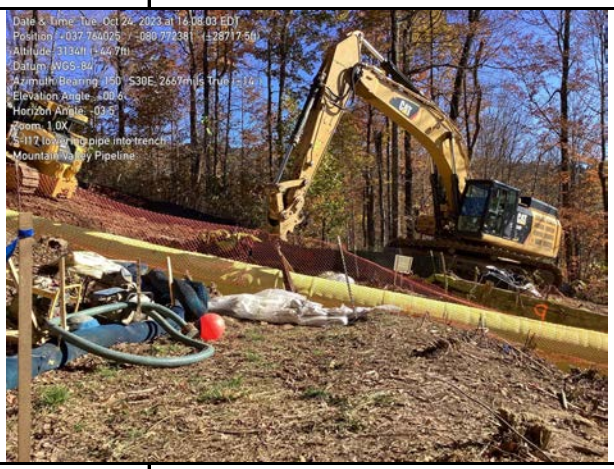
Optional Photos

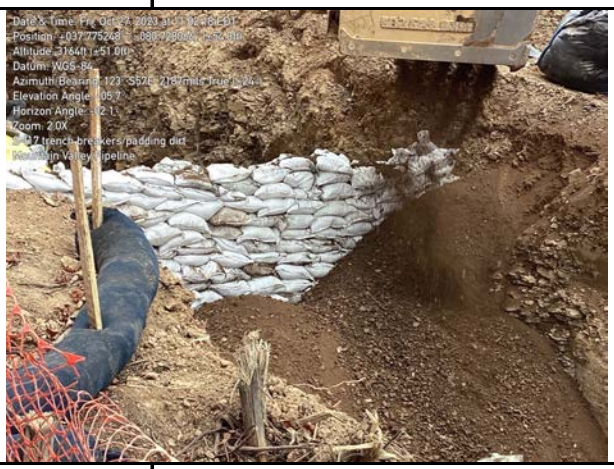
GPS Location	See photo
Description	Photo 3: Topsoil segregated and stored in upland area.



GPS Location	See photo
Description	Photo 4: Excavating trench through aquatic resource.

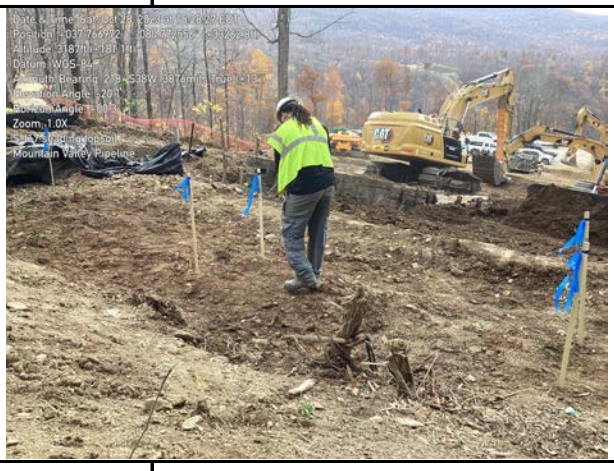


GPS Location	See photo
Description	Photo 5: Lowering pipe into trench within aquatic resource area.



GPS Location	See photo
Description	Photo 6: Trench breaker in place; filling trench with padding dirt.

GPS Location	See photo
Description	Photo 7: Surveying for topsoil elevations in aquatic resource area.



GPS Location	See photo
Description	Photo 8: Seeding in aquatic resource area.