Stream Biological Conditions EA Report

Project Name	H-600 Pipeline Spread F	**AFE**	124300135	**Spread**	H-600 Pipeline Spread F
Contractor	Price Gregory			**Report #**	31
Environmental Auditor	Allyson Kincaid			**Date/Time**	8/9/2023 2:27 PM

Stream ID	S-L2	**Crossing Start Date**	8/15/2023	**Crossing Completion Date**	8/17/2023
Milepost	172.17	**Pre-Con Assessment Date**	8/9/2023	**Post-Con Assessment Date**	8/17/2023
Station	9090+58	**Bankfull Width (ft.)**	6.3	**Riffle:Pool Complexes Present?**	No
State	WV	**Stream Classification**	Intermittent		
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	Gravel (0.1-2")	Gravel (0.1-2")
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	3	4
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

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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	1

Additional Notes

Pre-Construction Notes
*Bankfull width measured at OHWM
15. Predominate substrate type taken from the average size in the ROW from underneath the timber at bridge to the US edge of stream.
18. Low habitat score due to lack of stream flow

8-9-2023
PCM with PGI at 1400.
Discussions on proposed process on tying in pipe once laid down into stream.
Pre-construction site assessment completed.

Day 1 (8-15-2023)
Prep site for stream crossing, no flow.
Segregate 12” stream substrate in Maruka (Photo 1).
Trench/hammer/removal of soil and rock (Photo 2).

Day 2 (8-16-2023)
Trench through resource (Photo 3), pipe bedding installed, and pipe lowered into trench (Photo 4).

Day 3 (8-17-2023)
Sifted and placed trench pipe bedding/fill (Photo 5).
Installed trench breakers (Photo 6) and surveyed
Backfilled (Photo 7), shaped bed and banks, replaced top 12 inches of stream substrate in channel (Photo 8).
Encompasses surveyed thalweg and OHWM and fine-tuned restored contours.
Stream banks seeded and curlex installed.
Post construction assessment completed.

Post Construction Notes
16., 17. Crossing and riparian areas have been recently 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.
18. Low habitat score due to lack of stream flow.
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
Allyson Kincaid		POTESTA	8/17/2023

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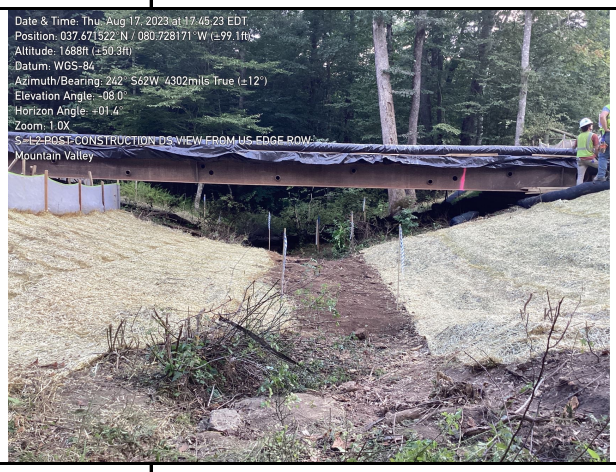
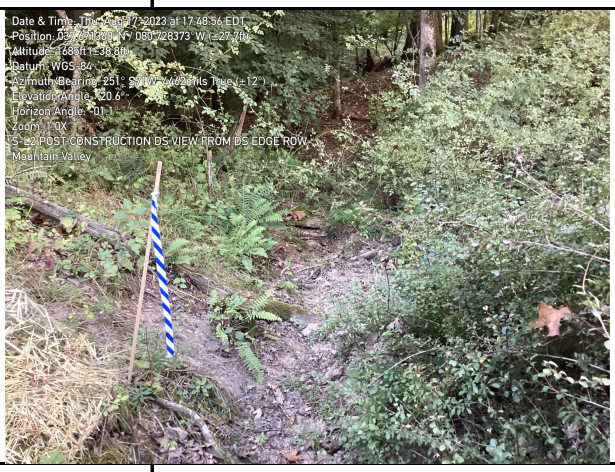
Required Photos

GPS Location	Refer to Photo
Description	Downstream view of permitted impact area during pre-construction assessment. DS View from US edge of ROW Pre-Construction

GPS Location	Refer to Photo
Description	Downstream view of unimpacted area during pre-construction assessment. DS View from DS edge of ROW Pre-Construction

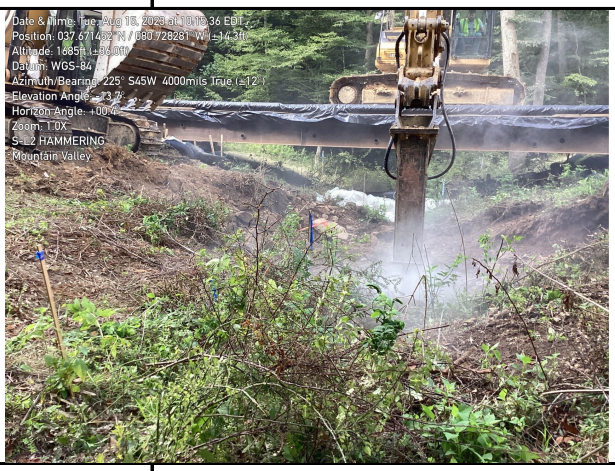


GPS Location	Refer to Photo
Description	Downstream view of permitted impact area during post-construction assessment. DS View from US edge of ROW Post Construction



GPS Location	Refer to Photo
Description	Downstream view of unimpacted area during post-construction assessment. DS View from DS edge of ROW Post Construction

GPS Location	Refer to Photo
Description	Photo 1. Segregated stream substrate into Maruka.



GPS Location	Refer to Photo
Description	Photo 2. Hammering and rock removal in resource.

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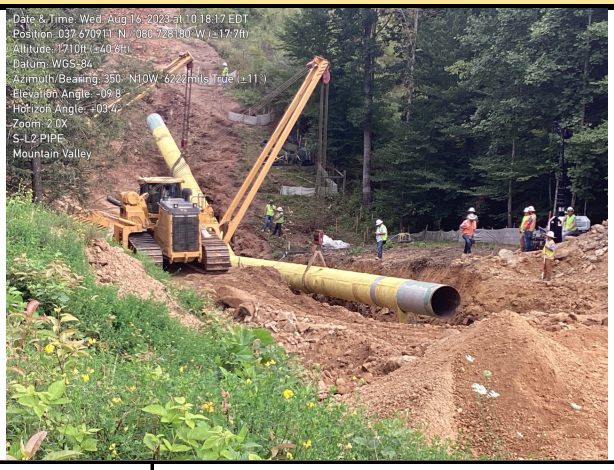
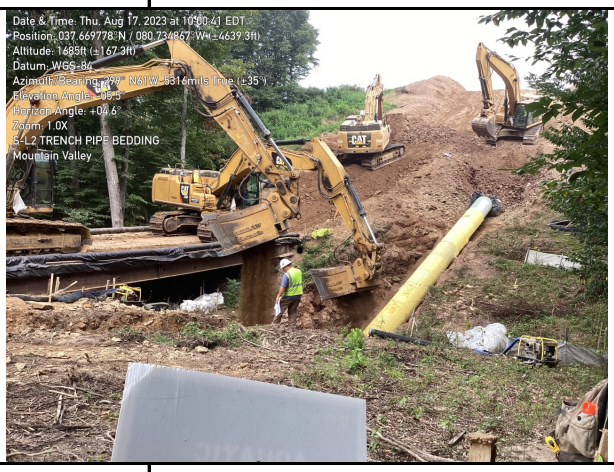
Optional Photos

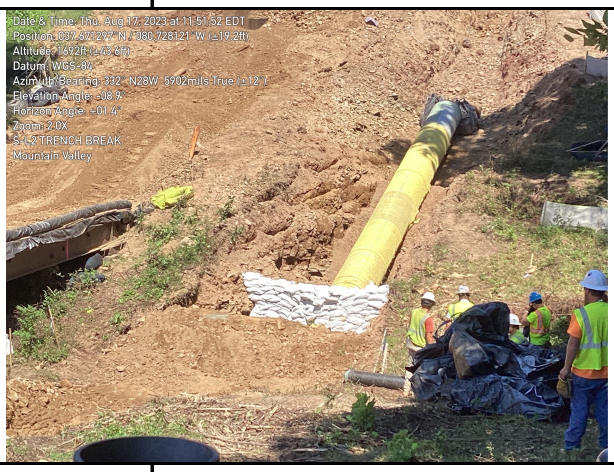
GPS Location	Refer to Photo
Description	Photo 3. Trench through resource.



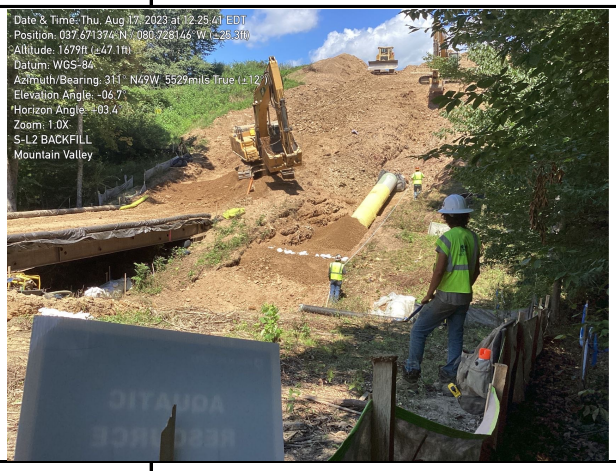
GPS Location	Refer to Photo
Description	Photo 4. Pipe lowered into resource.



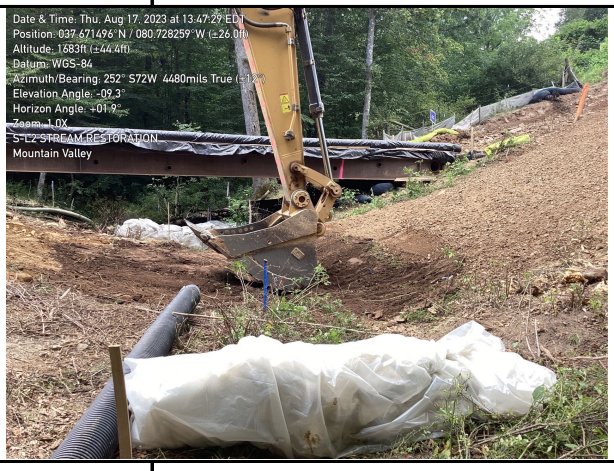
GPS Location	Refer to Photo
Description	Photo 5. Placing bedding and backfilling.



GPS Location	Refer to Photo
Description	Photo 6. Trench breakers



GPS Location	Refer to Photo
Description	Photo 7. Trench backfill.



GPS Location	Refer to Photo
Description	Photo 8. Restoring stream topsoil.