Stream Biological Conditions EA Report

Project Name	H-600 Pipeline Spread D	**AFE**	124300132	**Spread**	H-600 Pipeline Spread D
Contractor	Precision			**Report #**	382
Environmental Auditor	Scott Wessel			**Date/Time**	11/11/2023 8:56 AM

Stream ID	S-A74	**Crossing Start Date**	11/11/2023	**Crossing Completion Date**	11/22/2023
Milepost	115.01	**Pre-Con Assessment Date**	11/11/2023	**Post-Con Assessment Date**	11/25/2023
Station	6072+65	**Bankfull Width (ft.)**	4.0	**Riffle:Pool Complexes Present?**	No
State	WV	**Stream Classification**	Ephemeral		
County	Nicholas	**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 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	4

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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)	1	3
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

11/11/23 - Stream S-A74 had no stream flow but a dam and pump around was set up in case of emergency. The top 12” of stream substrate material was removed, put into labeled super sacks, and staged in an upland area. Topsoil for stream banks were removed and segregated from subsoil material in an upland area on the going away side (GAS) of the resource. Solid rock was hit soon after trenching began; therefore blasting was scheduled for the following day.

11/12/23 to 11/13/23 – Blasting operations took place over the next two days on the coming in side (CIS) and GAS of the resource. During this time pipe preparation in the upland area on the CIS was conducted with welding and x-ray operations.

11/14/23 – 11/15/23 – Due to the close proximity of stream S-A74 to stream S-A75, many of the same operations were conducted in conjunction with the adjacent stream. The pipe was being installed across stream S-A75 while trenching operations were being conducted through S-A74 after blasting operations were completed.

11/16/23 to 11/17/23 – The ditch line was padded with sandbags for the pipe to rest on through the section of S-A74 prior to the pipe on the GAS being lowered in and welding operations commencing on the loose end. After the tie-in welds on the loose end were completed, the section of pipe between S-A74 and S-A75 was lowered in and welding operation began. X-ray, blasting, and coating activities took place once the welding was completed.

11/18/23 – The focus shifted to padding the pipe once coating was completed.

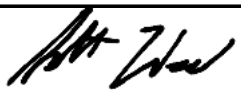
11/19/23 – No work was conducted on Sunday.

11/20/23 to 11/21/23 – Once the trench breakers were installed on the CIS and GAS of the resource, padding continued inside the resource area as well as to the tie in section between the two resources (S-A74, S-A75).

11/22/23 – Once the pipe was padded, the trench in the stream area was backfilled to with in 12” of the original grade. The topsoil for the stream banks and buffer zones were replaced prior to the top 12” of the streams substrate being restored. Survey verified that the elevations and contours met preconstruction specifications.
The proper seed mix for the 10’ buffer zones was applied and erosion control blankets were installed on the CIS and GAS of the stream. The pump and dam were removed from the channel and flow was restored.

Numbers 17 and 18 were rated “4” and “3” due to lack of vegetation in the impact area following the completion of crossing and restoration efforts. The disturbed area for stream S-A74 was properly stabilized and seeded with the appropriate permanent seed mix in accordance with Appendix B: Restoration Work Plan of the Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework.

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
Scott Wessel		SWCA	11/25/2023

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Required Photos

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

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

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

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

GPS Location	See coordinates in above photo.
Description	Topsoil and substrate material being removed.

GPS Location	See coordinates ina bove photo.
Description	Topsoil material segregated on the GAS of crossing.

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Optional Photos

GPS Location	See coordinates in above photo.
Description	Blasting crew drilling to set charges.

GPS Location	See coordinates in above photo.
Description	Stream section of pipe being lowered into the ditch.

GPS Location	See coordinates in above photo.
Description	Padding pipe after trench breaker was built on the GAS of resource.

GPS Location	See coordinates in above photo.
Description	Topsoil for buffer zone are being put back to original grade.

GPS Location	See coordinates in above photo.
Description	Curlex and silt fence installed on the CIS of resource.

GPS Location	See coordinates in above photo.
Description	Restored crossing after dam was removed, looking upstream.