Stream Biological Conditions EA Report

Project Name	H-600 Pipeline Spread C	**AFE**	124300131	**Spread**	H-600 Pipeline Spread C
Contractor	Precision			**Report #**	223
Environmental Auditor	Scott Wessel			**Date/Time**	9/5/2023 8:54 AM

Stream ID	S-J70	**Crossing Start Date**	9/5/2023	**Crossing Completion Date**	9/24/2023
Milepost	72.40	**Pre-Con Assessment Date**	9/2/2023	**Post-Con Assessment Date**	9/24/2023
Station	3822+72	**Bankfull Width (ft.)**	26.8	**Riffle:Pool Complexes Present?**	No
State	WV	**Stream Classification**	Perennial		
County	Braxton	**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	Bedrock, Boulder (>10")	Bedrock, Boulder (>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	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	1
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

9/5/23 – Sandbag dams were installed on the upstream and downstream side of the right of way (ROW) and two 6” pumps were used for the pump around. This pump and dam system was used throughout the crossing of S-J70. A small amount of substrate, primarily pebble and cobblestone on the coming in-side (CIS) of the crossing was segregated into labeled super sacks. Bedrock was the dominant medium at the surface of the stream channel inside the high water marks. Blasting operations commenced and continued for most of the day, due to the steep slope on the going away side (GAS) of the stream. Once blasting was completed, large rocks and boulders were segregated to be used during restoration.

9/6/23 – Blasting operation continued throughout the day on the GAS of stream S-J70.

9/7/23 – The sub-soil from the blasting operations was removed from the streambed and buffer zone and was segregated from the topsoil. The pipe was lowered in and the tie in weld on the CIS commenced. During dewatering operations, the hose was accidently connected to the line running to the upstream containment that was to be used only for emergency proposes and a small amount of sediment entered the stream. The inspection team caught this very quickly and shut down the pumps. Approximately 1 gallon of material was removed from the stream. This spill was self-reported to the Department of Environmental Protection (DEP).

9/8/23 – Trench breakers were installed, with bentonite on the CIS and concrete on the GAS within 25 feet from top of bank. On the GAS, a sandbag wall was constructed prior to the concrete wall so that the crew could build a revetment wall after the stream had been completed. Personnel from the DEP conducted an inspection of the site following the previous day’s dewatering issue; no violations were issued.

9/9/23 – Backfilling of the ditch started with the installation of river weights and sub-soil to within a few feet of the top of the streambed surface. Large rocks retrieved from the blasting activities were strategically placed back into the stream and the bank on the GAS of stream.

9/10/23 to 9/15/23 – The stream pump around continued to be in use while the contractor continued the tie in welds on the GAS of the stream. No in-stream activity took place during these days.

9/16/23 to 9/23/23 - The tie in crew moved out and a cleanup crew moved in to finish out the stream crossing and backfilling. Gabion baskets were installed on the GAS of stream crossing to stabilize hillside. The stream pump around continued to be in use during this time, but no in-stream activity took place during these days.

9/24/23 – The CIS embankment and stream substrate material were restored to survey specifications and the requirements mentioned in Appendix B; Sections 3.4 and 4.1 of the Mitigation Framework were met. The pump and dam were removed, and stream flow was restored by 5 pm.

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	9/24/2023

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Required Photos

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

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

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

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

GPS Location	See gps in attached photo
Description	Blasting crew drilling in stream.

GPS Location	See gps in attached photo
Description	Removing substrate material after blasting.

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Optional Photos

GPS Location	See gps in attached photo
Description	Pipe lowered in ditch and pumps dewatering.

GPS Location	See gps in attached photo
Description	Sandbag breakers being built.

GPS Location	See gps in attached photo
Description	Substrate material being put back after pipe installation.

GPS Location	See gps in attached photo
Description	Filter sock and silt fence in place until backfill and stream crossig is complete.

GPS Location	See gps in attached photo
Description	Gabion baskets being installed.

GPS Location	See gps in attached photo
Description	CIS stream bank being worked on.