



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread D	AFE	124300132	Spread	H-600 Pipeline Spread D
Contractor	Precision	Report #	342		
Environmental Auditor	Scott Wessel	Date/Time	11/8/2023 7:20 AM		
Stream ID	S-A75	Crossing Start Date	11/8/2023	Crossing Completion Date	11/24/2023
Milepost	114.98	Pre-Con Assessment Date	11/8/2023	Post-Con Assessment Date	11/25/2023
Station	6070+82	Bankfull Width (ft.)	10.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Nicholas	303(d) Impairment Listing	No		

Resource Post-Crossing Conditions






1	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? <u> N/A </u> Mussel Relocation? <u> N/A </u>	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 <input checked="" type="checkbox"/> Flume <input type="checkbox"/> Cofferdam <input type="checkbox"/> Conventional Bore <input type="checkbox"/> Horizontal Directional Drill (HDD) Bore <input type="checkbox"/>	
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


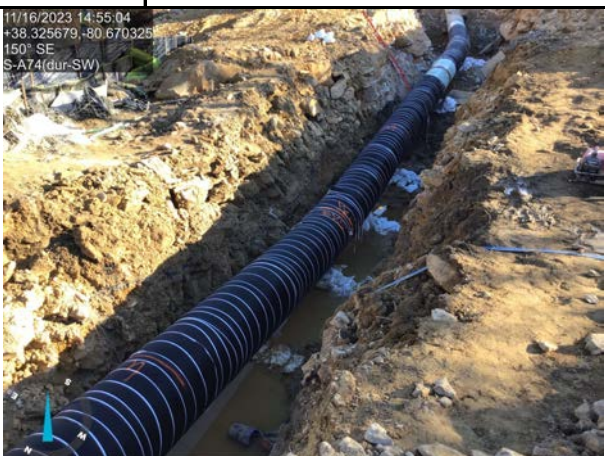



		Pre-Con	Post-Con
15	Predominant Substrate Type (select one): Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Cobble (2-10")	Cobble (2-10")
16	Channel Conditions: Rating: 1-Optimal (80-100% stable banks), 2-Sub-optimal (60-80% stable banks), 3-Marginal (40-60% stable banks), 4-Poor (20-40% stable banks), 5-Severe (0-20% stable banks, highly eroded or unvegetated banks)	1	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.)	1	4

AFE	124300132	Date/Time	11/8/2023 7:20 AM	Report #	342	
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	3	
Additional Notes						
<p>11/8/23 - A dam and pump around conveyance system was installed and utilized throughout the crossing. Large boulders were removed and segregated prior to removal of the top 12" of stream substrate. The boulders, stream substrate, and the topsoil from the stream banks were staged on plastic with proper signage on the coming in side (CIS) of resource. Solid rock was hit soon after trenching began; therefore blasting was scheduled for the following day.</p> <p>11/9/23 to 11/11/23 – Blasting operations took place over the next two days on the coming CIS and going away side (GAS) of the resource. During this time pipe preparation in the upland area on the CIS was conducted with welding and x-ray operations. No work was conducted on 11/10 due to a rain out.</p> <p>11/12/23 to 11/13/23 – Due to the close proximity of stream S-A75 to stream S-A74, many of the same operations were conducted in conjunction with the adjacent stream. Spoils were being excavated from the ditch line on the CIS of S-A75 while blasting operations were being conducted in the area of stream S-A74. Dewatering operations were conducted on an as needed basis to a structure on the CIS of the resource. Once the proper depth was achieved through S-A75, the ditch was lined with interval spaced sandbags.</p> <p>11/14/23 – 11/17/23 – The contractor's resources were divided between the two stream crossings (S-A75 & S-A74). From 11/14 to 11/15 the pipe for S-A75 was lowered in and welding operations for the CIS loose end commenced, while trenching operations were conducted on S-A74 crossing. By 11/16 the middle tie-in section of pipe between the two streams was lowered in and welding operations began. On 11/17 the remaining welds, x-ray, and coating operations were completed.</p> <p>11/18/23 – The main focus of the day was applying rock shield and subsoil padding to the pipe.</p> <p>11/19/23 – No work was conducted on Sunday.</p> <p>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).</p> <p>11/22/23 – Once the pipe was padded, the trench in the stream area was backfilled to within 12" of the original grade. The topsoil for the stream banks and 10' buffer zones were replaced.</p> <p>11/23/23 – No work was conducted on Thanksgiving.</p> <p>11/24/23 – The final topsoil adjustments were made to the stream banks and 10' buffer zone area. The substrate material, along with large rock armament was placed back into resource area. Due to construction activities and the removal of tree stumps, extra rocks for armament were needed to achieve original essence of the stream. Survey verified that the top 12" of substrate for S-A75 between the high water marks of the stream channel were restored to pre-construction elevations and contours. 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. Triple stack 18" filter socks were installed above the high water mark on both sides of crossing. The pump and dam were removed, and flow was restored.</p>						
<p>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.</p>						
Name		Signature		Company		
Scott Wessel				SWCA		
				Date		
				11/25/2023		

Required Photos

			
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Downstream view of permitted impact area during pre-construction assessment.	Description	Downstream view of unimpacted area during pre-construction assessment.
			
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Downstream view of permitted impact area during post-construction assessment.	Description	Downstream view of unimpacted area during post-construction assessment.
			
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Topsoil and large rocks from resource banks and buffer zone being removed.	Description	Substrate material being segregated on the CIS of resource crossing.

Optional Photos	
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 <p>11/11/2023 14:58:45 +38.325775,-80.670338 145° SE S-A74(dur-SW)</p>	 <p>11/12/2023 15:04:40 +38.326019,-80.670383 136° SE S-A75(dur-SW)</p>
GPS Location See coordinates in above photo.	GPS Location See coordinates in above photo.
Description Blasting crew drilling through rock to set charges.	Description Contractor removing subsoil on the GAS of crossing.
 <p>11/16/2023 14:55:04 +38.326079,-80.670325 150° SE S-A74(dur-SW)</p>	 <p>11/20/2023 16:32:23 +38.326249,-80.670574 102° E S-A75(dur-SW)</p>
GPS Location See coordinates in above photo.	GPS Location See coordinates in above photo.
Description Stream section of pipe being lowered into ditch.	Description Pipe being padded before backfill starts.
 <p>11/25/2023 12:43:10 +38.326005,-80.670457 107° E S-A75(post-SW)</p>	 <p>11/25/2023 12:42:55 +38.326005,-80.670457 132° SE S-A75(post-SW)</p>
GPS Location See coordinates in above photo.	GPS Location See coordinates in above photo.
Description Restored buffer zone area on the CIS.	Description Downstream view of stream after pump and dam was removed.