



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread D	AFE	124300132	Spread	H-600 Pipeline Spread D
Contractor	Precision	Report #	479		
Environmental Auditor	Scott Wessel	Date/Time	1/17/2024 11:00 AM		
Stream ID	S-A73	Crossing Start Date	1/17/2024	Crossing Completion Date	1/31/2024
Milepost	115.14	Pre-Con Assessment Date	1/13/2024	Post-Con Assessment Date	2/2/2024
Station	6079+56	Bankfull Width (ft.)	6.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Intermittent		
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)? <u> N/A </u> Mussel Relocation? <u> N/A </u>	
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 checked="" 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?	See Below
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	2	
Additional Notes						
<p>Stream S-A73 at the point of intersect prior to construction comprised of a subterranean nature. Root mats from old tree stumps supported the ground surface with random holes where the subsurface flow could be observed, and elevations of the thalweg were recorded by civil survey. The bridging structure of the roots and soil would not be able to be replicated, and due to these limitations, the reconstruction of the stream was of an open nature. Although the top surface of the streambed was altered, the post construction channels path matched pre-construction survey.</p> <p>1/17/24 – Prior to entering S-A73 a flume/pump around conveyance system was installed and utilized throughout the crossing on an as needed basis. The bridging surface layer of tree stumps and large boulders from S-A73 stream banks were segregated with the adjacent wetland W-A15 topsoil. The top 12" of the stream channel subsurface substrate was segregated and staged on plastic with proper signage on the coming in side (CIS) of the resource. Solid rock was hit soon after trenching began, and a blasting crew was called in for the following day.</p> <p>1/18/23 – Blasting operations were conducted throughout the resource area for the majority of the day.</p> <p>1/19/24 & 1/20/24 – No work was conducted due to inclement weather.</p> <p>1/21/24 – Spoils were removed from the resource area while the contractor focused on welding, x-raying, and coating activities of the loose ends on the CIS and GAS of the crossing.</p> <p>1/22/24 – Excavation of the trench was completed, and the ditch was lined with interval spaced sandbags.</p> <p>1/23/24 to 1/26/24 – During this time the pipe for S-A73 was lowered-in, welded, x-rayed, and coated prior to the rock shields being applied.</p> <p>1/27/24 – Construction efforts were focused on padding the pipe inside of resource area.</p> <p>1/28/24 – No work was conducted due to inclement weather.</p> <p>1/29/24 to 1/30/24 – Trench breakers were installed on the CIS and GAS of the resource using Aqua-block. Due to the stream being inside of wetland W-A15, the breakers were installed outside of the wetland boundaries at 6079+24 and 6080+22. After the breakers were installed, padding of all exposed pipe was completed and backfilling began.</p> <p>1/31/24 – After backfilling was completed, the final topsoil adjustments were made to the stream banks and 10' buffer zone area. The top 12" of substrate materials were replaced into the channel of S-A73 and all elevations and contours were verified by civil survey. The proper seed mix for the 10' buffer zones was applied, and coconut erosion control fabric were installed on the CIS and GAS of the stream in the wetland areas. Filter sock was installed above the high-water mark on both sides of crossing and the pump around was removed to allow natural flow.</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		
				2/2/2024		

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Required Photos

<p>01/13/2024 08:33:18 +38.323737,-80.670042 76° E S-A73(pre-SW)</p> 		<p>01/13/2024 08:39:54 +38.323889,-80.669985 100° E S-A73(pre-SW)</p> 	
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.
<p>02/02/2024 14:15:33 +38.323751,-80.670154 78° E S-A73 (Post-SW)</p> 		<p>02/02/2024 14:20:31 +38.323799,-80.669968 85° E S-A73 (Post-SW)</p> 	
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.
<p>01/17/2024 13:37:19 +38.323834,-80.670053 189° S S-A73(dur-SW)</p> 		<p>01/21/2024 16:35:28 +38.323757,-80.670054 331° NW S-A73(dur-SW)</p> 	
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Contractor removing large boulder that was in the ditch line.	Description	Flume pipe in place while subsoil was being removed.

Optional Photos

			
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Stream substrate material segregated on the CIS of resource.	Description	Interval spaced sand bags installed preparing for stream section of pipe to be lowered in.
			
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Stream section being welded on the GAS of resource.	Description	Aquablock trench breaker being constructed on the GAS of stream crossing.
			
GPS Location	See coordinates in above photo.	GPS Location	See coordinates in above photo.
Description	Reconstructing the contours of stream channel and adding back the substrate material.	Description	Upstream view of crossing post construction with ECD's in place.