



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread D	AFE	124300132	Spread	H-600 Pipeline Spread D
Contractor	Precision	Report #	497		
Environmental Auditor	Scott Wessel	Date/Time	2/5/2024 8:26 AM		
Stream ID	S-A67	Crossing Start Date	2/5/2024	Crossing Completion Date	2/17/2024
Milepost	115.63	Pre-Con Assessment Date	2/2/2024	Post-Con Assessment Date	2/18/2024
Station	6105+01	Bankfull Width (ft.)	7.0	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?	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 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	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

AFE	124300132	Date/Time	2/5/2024 8:26 AM	Report #	497	
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						
<p>During the preconstruction meeting on 2/2/24 it was noted that the relocation of the travel lane bridge to the other side of the Limit of Disturbance (LOD) area had exposed a braid that was part of stream S-A67. The braid originates outside of the LOD, from the mainstem, runs parallel to the mainstem and reconnects to the mainstem outside of the LOD. The average distance between the channels is approximately 10 feet. Both the mainstem and the braid were crossed simultaneously by the dry-ditch open cut. This approach was discussed with and approved by the WVDEP and USACE prior to active construction on the recourse.</p> <p>Due to the close proximity of stream S-A67 to S-A69, both areas were worked on roughly at the same time with efforts switching from one to the other as needed.</p> <p>Dewatering was conducted throughout the crossing on an as needed basis to a structure on the going away side (GAS) of the crossing.</p> <p>2/5/24 – Two separate pump and dam conveyance systems were installed for streams S-A67 and S-A67-Braid. Prominent rocks, boulders, and the top 12" of the streams substrate were segregated and placed in super sacks for each stream. The topsoil from stream banks was removed and staged in an upland area on the coming in side (CIS) of resource along with all substrate material. Solid rock was hit soon after trenching started, and a blasting crew was brought in.</p> <p>2/6/24 to 2/8/24 – Blasting operations and the excavation of the ditch continued for the next couple of days. With the completion of trenching through S-A67 and S-A67-Braid from the CIS, interval spaced sandbags were installed and welding began with the lowering in of a section of pipe on the CIS. The start of crossing S-A69 commenced with the removal of large boulders from the streambed and the segregation of soils on the 8th.</p> <p>2/9/24 – The area between S-A67 and S-A69 required blasting and hammering to complete the excavation of the ditch.</p> <p>2/10/24 to 2/14/24 – Most of the efforts were focused on S-A69 during this time with the finishing of trenching, welding, x-raying, and applying pipe protection.</p> <p>2/15/24 to 2/16/24 – Trench breakers were installed at both S-A67 and S-A69 crossings, with the trench breakers on the CIS of S-A67-Braid and GAS of S-A67 at station number 6104+79 and 6105+18. The padding of the pipe and backfilling of the trench started shortly afterwards for both S-A67 and S-A69 areas.</p> <p>2/17/24 – The final topsoil adjustments were made to the stream banks and the 10' buffer zone prior to restoring the top 12" of substrate material for S-A67 and S-A67 braid. Survey verified that the substrate material between the high water marks of the stream channels was restored to pre-construction elevations and contours. The proper seed mix for the buffer zones was applied, and all appropriate erosion control devices are in place and the 50' buffers on either side of the stream have been temporarily restored due to winter weather conditions. Permanent restoration of the 50' buffer will be conducted during the spring when soil conditions and weather are more favorable. The pumps and dams were removed, and stream flow was restored to both streams.</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		
				2/18/2024		

AFE 124300132		Date/Time	2/5/2024 8:26 AM	Report #	497
Required Photos					
<p>02/02/2024 11:38:06 +38.317609,-80.671601 90° E S-A67 (Pre-SW)</p> 		<p>02/02/2024 11:39:24 +38.317513,-80.671609 84° E S-A67 (Pre-SW)</p> 			
GPS Location		See coordinates in above photo.		GPS Location	
Description		Downstream view of permitted impact area during pre-construction assessment.		Description	
				Downstream view of unimpacted area during pre-construction assessment.	
<p>02/18/2024 12:00:34 +38.317589,-80.671648 87° E S-A67 (Post-SW)</p> 		<p>02/18/2024 12:01:40 +38.317523,-80.671530 99° E S-A67 (Post-SW)</p> 			
GPS Location		See coordinates in above photo.		GPS Location	
Description		Downstream view of permitted impact area during post-construction assessment.		Description	
				Downstream view of unimpacted area during post-construction assessment.	
<p>02/02/2024 11:36:34 +38.317609,-80.671601 93° E S-A67 Braid (Pre-SW)</p> 		<p>02/02/2024 11:22:40 +38.317613,-80.671514 106° E S-A67 Braid (Pre-SW)</p> 			
GPS Location		See coordinates in above photo.		GPS Location	
Description		Downstream view of permitted impact area (S-A67 Braid) during pre-construction assessment.		Description	
				Downstream view of unimpacted area (S-A67 Braid) during pre-construction assessment.	

Optional Photos	
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<p>02/18/2024 11:59:38 +38.317622,-80.671662 94° E S-A67 Braid (Post-SW)</p> 	<p>02/18/2024 12:02:14 +38.317619,-80.671525 97° E S-A67 Braid (Post-SW)</p> 
GPS Location See coordinates in above photo.	GPS Location See coordinates in above photo.
Description Downstream view of permitted impact area (S-A67 Braid) during post-construction assessment.	Description Downstream view of unimpacted area (S-A67 Braid) during post-construction assessment.
<p>02/15/2024 14:09:27 +38.317300,-80.671644 29° NE S-A67 (Dur-SW)</p> 	<p>02/08/2024 14:19:24 +38.317246,-80.671699 24° NE S-A67 (Dur-SW)</p> 
GPS Location See coordinates in above photo.	GPS Location See coordinates in above photo.
Description Trench breakers being constructed on the GAS of feature.	Description Welding activities occurring once pipe section was lowered into ditch.
<p>02/18/2024 12:01:22 +38.317523,-80.671530 251° W S-A67 (Post-SW)</p> 	<p>02/18/2024 12:02:23 +38.317619,-80.671525 279° W S-A67 Braid (Post-SW)</p> 
GPS Location See coordinates in above photo.	GPS Location See coordinates in above photo.
Description Upstream view of restored area with erosion blanket, filter sock, and silt fence for S-A67.	Description Upstream view of restored area with erosion blanket, filter sock, and silt fence for S-A67 Braid.