



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread D	AFE	124300132	Spread	H-600 Pipeline Spread D
Contractor	Precision	Report #	329		
Environmental Auditor	Scott Wessel	Date/Time	10/25/2023 9:08 PM		
Stream ID	S-139	Crossing Start Date	10/26/2023	Crossing Completion Date	10/29/2023
Milepost	125.70	Pre-Con Assessment Date	10/23/2023	Post-Con Assessment Date	10/29/2023
Station	6636+85	Bankfull Width (ft.)	7.0	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? Time of Year Restrictions (TOYR)? <u>Yes</u> Mussel Relocation? <u>N/A</u>	See Below
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 Flume <input checked="" type="checkbox"/> 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	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>Expanded Notes for question 1: Stream S-I39 has a time of year restriction (TOYR) prohibiting construction between Sept. 15th to March 31st. A waiver has been obtained from the appropriate agencies to allow construction within this window.</p> <p>10/26/23 – The two resource crossings (S-I38, S-I39) will be carried out at the same time due to the close proximity to each other. A flume conveyance system was installed for continuous stream flow, along with staging materials for a pump/dam system if needed. The top 12" of stream substrate was placed into labeled super sacks and the stream banks topsoil was removed and segregated. After blasting activities were conducted in the resource area and buffer zones on the coming in side (CIS) and going away side (GAS) of the crossing, trenching began.</p> <p>10/27/23 – After removing the spoils from the previous days blasting activities, it was discovered that more blasting was required, the majority of the day was spent drilling and re-blasting streams S-I38 & S-I39. Due to construction activity, sandbags around flume pipe had to be adjusted to prevent excess stream water from entering ditch.</p> <p>10/28/23 – While trench operations continued, pipe was being prepared on the CIS of S-I39 with welding, x-ray, and rock shield installation activities. After trenching was completed, the ditch was dewatered, lined with sandbags, and a section of pipe for streams S-I38 and S-I39 was lowered into the ditch.</p> <p>10/29/23 – Bentonite trench breakers were installed within 25 feet of high water mark on both the CIS and GAS of stream S-I39 before padding commenced. Once backfilling was complete, stream banks and buffer zones were restored using previously segregated topsoil. Erosion control blankets were installed along with proper seed mixture for the 10ft. buffer zone. Triple stack 18" filter socks were installed outside the buffer zone area on the CIS and GAS of resource. Survey verified that the top 12" of substrate for S-I39 between the high water marks of the stream channel were restored to pre-construction elevations and contours. The flume pipe was removed, and flow was restored to the resource.</p> <p>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-I39 has been properly stabilized and the disturbed area has been 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.</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		
				10/29/2023		

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Required Photos					
				GPS Location	See GPS 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 GPS 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 GPS in above photo.
Description	Flume being installed at stream S-I39.	Description	Substrate material from resource S-I39 segregated in super sacks.	GPS Location	See GPS in above photo.
Description	Flume being installed at stream S-I39.	Description	Substrate material from resource S-I39 segregated in super sacks.		

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Optional Photos					
	 <p>10/27/2023 14:51:08 +38.194366,-80.719309 145° SE S-I39(dur-SW)</p>			 <p>10/28/2023 12:02:53 +38.194071,-80.719328 138° SE S-I39(dur-SW)</p>	
GPS Location	See GPS in above photo.		GPS Location	See GPS in above photo.	
Description	GAS of S-I39 after blasting.		Description	Trenching activities on the GAS of S-I39.	
	 <p>10/28/2023 15:42:30 +38.194994,-80.719356 154° SE S-I39(dur-SW)</p>			 <p>10/28/2023 12:32:35 +38.194071,-80.719397 154° SE S-I39(dur-SW)</p>	
GPS Location	See GPS in above photo.		GPS Location	See GPS in above photo.	
Description	Pipe section being lowered in ditch on top of sandbags.		Description	Buffer zone area being backfilled on the GAS of S-I39.	
	 <p>10/28/2023 16:11:12 +38.193964,-80.719322 73° E S-I39(dur-SW)</p>			 <p>10/28/2023 12:32:45 +38.194071,-80.719397 49° NE S-I39(dur-SW)</p>	
GPS Location	See GPS in above photo.		GPS Location	See GPS in above photo.	
Description	Bentonite trench breaker installed on the GAS of S-I39.		Description	Buffer zone area backfilled on the CIS of S-I39.	