



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread D	AFE	124300132	Spread	H-600 Pipeline Spread D
Contractor	Precision	Report #	413		
Environmental Auditor	Gary Cruz	Date/Time	11/26/2023 8:00 PM		
Stream ID	S-I40	Crossing Start Date	11/16/2023	Crossing Completion Date	11/26/2023
Milepost	126.22	Pre-Con Assessment Date	11/16/2023	Post-Con Assessment Date	11/27/2023
Station	6664+61	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 <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?	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	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	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






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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	2	
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						
Expanded notes for question 1: Stream S-I40 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.						
10/16/2023 - A pump and dam conveyance system was established prior to the removal of the top 12" of substrate between the high water marks, which was segregated and stockpiled on geotextile fabric. The stream and 50' buffer zones were blasted prior to excavating the ditch line. A flume pipe was installed at the end of the day for overnight conveyance of the stream. The flume and pump/dam conveyance systems were used throughout the crossing on an as needed basis.						
10/17/2023 -10/18/2023 - Excavation in the upland areas on the coming in side (CIS) and going away side (GAS) of the stream were carried out and completed during these two days. Dewatering of the trench was conducted during this time and on an as needed basis for the remainder of the crossing.						
10/19/2023 -10/20/2023 –The stream section of pipe was being prepared in an upland area on the CIS while the loose ends and the stream section of the ditch was excavated. Once pipe preparations and excavation of the ditch was completed, the stream section of the pipe was lowered into the trench late on the 20th.						
10/21/2023 – A trench box was installed prior to lowering in another section of pipe that extended past the 50' buffer zone on the GAS. Welding operations commenced to tie-in the stream section of pipe to the extended section of pipe on the GAS of the feature.						
10/22/2023 – Due to the wet weather conditions only dewatering and environmental maintenance activities were conducted throughout the day.						
10/23/2023 - No work was conducted on Thanksgiving.						
10/24/2023 – Welding operations that commenced on the 21st were completed while dewatering and environmental maintenance activities continued.						
10/25/2023 – Once coating was completed on the GAS of S-I40, a river weight was installed over the pipe at station number 6664+71. The trench breakers began to be installed on the CIS and GAS of the stream at station number 6664+57 and 6664+78, respectively, while the pipe was being padded and the trench backfilled.						
10/26/2023 – The trench breakers were completed and the subsoil in the streambed was restored to within the top 12" of preconstruction grade. The streams substrate and the in stream island feature were restored. Survey verified that the elevations and contours met pre-construction specifications. The proper seed mix was applied to the disturbed areas of the stream banks and erosion control devices were installed on the boundaries prior to reestablishing the natural stream flow.						
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		
Gary Cruz				SWCA		
				Date		
				11/27/2023		

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Required Photos

			
GPS Location	See photo above	GPS Location	See photo above
Description	Downstream view of permitted impact area during pre-construction assessment.	Description	Downstream view of unimpacted area during pre-construction assessment.
			
GPS Location	See photo above	GPS Location	See photo above
Description	Downstream view of permitted impact area during post-construction assessment.	Description	Downstream view of unimpacted area during post-construction assessment.
			
GPS Location	See photo above	GPS Location	See photo above
Description	Top 12" of substrate being removed from stream feature.	Description	Drilling holes to blast the stream and the 50' buffer zones.

Optional Photos	
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 <p>11/20/2023 09:53:41 +38.188109,-80.723086 187° S S-I40-(Dur-GC)</p>	 <p>11/20/2023 17:44:24 +38.187891,-80.722995 112° E S-I40-(Dur-GC)</p>
GPS Location See photo above	GPS Location See photo above
Description Ditch line for the stream has been excavated.	Description Stream section of pipe being lowered-in the trench.
 <p>11/25/2023 15:52:39 +38.187465,-80.723081 99° E S-I40-(Dur-GC)</p>	 <p>11/26/2023 10:16:23 +38.187525,-80.723022 86° E S-I40-(Dur-GC)</p>
GPS Location See photo above	GPS Location See photo above
Description River weight was installed.	Description The impervious trench breakers have been installed on the CIS and GAS of S-I40.
 <p>11/26/2023 11:37:59 +38.187667,-80.723006 232° SW S-I40-(Dur-GC)</p>	 <p>11/26/2023 13:30:19 +38.187661,-80.723410 100° E S-I40-(Dur-GC)</p>
GPS Location See photo above	GPS Location See photo above
Description Backfilling of the trench was complete using subsoil to within 12" from top of grade.	Description Survey verifying that all elevations and contours met pre-construction specifications.