



# Stream Biological Conditions EA Report


<b>Project Name</b>	H-600 Pipeline Spread C	<b>AFE</b>	124300131	<b>Spread</b>	H-600 Pipeline Spread C
<b>Contractor</b>	Precision	<b>Report #</b>	256		
<b>Environmental Auditor</b>	Kyle Gillow	<b>Date/Time</b>	9/27/2023 2:04 PM		
<b>Stream ID</b>	S-A96/A103	<b>Crossing Start Date</b>	9/27/2023	<b>Crossing Completion Date</b>	10/2/2023
<b>Milepost</b>	80.88	<b>Pre-Con Assessment Date</b>	9/26/2023	<b>Post-Con Assessment Date</b>	10/5/2023
<b>Station</b>	4270+42	<b>Bankfull Width (ft.)</b>	5.0	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Ephemeral		
<b>County</b>	Webster	<b>303(d) Impairment Listing</b>	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?	N/A
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	<b>Predominant Substrate Type (select one):</b> Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Mud/Silt/Clay	Mud/Silt/Clay
16	<b>Channel Conditions: Rating:</b> 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	<b>Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank: Rating:</b> 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	3

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<b>Biological Conditions Continued</b>					<b>Pre-Con</b>	<b>Post-Con</b>
18	<b>Instream Habitat Conditions:</b> 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)			2	3	
19	<b>Channel Alterations:</b> 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	
<b>Additional Notes</b>						
<p>9/27/23 - Due to stream S-A96/A103 being a dry crossing, the flume along with the pump and dam were set up the day prior to the crossing date. The top 12" of soil between the high-water marks was removed and placed in super sacks and stockpiled just upstream. Blasting crew began drilling on going away side of feature while crew began trenching on coming in side of feature.</p> <p>9/28/23 - Crew continued digging on the coming in side of feature while the blasting crew dealt with some charging issues that were resolved late in the day. After blasting, trenching on the going away side of the stream began. Dewatering of the trench was required and continues throughout the crossing as needed.</p> <p>9/29/23 - Trenching was completed and the ditch was padded with sandbags in preparation for lowering of the pipe. After pipe was lowered in, welding started on the coming in side of the crossing. Due to welding issues, the restoration of the stream was not able to begin.</p> <p>9/30/23 - Restoration of S-A96/A103 began with the padding of the pipe beyond both 10' buffer zones and the trench breaker on the coming in side was installed. The top 12" of soil was restored between high water marks and verified by survey to the pre-construction specifications. Due to the lack of time at the end of the day, the environmental crew was not able to complete the 10' buffer zone on the going away side of the crossing but did install standard silt fence on both sides of the feature in case of rain. The dam and flume continue to be in place.</p> <p>10/1/23 - No work. Sunday.</p> <p>10/2/23 - The going away side 10' buffer was completed, and the environmental crew seeded and installed Curlex on the banks. Super silt fence was re-installed on coming in side of feature and standard silt fence on going away side. Once completed, the pump and flume were removed from feature. The stream continued to not have flow. The trench breaker on the going away side of S-A96/A103 could not be installed at the time that the pump and dam were removed, due to lack of space and the need to maneuver the pipe for the next crossing.</p> <p>10/5/23 - The trench breaker on the going away side of S-A96/A103 has been installed.</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>						
<b>Name</b>		<b>Signature</b>		<b>Company</b>	<b>Date</b>	
Kyle Gillow				SWCA	10/5/2023	

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**Required Photos**

			
<b>GPS Location</b>	See caption in photo.	<b>GPS Location</b>	See caption in photo.
<b>Description</b>	Downstream view of permitted impact area during pre-construction assessment.	<b>Description</b>	Downstream view of unimpacted area during pre-construction assessment.
			
<b>GPS Location</b>	See caption in photo.	<b>GPS Location</b>	See caption in photo.
<b>Description</b>	Downstream view of permitted impact area during post-construction assessment.	<b>Description</b>	Downstream view of unimpacted area during post-construction assessment.
			
<b>GPS Location</b>	See caption in photo.	<b>GPS Location</b>	See caption in photo.
<b>Description</b>	Segregated stream substrate.	<b>Description</b>	Crew beginning to dig on coming in side of feature.

<b>Optional Photos</b>		
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 <p>27/09/2023 15:27:59 +38.689101,-80.478665 168° S S-A96/A103 (Dur_KG)</p>	 <p>28/09/2023 16:42:51 +38.689060,-80.478767 166° S S-A96/A103 (Dur_KG)</p>
<b>GPS Location</b> See caption in photo.	<b>GPS Location</b> See caption in photo.
<b>Description</b> Blasting crew drilling blasting holes.	<b>Description</b> Crew digging on the going away side of feature.
 <p>29/09/2023 09:39:35 +38.688852,-80.478715 143° SE S-A96/A103 (Dur_KG)</p>	 <p>30/09/2023 09:02:24 +38.688631,-80.478715 321° NW S-A96/A103 (Dur_KG)</p>
<b>GPS Location</b> See caption in photo.	<b>GPS Location</b> See caption in photo.
<b>Description</b> Crew lowering in stream section from the coming in side of feature.	<b>Description</b> Installed River Weight at feature as called out on prints.
 <p>30/09/2023 12:02:27 +38.688705,-80.478657 22° N S-A96/A103 (Dur_KG)</p>	 <p>02/10/2023 11:35:45 +38.688694,-80.478625 16° N S-A96/A103 (Post_KG)</p>
<b>GPS Location</b> See caption in photo.	<b>GPS Location</b> See caption in photo.
<b>Description</b> Trench breaker installed on coming in side of feature.	<b>Description</b> Installed 10' barrier. Photo taken from going away side looking at coming in side.