



# Stream Biological Conditions EA Report

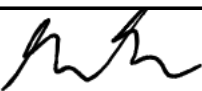
<b>Project Name</b>	H-600 Pipeline Spread D	<b>AFE</b>	124300132	<b>Spread</b>	H-600 Pipeline Spread D
<b>Contractor</b>	Precision	<b>Report #</b>	312		
<b>Environmental Auditor</b>	Gary Cruz	<b>Date/Time</b>	10/12/2023 7:42 PM		
<b>Stream ID</b>	S-J25	<b>Crossing Start Date</b>	10/12/2023	<b>Crossing Completion Date</b>	10/24/2023
<b>Milepost</b>	120.42	<b>Pre-Con Assessment Date</b>	10/12/2023	<b>Post-Con Assessment Date</b>	10/25/2023
<b>Station</b>	6358+09	<b>Bankfull Width (ft.)</b>	3.2	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Ephemeral		
<b>County</b>	Nicholas	<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?	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	<b>Predominant Substrate Type (select one):</b> Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Sand (<0.1")	Sand (<0.1")
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	4

AFE	124300132	Date/Time	10/12/2023 7:42 PM	Report #	312	
<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)			1	2	
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>10/12/2023 - A pump and dam conveyance system was established prior to the removal of the top 12" of substrate, which was segregated and placed on top of geotextile fabric. A flume pipe was installed at the end of the day for overnight conveyance of the stream. The flume conveyance system was used throughout the crossing on an as needed basis.</p> <p>10/13/2023 - The contractor excavated the ditch line and lowered-in the section of pipe that expanded across the stream. The tie-in weld at the loose end on the coming in side (CIS) of the feature was started.</p> <p>10/14/2023 - On the CIS of the feature, the contractor finished the tie-in weld at the loose end and installed the trench plug for the road before being rained out.</p> <p>10/16/2023 – Two sections of pipe were being welded in an upland area while excavation of the trench outside of the stream on the going away side (GAS) commenced.</p> <p>10/17/2023 – No construction activities were conducted within stream S-J25 due to starting on the next stream crossings (S-J24n &amp; S-J24s) approximately 130ft down the right of way (ROW). The appropriate steps were taken to segregate the surface rocks, the top 12" of substrate, and subsoil from streams S-J24n &amp; S-J24s. The ditch line was excavated through streams S-J24n &amp; S-J24s and a section of pipe was lowered in.</p> <p>10/18/2023 - No construction activities were conducted within stream S-J25. A tie-in weld was made in the upland area of S-J25 on the GAS, while backfilling began on the CIS of the stream.</p> <p>10/19/2023 – The tie-in weld on the GAS of S-J24s was made and the contractor continued to backfill the upland trench on CIS and GAS of S-J25. Impervious trench breakers were installed on the CIS and GAS of s-J25 at station numbers 6357+97 &amp; 6358+36 respectively. Using stream subsoil the contractor padded the pipe and backfilled the stream to within 12" of grade on S-J25.</p> <p>10/20/2023 - No construction activities were conducted due to a rain out.</p> <p>10/21/2023 – Only dewatering activities were conducted at S-J25. No construction activities were conducted within S-J25 due to the crew relocating equipment to a new crossing (S-J22) on Canvas Nettie Rd.</p> <p>10/22/2023 – Only dewatering activities were conducted at S-J25. Most of the efforts for the day were to dewater S-J24n &amp; S-J24s and install impervious trench breakers on the CIS and GAS of those features.</p> <p>10/23/2023 – Only dewatering activities were conducted at S-J25. Most of the day was spent dewatering S-J24n &amp; S-J24s while jeeping and coating was conducted on the GAS of S-J24s. Using subsoil the contractor padded the pipe and backfilled the trench to within 12" from top of grade for S-J24n and S-J24s.</p> <p>10/24/2023 - Stream S-J25 substrate was replaced and survey verified that all elevations and contours met pre-construction specifications. Erosion control devices were installed on the boundaries of the stream and the proper seed mix was applied before reestablishing flow to the stream.</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>		
Gary Cruz				SWCA		
				Date		
				10/25/2023		

<b>AFE</b> 124300132	<b>Date/Time</b> 10/12/2023 7:42 PM	<b>Report #</b> 312
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**Required Photos**

			
<b>GPS Location</b>	See photo above	<b>GPS Location</b>	See photo above
<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 photo above	<b>GPS Location</b>	See photo above
<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 photo above	<b>GPS Location</b>	See photo above
<b>Description</b>	Downstream view of permitted impacted area during pre-construction assessment.	<b>Description</b>	Upstream view of contractor removing top 12" of substrate.

<b>Optional Photos</b>	
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 <p>10/12/2023 17:42:48 +38.256681,-80.687360 343° N S-J25-(Dur-GC)</p>	 <p>10/13/2023 18:52:12 +38.2566837,-80.687325 191° S S-J25-(Dur-GC)</p>
<b>GPS Location</b> See photo above	<b>GPS Location</b> See photo above
<b>Description</b> Contractor removed the top 12" of substrate.	<b>Description</b> Section of pipe has been lowered-in within the ditch line of stream.
 <p>10/19/2023 15:07:30 +38.256372,-80.687280 348° N S-J25-(Dur-GC)</p>	 <p>10/19/2023 18:18:17 +38.2566833,-80.687304 190° S S-J25-(Dur-GC)</p>
<b>GPS Location</b> See photo above	<b>GPS Location</b> See photo above
<b>Description</b> Impervious trench breakers have been installed and contractor started backfill of feature.	<b>Description</b> Subsoil has been back filled approximately 12" below grade.
 <p>10/24/2023 15:46:15 +38.256560,-80.687342 30° NE S-J25-(Dur-GC)</p>	 <p>10/24/2023 16:50:24 +38.256637,-80.687126 77° E S-J25-(Dur-GC)</p>
<b>GPS Location</b> See photo above	<b>GPS Location</b> See photo above
<b>Description</b> The contractor restoring substrate to stream feature.	<b>Description</b> Survey verifying that all elevations and contours met pre-construction specifications.