



# Stream Biological Conditions EA Report


<b>Project Name</b>	H-600 Pipeline Spread F	<b>AFE</b>	124300135	<b>Spread</b>	H-600 Pipeline Spread F
<b>Contractor</b>	Price Gregory	<b>Report #</b>	437		
<b>Environmental Auditor</b>	Eric Schicker	<b>Date/Time</b>	12/12/2023 7:19 AM		
<b>Stream ID</b>	S-MN37	<b>Crossing Start Date</b>	12/12/2023	<b>Crossing Completion Date</b>	12/21/2023
<b>Milepost</b>	188.98	<b>Pre-Con Assessment Date</b>	12/11/2023	<b>Post-Con Assessment Date</b>	12/21/2023
<b>Station</b>	9978+02	<b>Bankfull Width (ft.)</b>	2.0	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Intermittent		
<b>County</b>	Monroe	<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	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)	2	2
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	1

<b>AFE</b>	124300135	<b>Date/Time</b>	12/12/2023 7:19 AM	<b>Report #</b>	437	
<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)			3	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	1	
<b>Additional Notes</b>						
<p>Pre-Construction Notes  Pre-Construction Meeting - 12/11/2023  Resource bordered by wetland.  15. Substrate noted as predominately mud/silt/clay with some sand, and sections of mixed gravel and cobble.  18. Low scope due to lack of varying depths, low presence of woody debris, and lack of undercut banks.</p> <p>12/12/2023 - Built upstream dam. Removed top 12 inches of substrate (Photo 1) and used Morooka to transport to separate containment area in upland work area. Installed flume pipe. Built downstream dam.</p> <p>12/13/2023 - Prepped for blasting through aquatic resource area. Drilled for blasting (Photo 2). Set up pump around system. Removed flume pipe. Mats put in place for blasting. Blasted. Flume pipe replaced.</p> <p>12/14/2023 - Pumped water around aquatic resource area. Drilled for blasting. Removed flume pipe. Placed rubber mats for blasting. Blasted. Removed rubber mats. Timber mats put in place to allow for excavation. Began excavating subsoils. Excavated through aquatic resource (Photo 3). Flume pipe replaced.</p> <p>12/15/2023 - Water pumped from aquatic resource. Welded. Worked outside resource area. Replaced flume pipe.</p> <p>12/16/2023 - Pumped water from aquatic resource area. Worked ongoing outside aquatic resource area. Pump around system set up.</p> <p>12/18/2023 - Pumped water from aquatic resource areas. Flume pipe removed; upstream dammed, pump around as needed. Sandbags added to trench for padding (Photo 4). Lowered pipe into trench (Photo 5). Staged pipe and began welding. Flume pipe replaced.</p> <p>12/19/2023 - Restaged pipe through aquatic resource area for welding. Welding completed. Pumped from trench in aquatic resource area. Padded and backfilled subsoil in aquatic resource area (Photo 6). X-rayed. Continued to pad and backfill.</p> <p>12/20/2023 - Backfilled subsoil in aquatic resource area. Removed flume. Dammed. Restored topsoil in aquatic resource area (Photo 7). Channel contoured.</p> <p>12/21/2023 - Survey onsite. Survey evaluated elevations. Adjusted configuration and contours. Restored substrate (Photo 8). Restored buffer area.</p> <p>Post Construction Notes  9. Trench breakers constructed outside of wetland limits  16., 17. Crossing and riparian areas have been recently restored. These areas will be monitored until 80% vegetative cover has been achieved and areas that do not have 80% vegetative cover within 30 days will be reseeded.  18. Low score related to lack channel diversity.  19. Does not include timber mats that remain in place for travel lane.  *Post construction photo for DS impacts replaced due to placement error.</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>		
Eric Schicker				Potesta		
				<b>Date</b>		
				12/28/2023		

AFE 124300135		Date/Time 12/12/2023 7:19 AM		Report # 437	
Required Photos					
					
<b>GPS Location</b> See Photo		<b>GPS Location</b> See 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 Photo		<b>GPS Location</b> See 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 Photo		<b>GPS Location</b> See Photo			
<b>Description</b> Photo 1: Excavating top 12 inches of substrate.		<b>Description</b> Photo 2: Drilling for blasting.			

<b>Optional Photos</b>					
------------------------	--	--	--	--	--



<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo
<b>Description</b>	Photo 3: Excavating through aquatic resource.	<b>Description</b>	Photo 4: Placing sandbags in trench for padding.



<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo
<b>Description</b>	Photo 5: Putting pipe in trench through aquatic resource area.	<b>Description</b>	Photo 6: Adding padding and backfilling.



<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo
<b>Description</b>	Photo 7: Restoring topsoil.	<b>Description</b>	Photo 8: Restoring substrate.