



# Stream Biological Conditions EA Report


<b>Project Name</b>	H-600 Pipeline Spread A	<b>AFE</b>	124300129	<b>Spread</b>	H-600 Pipeline Spread A
<b>Contractor</b>	Precision	<b>Report #</b>	258		
<b>Environmental Auditor</b>	Scott Wessel	<b>Date/Time</b>	9/25/2023 7:33 AM		
<b>Stream ID</b>	S-A83/A91	<b>Crossing Start Date</b>	9/25/2023	<b>Crossing Completion Date</b>	9/30/2023
<b>Milepost</b>	92.57	<b>Pre-Con Assessment Date</b>	9/18/2023	<b>Post-Con Assessment Date</b>	9/30/2023
<b>Station</b>	4887+84	<b>Bankfull Width (ft.)</b>	10.9	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Perennial		
<b>County</b>	Webster	<b>303(d) Impairment Listing</b>	No		






### Resource Post-Crossing Conditions







1	Were all applicable resource specific crossing conditions satisfied?	See Below
	Time of Year Restrictions (TOYR)? <u>Yes</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 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	Cobble (2-10")	Cobble (2-10")
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

<b>AFE</b>	124300129	<b>Date/Time</b>	9/25/2023 7:33 AM	<b>Report #</b>	258	
<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	1	
<b>Additional Notes</b>						
<p>Expanded notes for question 1: Stream S-A83/A91 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>9/25/23 – A sandbag dam and pump around was installed and utilized throughout the crossing. Boulder sized rocks were removed and placed to the side of the right of way (ROW) prior to the top 12" of stream substrate material being removed. Substrate material was put into super sacks, labeled, and stockpiled on the side of the ROW. The topsoil from the stream banks was removed and segregated from sub soil material. Blasting operations took place on the going away side (GAS) slope of the stream.</p> <p>9/26/23 – Blasting procedures took place on the coming in side (CIS) of the stream prior trenching, where the crew hit solid rock during excavation.</p> <p>9/27/23 – Due to hitting solid rock during trenching, the contractor used hammer attachment on a track hoe to break up hard material that remained after blasting. Dewatering activities were required and utilized throughout the crossing on, as need bases.</p> <p>9/28/23 – The contractor relayed the spoils up the hill to stage as trenching continued. Pipe preparations continued with welding, x-ray, and rock shield covering in anticipation for lowering in the following day. By the end of the day excavation of the crossing was complete and ready for pipe after lining the trench with sandbags.</p> <p>9/29/23 – The pipe section for the stream crossing was lowered into the ditch and a bentonite breaker was installed on the GAS at station number 4888+16. The stream section on the GAS of pipe was padded prior to having sub soil material added. Both stream banks, including 10-foot buffer zones were built up with sub soil.</p> <p>9/30/23 – The topsoil for the stream banks along with the top 12" of substrate between the high-water marks of the stream channel were restored to pre-construction elevations and contours. The large prominent rocks and boulders were replaced to their original location and verified to survey specifications.</p> <p>Stream banks and riparian buffer zones were stabilized with proper seed mixture, erosion control blanket, and silt fence, prior to reestablishing stream flow of S-A83/A91. The trench breaker on the CIS was not installed by the time stream flow was restored but is scheduled to be installed by 10/3/23. Numbers 17 and 18 were rated "poor" and "suboptimal" due to lack of vegetation in the impact area following the completion of crossing and restoration efforts.</p> <p>10/3/23 – The trench breaker on the CIS was installed using Aquablok and bentonite bags at station number 4887+79. In accordance with the Restoration Work Plan of the Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration, and Mitigation Framework stream crossing S-A83/A91 is complete.</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>		
Scott Wessel				SWCA		
				<b>Date</b>		
				10/3/2023		

AFE	124300129	Date/Time	9/25/2023 7:33 AM	Report #	258
Required Photos					
				<b>GPS Location</b>	See GPS in attached 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 GPS in attached photo.	<b>GPS Location</b>	See GPS in attached photo.	<b>Description</b>	Downstream view of permitted impact area during post-construction assessment.
				<b>GPS Location</b>	See GPS in attached photo.
<b>Description</b>	Removing topsoil from riparian buffer zone area.	<b>Description</b>	Substrate material being labeled in super sacks.	<b>GPS Location</b>	See GPS in attached photo.

AFE	124300129	Date/Time	9/25/2023 7:33 AM	Report #	258
Optional Photos					
					
GPS Location	See GPS in attached photo.		GPS Location	See GPS in attached photo.	
Description	Contractor using hammer attachment to break up solid rock.		Description	Trench being lined with sandbags before pipe is installed.	
					
GPS Location	See GPS in attached photo.		GPS Location	See GPS in attached photo.	
Description	Sub soil being used to build up streambed, banks, and buffer zone.		Description	Pipe installed and being backfilled.	
					
GPS Location	See GPS in attached photo.		GPS Location	See GPS in attached photo.	
Description	Aquablok and bentonite trench breaker being installed on the CIS of stream crossing.		Description	Riparian buffer zones restored with erosion control blanket, compost filter sock, and proper seed after pipe installation.	