



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread E	AFE	124300134	Spread	H-600 Pipeline Spread E
Contractor	Price Gregory	Report #	34		
Environmental Auditor	Charles Haden	Date/Time	8/14/2023 7:35 AM		
Stream ID	S-H67	Crossing Start Date	8/14/2023	Crossing Completion Date	8/23/2023
Milepost	131.95	Pre-Con Assessment Date	8/14/2023	Post-Con Assessment Date	8/23/2023
Station	6966+76	Bankfull Width (ft.)	6.8	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Nicholas	303(d) Impairment Listing	N/A		

Resource Post-Crossing Conditions

1	Were all applicable resource specific crossing conditions satisfied?	Yes
	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	Predominant Substrate Type (select one): Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Cobble (2-10")	Cobble (2-10")
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)	2	3
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.)	4	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)			3	4	
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	1	
Additional Notes						
<p>Pre-Construction Notes PCM - 8/12/2023 @ 1000 *Bankfull width measured at OHWM stakes 15. Substrate embedded and covered with vegetation and dirt/loam within center of ROW, substrate located underneath timber mat is predominantly cobble.</p> <p>Day 1 (08/14/2023) No Flow Present Substrate removed from the first 12-inches of the streambed and was segregated in an upland area (Photo 1). Dam installed, blasting occurred and trenching of the stream was initiated (Photo 2).</p> <p>Day 2 (08/15/2023) Light rain occurred overnight (~0.4") Water pumped from trench and excavation resumed.</p> <p>Days 3 and 4 (08/16-17/2023) Light rain during Day 3 and overnight. Hammering and excavation continued (Photo 3).</p> <p>Day 5 (08/18/2023) Rain overnight. No flow in stream. Hammering and excavation continued, bedding installed (Photo 4).</p> <p>Day 6 (08/19/2023) Dewatering and hammering/excavation continued. Pipe lowered into trench (Photo 5).</p> <p>Day 7 (08/21/2023) Dewatering and welding ongoing.</p> <p>Day 8 (08/22/2023) Installation of trench breakers (Photos 6) and beginning of backfilling (Photo 7).</p> <p>Day 9 (08/23/2023) Finished filling trench. Stream was reestablishing utilizing segregated substrate, banks were seeded and curlex put in place, and surveyed stream channel (Photo 8).</p> <p>Post Construction Notes 16., 17. Crossing and riparian areas have been recently restored. These areas will be monitored until 80% vegetative cover is achieved and areas that do not have 80% vegetative cover within 30 days will be reseeded. 18. Habitat scores also reflect no flow conditions. 19. Does not include timber mats that remain in place for travel lane.</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>						
Name		Signature		Company		
Charles Haden				Potesta & Associates		
				Date		
				8/30/2023		

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Required Photos

	
GPS Location See Photo	GPS Location See Photo
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	GPS Location See Photo
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	GPS Location See Photo
Description Photo 1. Segregated stream substrate.	Description Photo 2. Beginning to trench the stream.

Optional Photos		
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 <p style="font-size: small; margin-top: 5px;">Date & Time: Wed, Aug 16, 2023 at 14:07:55 EDT Position: +038.121100, -080.736981 (-24.91h) Altitude: 2597ft (-76.81h) Datum: WGS-84 Azimuth/Bearing: 196 S16W 0.84mils True (-11) Elevation Angle: -10.3 Horizon Angle: -10.5 Zoom: 1.0X Hammering rock on north side of S-H67 Mountain Valley Pipeline</p>	 <p style="font-size: small; margin-top: 5px;">Date & Time: Fri, Aug 18, 2023 at 18:44:17 EDT Position: +038.120051, -080.736904 (-24.91h) Altitude: 2596ft (-76.81h) Datum: WGS-84 Azimuth/Bearing: 008 N08E 0.142mils True (-11) Elevation Angle: -13.7 Horizon Angle: -01.0 Zoom: 1.0X Trench - coming in view Mountain Valley - S-H67</p>
GPS Location See Photo	GPS Location See Photo
Description Photo 3. On-going hammering and excavation in trench.	Description Photo 4. Bedding placed in trench.
 <p style="font-size: small; margin-top: 5px;">Date & Time: Sat, Aug 19, 2023 at 13:02:06 EDT Position: +038.121000, -080.736981 (-24.91h) Altitude: 2598ft (-76.81h) Datum: WGS-84 Azimuth/Bearing: 170 S10E 0.80mils True (-11) Elevation Angle: -15.9 Horizon Angle: -10.6 Zoom: 1.0X Leveling the 250 pipe into the trench MVP S-H67</p>	 <p style="font-size: small; margin-top: 5px;">Date & Time: Tue, Aug 22, 2023 at 13:27:55 EDT Position: +038.120751, -080.736802 (-24.91h) Altitude: 2577ft (-76.81h) Datum: WGS-84 Azimuth/Bearing: 168 S12E 2.987mils True (-11) Elevation Angle: -19.7 Horizon Angle: -06.5 Zoom: 1.0X Trench breakers in place, both sides MVP S-H67</p>
GPS Location See Photo	GPS Location See Photo
Description Photo 5. Lowering pipe into the trench at S-H67.	Description Photo 6. Trench breaks installed.
 <p style="font-size: small; margin-top: 5px;">Date & Time: Tue, Aug 22, 2023 at 17:44:03 EDT Position: +038.120096, -080.736981 (-24.91h) Altitude: 2604ft (-76.81h) Datum: WGS-84 Azimuth/Bearing: 019 N19E 0.338mils True (-11) Elevation Angle: -11.8 Horizon Angle: -02.5 Zoom: 1.0X Trench filling, facing North, at end of day MVP S-H67</p>	 <p style="font-size: small; margin-top: 5px;">Date & Time: Wed, Aug 23, 2023 at 16:20:11 EDT Position: +038.120000, -080.736816 (-24.91h) Altitude: 2604ft (-76.81h) Datum: WGS-84 Azimuth/Bearing: 071 N07E 1.160mils True (-11) Elevation Angle: -23.0 Horizon Angle: -00.0 Zoom: 1.0X Seeding and cover roll in buffer zone, post construction MVP S-H67</p>
GPS Location See Photo	GPS Location See Photo
Description Photo 7. Backfilling of trench.	Description Photo 8. Survey of restored stream.