



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	416		
Environmental Auditor	Charles Haden	Date/Time	11/27/2023 12:49 PM		
Stream ID	S-CV17	Crossing Start Date	12/2/2023	Crossing Completion Date	1/8/2024
Milepost	171.48	Pre-Con Assessment Date	11/27/2023	Post-Con Assessment Date	1/8/2024
Station	9054+16	Bankfull Width (ft.)	3.7	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Ephemeral		
County	Summers	303(d) Impairment Listing	N/A		

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	Predominant Substrate Type (select one): Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Gravel (0.1-2")	Gravel (0.1-2")
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	2
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.)	3	3

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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)			2	2	
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)			2	2	
Additional Notes						
<p>Pre-Construction Notes Pre-Construction Meeting - 11/28/2023 15. Predominate substrate noted as gravel/fine gravel. 17. Riparian buffer vegetation has been trimmed/mowed and is resource W-MM20-PFO; LDB is ~50' from State Hwy 12/3. 18. Low score due to lack of flow.</p> <p>12/02/2023 - Timber mats put in place for excavation in aquatic resource area. No Flow. Top 12 inches of substrate removed (Photo 1) and segregated in work area. Dam put in place using sandbags and plastic sheeting with flume pipe. 12/4/2023 - Adjusted flume pipe. Excavated trench within aquatic resource. 12/5/2023 - Excavation of trench continued (Photo 2). Measurements for bore, track, and pipe completed. Pump-around installed. Bore track installed in aquatic resource (Photo 3). Road bore trench opened on opposite side of the road. Bore pipe installed. 12/6/2023 - Bore lined up for drilling through aquatic resource. Pea gravel added to trench for stability. 12/7-9/2023 - Road bore construction began through aquatic resource. Pump installed in trench. Flume pipe removed occasionally-no flow. Bore successfully made it to other side of road. Mainline pipe installation begins through aquatic resource. 12/11-13/2023 - Water pumped from trench. Boring ongoing then completed. Welding and x-ray ongoing in buffer. Survey onsite. 12/14/2023 - No work in aquatic resource. 12/15/2023 - New adjustments made to trench line and road crossing area. Soil of resources moved to different location on site. 12/16/2023 - Pipe placement needed resurveyed and engineering approval. Water in trench. No work in aquatic resource. 12/18/2023 - Adjustments to pipe placement made. Water in trench. Welding ongoing outside of aquatic resource. 12/19-22/2023 - Snowy and icy conditions. Water in trench. Welding of pipe up along mountain side continued. X-ray and surveyed. 12/23/2023 - No flow. Stabilized stockpile. No work in aquatic resource 12/27-29/2023 - Wet and rainy. Trench flooded. Environmental crew adjusted dam and restored flow through flume pipe. Water pumped from trench. 12/30/2023 - Pipe in trench. Preparations for welding (Photo 4). Welding in trench in buffer adjacent to aquatic resource. 12/31/2023 - Pumped water from trench. Pipe wrapped with rock shielding. Welding in trench in buffer adjacent to aquatic resource. Sandbags added to trench for padding. Padding dirt added to trench. 1/2/2024 - Prepared for sand blasting. Removed trench box and began to backfill outside aquatic resource area. Cut pipe, moved pipe to trench, welded, x-ray, and coated in adjacent aquatic resource area. 1/3/2024 - Filling trench outside aquatic resource area. Pipe adjusted for final weld. Sandbag added to trench in aquatic resource area for padding. Welding and X-ray ongoing in adjacent aquatic resource. 1/4/2024 - No flow. X-ray completed on final weld. Continued to add sandbags to trench. Coating. Bore pit north of resource filled. 1/5/2024 - No flow. Calcimite added to subsoil. Padding filled added to trench and began to construct trench breakers (Photo 5). 1/6/2024 - Moderate rain. Flume in place along with pump around. Calcimite added to subsoil and padding dirt/subsoil added to trench (Photo 6). No flow in aquatic resource became a flash flood condition as rain intensified. Trench completely filled with water. 1/7/2024 - Water pumped from trench to tanker truck overnight. Site appeared stable. Site still wet. General sitewide clean-up. 1/8/2024 - Pumped water from trench into tanker truck. Repaired/built trench breakers. Backfilled and contoured (Photo 7). Removed road plates. Survey onsite to shoot elevations (Photo 8). Removed flume pipe. Contoured aquatic resource area. Restored substrate. Survey checked elevations. Restored buffer topsoil. Seeded buffer. Added jute. Restoration complete.</p> <p>Post Construction Notes 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. 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		Date
Charles Haden				POTESTA		1/8/2024

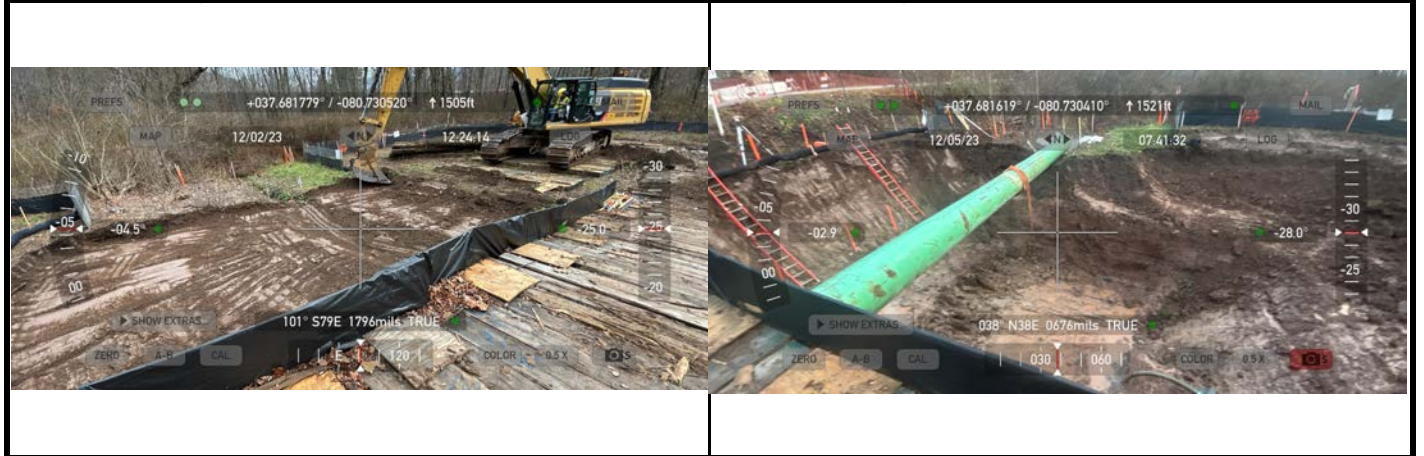
Required Photos	
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GPS Location See Photo	GPS Location See Photo
Description Downstream view of permitted impact area during pre-construction assessment.	Description Downstream view of unimpacted area during pre-construction assessment.



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: Excavating top 12 inches of substrate and buffer topsoil.	Description Photo 2: Excavating through aquatic resource.

Optional Photos



GPS Location See Photo	GPS Location See Photo
Description Photo 3: Bore track installed through aquatic resource.	Description Photo 4: Pipe in trench through aquatic resource. Preparing to weld to road bore.



GPS Location See Photo	GPS Location See Photo
Description Photo 5: Northern trench breaker constructed and padding dirt added to trench.	Description Photo 6: Padding dirt and subsoil added to trench in aquatic resource area.



GPS Location See Photo	GPS Location See Photo
Description Photo 7: Backfilled complete and contouring ongoing.	Description Photo 8: Survey shooting elevations.