



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	432		
Environmental Auditor	Jessica Yeager	Date/Time	12/11/2023 11:43 AM		
Stream ID	S-KL29	Crossing Start Date	12/29/2023	Crossing Completion Date	1/24/2024
Milepost	170.00	Pre-Con Assessment Date	12/11/2023	Post-Con Assessment Date	1/24/2024
Station	8976+00	Bankfull Width (ft.)	44.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Summers	303(d) Impairment Listing	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 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?	See Below
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.	See Below

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)	1	1
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.)	2	2

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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)			1	1		
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</p> <p>Pre-Constructing Meeting - 12/11/2023</p> <p>Water slightly turbid and high during pre-construction assessment. Timber mat in place. Poor access for pre-construction DS photo. Water too high to cross S-M3 to get access.</p> <p>12/29/2023 - Verified pre-construction assessment conditions still exist in ROW. Began to construct upstream dam for pump-around system (Photo 1).</p> <p>12/30/2023-1/2/2024 - Continued to construct upstream dam trying different configurations hoping to prevent leakage.</p> <p>1/3/2024 - Pump-around system in use. Stable dam configuration established upstream and pump-around system keeping work area dry. Removed top 12 inches of substrate (Photo 2). RDB topsoil removed.</p> <p>1/4/2024 - Pump-around system in use. DS dam rebuilt. Second dam added US of existing barrier dam due to barrier dam leakage.</p> <p>1/5/2024 - Pump-around system in use. Barrier dam continued to leak. Water from ROW pumped to dewatering structure. Sandbags added to dam US dam. Relocated substrate stockpile to new work area.</p> <p>1/6/2024 - Rain. Sandbags added to US dam. LDB topsoil removed. Stream surge due to heavy rain collapsed barrier dam and DS dam. Pumps moved to high ground. FERC, Safety, and LEI on site.</p> <p>1/7/2024-1/9/2024 - Rain (1/7/2024 and 1/9/2024). New larger pumps. Cleanup. Added sandbags to dams (effort to rebuild dam). Moved equipment and other materials to higher ground. LEI and DEP onsite (1/8/2024). DS dam rebuilt. Pumps and hoses fortified. Pump-around system in used intermittently. No additional work in aquatic resources during this timeframe.</p> <p>1/10/2024-1/11/2024 - Remaining portion of dams removed after previous days rain. Dams rebuilt. FERC onsite (1/11/2024). Pump-around system restored. No additional work in aquatic resources during this timeframe.</p> <p>1/12/2024-1/16/2024 - Pump-around system in use. Drilled and prepped for blasting. Explosives placed and detonated (1/12/2024 and 1/15/2024). Rain in afternoon (1/12/2024). Excavated rock and hammering as needed (Photo 3).</p> <p>1/17/2024 - Pump-around system in use. Water pumped from trench (to dewatering structure). Sandbags added to trench for padding (Photo 4). Pipe lowered into trench (Photo 5). Pipe cut.</p> <p>1/18/2024-1/19/2024 - Pump-around system in use. Welding, x-ray, sandblasting ongoing. Padding dirt added to trench. River weights placed in trench. Constructed first trench breaker.</p> <p>1/20/2024 - Pump-around system in use. Finished trench breaker (Photo 6). Survey onsite. Backfilled with padding dirt then subsoil.</p> <p>1/21/2024 - Pump-around system in use. Finished backfilling subsoil (Photo 7). Survey onsite to shoot bed elevations. Restored topsoil and substrate. Cutback slope on LDB for stability. Seeded and curlex bank LDB and placed rock at toe slope.</p> <p>1/22/2024 - Pump-around system in use. Removed secondary dam. Survey worked in ROW determining elevations in dam footprint. Lowered US dam.</p> <p>1/23/2024 - Finished contouring substrate including restoring bar. Continued to remove sandbags. Completed additional elevation work. Contoured RDB, seeded and added curlex.</p> <p>1/24/2024 - Continued to remove sandbags below OHWM (Photo 8). Removed pumps and hoses. Restoration completed.</p> <p>Post Construction Notes</p> <p>8. LDB cut back to promote greater stability during high flow events.</p> <p>14. Dam failure due to flash flood on 1/6/2024. Dams not completely restored until late in day on 1/11/2024.</p> <p>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.</p> <p>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	
Jessica Yeager				Potesta		1/24/2024	

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: Constructing upstream dam.	Description	Photo 2: Top 12 inches of substrate removed from aquatic resource.

AFE 124300135		Date/Time 12/11/2023 11:43 AM	Report # 432
Optional Photos			
 <p><small>Date & Time: Tue, Jan 16, 2024 at 11:42:24 EST Position: +037.692793 / -080.733210 (-28.9H) Altitude: 1722ft (-54.5H) Datum: WGS-84 Azimuth Bearing: 266.586W (-72.9mils True (-13.1) Elevation Angle: -14.4 Horizon Angle: +00.4 Zoom: 1.0X S-KL29: Trench end of day MVP</small></p>		 <p><small>Date & Time: Tue, Jan 16, 2024 at 11:44:01 EST Position: +037.692793 / -080.733210 (-28.9H) Altitude: 1722ft (-54.5H) Datum: WGS-84 Azimuth Bearing: 266.586W (-72.9mils True (-13.1) Elevation Angle: -14.4 Horizon Angle: +00.4 Zoom: 1.0X S-KL29: Trench end of day MVP</small></p>	
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 3: Excavated trench.	Description	Photo 4: Trench excavated, placing sandbags into trench for padding.
 <p><small>Date & Time: Wed, Jan 17, 2024 at 14:50:35 EST Position: +037.692763 / -080.733210 (-28.9H) Altitude: 1724ft (-54.9H) Datum: WGS-84 Azimuth Bearing: 247.569W (-64.7mils True (-14.1) Elevation Angle: -15.3 Horizon Angle: +01.6 Zoom: 1.0X S-KL29: Lowering pipe section into trench MVP</small></p>		 <p><small>Date & Time: Sat, Jan 20, 2024 at 07:45:01 EST Position: +037.692822 / -080.733210 (-28.9H) Altitude: 1737ft (-53.9H) Datum: WGS-84 Azimuth Bearing: 247.569W (-64.7mils True (-14.1) Elevation Angle: -15.3 Horizon Angle: +00.8 Zoom: 2.0X S-KL29: Building trench breaker away sidetre MVP</small></p>	
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 5: Lowering pipe in trench.	Description	Photo 6: Constructing trench breakers.
 <p><small>Date & Time: Sun, Jan 21, 2024 at 10:07:40 EST Position: +037.692950 / -080.734049 (-22.4.5H) Altitude: 1735ft (-54.2.6H) Datum: WGS-84 Azimuth Bearing: 248.1646W (-64.09mils True (-18.1) Elevation Angle: -15.2 Horizon Angle: +02.4 Zoom: 1.0X S-KL29: Backfilling sub MVP</small></p>		 <p><small>Date & Time: Wed, Jan 24, 2024 at 09:28:51 EST Position: +037.693000 / -080.733930 (-28.9H) Altitude: 1731ft (-54.1H) Datum: WGS-84 Azimuth Bearing: 248.1646W (-64.09mils True (-18.1) Elevation Angle: -15.2 Horizon Angle: +02.4 Zoom: 1.0X S-KL29: Clearing up stream, picking up sandbags MVP</small></p>	
GPS Location	See Photo	GPS Location	See Photo
Description	Photo 7: Backfilling.	Description	Photo 8: Removing additional sandbags.