



Stream Biological Conditions EA Report

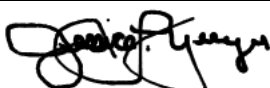
Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	431		
Environmental Auditor	Jessica Yeager	Date/Time	12/11/2023 11:41 AM		
Stream ID	S-M3	Crossing Start Date	1/26/2024	Crossing Completion Date	2/6/2024
Milepost	170.00	Pre-Con Assessment Date	12/11/2023	Post-Con Assessment Date	2/6/2024
Station	8976+00	Bankfull Width (ft.)	8.0	Riffle:Pool Complexes Present?	Yes
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 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.	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.)	1	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	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)			1	2	
Additional Notes						
<p>Pre-Construction Notes</p> <p>Pre-Constructing Meeting - 12/11/2023</p> <p>Water slightly turbid and high; however, stream appears to have high quality habitat. Timber mat in place.</p> <p>Due to length of time from initial pre-construction assessment, a second evaluation was completed on 1/21/2024. The EA found cobble dominated substrate, natural unaltered stream, stable banks, and mixed vegetation.</p> <p>1/24/2024 - Set up pumps for pump-around system. Constructed US dams. Constructed DS dam. Began pumping to minimize water coming around dams. Survey staked out centerline. Created notch or hole in US and DS dams to prepare for overnight rain.</p> <p>1/25/2024 - Worked on swapping out pumps. Utilized pumps to minimize backflow created from dams impacting banks. P1 fencing placed upland in area above aquatic resource below timber mat bridge. Rain. No instream work.</p> <p>1/26/2024 - Hoses for pump-around adjusted. Rebuilt both US/DS dams. Pump-around system not functioning well so added large flume pipes. Removed top 12 inches of substrate and topsoil from adjacent banks (Photo 1), segregated and stored in upland area (Photo 2). Excavated portion of subsoil from aquatic resource and its buffer. Pumped water from trench. Inserted flume pipes over trench. Built DS dam to support flume pipes.</p> <p>1/27/2024 - Pump-around system and flume pipes in use (Photo 3). Removed flume pipes. Blasting crew prepped site for blasting. Bored holes and packed with dynamite (Photo 4). Blasted. Removed blasting mats. Survey staked centerline. Excavated trench between aquatic resource and bell hole. Pumped water out of bell hole. Reinstalled flume pipes.</p> <p>1/28/2024 - Rain. Dams failed. Site flooded including excavated trench.</p> <p>1/29/2024 - Pumped water from bell hole. Built new dewatering structure. Removed timber mats from over bell hole in resource area. Added sandbags around bell hole. Pump-around system active but dams not rebuilt. General clean-up.</p> <p>1/30/2024 - Pump-around system in use. Flume also in place. Added more sandbags around bell hole to minimize water entering trench. Restored dams. Cleaned up sandbags from stream and trench. Removed flume pipes. Added timber mats for work in resource area. Excavated bell hole. Tanker truck used to remove additional water from trench. WVDEP onsite. Replaced flume pipes.</p> <p>1/31/2024 - Pump-around system in use. Completed rebuilding dewatering structure. Removed flume pipes. Pumped water out of bell hole. Timber mats in use. Hammered/excavated trench. Pumped water from trench/bell hole. Replaced flume pipes.</p> <p>2/1/2024 - Pump-around system in use. Timber mats in use. Pumped water out of bell hole. Removed flume pipes. Prepped for welders in bell hole. Excavated/hammered rock and subsoil. Added sandbags into trench (Photo 5). Welders beveled pipe. Side-booms lowered pipe into trench. Pipe lined-up for weld. Side-booms released pipe. Flume pipes reinstalled.</p> <p>2/2/2024 - Pump-around system in use. Welded, x-rayed, sandblasted, coated, and jeeped pipe. Patched holidays.</p> <p>2/3/2024 - Pump-around system in use. Finished jeeping/repairing holidays. Engineering/survey onsite to verify pipes position. Inserted trench box. Excavated upland. Pipe cut. Began constructing trench breakers (Photo 6). Welded.</p> <p>2/3/2024 - Backfilled with padding dirt. Removed flume pipes. Backfilled subsoil. Reinstalled flume pipes (Photo 7).</p> <p>2/6/2024 - Removed flume pipes. Contoured subsoil. Survey shot elevations (Photo 8). Recontoured subsoil to match elevations. Added buffer topsoil. Removed DS dam. Restored substrate. Removed US dam. Removed hoses. Seeded buffer. Added curlex. Added jute as needed below OHWM.</p> <p>Post Construction Notes</p> <p>Crossing in riffle:run area with cobble substrate which has been restored.</p> <p>14. Dam failure due to flash flood late 1/27/2024-early 1/28/2024. Dams not completely restored until 1/30/2024.</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		2/6/2024

AFE 124300135		Date/Time	12/11/2023 11:41 AM	Report #	431		
Required Photos							
 <p>Date & Time: Mon, Dec 11, 2023 at 11:38:51 EST Position: +037.692824, -080.734177, +23.5ft Altitude: 1701ft (+38.1ft) Datum: WGS-84 Azimuth Bearing: 156.524E 2773mils true (+12.1) Elevation Angle: -09.3 Horizon Angle: +01.3 Zoom: 1.0X S-M3_DS view US LOD MVP</p>		 <p>Date & Time: Mon, Dec 11, 2023 at 11:38:51 EST Position: +037.692824, -080.734177, +23.5ft Altitude: 1701ft (+38.1ft) Datum: WGS-84 Azimuth Bearing: 128.932E 2276mils true (+12.1) Elevation Angle: +20.9 Horizon Angle: +01.3 Zoom: 1.0X S-M3_DS view US LOD MVP</p>		<p>GPS Location See Photo</p> <p>Description Downstream view of permitted impact area during pre-construction assessment.</p>		<p>GPS Location See Photo</p> <p>Description Downstream view of unimpacted area during pre-construction assessment.</p>	
 <p>Date & Time: Tue, Feb 14, 2024 at 12:29:55 EST Position: +037.692824, -080.734177, +23.5ft Altitude: 1700ft (+38.1ft) Datum: WGS-84 Azimuth Bearing: 178.531E 3147mils true (+12.1) Elevation Angle: -09.6 Horizon Angle: +01.6 Zoom: 1.0X S-M3_DS view of permitted impact area during post-construction assessment MVP</p>		 <p>Date & Time: Tue, Feb 14, 2024 at 12:29:55 EST Position: +037.692824, -080.734177, +23.5ft Altitude: 1700ft (+38.1ft) Datum: WGS-84 Azimuth Bearing: 109.531E 2647mils true (+12.1) Elevation Angle: +17.6 Horizon Angle: +01.6 Zoom: 1.0X S-M3_DS view of unimpacted area during post-construction assessment MVP</p>		<p>GPS Location See Photo</p> <p>Description Downstream view of permitted impact area during post-construction assessment.</p>		<p>GPS Location See Photo</p> <p>Description Downstream view of unimpacted area during post-construction assessment.</p>	
 <p>Date & Time: Fri, Jan 26, 2024 at 13:41:15 EST Position: +037.693402, -080.735704, (+342.5ft) Altitude: 1710ft (+45.4ft) Datum: WGS-84 Azimuth Bearing: 283.177W 1491mils true (+12.1) Elevation Angle: +05.6 Horizon Angle: +02.5 Zoom: 1.0X S-M3 DS view opposite of aquatic resource MVP</p>		 <p>Date & Time: Fri, Jan 26, 2024 at 13:41:15 EST Position: +037.693402, -080.735704, (+342.5ft) Altitude: 1710ft (+45.4ft) Datum: WGS-84 Azimuth Bearing: 269.587W 1782mils true (+12.1) Elevation Angle: +02.7 Horizon Angle: +02.0 Zoom: 1.0X S-M3 DS view segregated substrate MVP</p>		<p>GPS Location See Photo</p> <p>Description Photo 1: Excavating top 12 inches of substrate from aquatic resource.</p>		<p>GPS Location See Photo</p> <p>Description Photo 2: Segregated substrate stored in upland area.</p>	

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Optional Photos

 <p><small>Date & Time: Sat, Jan 27, 2024 at 09:41:50 EST Position: +037.692875, -080.734125, +40.91H Altitude: 169.0ft (+0.0ft) Datum: WGS-84 Azimuth/Bearing: 045° N45E 0800mils True (+12) Elevation Angle: -92.7 Horizon Angle: -92.7 Zoom: 1.0X S-M3: Sandbagging trench MVP</small></p>	 <p><small>Date & Time: Sat, Jan 27, 2024 at 10:31:17 EST Position: +037.692875, -080.734165, +40.91H Altitude: 170.1ft (+0.0ft) Datum: WGS-84 Azimuth/Bearing: 107° S87W 4767mils True (+12) Elevation Angle: 102.9 Horizon Angle: -102.9 Zoom: 1.0X S-M3: Preparing site for blasting MVP</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 3: Double flume pipes.	Description Photo 4: Prepping site for blasting.
 <p><small>Date & Time: Sat, Feb 03, 2024 at 15:13:13 EST Position: +037.692875, -080.734125, +40.91H Altitude: 170.1ft (+0.0ft) Datum: WGS-84 Azimuth/Bearing: 227° S27W 5013mils True (+12) Elevation Angle: -43.2 Horizon Angle: -102.3 Zoom: 1.0X S-M3: Sandbagging trench MVP</small></p>	 <p><small>Date & Time: Sat, Feb 03, 2024 at 15:01:12 EST Position: +037.692887, -080.734195, +40.91H Altitude: 170.9ft (+127.8ft) Datum: WGS-84 Azimuth/Bearing: 237° S37W 4213mils True (+16) Elevation Angle: -43.2 Horizon Angle: -102.3 Zoom: 1.0X S-M3: Building going away side trench breaker MVP</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 5: Sandbags added to trench for padding.	Description Photo 6: Constructing trench breaker.
 <p><small>Date & Time: Mon, Feb 05, 2024 at 10:28:01 EST Position: +037.692929, -080.734025, +40.91H Altitude: 171.0ft (+0.0ft) Datum: WGS-84 Azimuth/Bearing: 114° S14W 5109mils True (+12) Elevation Angle: -11.8 Horizon Angle: -109.9 Zoom: 1.0X S-M3: Flume pipes end of day. MVP</small></p>	 <p><small>Date & Time: Tue, Feb 06, 2024 at 10:20:06 EST Position: +037.692932, -080.734055, +40.91H Altitude: 172.0ft (+14.0ft) Datum: WGS-84 Azimuth/Bearing: 306° N54W 5444mils True (+16) Elevation Angle: -106.9 Horizon Angle: -101.9 Zoom: 1.0X S-M3: Shaping stream subsoil for waterway MVP</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 7: Backfilling complete. Flume pipes restored.	Description Photo 8: Survey onsite shooting elevations. Contouring bed and banks.