



Stream Biological Conditions EA Report

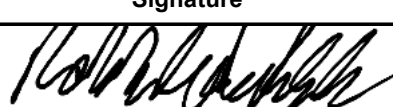
Project Name	H-600 Pipeline Spread F	AFE	124300135	Spread	H-600 Pipeline Spread F
Contractor	Price Gregory	Report #	360		
Environmental Auditor	Elyse Johnston	Date/Time	11/16/2023 8:46 AM		
Stream ID	S-E43	Crossing Start Date	11/17/2023	Crossing Completion Date	12/14/2023
Milepost	191.60	Pre-Con Assessment Date	11/15/2023	Post-Con Assessment Date	12/14/2023
Station	10116+48	Bankfull Width (ft.)	7.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Ephemeral		
County	Monroe	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.	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	Mud/Silt/Clay	Mud/Silt/Clay
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.)	1	3

AFE	124300135	Date/Time	11/16/2023 8:46 AM	Report #	360	
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	3	
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	3	
Additional Notes						
<p>Pre-Construction Notes Pre-Construction Meeting - 11/15/2023 Must maintain buffer 100' away from karst (i.e. no parking, etc.). Tributary S-E45 discharges into S-E43 in ROW</p> <p>11/17/2023 - First top 12 inches of substrate removed (Photo 1) and segregated in work area. Dam and pump installed, along with set up for flume pipe. Prepped for blasting. Bank topsoil removed (Photo 2) and segregated. Rock encountered at ~18" below soil surface. Drilled for blasting. Flume pipe put in place. 11/18/2023 - Additional drilling occurred. Blasted through aquatic resource and riparian buffer. 11/19/2023 - No work in-stream. Pump around in-place. 11/20/2023 - Excavated trench and hammered within riparian buffer and through aquatic resources. 11/21/2023 - Rain Event. No work in-stream. Ditch water from precipitation pumped out of trench only. 11/22/2023 - Excavation of aquatic resources and adjacent riparian corridor (northern edge) (Photo 3). Section of the pipe (adjacent to the riparian buffer) was lowered into trench. 11/24/2023 - Welded outside resource area. Removed flume pipe and continued to excavate. Replaced flume pipe. 11/25/2023 - Excavated and hammered in trench outside aquatic resource area. No work in aquatic resources. Flume pipe remained in place. 11/26/2023 - Completed excavation of trench through and outside of aquatic resource area. Section of pipe in southern riparian buffer lowered into trench. No work in aquatic resources. Flume pipe remained in place. 11/27/2023-11/28/2023 - Welded, x-rayed, sandblasted and coated outside of aquatic resource area. Sorted/sifted subsoil for backfill. No work in aquatic resources. Flume pipe remained in place. 11/29/2023 - Flume pipe removed. Pump-around in place. Pipe lowered into trench through aquatic resources. Sandbags added for padding. Trench boxed lowered into trench. Flume pipe restored (Photo 4). 11/30/2023 - Pipe adjusted in trench. Welding and coating completed. Padding of pipe ongoing. Flume pipe remained in place. 12/1/2023 - Welding, coating, x-ray of the pipe ongoing. No work in aquatic resources. Pipe remained in place. 12/2/2023 - Welding completed. Survey onsite to shoot pipe location. X-rayed. Backfilling began. No work in aquatic resources. Flume pipe remained in place. 12/4/2023 - Sandblasted and coated. Backfilled. No work in aquatic resources. Flume pipe remained in place. 12/5/2023 - Backfilled. Rock shielding put on pipe. Trench breaker started. 12/6/2023 - Additional sandbags placed in trench. Padding soil added to trench outside of resource area. 12/7/2023 - Padding and backfilling continued. Trench breaker is installed (Photo 5). Flume pipe remained in place. 12/8/2023 - Padding soil added to trench (Photo 6). Lime added to soil to decrease moisture. Second trench breaker started. Backfilling continued outside of resource area. 12/9/2023-12/12/2023 - Padding and backfilling continued. Flume removed and replaced as needed. 12/13/2023 - Backfilling continued. Flume pipe and sandbags removed. Substrate and bank soil restored (Photo 7) and contoured. Survey checked elevations (Photo 8) and placed OHWM. 12/14/2023 - Seeding and back stabilization completed.</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
Elyse Johnston				ERM		12/14/2023

AFE	124300135	Date/Time	11/16/2023 8:46 AM	Report #	360
Required Photos					
 <p data-bbox="170 184 430 331">Date & Time: Wed, Nov 15, 2023, 10:15:03 EST Position: +037.453705, -080.654422 (-18.8m) Altitude: 2039ft (-64.4m) Datum: WGS-84 Azimuth Bearing: 201.521W 3573mils True (-12) Elevation Angle: -12.3 Horizon Angle: -01.3 Zoom: 1.0X s-e-43/45 off LOD MVP/ERM</p>	See Photo	 <p data-bbox="868 184 1128 331">Date & Time: Wed, Nov 15, 2023, 10:39:55 EST Position: +037.453798, -080.654511 (-17.8m) Altitude: 2039ft (-64.4m) Datum: WGS-84 Azimuth Bearing: 201.521W 3573mils True (-12) Elevation Angle: -12.3 Horizon Angle: -01.3 Zoom: 1.0X s-e-43/45 off LOD MVP/ERM</p>	See Photo		
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.		
 <p data-bbox="170 1239 430 1386">Date & Time: Mon, Nov 13, 2023, 14:21:52 EST Position: +037.453798, -080.654422 (-18.8m) Altitude: 2032ft (-62.9m) Datum: WGS-84 Azimuth Bearing: 200.522W 3573mils True (-12) Elevation Angle: -12.3 Horizon Angle: -01.3 Zoom: 1.0X s-e-43/45 downstream MVP Spread F 43/45</p>	See Photo	 <p data-bbox="868 1239 1128 1386">Date & Time: Mon, Nov 13, 2023, 14:21:52 EST Position: +037.453798, -080.654422 (-18.8m) Altitude: 2032ft (-62.9m) Datum: WGS-84 Azimuth Bearing: 200.522W 3573mils True (-12) Elevation Angle: -12.3 Horizon Angle: -01.3 Zoom: 1.0X s-e-43/45 downstream of unimpacted area MVP Spread F 43/45</p>	See Photo		
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.		
 <p data-bbox="170 1837 430 1984">Date & Time: Fri, Nov 17, 2023, 11:57:22 EST Position: +037.453799, -080.654367 (-14.05ft) Altitude: 2044ft (-62.7m) Datum: WGS-84 Azimuth Bearing: 045. N45E 0800mils True (-12) Elevation Angle: -10.7 Horizon Angle: -01.2 Zoom: 1.0X s-e-43/45 topsoil removal in banks (10) MVP/ERM</p>	See Photo	 <p data-bbox="868 1837 1128 1984">Date & Time: Fri, Nov 17, 2023, 14:24:11 EST Position: +037.453708, -080.654219 (-94.1ft) Altitude: 2044ft (-62.7m) Datum: WGS-84 Azimuth Bearing: 320. N40W 5689mils True (-22) Elevation Angle: -19.4 Horizon Angle: -01.6 Zoom: 1.0X s-e-43/45 MVP/ERM</p>	See Photo		
GPS Location	See Photo	GPS Location	See Photo		
Description	Photo 1: Excavating top 12 inches of substrate.	Description	Photo 2: Soil from buffer removed.		

Optional Photos		
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 <p><small>Date & Time: Wed, Nov 22, 2023 09:44:46 EST Position: +037.453777, -80.663918 (+25.4ft) Altitude: 2042ft (+54.0ft) Datum: WGS 84 Azimuth Bearing: 351 N09W 6240mils True (+27) Elevation Angle: -09.4 Horizon Angle: +01.6 Zoom: 1.0X s-e43.45.46 in replacing flume MVP.ERM</small></p>	 <p><small>Date & Time: Wed, Nov 22, 2023 12:03:10 EST Position: +037.453785, -80.664245 (+25.4ft) Altitude: 2042ft (+54.0ft) Datum: WGS 84 Azimuth Bearing: 303 N57W 5387mils True (+12) Elevation Angle: -10.4 Horizon Angle: +00.0 Zoom: 1.0X s-e43.45.46 in replacing flume MVP.ERM</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 3: Excavating trench.	Description Photo 4: Pipe in place in trench through aquatic resources and flume being restored.
 <p><small>Date & Time: Thu, Dec 14, 2023 11:07:36 EST Position: +037.453780, -80.664327 (+59.5ft) Altitude: 2042ft (+54.0ft) Datum: WGS 84 Azimuth Bearing: 227 S47W 4036mils True (+39) Elevation Angle: -08.2 Horizon Angle: -04.3 Zoom: 1.0X trench breaker installation MVP S-E43 S-E45</small></p>	 <p><small>Date & Time: Thu, Dec 14, 2023 11:09:07 EST Position: +037.453785, -80.664267 (+59.5ft) Altitude: 2042ft (+54.0ft) Datum: WGS 84 Azimuth Bearing: 201 S80W 4672mils True (+34) Elevation Angle: -08.2 Horizon Angle: -00.0 Zoom: 1.0X padding MVP S-E43 S-E45</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 5: Trench breaker installed.	Description Photo 6: Padding material added to trench in aquatic resource area.
 <p><small>Date & Time: Wed, Dec 13, 2023 14:16:38 EST Position: +037.453777, -80.664327 (+59.5ft) Altitude: 2042ft (+54.0ft) Datum: WGS 84 Azimuth Bearing: 227 S47W 4036mils True (+39) Elevation Angle: -08.2 Horizon Angle: -04.3 Zoom: 1.0X placing stream bank soil MVP S-E43 S-E45</small></p>	 <p><small>Date & Time: Wed, Dec 13, 2023 14:15:19 EST Position: +037.453777, -80.664327 (+59.5ft) Altitude: 2042ft (+54.0ft) Datum: WGS 84 Azimuth Bearing: 180 S00W 3200mils True (+24) Elevation Angle: -21.2 Horizon Angle: -00.1 Zoom: 1.0X survey on site for stream MVP S-E43 S-E45</small></p>
GPS Location See Photo	GPS Location See Photo
Description Photo 7: Substrate and bank soil added.	Description Photo 8: Survey checking elevations.