



# Stream Biological Conditions EA Report


<b>Project Name</b>	H-600 Pipeline Spread F	<b>AFE</b>	124300135	<b>Spread</b>	H-600 Pipeline Spread F
<b>Contractor</b>	Price Gregory	<b>Report #</b>	347		
<b>Environmental Auditor</b>	Aaron Crank	<b>Date/Time</b>	11/9/2023 1:14 PM		
<b>Stream ID</b>	S-Z5	<b>Crossing Start Date</b>	11/17/2023	<b>Crossing Completion Date</b>	12/4/2023
<b>Milepost</b>	185.30	<b>Pre-Con Assessment Date</b>	11/9/2023	<b>Post-Con Assessment Date</b>	12/4/2023
<b>Station</b>	9783+84	<b>Bankfull Width (ft.)</b>	3.0	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Ephemeral		
<b>County</b>	Monroe	<b>303(d) Impairment Listing</b>	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    Flume <input checked="" type="checkbox"/> Cofferdam    Conventional Bore    Horizontal Directional Drill (HDD) Bore	
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	<b>Predominant Substrate Type (select one):</b> Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Mud/Silt/Clay	Mud/Silt/Clay
16	<b>Channel Conditions: Rating:</b> 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)	4	4
17	<b>Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank: Rating:</b> 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

<b>AFE</b>	124300135	<b>Date/Time</b>	11/9/2023 1:14 PM	<b>Report #</b>	347		
<b>Biological Conditions Continued</b>					<b>Pre-Con</b>	<b>Post-Con</b>	
18	<b>Instream Habitat Conditions:</b> 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)			4	4		
19	<b>Channel Alterations:</b> 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)			4	4		
<b>Additional Notes</b>							
<p>Pre-Construction Notes</p> <p>Pre-Construction Meeting - 11/9/2023</p> <p>15. Substrate consisted of mud/silt/clay overlain with nonnative gravel.</p> <p>16, 17, 18, 19. No water observed in resource. Poor habitat conditions throughout resource resulting in low scores in all categories.</p> <p>11/13/2023 - Survey marked OHWM in resource. No work occurred in resource.</p> <p>11/17/2023 - First 12 inches of substrate excavated from aquatic resource (Photo 1) and stored in designated containment structure (Photo 2). Excavated and hammered in trench through road and aquatic resources (both sides of road) (Photo 3). Timber mat bridge (TMB) placed and removed over trench through aquatic resource and road throughout the day. Flume pipe installed in resource.</p> <p>11/18/2023 and 11/20/2023 - Excavated and hammered in trench through aquatic resources and adjacent riparian buffers. TMB removed and replaced over resource throughout day. Flume removed and replaced at the beginning and end of day, respectively.</p> <p>11/21/2023 - Rain out</p> <p>11/22/2023 - Welding ongoing. Trench dewatered in aquatic resource area. Sandbag "pillows" added to trench for padding. Pipe lowered into trench (Photo 4). TMB removed and replaced over resource throughout day. Flume removed and replaced.</p> <p>11/24/2023 - No water in stream resource. Welding and x-ray occurred outside of aquatic resource boundary. Flume removed and replaced.</p> <p>11/25/2023 - Continued to excavate trench north of aquatic resource. Sandblasted and coated. Placed sandbag "pillows" then pipe in trench north of aquatic resource. Welding and x-ray ongoing. Added gravel to intersection of road and ROW. Cleaned out inlet of flume where gravel had fallen over side covering part of pipe. Sandblasted and coated weld south of aquatic resource. Flume pipe remained in place.</p> <p>11/26/23 - Completed repair work outside of aquatic resource area in the section of pipe that will be installed next. Additional sandbags "pillows" then pipe placed in trench north of aquatic resource. Welded, sandblasted, and coated outside resource area. No work being completed near resource crossings. Flume pipe remained in place.</p> <p>11/27/2023-11/28/2023 - Welding continued, tied-in to pipe through aquatic resource, jeeped, and rock shielding. Padding soil prepared. Added more grave to road. No work occurred within aquatic resource boundary.</p> <p>11/29/2023 - Additional padding soil prepared and added to trench. Welding and coating continued. Constructed concrete trench breakers for road crossing (Photo 5).</p> <p>11/30/2023 - Welding and coating ongoing outside of aquatic resource area. Backfilled with padding dirt (Photo 6). Sand and water added to trench at road crossing. Subsoil (Photo 7) and topsoil added in buffer.</p> <p>12/01/2023 - Installed test station in resource buffer zone on northern edge of road. Backfilling. Flume pipe and TMB removed from aquatic resource. Environmental crew replaced P1 silt saver fence in buffer zone. Environmental crew applied Curlex to buffer zone. Work ceased due to rain. Contoured subsoil. Added topsoil to resource area. Restored substrate (Photo 7). Backfilling resumed north of aquatic resource, outside buffer zone. Graded.</p> <p>12-02-2023 - Worked outside resource padding and backfilling trench. Survey onsite. Survey shot OHWM elevations. Applied Curlex above OHWM (Photo 8) and installed P1 fencing. Environmental crew called to different location.</p> <p>12/04/2023 - Seed applied to resource.</p> <p>Post Construction Notes</p> <p>16., 17. Crossing and riparian areas have been recently restored. These areas will be monitored until 80% vegetative coverage has been achieved and areas that do not have 80% vegetative cover within 30 days will be reseeded.</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>							
<b>Name</b>		<b>Signature</b>		<b>Company</b>		<b>Date</b>	
Aaron Crank				Potesta		12/4/2023	

AFE	124300135	Date/Time	11/9/2023 1:14 PM	Report #	347						
Required Photos											
<p>Date &amp; Time: Thu, Nov 09, 2023 at 13:17:56 EST            Position: +037.524369° / -080.711311° (±15.6ft)            Altitude: 1765ft (±10.9ft)            Datum: WGS-84            Azimuth/Bearing: 209° S62W (±27) mits True (±30°)            Elevation Angle: +17.7°            Horizon Angle: +00.6°            Zoom: 1.0X            S-Z5 - Downstream view of permitted impact area during pre-construction assessment            MVP-SZ5</p>		<p>Date &amp; Time: Thu, Nov 09, 2023 at 13:19:06 EST            Position: +037.524339° / -080.711561° (±15.6ft)            Altitude: 1761ft (±11.0ft)            Datum: WGS-84            Azimuth/Bearing: 241° S61W (±28) mits True (±26°)            Elevation Angle: +18.8°            Horizon Angle: +01.3°            Zoom: 1.0X            S-Z5 - Downstream view of unimpacted area during pre-construction assessment            MVP-SZ5</p>		<p><b>GPS Location</b></p>	<p>See Photo</p>	<p><b>GPS Location</b></p>	<p>See Photo</p>				
<p><b>Description</b></p>	<p>Downstream view of permitted impact area during pre-construction assessment.</p>	<p><b>Description</b></p>	<p>Downstream view of unimpacted area during pre-construction assessment.</p>	<p>Date &amp; Time: Mon, Dec 04, 2023 at 10:48:53 EST            Position: +037.524353° / -080.711305° (±15.6ft)            Altitude: 1762ft (±11.1ft)            Datum: WGS-84            Azimuth/Bearing: 038° N38E (067) mits True (±18°)            Elevation Angle: +16.8°            Horizon Angle: +00.2°            Zoom: 1.0X            S-Z5 view of permitted impact area during post-construction assessment            MVP-SZ5</p>		<p>Date &amp; Time: Mon, Dec 04, 2023 at 14:50:02 EST            Position: +037.524329° / -080.711561° (±15.6ft)            Altitude: 1741ft (±11.1ft)            Datum: WGS-84            Azimuth/Bearing: 083° N83E (147) mits True (±18°)            Elevation Angle: +18.9°            Horizon Angle: +00.2°            Zoom: 1.0X            S-Z5 view of unimpacted area during post-construction assessment            MVP-SZ5</p>		<p><b>GPS Location</b></p>	<p>See Photo</p>	<p><b>GPS Location</b></p>	<p>See Photo</p>
<p><b>Description</b></p>	<p>Downstream view of permitted impact area during post-construction assessment.</p>	<p><b>Description</b></p>	<p>Downstream view of unimpacted area during post-construction assessment.</p>	<p>Date &amp; Time: Fri, Nov 17, 2023 at 08:38:21 (08:38:21) EST            Position: +037.524324° / -080.711533° (±32.3ft)            Altitude: 1723ft (±78.7ft)            Datum: WGS-84            Azimuth/Bearing: 127° S33E (225) mits True (±24°)            Elevation Angle: +14.0°            Horizon Angle: +01.3°            Zoom: 1.0X            Stream Substrate Removal begins in S-Z5            MVP-SZ5            Tick marks every 5'</p>		<p>Date &amp; Time: Fri, Nov 17, 2023 at 10:12:41 EST            Position: +037.523703° / -080.711119° (±11.8ft)            Altitude: 1792ft (±9.8ft)            Datum: WGS-84            Azimuth/Bearing: 230° S50W (408) mits True (±40°)            Elevation Angle: +00.6°            Horizon Angle: +00.6°            Zoom: 1.0X            S-Z5 substrate containment structure            MVP-SZ5            Tick marks every 5'</p>		<p><b>GPS Location</b></p>	<p>See Photo</p>	<p><b>GPS Location</b></p>	<p>See Photo</p>
<p><b>Description</b></p>	<p>Photo 1: Substrate removal.</p>	<p><b>Description</b></p>	<p>Photo 2: Substrate containment structure.</p>								

**Optional Photos**

 <p style="font-size: small; color: gray;">Date &amp; Time: Wed, Nov 07, 2023 at 11:09:29 EST Position: +037.5245367, -080.711341 (-12.0ft) Altitude: 1757ft (+49.1ft) Datum: WGS-84 Azimuth/Bearing: 298.878W 0597mils True (+89.7) Horizontal Angle: -26.0 Elevation Angle: +0.9 Zoom: 1.0X Horizontal Curves: 5.25 Vertical Curves: 5.25 Mounting: Substrate Mountain Valley Pipeline</p>	 <p style="font-size: small; color: gray;">Date &amp; Time: Wed, Nov 22, 2023 at 15:22:01 EST Position: +037.524537, -080.711332 (-17.1ft) Altitude: 1753ft (+43.5ft) Datum: WGS-84 Azimuth/Bearing: 111.110E 0178mils True (+30) Horizontal Angle: -26.0 Elevation Angle: +0.2 Zoom: 1.0X Horizontal Curves: 5.25 Vertical Curves: 5.25 Mounting: Substrate Mountain Valley Pipeline</p>
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 3: Trenching in resource.	<b>Description</b> Photo 4: Pipe placed in trench.
 <p style="font-size: small; color: gray;">Date &amp; Time: Wed, Nov 08, 2023 at 10:36:22 EST Position: +037.524537, -080.711317 (-2.7ft) Altitude: 1763ft (+59.3ft) Datum: WGS-84 Azimuth/Bearing: 186.500W 0320mils True (+2.0) Horizontal Angle: -42.3 Elevation Angle: -0.9 Zoom: 1.0X Trench Breaker: 1 Mounting: Substrate Mountain Valley Pipeline</p>	 <p style="font-size: small; color: gray;">Date &amp; Time: Thu, Nov 30, 2023 at 09:03:12 EST Position: +037.524537, -080.711339 (-17.1ft) Altitude: 1753ft (+43.5ft) Datum: WGS-84 Azimuth/Bearing: 111.110E 0178mils True (+30) Horizontal Angle: -26.0 Elevation Angle: +0.2 Zoom: 1.0X Horizontal Curves: 5.25 Vertical Curves: 5.25 Mounting: Substrate Mountain Valley Pipeline</p>
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 5: Constructing trench breakers.	<b>Description</b> Photo 6: Adding padding dirt to trench.
 <p style="font-size: small; color: gray;">Date &amp; Time: Fri, Dec 01, 2023, 15:43:35 EST Position: +037.5242584, -080.711594 (-21.0ft) Altitude: 1757ft (+49.1ft) Datum: WGS-84 Azimuth/Bearing: 195.155E 0978mils True (+13.1) Horizontal Angle: -92.2 Elevation Angle: -0.9 Zoom: 1.0X Horizontal Curves: 5.25 Vertical Curves: 5.25 Mounting: Substrate Mountain Valley Pipeline</p>	 <p style="font-size: small; color: gray;">Date &amp; Time: Sat, Dec 02, 2023 at 09:57:32 EST Position: +037.524076, -080.711524 (-32.8ft) Altitude: 1600ft (+62.3ft) Datum: WGS-84 Azimuth/Bearing: 82.1123E 0409mils True (+12.1) Horizontal Angle: -92.2 Elevation Angle: -0.9 Zoom: 1.0X Horizontal Curves: 5.25 Vertical Curves: 5.25 Mounting: Substrate Mountain Valley Pipeline</p>
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 7: Substrate restored.	<b>Description</b> Photo 8: Applying curlex.