



# 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>                  | 280               |                                       |                         |
| <b>Environmental Auditor</b> | Beth Burdette           | <b>Date/Time</b>                 | 10/9/2023 1:43 PM |                                       |                         |
| <b>Stream ID</b>             | S-N5                    | <b>Crossing Start Date</b>       | 10/9/2023         | <b>Crossing Completion Date</b>       | 10/14/2023              |
| <b>Milepost</b>              | 169.09                  | <b>Pre-Con Assessment Date</b>   | 10/9/2023         | <b>Post-Con Assessment Date</b>       | 10/14/2023              |
| <b>Station</b>               | 8928+11                 | <b>Bankfull Width (ft.)</b>      | 4.0               | <b>Riffle:Pool Complexes Present?</b> | No                      |
| <b>State</b>                 | WV                      | <b>Stream Classification</b>     | Perennial         |                                       |                         |
| <b>County</b>                | Summers                 | <b>303(d) Impairment Listing</b> | None              |                                       |                         |

### 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)<br>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)  | 1             | 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.) | 1             | 2             |

|  |   |   |                   |                 |                |                 |
|--|---|---|-------------------|-----------------|----------------|-----------------|
| <b>AFE</b>   | 124300135   | <b>Date/Time</b>  | 10/9/2023 1:43 PM | <b>Report #</b> | 280            |                 |
| <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)  |   |                   | 1               | 1              |                 |
| <b>Additional Notes</b>  |   |   |                   |                 |                |                 |
| <p>Pre-Construction Notes<br/> Pre-Construction Meeting (10/9/2023)<br/> Pre-Construction completed 10/10/2023 due to climatic conditions.<br/> Bank full width measured at OHWM takes at the centerline.<br/> 18. Low instream habitat score due to no flow conditions.</p> <p>10/9/2023 - Heavy rain. No flow in channel prior to rain event. Stream substrate removed and segregated (Photo 1). Dams and flumes installed.</p> <p>10/10/2023 - Hammering of rock material and excavating trench. Pumping as needed. Welding ongoing outside of trench. Lowered pipe into trench (outside of aquatic resource).</p> <p>10/11/2023 - Dewatering of trench as needed. Continued trench excavation (Photo 2). Cutting, welding, x-ray and coating occurred outside of aquatic resource area. Installed sandbag bedding in trench (Photo 3).</p> <p>10/12/2023 - Dewatering of trench as needed. Lowered pipe into trench in aquatic resource area and made necessary alignment adjustments (Photo 4).</p> <p>10/13/2023 - Cutting, welding, x-ray and coating occurred in trench outside of aquatic resource area. Survey verified pipe elevations. Began construction of trench breakers and backfilling trench (Photo 5).</p> <p>10/14/2023 - Trench breakers completed. Trench backfilled (Photo 6). Stream substrate and topsoil returned to channel. Survey verified elevations and placement of OHWM. Stream banks seeded (Photo 7) and curlex put in place above OHWM (Photo 8). Restoration complete.</p> <p>Post Construction Notes<br/> No stream flow present during resource crossing.<br/> 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.<br/> 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>  |   |   |                   |                 |                |                 |
| <b>Name</b>  |   | <b>Signature</b>  |                   | <b>Company</b>  |                |                 |
| Beth Burdette  |   |  |                   | POTESTA         |                |                 |
|  |   |   |                   | <b>Date</b>     |                |                 |
|  |   |   |                   | 10/15/2023      |                |                 |

**Required Photos**

|  |  |
|--|--|
|                 |          |
| <b>GPS Location</b> See Photo  | <b>GPS Location</b> See Photo  |
| <b>Description</b> Downstream view of permitted impact area during pre-construction assessment.  | <b>Description</b> Downstream view of unimpacted area during pre-construction assessment.  |
|                |         |
| <b>GPS Location</b> See Photo  | <b>GPS Location</b> See Photo  |
| <b>Description</b> Downstream view of permitted impact area during post-construction assessment. | <b>Description</b> Downstream view of unimpacted area during post-construction assessment. |
|               |        |
| <b>GPS Location</b> See Photo  | <b>GPS Location</b> See Photo  |
| <b>Description</b> Photo 1: Stream substrate segregated and placed in upland area.               | <b>Description</b> Photo 2: Trenching and hammering through aquatic resource area.         |

**Optional Photos**

|   |   |
|---|---|
|  <p><small>Date &amp; Time: Wed, Oct 11, 2023 at 16:09:02 EDT<br/>Position: 037.684570 N / 080.720478 W (-13124.0ft)<br/>Altitude: 2000ft (-182.4ft)<br/>Datum: WGS-84<br/>Azimuth/Bearing: 012° N12E 0230mils True (-17)<br/>Elevation Angle: -21.3<br/>Horizon Angle: +02.9<br/>Zoom: 1.0X<br/>S-NS TRENCH BEDDING<br/>Mountain Valley</small></p>     |  <p><small>Date &amp; Time: Thu, Oct 12, 2023 at 11:26:45 EDT<br/>Position: 037.703823 N / 080.742714 W (-1313.3ft)<br/>Altitude: 2079ft (-168.3ft)<br/>Datum: WGS-84<br/>Azimuth/Bearing: 851° N09W 8940mils True (-12)<br/>Elevation Angle: -17.4<br/>Horizon Angle: 10.0<br/>Zoom: 1.0X<br/>S-NS PIPE ALIGNMENT<br/>Mountain Valley</small></p>                          |
| <b>GPS Location</b> See Photo   | <b>GPS Location</b> See Photo   |
| <b>Description</b> Photo 3: Adding sandbag bedding to trench.   | <b>Description</b> Photo 4: Pipe lowered into trench and adjustments made to pipe.  |
|  <p><small>Date &amp; Time: Fri, Oct 13, 2023 at 16:52:27 EDT<br/>Position: 037.703935 N / 080.744755 W (-1312.8ft)<br/>Altitude: 2012ft (-159.8ft)<br/>Datum: WGS-84<br/>Azimuth/Bearing: 345° N15W 6133mils True (-12)<br/>Elevation Angle: -19.8<br/>Horizon Angle: +05.8<br/>Zoom: 2.0X<br/>S-NS TRENCH BREAKERS<br/>Mountain Valley</small></p>    |  <p><small>Date &amp; Time: Sat, Oct 14, 2023 at 12:34:48 EDT<br/>Position: 037.704009 N / 080.744805 W (-1312.9ft)<br/>Altitude: 1968ft (-146.7ft)<br/>Datum: WGS-84<br/>Azimuth/Bearing: 202° N80E 4977mils True (-12)<br/>Elevation Angle: -16.5<br/>Horizon Angle: +02.4<br/>Zoom: 1.0X<br/>S-NS BACKFILLED PRE-RESTORATION<br/>Mountain Valley</small></p>            |
| <b>GPS Location</b> See Photo   | <b>GPS Location</b> See Photo   |
| <b>Description</b> Photo 5: Construction of trench breakers and filling of trench.  | <b>Description</b> Photo 6: Site prepared for substrate restoration.  |
|  <p><small>Date &amp; Time: Sat, Oct 14, 2023 at 16:19:26 EDT<br/>Position: 037.704251 N / 080.744911 W (-1313ft)<br/>Altitude: 1983ft (-142.3ft)<br/>Datum: WGS-84<br/>Azimuth/Bearing: 252° N32W 4880mils True (-12)<br/>Elevation Angle: -15.5<br/>Horizon Angle: +00.4<br/>Zoom: 1.0X<br/>S-NS STREAM BANK SEEDING<br/>Mountain Valley</small></p> |  <p><small>Date &amp; Time: Sat, Oct 14, 2023 at 15:27:08 EDT<br/>Position: 037.704187 N / 080.744805 W (-1313.9ft)<br/>Altitude: 1968ft (-146.7ft)<br/>Datum: WGS-84<br/>Azimuth/Bearing: 081° N81E 1440mils True (-12)<br/>Elevation Angle: -19.5<br/>Horizon Angle: -01.2<br/>Zoom: 1.0X<br/>S-NS CURLEX WOOD PROXIMITY FLAG PLACEMENT<br/>Mountain Valley</small></p> |
| <b>GPS Location</b> See Photo   | <b>GPS Location</b> See Photo   |
| <b>Description</b> Photo 7: Seeding of banks above OHWM.  | <b>Description</b> Photo 8. Curlex installed on banks to edge of OHWM.  |