



Wetland Biological Conditions EA Report

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|------------------------------|-------------------------|--------------------------------|------------|-----------------------------------|-------------------------|
| Project Name | H-600 Pipeline Spread B | AFE | 124300130 | Spread | H-600 Pipeline Spread B |
| Contractor | Precision | Report # | 118 | | |
| Environmental Auditor | Clayton Calmindon | | | Date/Time | 11/3/2023 7:51 AM |
| Wetland ID | W-K31 | Crossing Start Date | 10/16/2023 | Crossing Completion Date | 11/7/2023 |
| Milepost | 45.94 | Pre-Con Assessment Date | 10/16/2023 | Post-Con Assessment Date | 11/7/2023 |
| Station | 2425+37 | Cowardin Classification | PEM | Wetland Impact Area(acres) | 1.135 |
| State | WV | | | | |
| County | Lewis | | | | |

Resource Post-Crossing Conditions

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|----|---|-----------|
| 1 | Were equipment mats or other suitable methods utilized under heavy equipment to minimize soil compaction and disturbance in wetlands? | Yes |
| 2 | Was the existing vegetation removed prior to initiating land disturbance within the resource? | Yes |
| 3 | Was the top 1-foot (12-inches) of wetland soil segregated and stockpiled separate from trench spoils? | See Below |
| 4 | Was excess material not needed for backfill removed and disposed of in an upland area? | Yes |
| 5 | Was the top 12-inches of backfill made with clean native wetland topsoil? | See Below |
| 6 | Were standard decompaction practices (disking, plowing, cultivating, tilling, or incorporation of organic matter into the topsoil horizon) implemented prior to applying seed? | Yes |
| 7 | Was wetland topsoil replaced and temporarily seeded? | Yes |
| 8 | Was permanent seed applied to unsaturated wetlands? | Yes |
| 9 | Was equipment/timber matting removed from the wetland area properly by vertically lifting, and not pulling through the impact area? | Yes |
| 10 | Were impervious trench breakers/plugs properly installed within 25-feet of the resource to prevent subsurface erosion to or from the resource area? | Yes |
| 11 | Was the pre-construction survey data utilized during restoration in attempt to maintain the original surface hydrology, and were contours re-established to pre-construction conditions to maintain overland flow patterns? | 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 | Was the time of disturbance minimized by conducting resource work continuously to completion? | Yes |
| 14 | Does the post-construction square footage of wetland area appear to be restored to meet or exceed the pre-construction area square footage? | Yes |
| 15 | Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 – 4/30) in PFO classified wetlands? | N/A |
| 16 | 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 |
|----|--|---------|--|----------|
| 17 | Wetland Saturation: Are surface waters, the water table, and/or overall soil saturation present? (Select Yes or No) | Yes | | No |
| 18 | Resource Alterations: Are the wetland soil conditions visibly disturbed? Examples: Livestock presence, haul roads, farm traffic, drain tiles, recent mowing/clear cutting, recent excavating/disking of soils, etc. Rating: 1-Negligible (undisturbed/natural resource), 2-Minor (20-40% of resource disturbed by alterations), 3-Moderate (40-80% of resource disturbed), 4-Poor (>80% of resource disturbed) | 2 | | 4 |
| 19 | Is vegetation present within the permitted impact area prior to disturbance? (Pre-Con) Are areas properly seeded and stabilized after restoration? (Post-Con) Rating: 1-Optimal (60-100% heavy vegetative cover), 2-Sub-optimal (30-60% mixed vegetative coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetative coverage, etc.) | 1 | | 4 |

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|----------------------|------------------------------------|---------------------|
| AFE 124300130 | Date/Time 11/3/2023 7:51 AM | Report # 118 |
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Additional Notes

10/16/23 - Pre construction meeting was held and construction of crossing commenced with topsoil removal from wetland. Some areas of the wetland had less than 12" of topsoil present before encountering bedrock so the contractor removed available topsoil in those areas. The removed topsoil was stockpiled in a designated area separate from other spoil. C. Biden

10/17/23 Contractor continued working on removing and segregating wetland topsoil. Groundwater entering the trench was pumped out and dewatered. C. Biden

10/18/23-10/20/23 The contractor worked on excavating the trench through the bedrock. C Biden

10/21/23 The contractor worked on welding pipe connection outside of wetland area. Trench digging and bedrock removal within wetland area continued. C Biden

10/23/23 The contractor worked on welding of first pipeline connection within the wetland area. C Biden

10/24/23 The contractor worked on removal of most of the remaining bedrock from wetland near the northeast slope. Welding of pipe within wetland X-rayed and surveyed. C Biden

10/25/23 The contractor continued removal of bedrock and welding of pipe coming down northeast slope. C Biden

10/26/23-10/28/23 The contractor worked on installation and welding of pipe within wetland. C Biden

10/30/23 No work conducted within wetland due to high precipitation event-rained out. C. Calmindon

10/31/23 The contractor worked on sifting subsoil and began backfilling within wetland. C. Calmindon

11/1/23-11/4/23 The contractor installed trench breakers and continued working on backfilling. C. Calmindon


11/5/23 The contractor used survey data to ensure subsoil was restored to appropriate depth and grade. C. Calmindon/R. Ellis

11/6/23 The topsoil was restored. R. Ellis

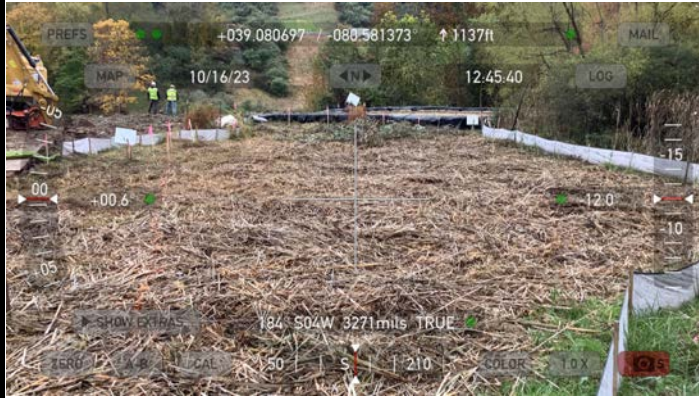
11/7/23 The topsoil was seeded. R. Ellis

Post Construction Assessment
 Conditions 18 and 19 were given a rating of 4 during the post-construction assessment due to the lack of vegetation in the disturbed permitted impact area following the completion of the crossing. The W-K31 topsoil was seeded with the appropriate permanent seed mix in accordance with Appendix B: Restoration Work Plan of the Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework.

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.

| Name | Signature | Company | Date |
|-------------------|---|---------|-----------|
| Clayton Calmindon |  | ERM | 11/8/2023 |

Required Photos



| | |
|---------------------|--|
| GPS Location | Refer to photo. |
| Description | View of permitted resource impact area during pre-construction assessment. |

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|---------------------|---|
| GPS Location | Refer to photo. |
| Description | At edge of LOD, view of unimpacted resource area conditions during pre-construction assessment. |



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|---------------------|---|
| GPS Location | Refer to photo. |
| Description | View of permitted resource impact area during post-construction assessment. |

| | |
|---------------------|--|
| GPS Location | Refer to photo. |
| Description | At edge of LOD, view of unimpacted resource area conditions during post-construction assessment. |



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| GPS Location | Refer to photo. |
| Description | Soil segregation continued and groundwater was pumped out as needed. |

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| GPS Location | Refer to photo. |
| Description | The digging of the trench continued. |

Optional Photos



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| GPS Location | Refer to photo. | GPS Location | Refer to photo. |
| Description | The welding on the first pipe section began. | Description | The bedrock removal continued. |



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|---------------------|--------------------------------|---------------------|------------------------------------|
| GPS Location | Refer to photo. | GPS Location | Refer to photo. |
| Description | The bedrock removal continued. | Description | The welding on the pipe continued. |



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|---------------------|----------------------------|---------------------|---------------------------|
| GPS Location | Refer to photo. | GPS Location | Refer to photo. |
| Description | The backfilling continued. | Description | The topsoil was returned. |