

8.3 Characterization of Groundwater [§§ 77.405, 77.457 and 77.521]

Characterize the existing hydrologic balance of the permit and general areas. Cite all references and sources of information.

- a) Identify all aquifers above the lowest mineral to be mined and the first aquifer below the lowest mineral to be mined. Include stratigraphic units, depths, and current use. Discuss the general uses of these aquifers in the area and known quality or quantity issues with these aquifers in relation to their uses.

The groundwater system within the surface and underground sections of the proposed permit area is comprised of a local flow system, a perched water bearing zone associated with the Waynesburg coal horizon, low volume groundwater associated with the Benwood Limestone, an intermediate flow system, and a regional groundwater flow system. A detailed discussion of each portion of the groundwater system and the data used to establish the description follows.

The local flow system occurs as the result of water infiltrating within the topographic highs of the area and subsequent groundwater migration towards adjacent topographic lows. The following springs occur from the local flow system: 15, 20, 22, 24, 34 (spring supply), 36, 38, 39, 44, 45, 46, 47, 48, 49, 50, 53, 55 (seep), and 59.

Also, part of the local flow system is the local water table, which is defined as the upper zone of saturation not overlain by an impermeable formation. The following drill holes and well provide evidence for the local water table: DH-2 (water level 19.76'), DH-3 (water level 10.56'), DH-4 (water level 21.08'), DH-5 (water level 11.08'), DH-6 (water level 26.5'), TH-3 (40' – 1 gpm), TH-4 (cuttings wet at 13'), TH-7 (43' – 1 gpm), and Ondrik drilled well water at 30 feet. Hand dug well sample point 77 intercepts the local water table.

Lying approximately sixty (60') feet above the Waynesburg (BS) is the Waynesburg "A" coal seam. There is little evidence for any groundwater present within the Waynesburg "A" horizon. Drill hole TH-4 encountered water eleven (11') feet above the coal seam. No springs or seeps were found along this horizon.

The Waynesburg coal seam lies approximately one hundred seventy (170') feet above the top of the Benwood Limestone formation. This horizon supports a perched water bearing zone, as evidenced by test drilling. The underclay that lies below the Waynesburg coal is an aquiclude impeding further downward migration of groundwater. The following drill holes provide evidence for the presence of the perched water bearing zone: TH-1 (static water level 4 feet above the coal), TH-3 (static water level 26 feet above), TH-4 (static water level 16 feet above, 1 gpm just above), TH-6 (static water levels 5 feet and 15 feet above), TH-7 (static water level 25 feet above), DH-2-OB (static water level in coal), DH-3-OB (static water level 2 feet above), DH-4-OB (static water level 2 feet above), and DH-5-OB (static water level 3 feet above). The following water samples occur from the Waynesburg perched water bearing zone: 5, 6, 7, 8, 21, 36, 38, 39, 48, 59, 60, 62, 69, 71, 72, and Bugger 25. Sample points 5, 6, 7, 8, and 72 are Waynesburg underground mine discharges. Sample point 21 is a seep.

The Benwood Limestone supports a low volume water bearing zone. This water bearing zone is part of the intermediate flow system and semi-confined by the underclay associated with the Waynesburg and Sewickley coal seams. Static water levels of test holes that intercept the limestone document the following groundwater levels within this portion of the groundwater system: BH-2 water level 11.2 feet above the base of the limestone, BH-3 water level 9.5 feet above the base, DH-1 water level 10.3 feet above the top of the limestone, DH-2 water level 15.24 feet above the top of the limestone, DH-3 water level 14.44 feet above the top of the limestone, DH-4 water level 5.92 feet above the top of the limestone, DH-5 water level 21.92 feet above the top of the limestone, DH-6 water level 2.5 feet above the base of the limestone, and MW-1 average 10 feet above the top of the limestone. None of the test holes encountered measurable groundwater within the Benwood limestone horizon. Wetland sample point 25 and spring sample points 26 and 27 occur from the local flow system near the base of the Benwood Limestone. The elevated iron and total aluminum in most of the sample results is due to high suspended solids. The elevated sulfates source is groundwater migrating from the Waynesburg coal horizon along the topography towards sample points 25, 26, and 27 which are located in a topographic low. Recent samples show a drop in the sulfates as the active quarry has cut off the water emanating from the Waynesburg horizon.

April 2024 Revision Please see Module 8.6 (c) for additional information concerning additional groundwater sources associated with the existing pits.

The term "low volume water bearing zone" referenced in the paragraph above (and in many other locations within the proposed Maggie Lynn underground mine permit application) is in regard to the Benwood Limestone horizon. The Department of Environmental Protection has requested clarification on this term and referenced that the estimate of 0.5-1.0 gpm per acre (for DEP item 61) is typical for expected mine water for underground permit applications. The term "0.5-1.0 gpm per acre" is synonymous with discussions relative to the average amount of mine water to be expected for surface coal mining discharges from spoil material in a post mining environment and, to a lesser degree, with the amount of mine water within Pittsburgh deep mines (and other seams).

- c) Is pumping of groundwater planned within the life of the operation. Yes No.

If yes, indicate the estimated gallons/day to be pumped for each stage of mining. Submit a science-based estimate of the zone of influence for each proposed stage of the operation. This may require a groundwater model to be developed using existing aquifer data as well as collecting new data, tracer tests or fracture trace analysis. Provide all documentation for the modeling. Use of groundwater modeling may be required to support the discussion of potential effects of groundwater withdrawal if the withdrawal has the potential to adversely impact water supplies, wetlands and other water resources and their affiliated uses, or if the withdrawal has the potential to cause or exacerbate sinkhole formation (See section 8.7). (Key groundwater elevations to cross-sections in 7.1 (c).)

As per Module 8.3(a), the groundwater contribution into the Maggie Lynn Underground Mine is expected to be minimal. However, as per the Department's concerns, the operator has submitted an estimate of between 0.2 gpm to 0.3 gpm per acre of groundwater contribution into the proposed underground mine, with a maximum of 0.5 gpm per acre for safety purposes, primarily for sediment pond construction calculations. This equates to a maximum 256.6 gallons/day when the mine is at its maximum acreage extent. Please note that initially the groundwater extent will be near zero and will only increase as the actual deep mine progresses.

April 2024 Revision. As per additional Department concerns, there is a separate groundwater component associated with the existing pits. As of April 2024, there are two separate pits associated with previous Benwood Limestone mining associated with surface mine permit 63100401. This main pit has existed for many years and will remain throughout the proposed Benwood Limestone deep mining. This main pit is approximately 200 feet in height and consists of about 10-12 acres. The other pit is smaller and will be backfilled prior to the opening of the proposed deep mine. Both pits act as pseudo "cones of depression" as groundwater seepage zones from the highwall exist. The seepage ends up in the pit and is utilized for haul road watering, etc. The seepage zones have been noted previously and will likely be present throughout the life of the proposed deep mine. On March 21, 2024, personnel from GeoTech Engineering Inc. noted three separate areas of groundwater seepage associated with stratigraphy in the main highwall. A review of core hole B-1 (located just above the highwall) indicates areas of fractured and broken up material located at elevations at depths of 25, 35-50, and 100-110 feet from the surface. This correlates well with visual observations and photographs on March 21, 2024. It is noted that there was some pit water noted on March 21, 2024.

It is difficult to estimate the amount of groundwater emanating from the highwall due to seasonal fluctuations etc, however, if one uses 0.5-1.0 gpm per acre of water to be expected from the highwall, a value of about 5-10 gpm could be expected. NOTE: This is using the same formula that is in Module 8.3(a) and an estimated recharge of 10 acres.

In regard to concerns about sufficient water being available for dust suppression, please refer to Module 17.

NOTE: Operations in karst geology areas may be required to complete the *Karst Permitting Supplement* ([5600-PM-BMP0456](#)) in addition to supplying this information.

8.7. Water Supply Replacement [§§ 77.407 and 77.533]

- a) Identify water supply sources that may be contaminated, diminished or interrupted by the mining operation and the means to restore or replace the affected supply. Include a demonstration that the quantity of the water supply will be sufficient to meet the needs of the water supply use. Note why other water supplies will not be affected.

Most of the homes located within or adjacent to the permit area are supplied by public water by Southwestern Pennsylvania Water Authority.

Seven (7) private water supplies and a cistern which collects rainwater have been identified within 1000 feet of the proposed underground mining portion of the permit area.

Spring supply, sample point 34, is used for outside purposes. This spring lies just within 1000 feet north of the proposed underground portion of the permit area. This water supply occurs from the local flow system below the Waynesburg horizon. The recharge area for this spring is with topography to the east and northeast, which is located north of the proposed mining. This spring will not be affected.

Also located on the same property is drilled well supply 35, which is used for outdoor purposes including filling the swimming pool. The depth of the well is not known but is believed to be shallow. Recharge to this well supply is with topography and the structural orientation of confined beds. This recharge area is to the east with Unnamed Tributary "G" to Ten Mile Creek lying between the proposed mining area and the well which is a groundwater divide. This well will not be impacted.

The property owner of private well supply, sample point 35, was interviewed on October 19, 2019. The well is old, constructed in the 1920's to 1930's. There is a surface jet pump that is used which suggests that the well is shallow. Based on its location this well supply intercepts the local water table with the bottom of the well (assuming a maximum depth of sixty feet), is at least 130 feet above the base of the Benwood Limestone. The pump is currently not functioning a may not be repaired, according to the owner.

Revised 06/2023, 11/2023, 04/2024

Private well supply 58 is the primary source of water for this home. The depth of the well is unknown, but more than likely intercepts the intermediate groundwater flow system which is recharged with both topography and the structural orientation of confined beds. The recharge area for this well lies to the east which will not be affected by the proposed mining. An interview on October 19, 2019, with the owner of private well supply, sample point 58, came up with the same answer as the initial interview. The property owner has no idea of the depth of the well. A static water level measurement was taken and found to be 42.5 feet from the surface, which lies very near the Waynesburg coal horizon. This supply more than likely intercepts the intermediate water bearing zone.

The source of water for parcel 11 is a cistern which collects rainwater. This will not be impacted.

Hand dug well supply, sample point 76, is located north of the eastern section of the underground permit area. Information about this supply is not known by the owner. The pump in the well is currently not functioning. The owner uses public water as their water supply source. This hand dug well intercepts the local water table and lies outside the proposed underground mining area, as well as its recharge area. It will not be affected. The owner has no plans to use this well.

Located north of the proposed permit area is hand dug well supply 77 which has a measured depth of nineteen (19') feet. The primary source of water for this home is public. The dug well is used for car washing and outdoor uses. The well is recharged by topography to the north and will not be impacted.

The owner of parcel 10 was found to be on the property May 8, 2023. An interview with the owner found that they use a buried drilled well located just east of the dwelling. This well has been identified as point 78. The owner does not know the depth of the well, but it lies at least 80 feet above the top of the Benwood Limestone and north of Unnamed Tributary "G". It will not be impacted.

The Ondrik drilled well located somewhere on property 15 is currently vacant. The physical location on this well is unknown and water samples were not collected. The well is 97 feet deep, with the base of the well approximately 130 feet above the bottom of the Benwood Limestone. This supply will not be affected by the proposed mining.

- b) Provide a specific capacity, step-drawdown, or other approved yield test for all water supplies that may be impacted by mining and for each proposed replacement supply source. Yield tests on other wells are at the discretion of the applicant or as requested by the Department. Provide specific capacity data on Module 8.6(A). Please refer to the guidance document, "Procedures for Establishing the Quantity of Water in Low-Yield Wells" (TGD # 563-2112-606) for methods.

Not applicable.

- c) Provide the existing operation and maintenance costs for each water supply that may be contaminated, diminished or interrupted by the mining operation and the projected operation and maintenance costs for the proposed replacement supply.

Not applicable.

- d) If the operation and maintenance costs for the proposed replacement water supply will be more than for the existing water supply, identify the provisions for compensating the water supply owner for the increased costs or provide the consent to Lesser Water Supply Agreement Form 5600-FM-BMP0110 for the increased operation/maintenance costs.

Not applicable.

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: A
 Latitude: 40° 00' 10.10" N and
 Longitude: 80° 02' 26.19" W
 Surface Elevation: 891.9'

Description of Sample Point**: Unnamed Tributary "E" immediately upstream of wetland. Stream flow measurement station.

Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm}@25^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l		
10/25/23	8" PVC	2.14												Measured by MFB & MG
11/20/23	8" PVC	4.62												Measured by MFB
12/20/23	8" PVC	8.22												Measured by MFB & MG
01/26/24	8" PVC	120												Measured by MFB & MG
02/26/24	8" PVC	47.4												Measured by MFB & MG
03/21/24	8" PVC	60												Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative *** _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals. ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: **B**
 Latitude: 40° 00' 12.21" N and 80° 02' 26.57" W
 Longitude: 80° 02' 26.57" W
 Surface Elevation: 908'
 Description of Sample Point**: Unnamed Tributary "E" downstream of confluence with eastern branch. Flow measurement station.
Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department				Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l		
10/25/23	6" PVC	1.74											Measured by MFB & MG
11/20/23	6" PVC	1.82											Measured by MFB
12/20/23	6" PVC	3.58											Measured by MFB & MG
01/26/24	6" PVC	72											Measured by MFB & MG
02/26/24	6" PVC	32.3											Measured by MFB & MG
03/21/24	6" PVC	39											Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative *** _____

Date _____

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** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

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Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: C
 Latitude: 40° 00' 15.51" N and
 Longitude: 80° 02' 28.33" W
 Surface Elevation: 940'

Description of Sample Point**: Unnamed Tributary "E"
 western branch - upstream.

Quarterly Water Monitoring & Monthly Flow

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance µS/cm @25°C	Field Temp. °C	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l		
09/20/23	6" PVC	0												Checked by MFB & MG
10/25/23	6" PVC	Dry												Checked by MFB & MG
11/20/23	6" PVC	Dry												Checked by MFB
12/20/23	6" PVC	Dry												Checked by MFB & MG
01/26/24	6" PVC	60	7.34	7.98	18	846	8.9	158.02	<0.05	0.72	275.0	600		717785 MB
02/26/24	6" PVC	20.6												Measured by MFB & MG
03/21/24	6" PVC	40												Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals. ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

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Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: D Description of Sample Point**: Unnamed Tributary "E"
 Latitude: 40° 00' 12.81" N and eastern branch. Flow measurement station.
 Longitude: 80° 02' 26.11" W
 Surface Elevation: 914.3'
Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S}/\text{cm}$ @25°C	Field Temp. °C	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l		
10/25/23	4" PVC	1.36												Measured by MFB & MG
11/20/23	4" PVC	1.71												Measured by MFB
12/20/23	4" PVC	3.43												Measured by MFB & MG
01/26/24	4" PVC	49												Measured by MFB & MG
02/26/24	4" PVC	24.5												Measured by MFB & MG
03/21/24	4" PVC	24.9												Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____

Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No.: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: E Description of Sample Point**: Unnamed Tributary "E"
 Latitude: 40° 00' 17.61" N and western branch, downstream of sample point 22 at confluence
 Longitude: 80° 02' 29.39" W with stream from pond sample point 17.
 Surface Elevation: 962'
Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department				Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l		
04/24/23	6" PVC	6.12											Measured by MFB & MG
05/08/23	6" PVC	5.36											Measured by MFB & MG
06/26/23	6" PVC	0.2											Measured by MFB & MG
07/24/23	6" PVC	0											Checked by MFB & MG
08/17/23	6" PVC	0.4											Measured by MFB & MG
09/20/23	6" PVC	0											Checked by MFB & MG
10/25/23	6" PVC	0											Checked by MFB & MG
11/20/23	6" PVC	0											Checked by MFB
12/20/23	6" PVC	0											Checked by MFB & MG
01/26/24	6" PVC	22.2											Measured by MFB & MG
02/26/24	6" PVC	9.5											Measured by MFB & MG
03/21/24	6" PVC	16.4											Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative *** _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

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Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No.: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: F Description of Sample Point**: Unnamed Tributary "E"
 Latitude: 40° 00' 17.59" N and western branch, downstream from pond sample point 17 at
 Longitude: 80° 02' 29.72" W confluence with flow measuring point E.
 Surface Elevation: 958'
Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S}/\text{cm}$ @25°C	Field Temp. °C	Submit above as requested by the Department				Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l		
04/24/23	6" PVC	9.84											Measured by MFB & MG
05/08/23	6" PVC	8.82											Measured by MFB & MG
06/23/23	6" PVC	2.19											Measured by MFB & MG
07/24/23	6" PVC	0											Checked by MFB & MG
08/17/23	6" PVC	1.5											Measured by MFB & MG
09/20/23	6" PVC	0											Checked by MFB & MG
10/25/23	6" PVC	0											Checked by MFB & MG
11/20/23	6" PVC	0											Checked by MFB
12/20/23	6" PVC	0											Checked by MFB & MG
01/26/24	6" PVC	27.3											Measured by MFB & MG
02/26/24	6" PVC	15.3											Measured by MFB & MG
03/21/24	6" PVC	20											Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

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Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: G Description of Sample Point**: Unnamed Tributary "E"
 Latitude: 40° 00' 14.32" N and eastern branch, downstream of sample points H and 5, and
 Longitude: 80° 02' 24.20" W upstream of measuring point D.
 Surface Elevation: 937.9'
Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department				Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l		
04/24/23	6" PVC	9.38											Measured by MFB & MG
05/08/23	6" PVC	11.76											Measured by MFB & MG
06/26/23	6" PVC	5.77											Measured by MFB & MG
07/24/23	6" PVC	3.16											Measured by MFB & MG
08/17/23	6" PVC	5.13											Measured by MFB & MG
09/20/23	6" PVC	0.5											Measured by MFB & MG
10/25/23	6" PVC	1.3											Measured by MFB & MG
11/20/23	6" PVC	4.29											Measured by MFB & MG
12/20/23	6" PVC	2.5											Measured by MFB & MG
01/26/24	6" PVC	40											Measured by MFB & MG
02/26/24	6" PVC	11.1											Measured by MFB & MG
03/21/24	6" PVC	24.3											Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A) BACKGROUND or MONITORING POINT* (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: H
 Latitude: 40° 00' 17.5" N and
 Longitude: 80° 02' 21" W
 Surface Elevation: 995.8'

Description of Sample Point**: Unnamed Tributary "E" eastern branch, downstream of sample point 5 and upstream of flow measuring point G.

Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm}@25^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l		
01/18/23	6" PVC	6												Measured by MFB & RT
02/15/23	6" PVC	4.14												Measured by MFB & RT
03/02/23	6" PVC	6.65												Measured by RT
04/24/23	6" PVC	4.26												Measured by MFB & MG
05/08/23	6" PVC	4.14												Measured by MFB & MG
06/26/23	6" PVC	3.37												Measured by MFB & MG
07/24/23	6" PVC	0.2												Measured by MFB & MG
08/17/23	6" PVC	2												Measured by MFB & MG
09/20/23	6" PVC	0.7												Measured by MFB & MG
10/25/23	6" PVC	1.3												Measured by MFB & MG
11/20/23	6" PVC	0.75												Measured by MFB & MG
12/20/23	6" PVC	1.76												Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____

Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

*** Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application. Revised 05/2023

Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: H
 Latitude: 40° 00' 17.5" N and
 Longitude: 80° 02' 21" W
 Surface Elevation: 995.8'

Description of Sample Point**: Unnamed Tributary "E" eastern branch, downstream of sample point 5 and upstream of flow measuring point G.

Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S}/\text{cm}$ @25°C	Field Temp. °C	Submit above as requested by the Department				Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l		
01/26/24	6" PVC	30											Measured by MFB & MG
02/26/24	6" PVC	8.6											Measured by MFB & MG
03/21/24	6" PVC	6.4											Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application. Revised 05/2023

Module 8.1(A) BACKGROUND or MONITORING POINT* (check appropriate box)

Operator: Neiswonger Construction, Inc. Monitoring Point ID: 1 Description of Sample Point**: Ten Mile Creek - intermediate point in stream, just west of permit area.

Operation Name: Maggie Lynn Underground Mine Latitude: 40° 00' 13" N and Longitude: 80° 02' 47" W

Permit No: 63192001 Surface Elevation: 815'

Township: Deemston Borough

County: Washington

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler	
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l			Sulfate mg/l
06/09/23		>10000	7.6	8.13	7	561	13	172.78	-64.26	0.11	<0.05	0.2	102.1	286	708848 G&C JS
09/28/23		>10000	7.7	8.05	<5	596	12.0	171.81	-132.49	0.27	<0.05	0.19	90.8	340	712956 G&C JS
12/20/23		>10000	7.5	8.26	<5	486	4.2	158.72	-139.35	0.20	<0.05	<0.10	62.9	272	716600 MB
03/28/24		>100000	7.9	7.85	7	599	8.0	55.40	-33.03	0.22	0.05	<0.10	47.8	334	720438 G&C JS

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals. ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.) ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A) BACKGROUND or MONITORING POINT*

(check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: 5
 Latitude: 40° 00' 18" N and
 Longitude: 80° 02' 17" W
 Surface Elevation: 1064'

Description of Sample Point**: Small underground mine discharge to the eastern branch of Unnamed Tributary "E", central section of permit.

Quarterly Water Monitoring & Monthly Flow

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l	Total Dissolved Solids mg/l	Laboratory and Name of Sampler
02/15/23	6" PVC	0.2													Measured by MFB & RT
03/02/23	6" PVC	0.2													Measured by RT
04/24/23	4" PVC	1.3	7.30	7.77	18	1565	9.60	169.00	-138.57	<0.10	0.10	<0.10	767.6	1232	706675 MB
05/08/23	6" PVC	2.4													Measured by MFB & MG
06/26/23	6" PVC	1													Measured by MFB & MG
07/24/23	6" PVC	0													Checked by MFB & MG
08/17/23	6" PVC	0.4	N/A	7.84	123	1874	20	165.01	-125.44	0.87	0.26	0.73	776.0	1620	711543 MB
09/20/23	6" PVC	0.2													Measured by MFB & MG
10/25/23	6" PVC	0													Measured by MFB & MG
11/20/23	6" PVC	0													Checked by MFB
12/20/23	6" PVC	0.1	6.6	7.76	174	1666	3.3	150.99	-90.94	1.94	0.11	<0.10	795.6	1329	716598 MB
01/26/24	6" PVC	7.2	7.32	7.90	36	687	10	85.94	-25.47	1.13	0.10	1.18	236.2	484	717786 MB

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: 11
 Latitude: 40° 00' 19" N and
 Longitude: 80° 02' 03" W
 Surface Elevation: 1122'

Description of Sample Point**: Unnamed Tributary "D" upstream, east - central section of permit area.

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance μ S/cm @25°C	Field Temp. °C	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l		
06/09/23		DRY												708898 G&C JS
09/28/23		NO FLOW												712970 G&C JS
12/20/23		DRY												716617 MB
03/28/24		NO FLOW												720485 G&C JS

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals. ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.) ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deerston Borough
 County: Washington

Monitoring Point ID: 13
 Latitude: 40° 00' 03" N and
 Longitude: 80° 02' 04" W
 Surface Elevation: 1020'

Description of Sample Point**: Unnamed Tributary "D" to Ten Mile Creek - intermediate point, just southeast of permit area.

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp $^\circ\text{C}$	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler	
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l			Sulfate mg/l
03/29/23		21	7.4	7.94	5	381	9.0	106.46	-70.36	0.29	<0.05	0.20	37.2	208	705248 G&C JS
06/09/23		Dry													708898 G&C JS
09/28/23		NO FLOW													712970 G&C JS
12/20/23		3.2	7.9	8.05	<5	529	5.5	416.24	-338.68	0.21	<0.05	<0.10	59.6	294	716602 MB
03/28/24		17	7.6	7.93	8	401	9.0	112.49	-93.53	0.14	<0.05	<0.10	51.9	224	720437 G&C JS

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative *** _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A) BACKGROUND or MONITORING POINT* (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: 14
 Latitude: 40° 00' 6.45" N and
 Longitude: 80° 02' 25.45" W
 Surface Elevation: 884'

Description of Sample Point**: Unnamed Tributary "E" to Ten Mile Creek - downstream, central section of permit area.

Quarterly Water Monitoring & Monthly Flow

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance µS/cm @25°C	Field Temp. °C	Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l	Total Dissolved Solids mg/l	Laboratory and Name of Sampler
01/18/23	Bucket	60	7.8	8.03	14	1223	6	171.33	-164.83	<0.10	<0.05	<0.10	408.5	900	702397 MB
02/15/23	Bucket	30.8													Measured by MFB & RT
03/02/23	Bucket	41.9													Measured by RT
04/24/23	Bucket	32	7.7	8.11	<5	1592	9.7	176.34	-142.29	<0.10	<0.05	<0.10	802.3	1348	706676 MB
05/08/23	Bucket	26.78													Measured by MFB & MG
06/26/23	NA	Dry	Checked at culvert	Checked at culvert	downstream of haulroad										Checked by MFB & MG
07/24/23	Bucket	0	Checked at culvert	Checked at culvert	downstream of haulroad										Checked by MFB & MG
08/17/23	NA	0	Checked at culvert	Checked at culvert	downstream of haulroad										Checked by MFB & MG
09/20/23	NA	0	Checked at culvert	Checked at culvert	downstream of haulroad										Checked by MFB & MG
10/25/23	NA	0	Checked at culvert	Checked at culvert	downstream of haulroad										Checked by MFB & MG
11/20/23	NA	0	Checked at culvert	Checked at culvert	downstream of haulroad										Checked by MFB
12/20/23	NA	Dry	Checked at culvert	Checked at culvert	downstream of haulroad										Checked by MFB & MG

Submit above as requested by the Department

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative *** _____ Date _____

* Water Monitoring Reporting Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals. ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A) BACKGROUND or MONITORING POINT* (check appropriate box)

Operator: Neiswonger Construction, Inc.
Operation Name: Maggie Lynn Underground Mine
Permit No: 63192001
Township: Deemston Borough
County: Washington

Monitoring Point ID: 14
Latitude: 40° 00' 6.45" N and
Longitude: 80° 02' 25.45" W
Surface Elevation: 884'

Description of Sample Point**: Unnamed Tributary "E" to Ten Mile Creek - downstream, central section of permit area.

Quarterly Water Monitoring & Monthly Flow

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance μ S/cm @25°C	Field Temp. °C	Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l	Total Dissolved Solids mg/l	Laboratory and Name of Sampler
01/26/24	Bucket	120	7.6	8.03	12	999	9.7	160.94	-130.54	0.70	<0.05	0.49	338.8	728	717787 MB
02/26/24	Bucket	47													Measured by MFB & MG
03/21/24	Bucket	60													Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR013 may be used for multiple monitoring point sample submittals.
** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.
Revised 05/2023

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc. Description of Sample Point**: Spring, central section of permit area.

Operation Name: Maggie Lynn Underground Mine

Permit No: 63192001

Township: Deerstown Borough

County: Washington

Monitoring Point ID: 15

Latitude: 40° 00' 10.82" N and Longitude: 80° 02' 25.83" W

Surface Elevation: 901.4'

Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l		
05/08/23	4" PVC	10.91												Measured by MFB & MG
06/26/23	4" PVC	4.38												Measured by MFB & MG
07/24/23	4" PVC	2.31												Measured by MFB & MG
08/17/23	4" PVC	6.98												Measured by MFB & MG
09/20/23	4" PVC	2.6												Measured by MFB & MG
10/25/23	4" PVC	3.53												Measured by MFB & MG
11/20/23	4" PVC	3												Measured by MFB
12/20/23	4" PVC	5.77												Measured by MFB & MG
01/26/24	4" PVC	29												Measured by MFB & MG
02/26/24	4" PVC	22												Measured by MFB & MG
03/21/24	4" PVC	26.1												Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deerstown Borough
 County: Washington

Monitoring Point ID: 17
 Latitude: 40° 00' 21" N and
 Longitude: 80° 02' 35" W
 Surface Elevation: 1037.84'

Description of Sample Point**: Pond, northwestern section of permit.

Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l	Total Dissolved Solids mg/l	Laboratory and Name of Sampler
10/25/23	6" PVC	0													Checked by MFB & MG
11/20/23	6" PVC	0													Checked by MFB
12/20/23	6" PVC	0													Checked by MFB & MG
01/26/24	6" PVC	6													Measured by MFB & MG
02/27/24	6" PVC	4.4													Measured by MFB & MG
03/21/24	6" PVC	15													Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deerstown Borough
 County: Washington

Monitoring Point ID: 21
 Latitude: 40° 00' 21" N and
 Longitude: 80° 02' 26" W
 Surface Elevation: 1062.13'

Description of Sample Point*: Iron stained seep zone, central section of permit area.

Monthly Flow Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm}@25^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l	Total Dissolved Solids mg/l	Laboratory and Name of Sampler
08/17/23	4" PVC	0.2													Measured by MFB & MG
09/20/23	4" PVC	0													Checked by MFB & MG
10/25/23	4" PVC	0													Checked by MFB & MG
11/20/23	4" PVC	0													Checked by MFB
12/20/23	4" PVC	0													Checked by MFB & MG
01/26/24	4" PVC	8.57													Measured by MFB & MG
02/26/24	4" PVC	8.8													Measured by MFB & MG
03/21/24	4" PVC	8.6													Measured by MFB & MG

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: 25
 Latitude: 40° 00' 08.30" N and
 Longitude: 80° 02' 42.11" W
 Surface Elevation: 817.1'

Description of Sample Point*: Wetland discharge, southwestern section of permit area.

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm}@25^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department				Total Dissolved Solids mg/l	Laboratory and Name of Sampler		
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l			Aluminum mg/l	Sulfate mg/l
12/20/23		0.25	7.9	8.19	31	1932	0.7	163.26	-115.05	5.62	0.28	<0.10	449.5	1252	616603 MB
03/28/24		0.1	7.00	7.71	5	552	7	149.23	-137.11	0.18	<0.05	<0.10	51.8	328	720436 G&C JS

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals. ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: 26
 Latitude: 40° 00' 09.41" N and
 Longitude: 80° 02' 41.93" W
 Surface Elevation: 826.9'

Description of Sample Point**: Spring which occurs from the local flow system near the base of the Benwood Limestone, western section of permit area.

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler			
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l			Sulfate mg/l		
12/16/22		NO FLOW															
03/29/23		0.1	7.40	7.03	<5	375	7.00	85.50	-43.60	0.20	<0.05	<0.10	47.4	210			700977 G&C JS
06/09/23		NO FLOW															705251 G&C JS
09/28/23		DRY															708900 G&C JS
12/20/23		DRY															712969 G&C JS
03/28/24		NO FLOW															Checked by M. Barilar
																	720485 G&C JS

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 *** Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official.
 Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: 27 Description of Sample Point**: Spring which occurs from the local flow system within the Benwood Limestone, western boundary of permit area.
 Latitude: 40° 00' 14.90" N and
 Longitude: 80° 02' 46.20" W
 Surface Elevation: 817.4'

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler	
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l			Sulfate mg/l
03/29/21		No Flow													675909 G&C JS
04/19/21	Estimated	0.5	8.00	8.10	338	1466	15.7	433.59	-290.04	10.46	0.47	6.57	286.5	952	677086 MB
08/12/21		Dry													681519 G&C JS
12/22/21		No Flow													686720 G&C JS
03/23/22		2	7.80	7.43	<5	465	10.0	126.96	-116.82	0.52	0.20	0.20	32.7	3330	690107 G&C JS
06/23/22		DRY													694465 G&C JS
08/11/22		DRY													696063 G&C JS
12/16/22		NO FLOW													700977 G&C JS
03/29/23		2	7.60	7.67	<5	418	7.0	91.50	-55.86	0.12	<0.05	0.17	76.2	244	705253 G&C JS
06/09/23		NO FLOW													708900 G&C JS
09/28/23		DRY													712969 G&C JS
12/20/23		DRY													Checked by M. Barilar

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR013 may be used for multiple monitoring point sample submittals. ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: 31
 Latitude: 40° 00' 20.67" N and
 Longitude: 80° 03' 08.34" W
 Surface Elevation: 820'
 Description of Sample Point**: Ten Mile Creek - upstream, west of northern section of permit area.

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler	
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l			Sulfate mg/l
06/28/21		>10000	7.7	7.81	<5	223	18.0	62.55	-54.67	<0.10	<0.05	<0.10	24.0	166	679570 G&C JS
08/12/21		>10000	7.60	8.15	8	389	19.0	115.68	-108.54	0.15	<0.05	<0.10	25.3	200	681577 G&C JS
12/22/21		>10000	7.40	8.10	<5	294	5.0	95.31	-86.24	0.43	<0.05	<0.10	26.9	176	686648 G&C JS
03/23/22		>10000	7.60	8.32	<5	327	10.0	80.43	-74.48	0.11	<0.05	<0.10	52.2	232	690108 G&C JS
06/23/22		>10000	7.50	7.67	<5	552	17.0	118.79	-96.82	0.27	0.34	<0.10	115.8	362	694162 G&C JS
08/11/22		>10000	7.50	8.14	<5	376	17.0	115.23	-79.57	0.29	<0.05	<0.10	42.6	210	696014 G&C JS
12/16/22		>10000	7.60	8.07	31	410	6.0	115.92	-113.48	0.95	<0.05	<0.10	47.6	291	700916 G&C JS
02/15/23		TLTG	8.20	8.26	5	438	8.2	143.06	-120.34	0.22	<0.05	0.3	65.9	248	703530 MB
06/09/23		>10000	7.60	8.09	5	453	13.0	134.10	-65.40	<0.10	<0.05	0.16	88.5	220	708849 G&C JS
09/28/23		>10000	7.60	7.81	<5	468	13.0	126.31	-96.04	<0.10	<0.05	0.26	83.7	266	712955 G&C JS
12/20/23		>10000	7.85	8.31	27	482	3.7	168.42	-143.66	0.22	<0.05	<0.10	60.6	282	716604 MB
03/28/24		>100000	7.80	7.99	7	264	8.0	121.68	-105.07	0.14	<0.05	<0.10	33.2	140	720439 G&C JS

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc. Monitoring Point ID: 42 Description of Sample Point**: Reconstructed stream,
 Operation Name: Maggie Lynn Underground Mine Latitude: 39° 59' 52.07" N and downstream, south of permit area.
 Permit No: 63192001 Longitude: 80° 02' 25.79" W
 Township: Deemston Borough Surface Elevation: 812'
 County: Washington

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l	Total Dissolved Solids mg/l	Laboratory and Name of Sampler
08/17/23		Dry													Checked by Mike Barilar
09/28/23		NO FLOW													712970 G&C JS
10/25/23		Dry													Checked by Mike Barilar
11/20/23		Dry													Checked by Mike Barilar
12/20/23		Dry													Checked by Mike Barilar
03/28/24		1	7.4	7.95	5	1459	7	173.07	-127.16	0.23	0.14	<0.10	616.2	1148	720434 G&C JS

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: MP-4
 Latitude: 39° 59' 49" N and
 Longitude: 80° 02' 22" W
 Surface Elevation: 805'

Description of Sample Point**: Ten Mile Creek - downstream, upstream of confluence with Unnamed Tributary "D", south of permit area.

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance µS/cm @25°C	Field Temp. °C	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler	
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l		
06/23/22		>10000	7.9	8.30	7	521	17	161.24	-109.56	0.31	<0.05	0.12	54.4	298	694156 G&C JS
08/11/22		>10000	7.7	8.27	<5	468	16	155.57	-89.37	0.38	<0.05	<0.10	39.1	<5	696011 G&C JS
12/16/22		>10000	7.7	7.91	13	942	6	111.12	-108.78	0.84	0.72	0.72	398.0	668	700921 G&C JS
03/29/23		>10000	7.7	8.11	<5	405	8.0	128.52	-75.85	0.40	<0.05	0.26	45.1	252	705247 G&C JS
06/09/23		>10000	7.6	8.03	<5	608	13.00	212.78	-146.21	<0.10	<0.05	0.11	65.6	284	708846 G&C JS
09/28/23		>10000	7.7	7.97	<5	752	12.0	180.42	-142.68	0.24	<0.05	0.40	72.8	424	712958 G&C JS
12/20/23		>10000	7.9	8.23	<5	497	4.4	57.26	-44.29	0.24	<0.05	<0.10	68.1	274	716605 MB
03/28/24		>100000	8.0	8.10	9	406	8	126.67	-106.26	0.38	<0.05	<0.10	65.5	298	720433 G&C JS

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative *** _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals. ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: MD-F
 Latitude: 39° 59' 52" N and
 Longitude: 80° 02' 18" W
 Surface Elevation: 830'
 Description of Sample Point**: monitoring point on Hawkins permit #63813210.

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l	Total Dissolved Solids mg/l	Laboratory and Name of Sampler
03/23/22		30	7.70	7.01	6	2188	10.0	124.56	-111.52	1.11	2.90	0.33	1109.3	1553	690103 G&C JS
06/23/22		1	7.7	6.86	7	1901	19.0	98.54	-71.11	0.47	1.59	0.18	676.8	1564	694157 G&C JS
08/11/22		1	7.80	7.14	<5	1610	20.0	97.02	-78.01	<0.10	0.37	<0.10	667.2	1228	696012 G&C JS
12/16/22		5	7.4	7.39	5	1763	6.0	97.44	-94.45	0.53	1.77	<0.10	892.2	1251	700917 G&C JS
02/15/23		15	7.0	7.13	14	2134	9.6	123.96	-96.43	1.50	3.17	1.12	1379.0	1852	703534 MB
06/09/23		DIPPED	7.60	7.29	25	1964	15.0	121.14	-79.52	0.75	0.54	<0.10	1236.7	1558	708847 G&C JS
09/28/23		0.5	7.60	7.48	11	1827	14.0	105.32	-69.18	0.45	0.89	0.58	1000.2	1348	712957 G&C JS
12/20/23		3.8	7.00	7.34	<5	1815	4.5	20.10	-9.60	0.45	1.52	<0.10	766.4	1420	716606 MB
03/28/24		0.5	7.6	7.04	17	2201	10.0	148.62	-124.37	1.69	2.87	0.32	962.7	1808	720435 G&C JS

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A) BACKGROUND or MONITORING POINT* (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: **MW-WPW**
 Latitude: 39° 59' 59.1" N and
 Longitude: 80° 02' 19.3" W
 Surface Elevation: 869.8'

Description of Sample Point**: Former Wash Plant Well drilled into the Clyde Underground Mine, southern section of site.
 Top of Casing Elevation - 872'
 Monthly Static Water Level Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Submit above as requested by the Department				Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l		
05/08/23	SWL Meter	749.3'											Measured by Mike Barilar
06/26/23	SWL Meter	747.4'											Measured by Mike Barilar
07/24/23	SWL Meter	747.2'											Measured by Mike Barilar
08/17/23	SWL Meter	743.9'											Measured by Mike Barilar
09/20/23	SWL Meter	745.9'											Measured by Mike Barilar
10/25/23	SWL Meter	748.5'											Measured by Mike Barilar
11/20/23	SWL Meter	749.5'											Measured by Mike Barilar
12/20/23	SWL Meter	747.6'											Measured by Mike Barilar
01/26/24	SWL Meter	745.8'											Measured by Mike Barilar
02/26/24	SWL Meter	744.9'											Measured by Mike Barilar
03/21/24	SWL Meter	744.5'											Measured by Mike Barilar

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official.
 Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A) BACKGROUND or MONITORING POINT* (check appropriate box)

Operator: Neiswonger Construction, Inc. Monitoring Point ID: MW-TH-2 Description of Sample Point**: Test hole TH-2 which is located in the southeastern section of the permit area, intercepts the Waynesburg through the Sewickley coal horizons.

Operation Name: Maggie Lynn Underground Mine Latitude: 40° 00' 06.6" N and Longitude: 80° 02' 07.2" W Surface Elevation: 1108.6'

Permit No: 63192001 Township: Deernston Borough County: Washington

Monthly Static Water Level Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance µS/cm @25°C	Field Temp. °C	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l		
09/24/19	SWL Meter	1024'	6.3	6.78	99	743	17.2	262.03	-242.80	4.51	0.25	133.8	653687 MB	
04/24/23	SWL Meter	1038.4'											Measured by M. Barilar	
05/08/23	SWL Meter	1040.1'											Measured by M. Barilar	
06/26/23	SWL Meter	1039.1'											Measured by M. Barilar	
07/24/22	SWL Meter	1027.4'											Measured by M. Barilar	
08/17/23	SWL Meter	1037.5'											Measured by M. Barilar	
09/20/23	SWL Meter	1028.9'											Measured by M. Barilar	
10/25/23	SWL Meter	1027'											Measured by M. Barilar	
11/25/23	SWL Meter	1029.1'											Measured by M. Barilar	
12/20/23	SWL Meter	1034.5'											Measured by M. Barilar	
01/26/24	SWL Meter	1037.1											Measured by M. Barilar	
02/26/24	SWL Meter	1038.45'											Measured by M. Barilar	

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or MONITORING POINT*
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: MWV-TH-2
 Latitude: 40° 00' 06.6" N and
 Longitude: 80° 02' 07.2" W
 Surface Elevation: 1108.6'

Description of Sample Point**: Test hole TH-2 which is located in the southeastern section of the permit area, intercepts the Waynesburg through the Sewickley coal horizons.

Monthly Static Water Level Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance μS/cm @25°C	Field Temp. °C	Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l	Total Dissolved Solids mg/l	Laboratory and Name of Sampler
03/21/24	SWL Meter	1039.1'													Measured by M. Barilar

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: MW-TH-4 Description of Sample Point**:
Test hole TH-4 which intercepts the Waynesburg A through the Sewickley coal seam central section of permit area.
 Latitude: 40° 00' 26.06" N and Longitude: 80° 02' 23.20" W
 Surface Elevation: 1135.9'
Monthly Static Water Level Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S}/\text{cm}$ @25°C	Field Temp. °C	Submit above as requested by the Department				Total Dissolved Solids mg/l	Laboratory and Name of Sampler		
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l			Aluminum mg/l	Sulfate mg/l
09/24/19	SWL Meter	1061'	6.4	7.32	137	704	15.6	377.26	-377.00	1.81	0.17	1.23	79.1	402	653685 MB
04/24/23	SWL Meter	1060.2'													Measured by M. Barilar
05/08/23	SWL Meter	1060.3'													Measured by M. Barilar
06/26/23	SWL Meter	1058.7'													Measured by M. Barilar
07/24/23	SWL Meter	1058.2'													Measured by M. Barilar
08/17/23	SWL Meter	1058.2'													Measured by M. Barilar
09/20/23	SWL Meter	970.9'													Measured by M. Barilar
10/25/23	SWL Meter	1007.52													Measured by M. Barilar
11/20/23	SWL Meter	980.6'													Measured by M. Barilar
12/20/23	SWL Meter	970.14'													Measured by M. Barilar
01/26/24	SWL Meter	1057.3													Measured by M. Barilar
02/26/24	SWL Meter	1055.1'													Measured by M. Barilar

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A)
 BACKGROUND or **MONITORING POINT***
 (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: **MW-TH-4**
 Latitude: 40° 00' 26.06" N and
 Longitude: 80° 02' 23.20" W
 Surface Elevation: 1135.9'
 Description of Sample Point**: Test hole TH-4 which intercepts the Waynesburg A through the Sewickley coal seam central section of permit area.
 Monthly Static Water Level Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance μS/cm @25°C	Field Temp. °C	Submit above as requested by the Department				Total Dissolved Solids mg/l	Laboratory and Name of Sampler
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l		
03/21/24	SWL Meter	1055.7'											Measured by M. Barilar

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 *** Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.
 Added 05/2023
 8-1.TH4.1

Module 8.1(A) BACKGROUND or MONITORING POINT* (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: MW -TH-6
 Latitude: 40° 00' 31.30" N and
 Longitude: 80° 02' 38.70" W
 Surface Elevation: 1202.6' (TOC 1204.9')
 Description of Sample Point**: Test Hole TH-6 which intercepts the Waynesburg A through the base of the Benwood Limestone, western section of permit area.
Monthly Static Water Level Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance $\mu\text{S/cm @25}^\circ\text{C}$	Field Temp. $^\circ\text{C}$	Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l	Sulfate mg/l	Total Dissolved Solids mg/l	Laboratory and Name of Sampler
02/20/18	SWL Meter	1058.9'	6.3	6.67	73	732	14.4	227.28	-227.00	2.39	0.30	1.67	81.5	426	624522 MB
03/12/18	SWL Meter	1050.3'													Measured by Mike Gardner
03/22/23	SWL Meter	1050.8'													Measured by Mike Barilar
04/24/23	SWL Meter	1050.6'													Measured by Mike Barilar
05/08/23	SWL Meter	1050.3'													Measured by Mike Barilar
06/26/23	SWL Meter	1047.1'													Measured by Mike Barilar
07/24/23	SWL Meter	1045.6'													Measured by Mike Gardner
08/17/23	SWL Meter	1044.8'													Measured by Mike Barilar
09/20/23	SWL Meter	1044.3'													Measured by Mike Barilar
10/25/23	SWL Meter	1043.9'													Measured by Mike Barilar
11/20/23	SWL Meter	1043.2'													Measured by Mike Barilar
12/20/23	SWL Meter	1038.8'													Measured by Mike Barilar

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.
 ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)
 ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Module 8.1(A) BACKGROUND or MONITORING POINT*

(check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: MW -TH-6 Description of Sample Point**: Test Hole TH-6 which intercepts the Waynesburg A through the base of the Benwood Limestone, western section of permit area.
 Latitude: 40° 00' 31.30" N and Longitude: 80° 02' 38.70" W
 Surface Elevation: 1202.6' (TOC 1204.9')
Monthly Static Water Level Only

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance µS/cm @25°C	Field Temp. °C	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler		
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l			Sulfate mg/l	
01/26/24	SWL Meter	1101.5'	May not be accurate. Water cascading down the borehole.											Measured by Mike Barilar		
02/01/24	SWL Meter	1046.9'														Measured by Mike Barilar
03/21/24	SWL Meter	1052.5'														Measured by Mike Barilar

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals. ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.) ***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.

Revised September 2020, 05/2023 8-1.TH-6

Module 8.1(A) BACKGROUND or MONITORING POINT* (check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: Parcel 16
 Latitude: 0' " N and
 Longitude: 0' " W
 Surface Elevation: _____

Description of Sample Point**: Residence along Buckingham Road, water supply source unknown.

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance μS/cm @25°C	Field Temp. °C	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler	
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l			Sulfate mg/l
05/08/23	Left business card with girlfriend. No response for request to water supply source.														
06/26/23	Not home														Checked by Mike Barilar
07/24/23	Not home														Checked by Mike Barilar
08/17/23	Not home														Checked by Mike Barilar
09/20/23	Not home														Checked by Mike Barilar
10/25/23	Not home	Left survey letter with stamped return envelope												Checked by Mike Barilar	
11/20/23	Not home														Checked by Mike Barilar
01/26/24	Not home														Checked by Mike Barilar
02/26/24	Not home														Checked by Mike Barilar
03/21/24	Not home														Checked by Mike Barilar

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals.

** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

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Module 8.1(A) BACKGROUND or MONITORING POINT*

(check appropriate box)

Operator: Neiswonger Construction, Inc.
 Operation Name: Maggie Lynn Underground Mine
 Permit No: 63192001
 Township: Deemston Borough
 County: Washington

Monitoring Point ID: P-2
 Latitude: 39° 59' 59.63" N and
 Longitude: 80° 02' 23.7" W
 Surface Elevation: 856'

Description of Sample Point**: Pond to be added as a
 NPDES point, southeastern section of permit.

Instructions: Use a separate sheet for each sample point and list results consecutively by date.

Date Sampled	Method of Flow Measurement	Flow (GPM) or Static Water Elevation	Field pH	Laboratory pH	Suspended Solids mg/l	Specific Conductance µS/cm @25°C	Field Temp. °C	Submit above as requested by the Department					Total Dissolved Solids mg/l	Laboratory and Name of Sampler	
								Alkalinity mg/l	Acidity mg/l	Iron mg/l	Manganese mg/l	Aluminum mg/l			Sulfate mg/l
12/20/23	NA	Stagnant	6.83	7.18	72	2107	1.7	173.47	-137.39	1.46	0.42	<0.10	1189.6	1688	716599 MB
01/26/24	NA	Stagnant	7.31	6.87	38	1006	9.20	71.77	-39.80	4.08	0.39	1.05	435.6	748	717788 MB

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permittee or Responsible Official or Authorized Representative _____ Date _____

* Water Monitoring Report Cover Sheet Form 5600-FM-MR0113 may be used for multiple monitoring point sample submittals. ** Description should include type of sample point, relation to mine site, treatment and other comments (such as odor, color, etc.)

***Written notification of delegation of signatory authority must be submitted to the Department if signatory is other than company official. Signature not necessary if this report is submitted as part of the permit application.