



August 16, 2024

**VIA EMAIL**

Ms. Samantha Lutz  
Aquatic Biologist  
Pennsylvania Department of Environmental Protection  
Oil and Gas Management Program/Southwest Regional Office  
400 Waterfront Drive  
Pittsburgh, PA 15222

RE: Water Management Plan Amendment Application: Big Sewickley Creek and B50  
Temporary Aboveground Waterline State Water Obstruction and Encroachment Permit  
E0407222-001; APS# 1058722

Ms. Lutz,

PennEnergy Resources, LLC (“PennEnergy”) has prepared this demonstration of compliance requested by the Pennsylvania Department of Environmental Protection (“PADEP”) in a letter received on July 17, 2024. The letter referred to the Big Sewickley Creek Water Management Plan Amendment and the B50 Temporary Aboveground Waterline State Water Obstruction and Encroachment Permit, E0407222-001; APS # 1058722. PADEP requested an updated cross-section and pool monitoring schedule be submitted for review.

Upon receipt of the request, PennEnergy hired a survey consultant to conduct a topographical and bathymetrical survey of the project area in Big Sewickley Creek on July 30 and July 31, 2024; and with the hired services of an environmental and geological consultant, prepared this report and drawing to show our findings.

While the conditions in Big Sewickley Creek have changed from those shown in the approved applications, specifically the cross sections shown on Drawing JP01, the same parameters can be followed to conduct the withdrawal safely and in compliance with the permit. See the attached JP03, titled Stream Survey Exhibit, for reference.

The plan view and cross sections show the former surveyed bathymetry of Big Sewickley Creek in light gray. The current surveyed bathymetry and proposed intake arrangement are shown in bold black. While the current bottom of the creek is higher than the former survey at this time, this drawing shows that the 27 inches of water depth needed for full rate of withdrawal can still be achieved. The live measurements proposed for minimum passby requirements will be taken as described below and in the approved applications.

Before the intake structures are placed into the stream for first withdrawal from the creek, the creek flow will be monitored and live measurements conducted to provide a value in cubic feet per second (“cfs”). If the live stream flow value is equal to or greater than the minimum passby values [6.5 cfs Oct – Mar and 10.8 cfs Apr – Sep] the pool depth will be measured. If the pool depth at each strainer location is equal to or greater than 27 inches, only then will the intake structures be lowered into the creek and the withdrawal started per the approved Operations Plan, appendix C in the approved Water Management Plan Amendment for Big Sewickley Creek. Once pumping has started, the stream flow and pool depths will be monitored and measured consistent with withdrawal compliance measurement sequence and TABLE 1 below.

**Withdrawal Compliance Measurement Sequence:**

- Live stream flow measurements will be taken to ensure minimum passby flow is maintained. Minimum passby is 6.5 cfs (Oct – Mar) or 10.8 cfs (Apr – Sep).
- Live pool depth measurements will be taken to ensure minimum pool dept of at least 27 inches deep resulting in no less than 16.8 inches, or 1.4 feet, from the bottom of intake structures to the stream bottom.
- Thereafter, the frequency of stream flow and pool depth measurements will be as shown in TABLE 1, consistent with the approved applications.

30% Pass-By Intervals (CFS / % ADF)			50% Pass-By Intervals (CFS / % ADF)			Schedule A Frequency of Measurement with Stream Rising	Schedule B Frequency of Measurement with Stream Declining
Above 21.6 >100%			Above 21.6 >100%			Weekly	Daily
21.6 100%	TO	10.8 50%	21.6 100%	TO	15.1 70%	Daily	8 HR Intervals
10.8 50%	TO	9.7 45%	15.1 70	TO	14.0 65%	8 HR Intervals	4 HR Intervals
9.7 45%	TO	8.8 40.6%	14 65%	TO	13.1 60.6%	4 HR Intervals	4 HR Intervals
8.8 40.6%	TO	6.5 30%	13.1 60%	TO	10.8 50%	4 HR Intervals	1 HR Intervals

Table 1: Measurement Schedule

Localized stream gages will be used for visual reference to determine if:

- the stream flow is rising, and measurements taken per Schedule A, or
- the stream flow is declining, and measurements take per Schedule B.

Once operations have ceased or the withdrawal parameters can no longer be met, the pumps will be turned off, the intake structures removed from the creek, upland disturbed areas seeded, mulched, or

otherwise stabilized, and monitored until vegetation established in accordance with the ESCGP-3 approved Site Restoration Plan.

Best Regards,

A handwritten signature in blue ink that reads "Richard Watson". The signature is fluid and cursive, with a large initial "R" and "W".

Richard Watson  
Manager, Permitting and Compliance