MAWC – IUP Service Contract
Air Quality Monitoring at Beaver Run Reservoir
Quarterly Report #3

Covering the Period from 2/1/2020 – 4/30/2020

Submitted by

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I. Scope of Contract

The current contract between the Municipal Authority of Westmoreland County (MAWC) and the Indiana University of Pennsylvania (IUP) started on 1 August 2019 and runs until 31 July 2020. The scope of the contract calls for the contractor, IUP, to perform air quality measurement services at Beaver Run Reservoir (BRR) quarterly.

The air quality measurement services include field sampling, laboratory analyses and reporting as follows: (1) Field Sampling: air quality samples and hand-held sensor readings will be taken at the Mamont compressor station and at the Kuhns, DeArmitt, Hutchinson and Mamont (KDHM) pad sites. Background air quality samples will be taken near the Kuhns pad. (2) Laboratory Analyses: The air samples taken from the pad sites will be monitored for methane concentration and compared to the hand-held sensor readings taken at the pads. The air samples taken from the Mamont compressor station will be monitored for the standard compressor gases of CO, NO₂, SO₂, Benzene, Ethylbenzene, Formaldehyde, n-Hexane, Toluene, Xlenes and 2,2,4 Trimethylpentane. (3) Reporting: A report on the results of the field sampling and analyses will be delivered within six weeks after field sampling. After review and approval of the report results by MAWC, the results will then be posted on an IUP web site for public access.

II. Scope of Report

This report covers the third quarter of the contract. On 13 March of this quarter IUP shut down all face-to-face classes. In addition, IUP personnel were not permitted in IUP buildings. As a result, I did not have access to my laboratory to make measurements on air samples.

At that time, I surveyed some local laboratories in Western Pennsylvania to see if I could outsource the analysis of air samples collected at Beaver Run. I found no environmental laboratories that could do a concentration analysis for methane down to the ppm level. For example, Environmental Service Laboratories in Indiana, Pennsylvania do perform gases analyses for methane concentration, but with a minimum sensitivity of 1000 ppm. Other laboratories had similar capabilities.

As a result, the course of action that I pursued, after speaking with other IUP individuals with research or service contracts, was to delay the Q3 air sampling until after the end of Q3 and plan to do the Q# sampling about two weeks into the Q4 range, about 15 May.

III. Field Report of Air Quality Sampling

The air quality sampling was delayed until 10 June. At that time I retrieved and replaced the CO data loggers and the temperature-relative humidity data logger that were placed at the Mamont compressor on 30 January 2020. All three CO monitors failed at some point during the quarter. The temperature-relative humidity logger did record data and I was able to download it.
IV. Summary

At this point all air quality monitoring for the third quarter is lost. I will continue with fourth-quarter air quality monitoring and analysis.