PERMITTING AND CONSTRUCTION OF A MICRO-HYDROELECTRIC POWER FACILITY UTLIZING TREATED MINE DRAINAGE[1]

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Abstract: The effluent (63 lps to 126 lps) from the existing Antrim Treatment Plant (Plant) was utilized to generate electricity from two micro-hydroelectric turbines. The site is located in the bituminous coal fields in north central Pennsylvania within the Babb Creek watershed. This is the first project in Pennsylvania (and possibly the USA) to use AMD to power impulse (Turgo) turbines. The electricity generated from the turbines is used to run components of the Plant with the intention to eventually connect to the local electric utility or "the grid". The complex terrain coupled with the utilization of both the treated and seasonal raw overflow water created some unique design and construction issues. This is a case study on the permitting and construction of a micro-hydroelectric power facility.

Additional Key Words: AMD, Tioga County, Pennsylvania, hydroelectric, turbine, Turgo, FERC

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