PPRP Research to Support Coal Combustion Product Management in Maryland

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KEYWORDS:

ABSTRACT

The Maryland Department of Natural Resources Power Plant Research Program (PPRP) is a non-regulatory program that ensures that Maryland meets its electricity demands at reasonable costs, while protecting the State's valuable natural resources. PPRP researches power plant impacts to Maryland's natural resources and recommends balanced, long-term solutions to minimize impacts, including those related to coal combustion products (CCPs). Traditionally, Maryland power plants have managed CCPs by placing them in landfills. As such a portion of PPRP's research focuses on the environmental impacts from landfilling CCPs, as well as beneficial uses to reduce landfill demand.

The purpose of this paper is to present an overview of PPRP's current research on CCP management in Maryland. As part of its research on the environmental impact of CCP landfills, PPRP is investigating leachate management techniques at the Faulkner Fly Ash Storage Site. PPRP has also worked to evaluate the environmental impact associated with using CCPs as structural fill in two highway embankment projects.

In addition, PPRP sponsors demonstration projects that provide environmental monitoring data on potential future beneficial uses for large volumes of CCPs. Two such demonstration projects are the Winding Ridge Project, now in its eighth year of post-injection monitoring; and the Kempton Manshaft Project, where injection was completed in 2003. Both of these projects focus on using CCP-based grouts to mitigate problems associated with abandoned coal mines. PPRP is also evaluating the technical feasibility of using CCP-grouts for geotechnical applications to mitigate sinkholes and stream losses in karst areas of central Maryland.

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