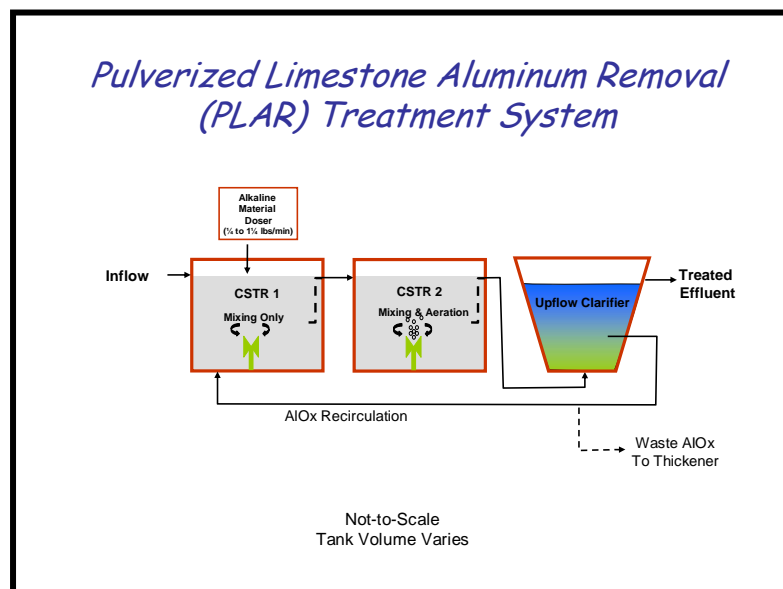


DEVELOPMENT OF ABATEMENT APPROACHES FOR AMD EMANATING FROM THE POTATO RIDGE MINE

Project Location: Potato Ridge Mine
Fayette County, PA

Client: Kaiser Aluminum & Chemical Corp.
Fayette County, PA
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Dietz *et al* Consulting has assisted The EADS Group in a project involving reclamation and treatment of numerous acid mine drainage (AMD) emanating from two mines, Smith & Potato Ridge Mines, as well as abandoned mined land (AML) in the area. The various AMD discharge into Laurel Run, a cold water fishery containing wild brook trout, and cause water quality impacts from AML AMD and inadequately treated water from the Smith Mine (currently treated with various passive treatment approaches). The goal of the project is to develop new and comprehensive treatment options for the discharges emanating from both mines (as well as AML areas) to levels achieving NPDES effluent limits, minimize the water quality impacts, and restore Laurel Run to a productive cold water fishery.



Dietz *et al* Consulting has provided numerous services for this project including: 1) field sampling and data analysis, 2) bench-scale testing for various treatment options, 3) water quality modeling of current and anticipated water quality in Laurel Run for various treatment scenarios; 4) design of the proposed PLAR treatment system, 6) design of a passive treatment system for manganese removal; and 5) review of various NPDES, TMDL and other DEP documentation.

The PLAR system depicted is a new and innovative AMD treatment approach that was selected by the client and approved by DEP reviewers as the pre-treatment option to remove aluminum and associated acidity from the high aluminum (greater than 50 mg/L) AMD discharges found throughout both the Potato Ridge Mine, Smith Mine, and nearby AML.