



421-09-04

DATE: September 30, 2009
SUBJECT: Acid Bearing Rock Policy
TO: District Executives
FROM: Tucker Ferguson, P.E., Director
Bureau of Construction and Materials

A handwritten signature in black ink, appearing to read "Tucker Ferguson".

This Strike-Off Letter is time-neutral.

The diverse geologic formations across Pennsylvania include many different forms of acid bearing rocks (ABR). Since many of our highway construction projects require considerable earth excavation, the possibility of encountering these acid-generating materials is very real, and must be thoroughly considered during project design and construction.

As part of the Department's formal efforts to address the concerns of ABR, a comprehensive Acid Bearing Rock Policy has been developed and is attached for your immediate implementation. In addition to providing a fundamental understanding of the acid-forming process, the ABR policy sets standards for site assessment, subsurface investigation, sampling and testing requirements, acid-base analysis, and design details for acidic or potentially acidic site conditions. Currently there are no standard ASTM or AASHTO methods for sampling and testing the acid-generating potential of earth material. The acid-base methods required in the policy are drawn from current mining industry practice. The test methods are covered in detail in the policy, as well as assessment of the results and development of remedial treatments. Several worked examples of acid-base accounting are included for clarification. The policy addresses avoidance, prevention, and mitigation of acid drainage.

This policy will be permanently located as one of the technical sections in an updated Pub. 293, Geotechnical Engineering Manual, which is scheduled to be released in 2010. Also to be included in a future revision to this policy will be Standard Special Provisions for Construction to assist Districts in writing specification provisions for project-specific ABR conditions.

The new ABR policy is part of the Department's overall response to the constructive recommendations provided in the FHWA Geotechnical Engineering Program Review of PennDOT, which called for improved policy standards, technical guidance, and continuity in project development.

If you need additional information, please contact Kerry Petrasic, P.E. at (717) 787-4319 or at kpetrasic@state.pa.us.

Attachment

2516/4200/DQN/kwp/lgb

cc: Scott Christie, P.E., Deputy Secretary for Highway Administration
Danielle Spila, Policy Director
Highway Administration Bureau Directors
Assistant District Executives-Construction
Assistant District Executives-Design
Construction and Materials Division Chiefs
Design Division Chiefs
Associated Pennsylvania Constructors
Federal Highway Administration
PA Turnpike Commission
District Geotechnical Engineers
American Council of Engineering Companies
K. W. Petrasic, P.E.
P. H. Moffitt, P.E.
D. Q. Neff, P.E.
V. A. Porto, P.G.
Source File
Reading File