

**VIRGINIA DEPARTMENT OF ENERGY
MINED LAND REPURPOSING**

GUIDANCE MEMORANDUM¹ No. 30-10

Issue Date: April 26, 2010

Subject: Engineering Review of Sediment Basin Design; Excavated Basins

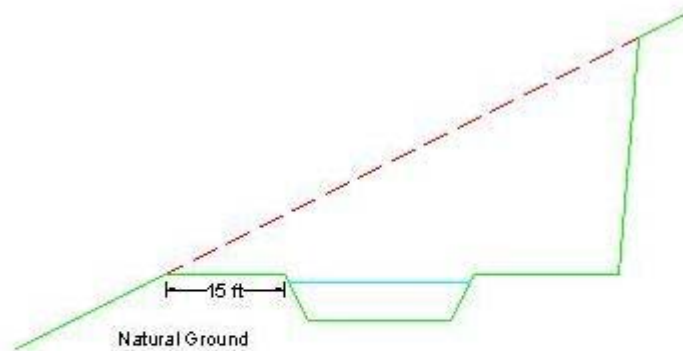
The Virginia Coal Surface Mining Reclamation Regulations (VaCSMRR) at 4VAC25-130-4VAC25-130-816.46 and 817.46 Hydrologic balance; siltation structures, and 4VAC25-130-784.16. Reclamation plan; siltation structures, impoundments, banks, dams, and embankments set forth specific guidelines for the review, approval and performance of the various sedimentation basins under an approved Chapter 19 permit. This Guidance Memorandum sets forth clarification of the review of excavated basins by the Mined Land Repurposing (MLR) program.

Section 4 VAC 25-130-816.46 and 49 as well as Section 4 VAC 25-130-817.46 and 49 of the VaCSMRR address the two types of siltation structures most frequently constructed to meet the requirements for drainage control. An **Embankment Basin** is a structure formed from artificial deposit of material that is raised above the natural surface of the land and used to contain, divert, or store water. An **Excavated Basin** is a structure created when material is removed creating a depression where drainage is impounded.

In the process of an engineering review of a proposed siltation structure, the MLR will examine as a critical factor the location of the siltation structure in relation to undisturbed area such as the existing bench in a previously mined area. Excavated basins must be placed far enough back on the bench or natural ground to ensure long term stability. A general check for the approximate location of natural ground will be done by projecting a line from the top of the highwall. This line will either be at a 2h: 1v slope or approximating the slope above the highwall. A width of a minimum of 15 feet of natural ground is necessary for justification that the pond in natural ground and can be addressed as an excavated basin. (See Figure 1.)

¹ This Memorandum is to be considered a guideline issued under the authority of § 45.1-230.A1 of the Code of Virginia which reads:

"In addition to the adoption of regulations under this chapter, the Director may at his discretion issue or distribute to the public interpretative, advisory or procedural bulletins or guidelines pertaining to permit applications or to matters reasonably related thereto without following any of the procedures set forth in the Administrative Process Act (§ 2.2-4000 et seq.). The materials shall be clearly designated as to their nature, shall be solely for purposes of public information and education, and shall not have the force of regulations under this chapter or under any other provision of this Code."



If the width between the top of the pond and the outslope is less than 15 feet then the pond will be treated as an embankment pond.

Figure 1.

.Another option would be to have a minimum of thirty (30) feet between the top of the pond and the outslope. This may allow the pond to be considered excavated. (See Figure 2)

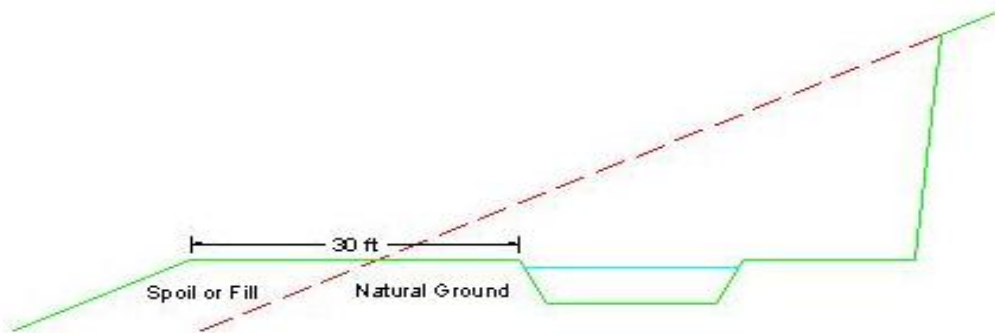


Figure 2.

If this check predicts that the pond is in spoil and it is still desired that the pond be considered an excavated structure then it will have to be proven that the pond is built in natural ground. This will likely require either drilling or excavation at the site to locate natural ground. The use of photographs would also be helpful. Basins **not** meeting this criterion will be reviewed as embankment basins.

Should you have any questions regarding this guidance document, please contact the MLR's Technical Services Manager at (276) 523-8100.