From: Priscilla Burton
To: Kent Fawcett; OGMCOAL
CC: Dean, Dana; Haddock, Daron; Owen, James
Date: 7/26/2011 6:47 PM
Subject: 0070001 White Oak Outgoing subsidence hole closure

Hello Kent,

I discussed the subsidence hole closure with Daron Haddock and Dana Dean. They would like to use cement mixed with dirt and rock to make a plug in the subsidence hole. The procedure would be as follows:

Slightly excavate the hole.
Throw large boulders into hole to create foundation.
Mix portland cement with dirt and rock. The mix should be no more than 1:1, since the available dirt has very little sand and gravel (usually called for in mixing portland cement).
Back fill three feet of the back fill depth with the cement mixture.
Fill remainder of hole with dirt.

My "back of the napkin" calculation for the quantity of cement is as follows:
Assume over excavation to 10 ft. diameter. Then, 3 ft. deep times the area of the 10 ft. circle would be 942 cu ft. If half of that is cement, then 471 cu ft of cement would be needed. Each 94# bag of portland cement creates 6 cu ft, so that 78 bags would be needed.

Do you agree with this calculation? Could you give me a cost for this subsidence hole closure method to use in the Change Order?

Priscilla.

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