

HLWYM HEmails

From: Randall Fedors
Sent: Thursday, October 19, 2006 9:45 AM
To: 'Robert Lenhard'
Cc: Stuart Stothoff; Eugene Peters
Subject: RE: Gene,

I look through my stuff for a reference to the soils report, but also check with Stu.

My impressions of the caliche horizon are that we saw it in the colluvium on toes of slopes, in some locations, but not generally all. Where the soils are thin on hillslopes and tops of ridges, sporadic caliche was found under rock blocks buried in the soil and at the soil-bedrock interface. Where the soils are thick in the flat washes and valleys, the caliche may be more common; this is probably the area that the soils report focused on. We also saw more caliche on cleared-off pavements (e.g., soil-cleared surfaces for fracture studies). I think this caliche built-up during the post-clearing period (evaporation directly from the bedrock). This is something to check/confirm during your observations.

--Randy

>>> Robert Lenhard <rlenhard@cnwra.swri.edu> 10/19/2006 8:41 AM >>>
Randy,

Thanks for the data. While at the infiltration OR visit, I understood that DOE was largely relying on an older? soil survey. We need to get a copy of the survey report. I have no idea who conducted the survey. There were soil classifications in the survey report that indicated some soils had, at least, a partial obstruction to downward water movement by a silca-cemented layer. To me, this suggests that those soils are relatively old/mature. The lithic term used in some of the classification units suggest that hard rock will be encountered within 20 cm of the surface. Other classifications indicate an increase in clay content with depth. For a sandy surface, the increase in clay needs to be at least 3%, which will likely reduce the Ksat values of those horizons significantly. I think it would be good to check if the survey report accurately reflects soil conditions at the site.

I understand that time may be an issue about traveling to Yucca Mtn. Because of the upcoming CNWRA Annual Review, Thanksgiving week, possible Keith Compton visit on 4-8 Dec., AGU, etc. -- we may not be able to schedule a trip until spring? I sent Gene an email yesterday.

Nice seeing you again.

regards, Bob

-----Original Message-----

From: Randall Fedors [mailto:RWF@nrc.gov]
Sent: Thursday, October 19, 2006 6:40 AM
To: Eugene Peters
Cc: Robert Lenhard; Stuart Stothoff; Jack Guttman
Subject: Gene,

Gene,

Bob talked with me briefly about the field soil depth activity while I was in San Antonio. He is excited to walk the mountain and dig into the soils; he reminded me of his soils background. Bob has enlisted Larry's help in making the arrangements for the field work, so the three of you should be getting together on this. There may be some sticky issues with moving soil, 6-inch soil disturbance NEPA permitting stuff.

Attached is a quick summary of the field observations we made back in 1998. Nine hillslope transects and a total of 50 or 60 pits (1 m² area cleared for each pit). We might talk about developing a means to release this data to DOE right away, i.e., a short 5-page report. Or, depending on how quickly the new soil depths field work happens, we could wait. Or, we could just use our data to support our evaluation of the DOE model. Of course, I'd rather DOE had the data.

--Randy

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From: Randall Fedors

Created By: Randall.Fedors@nrc.gov

Recipients:

"Stuart Stothoff" <sstothoff@cnwra.swri.edu>
Tracking Status: None
"Eugene Peters" <Eugene.Peters@nrc.gov>
Tracking Status: None
"Robert Lenhard" <rlnhard@cnwra.swri.edu>
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