From:	Gorin, Jonathan
To:	DiPippo, Gary
Cc:	John M. Hoffman; Carrie McGowan
Subject:	RE: pH Question at Last Night"s Meeting
Date:	Thursday, August 29, 2013 12:31:00 PM

Thanks Gary, the write-up will be very helpful for the responsiveness summary.

Good seeing you last night, I appreciate you chiming in to correct some of my factual errors.

jon

From: DiPippo, Gary [mailto:Gary.DiPippo@Cornerstoneeg.com]
Sent: Thursday, August 29, 2013 12:04 PM
To: Gorin, Jonathan
Cc: John M. Hoffman; Carrie McGowan
Subject: pH Question at Last Night's Meeting

Hello Jon.

Nice job last night that you and your colleagues did with the public meeting.

I thought that my response to the question about formation of hydrogen sulfide or sulfuric acid was not particularly articulate, so I thought I would summarize to the extent it may help with your responsiveness summary.

Significant acid or hydrogen sulfide formation is not anticipated. Hydrogen sulfide can form biologically under reducing conditions with an organic substrate. This is not likely to exist in the fill. Hydrogen sulfide can also form geochemically, but typically at a very low pH, and this is unlikely. Sulfuric acid can form when the sulfur is reduced and in solution with sufficient oxygen (for instance elemental sulfur is used for pH control for agricultural purposes). However, with the form of sulfur and in-situ process contemplated, these conditions are also not likely to exist. Available literature regarding mercury stabilization with sulfur does not indicate problems with formation of these compounds. Nonetheless, the potential formation of such compounds will be addressed by the treatability study that will be performed as a part of the remedial design process.

I hope this is of some use.

Regards, Gary

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