From:	Axelrad, Don
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Subject:	EAA peat-bound sulfur originates from fertilizer application in the EAA?
Date:	Thursday, September 25, 2008 7:17:09 PM

Bill,

The text below is from the 2006 SFER Hg chapter.

How strong are the isotopic data indicating that EAA peat-bound sulfur originates from fertilizer application in the EAA?

Don

"This brings into question the source of the sulfur in EAA peats. The formation of reduced organic sulfur from sulfate via microbial sulfate reduction has been frequently reported (Aamaral, et al., 1993; Rudd et al., 1986; Vile et al., 2003). Carbon-bonded reduced sulfur is generally the dominant end product of sulfate-reduction in freshwater peat soils. ACME data from sulfate reduction rate measurements show this is case at all of ACME sites in the Everglades, including ENR (now STA-1W). As such, much of the sulfur released from mineralizing EAA soils quite possibly originates from application of agricultural sulfur. This hypothesis is also consistent with the stable isotope data (Orem et al., in press)."

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