

Gray, Jeff

From: Johnson, Linden Printz
Sent: Monday, August 28, 2006 1:01 PM
To: Gray, Jeff; Purkey, Ronald E
Cc: Petty, Harold L; Knight, Tony Alan; Johnson, Linden Printz
Subject: RE: KIF CO2 Flowrate

By Tony's 3rd paragraph, 1st sentence, I believe he means would not need treatment for upper pH issues - it could, however, need treatment for low pH issues.

Linden (Lindy) Printz Johnson
Tennessee Valley Authority
Environmental Affairs, LP 5D-C
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-----Original Message-----

From: Gray, Jeff
Sent: Monday, August 28, 2006 12:03 PM
To: Purkey, Ronald E; Johnson, Linden Printz; Shaffer, Douglas P; Dixon, Melisa D; Campbell, Linda F
Cc: Petty, Harold L; Gray, Jeff
Subject: FW: KIF CO2 Flowrate

FYI,

Thanks,
Jeff L. Gray
EDS, Civil Engineering
423-751-7693
423-751-6116 (Fax)

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

From: Knight, Tony Alan
Sent: Monday, August 28, 2006 11:52 AM
To: Gray, Jeff
Subject: KIF CO2 Flowrate

Jeff,

I have reviewed the data from the lab in Muscle Shoals that performed the CO2 titration. Using the titration data and the ashpond discharge flowrate of 43 MGD combined with the runoff from the Dredge Cell 10 year 24 hour storm event gave a total of 56 MGD that would need to be treated.

The daily CO2 usage is approximately 3.9 tons/day at an efficiency of 90% with the liquid injection system. Gas sparging is only 50-60% efficient and would require almost 8 tons/day.

The data from the Emory River samples showed pH's in the 7.5 range and would not need treatment. Additional samples will need to be collected during the winter system to obtain data to design a system to increase the pH. We will continue to investigate treatment systems for increasing pH's.

I have included the workbook with the data that was used for calculating the CO2 usage. Please let me know if

anything additional needs to be added.

Thanks
Tony Knight
423.751.7332