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To: MICHAEL MCATEER cc: timothy.p.gouger, DMLIGH

Subject: SA1/SSP - Bioassay Results Summary

Mike

Here is a summary of the toxicity bioassays conducted on sediments from Dead Creek and several reference areas:

Acute (10 Day) and Chronic (20 to 42 Day) Sediment Toxicity Tests

Sampling Location	Amphipods Hyallela azteca Mean Survival(%)		Midges Chironomus tentans Mean Survial (%)	
	Acute	Chronic	Acute	Chronic
B-1	16*	8*	0*	Acute Toxicity — ?
B-2	1*	-	0*	Acute Toxicity
B-3	64*	39*	100	52
Site M	10*	85	96	40
C-1	90	87	30*	Acute Toxicity
C-2	71	73	0*	Acute Toxicity
C-3	68*	76	96	63
D-1	90	84	44*	Acute Toxicity
D-2	88	81	48*	31
D-3	90	79	71*	42*
E-1	23*	56*	91*	54
E-2	76	91	16*	Acute Toxicity
E-3	85	50*	97	0*
F-1	91	84	31*	Acute Toxicity
F-2	86	70	16*	Acute Toxicity
F-3	83	76	10*	Acute Toxicity
Borrow Pit Lake 1	89	75	40*	0*
Borrow Pit Lake 2	96	73	14*	Acute Toxicity
Borrow Pit Lake 3	91	84	53*	6*
Prairie du Pont Ck	98	79	16*	Acute Toxicity
Prairie du Pont Ck2	98	80	55*	Acute Toxicity
Reference Creek	98	65	13*	Acute Toxicity

Reference Borrow Pit	98	83	11*	Acute Toxicity

* Statistically significant at p less than or equal to 0.05

Sediments from CS-B, C and E have an adverse affect on both amphipods and midges. Sediments from CS-D and F have an adverse affect on midges (note that the Borrow Pit Lake is the downstream portion of CS-F). Overall, these data indicate to me that sediments in the stream portion of Dead Creek (CS-B, C, D, E and the stream portion of F) can adversely affect sensitive organisms.

Bruce