

Richard Mine Drainage Bench Titration													
06-26-06 REIC Laboratories - Ben Faulkner and Jason Clark													
Source:	Richard Mine Drainage #1, Richard, WV												
collected:	06/15/06 by Ben Faulkner at largest PE pipe draining Richard Mine cubitainer 1/5												
	Target is a steady pH maintained for 60 seconds												
Third Run	CALCIUM OXIDE 100% 4 concurrent beakers added increments of 0.02 g CaO												
BEAKER A target pH 5.5													
volume g	pH	total iron	dissolved iron	dissolved aluminum	dissolved manganese	dissolved copper	dissolved nickel	dissolved zinc	dissolved magnesium	time	pic	filtered lab id	Imhoff cone ml
0.00	3.24									12:27			
0.18	4.44									12:54	20		
0.30	5.62									13:01			
	5.48		61.0							13:30		L5.5	0
		60.80								16:40			90
										24 hrs			
BEAKER B target pH 6.0													
0.00	3.26									13:00		aerated for 33 minutes prior to pH	
0.30	5.33									13:06	24		
0.35	6.07									13:15			
	5.54		44.8							13:30		L6.0	0
		44.00								16:40			120
										24 hrs			
BEAKER C target pH 6.5													
0.00	3.26									11:13		aerated for 46 minutes prior to pH	
0.35	6.00									13:17	25		
0.40	6.50									13:20			
	5.81		18.4							13:30		L6.5	0
		15.50								16:40			150
										24 hrs.			
BEAKER D target pH 7.0													
0.00	3.26									13:22		aerated for 55 minutes prior to pH	
0.40	6.56									13:24	27		
0.45	7.84									13:25	28	maintained green color	
	7.84		0.158							13:30		L7.0	0 green
										14:00			300 red
	6.67	1.36								16:40			170
										24 hrs.			
Cubitainer 2/5			90.6	<--- this value is the assumed dissolved iron starting point for titrations.									
				Preserved sample of 6/15/06 minus this value represents the concentration of dissolved iron lost in transit and storage									
Cubitainer 1/5	179.00												