Project ID: **Cinco Central - WER #2**
JobNo: **470153.02-0203**
SampDateTime: **9/5/2007**

Copper Stock Solution: **22.693** g/L (as $Cu(NO_3)_2 \cdot 2.5H_2O$)
6.19 mg/mL, or ug/uL (as Cu)

Dilfac	0.75	
	Factor	Cu (ppb)
	0.18	4.27
	0.24	5.70
	0.32	7.59
	0.42	10.13
	0.56	13.50
	0.75	18.00
C. dubia SMAV	1.00	24.00
	1.33	32.00
	1.78	42.67
	2.37	56.89
	3.16	75.85
	4.21	101.14
	5.62	134.85
	7.49	179.80
	9.99	239.73
	13.32	319.64
	17.76	426.19
	23.68	568.25
	31.57	757.66
	42.09	1010.22
	56.12	1346.96
	74.83	1795.94

Critical dilution (%): 82
OverageFactor: 1.75
Cerio Vol 75

	MaxConc
cdLW	50
cdSD	570

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SD Prep	Vol	Eff	RW
Set-up (L)	12.3	10.0	2.2

	Spike-Vol uL/L)	Conc. (ppb)	Vol Needed (L)	Spike-Vol (uL)
LW	10	62	3.0	30
SD	90	557	3.0	270

SET-UPS

LabWater

Ceriodaphnia dubia				Cup Vol.	75
Conc. (ppb)	Conc. (%)	Reps	Renewals	Spiked-LW	LW
62	100	8	1	600	0
46	75	8	1	450	150
35	56	8	1	338	263
26	42	8	1	253	347
20	32	8	1	190	410
15	24	8	1	142	458
11	18	8	1	107	493
8	13	8	1	80	520
6	10	8	1	60	540
0	0	8	1	0	600
Totals				2220	3780
				3	4

SD Water

Ceriodaphnia dubia				Cup Vol.	75
Conc. (ppb)	Conc. (%)	Reps	Renewals	Spiked-SD	SD
557	100	8	1	600	0
418	75	8	1	450	150
313	56	8	1	338	263
235	42	8	1	253	347
176	32	8	1	190	410
132	24	8	1	142	458
99	18	8	1	107	493
74	13	8	1	80	520
56	10	8	1	60	540
0	0	8	1	0	600
Totals				2220	3780
				3	4

SampNo	Client	Medium	Samp_DateTime	Analysis
1	Cinco Central - WER #2	EFF	9/5/2007	Total Organic Carbon
2	Cinco Central - WER #2	EFF	9/5/2007	Dissolved Organic Carbon
3	Cinco Central - WER #2	EFF	9/5/2007	Carbonaceous BOD
4	Cinco Central - WER #2	EFF	9/5/2007	TDS, TSS, Alk, Hardness, Chloride, Sulfate
5	Cinco Central - WER #2	EFF	9/5/2007	Sulfide
6	Cinco Central - WER #2	EFF	9/5/2007	Na, K, Ca, Mg (Total)
7	Cinco Central - WER #2	Rec H20	9/5/2007	Total Organic Carbon
8	Cinco Central - WER #2	Rec H20	9/5/2007	Dissolved Organic Carbon
9	Cinco Central - WER #2	Rec H20	9/5/2007	Carbonaceous BOD
10	Cinco Central - WER #2	Rec H20	9/5/2007	TDS, TSS, Alk, Hardness, Chloride, Sulfate
11	Cinco Central - WER #2	Rec H20	9/5/2007	Sulfide
12	Cinco Central - WER #2	Rec H20	9/5/2007	Na, K, Ca, Mg (Total)
13	Cinco Central - WER #2	SD	9/5/2007	Total Organic Carbon
14	Cinco Central - WER #2	SD	9/5/2007	Dissolved Organic Carbon
15	Cinco Central - WER #2	SD	9/5/2007	Carbonaceous BOD
16	Cinco Central - WER #2	SD	9/5/2007	TDS, TSS, Alk, Hardness, Chloride, Sulfate
17	Cinco Central - WER #2	SD	9/5/2007	Sulfide
18	Cinco Central - WER #2	SD	9/5/2007	Na, K, Ca, Mg (Total)
19	Cinco Central - WER #2	LW	9/5/2007	Total Organic Carbon
20	Cinco Central - WER #2	LW	9/5/2007	Dissolved Organic Carbon
21	Cinco Central - WER #2	LW	9/5/2007	Carbonaceous BOD
22	Cinco Central - WER #2	LW	9/5/2007	TDS, TSS, Alk, Hardness, Chloride, Sulfate
23	Cinco Central - WER #2	LW	9/5/2007	Sulfide
24	Cinco Central - WER #2	LW	9/5/2007	Na, K, Ca, Mg (Total)

SampNo	Client	Medium	Time	NomConc	Unit	Analysis
1011	o Central - WER #2	LW	0 hr	0	ppb	TotCu
1012	o Central - WER #2	LW	0 hr	6	ppb	TotCu
1013	o Central - WER #2	LW	0 hr	8	ppb	TotCu
1014	o Central - WER #2	LW	0 hr	11	ppb	TotCu
1015	o Central - WER #2	LW	0 hr	15	ppb	TotCu
1016	o Central - WER #2	LW	0 hr	20	ppb	TotCu
1017	o Central - WER #2	LW	0 hr	26	ppb	TotCu
1018	o Central - WER #2	LW	0 hr	35	ppb	TotCu
1019	o Central - WER #2	LW	0 hr	46	ppb	TotCu
1020	o Central - WER #2	LW	0 hr	62	ppb	TotCu
2011	o Central - WER #2	LW	0 hr	0	ppb	DisCu
2012	o Central - WER #2	LW	0 hr	6	ppb	DisCu
2013	o Central - WER #2	LW	0 hr	8	ppb	DisCu
2014	o Central - WER #2	LW	0 hr	11	ppb	DisCu
2015	o Central - WER #2	LW	0 hr	15	ppb	DisCu
2016	o Central - WER #2	LW	0 hr	20	ppb	DisCu
2017	o Central - WER #2	LW	0 hr	26	ppb	DisCu
2018	o Central - WER #2	LW	0 hr	35	ppb	DisCu
2019	o Central - WER #2	LW	0 hr	46	ppb	DisCu
2020	o Central - WER #2	LW	0 hr	62	ppb	DisCu
3011	o Central - WER #2	SD	0 hr	0	ppb	TotCu
3012	o Central - WER #2	SD	0 hr	56	ppb	TotCu
3013	o Central - WER #2	SD	0 hr	74	ppb	TotCu
3014	o Central - WER #2	SD	0 hr	99	ppb	TotCu
3015	o Central - WER #2	SD	0 hr	132	ppb	TotCu
3016	o Central - WER #2	SD	0 hr	176	ppb	TotCu
3017	o Central - WER #2	SD	0 hr	235	ppb	TotCu
3018	o Central - WER #2	SD	0 hr	313	ppb	TotCu
3019	o Central - WER #2	SD	0 hr	418	ppb	TotCu
3020	o Central - WER #2	SD	0 hr	557	ppb	TotCu
4011	o Central - WER #2	SD	0 hr	0	ppb	DisCu
4012	o Central - WER #2	SD	0 hr	56	ppb	DisCu
4013	o Central - WER #2	SD	0 hr	74	ppb	DisCu
4014	o Central - WER #2	SD	0 hr	99	ppb	DisCu
4015	o Central - WER #2	SD	0 hr	132	ppb	DisCu
4016	o Central - WER #2	SD	0 hr	176	ppb	DisCu
4017	o Central - WER #2	SD	0 hr	235	ppb	DisCu
4018	o Central - WER #2	SD	0 hr	313	ppb	DisCu
4019	o Central - WER #2	SD	0 hr	418	ppb	DisCu
4020	o Central - WER #2	SD	0 hr	557	ppb	DisCu
5011	o Central - WER #2	LW	48 hr	0	ppb	TotCu
5012	o Central - WER #2	LW	48 hr	6	ppb	TotCu
5013	o Central - WER #2	LW	48 hr	8	ppb	TotCu
5014	o Central - WER #2	LW	48 hr	11	ppb	TotCu
5015	o Central - WER #2	LW	48 hr	15	ppb	TotCu
5016	o Central - WER #2	LW	48 hr	20	ppb	TotCu

5017	o Central - WER #2	LW	48 hr	26	ppb	TotCu
5018	o Central - WER #2	LW	48 hr	35	ppb	TotCu
5019	o Central - WER #2	LW	48 hr	46	ppb	TotCu
5020	o Central - WER #2	LW	48 hr	62	ppb	TotCu
6011	o Central - WER #2	LW	48 hr	0	ppb	DisCu
6012	o Central - WER #2	LW	48 hr	6	ppb	DisCu
6013	o Central - WER #2	LW	48 hr	8	ppb	DisCu
6014	o Central - WER #2	LW	48 hr	11	ppb	DisCu
6015	o Central - WER #2	LW	48 hr	15	ppb	DisCu
6016	o Central - WER #2	LW	48 hr	20	ppb	DisCu
6017	o Central - WER #2	LW	48 hr	26	ppb	DisCu
6018	o Central - WER #2	LW	48 hr	35	ppb	DisCu
6019	o Central - WER #2	LW	48 hr	46	ppb	DisCu
6020	o Central - WER #2	LW	48 hr	62	ppb	DisCu
7011	o Central - WER #2	SD	48 hr	0	ppb	TotCu
7012	o Central - WER #2	SD	48 hr	56	ppb	TotCu
7013	o Central - WER #2	SD	48 hr	74	ppb	TotCu
7014	o Central - WER #2	SD	48 hr	99	ppb	TotCu
7015	o Central - WER #2	SD	48 hr	132	ppb	TotCu
7016	o Central - WER #2	SD	48 hr	176	ppb	TotCu
7017	o Central - WER #2	SD	48 hr	235	ppb	TotCu
7018	o Central - WER #2	SD	48 hr	313	ppb	TotCu
7019	o Central - WER #2	SD	48 hr	418	ppb	TotCu
7020	o Central - WER #2	SD	48 hr	557	ppb	TotCu
8011	o Central - WER #2	SD	48 hr	0	ppb	DisCu
8012	o Central - WER #2	SD	48 hr	56	ppb	DisCu
8013	o Central - WER #2	SD	48 hr	74	ppb	DisCu
8014	o Central - WER #2	SD	48 hr	99	ppb	DisCu
8015	o Central - WER #2	SD	48 hr	132	ppb	DisCu
8016	o Central - WER #2	SD	48 hr	176	ppb	DisCu
8017	o Central - WER #2	SD	48 hr	235	ppb	DisCu
8018	o Central - WER #2	SD	48 hr	313	ppb	DisCu
8019	o Central - WER #2	SD	48 hr	418	ppb	DisCu
8020	o Central - WER #2	SD	48 hr	557	ppb	DisCu

CLIENT	WATER	T	ORG	CONC	ppb	REP
Cinco Central - WER #2	**LW**	**48h**	**CD**	**0**	**ppb**	**A**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**0**	**ppb**	**B**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**0**	**ppb**	**C**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**0**	**ppb**	**D**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**0**	**ppb**	**E**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**6**	**ppb**	**A**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**6**	**ppb**	**B**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**6**	**ppb**	**C**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**6**	**ppb**	**D**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**6**	**ppb**	**E**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**8**	**ppb**	**A**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**8**	**ppb**	**B**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**8**	**ppb**	**C**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**8**	**ppb**	**D**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**8**	**ppb**	**E**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**11**	**ppb**	**A**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**11**	**ppb**	**B**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**11**	**ppb**	**C**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**11**	**ppb**	**D**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**11**	**ppb**	**E**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**15**	**ppb**	**A**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**15**	**ppb**	**B**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**15**	**ppb**	**C**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**15**	**ppb**	**D**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**15**	**ppb**	**E**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**20**	**ppb**	**A**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**20**	**ppb**	**B**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**20**	**ppb**	**C**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**20**	**ppb**	**D**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**20**	**ppb**	**E**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**26**	**ppb**	**A**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**26**	**ppb**	**B**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**26**	**ppb**	**C**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**26**	**ppb**	**D**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**26**	**ppb**	**E**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**35**	**ppb**	**A**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**35**	**ppb**	**B**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**35**	**ppb**	**C**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**35**	**ppb**	**D**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**35**	**ppb**	**E**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**46**	**ppb**	**A**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**46**	**ppb**	**B**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**46**	**ppb**	**C**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**46**	**ppb**	**D**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**46**	**ppb**	**E**
Cinco Central - WER #2	**LW**	**48h**	**CD**	**62**	**ppb**	**A**

Cinco Central - WER #2	LW	48h	CD	62	ppb	B
Cinco Central - WER #2	LW	48h	CD	62	ppb	C
Cinco Central - WER #2	LW	48h	CD	62	ppb	D
Cinco Central - WER #2	LW	48h	CD	62	ppb	E
Cinco Central - WER #2	SD	48h	CD	0	ppb	A
Cinco Central - WER #2	SD	48h	CD	0	ppb	B
Cinco Central - WER #2	SD	48h	CD	0	ppb	C
Cinco Central - WER #2	SD	48h	CD	0	ppb	D
Cinco Central - WER #2	SD	48h	CD	0	ppb	E
Cinco Central - WER #2	SD	48h	CD	56	ppb	A
Cinco Central - WER #2	SD	48h	CD	56	ppb	B
Cinco Central - WER #2	SD	48h	CD	56	ppb	C
Cinco Central - WER #2	SD	48h	CD	56	ppb	D
Cinco Central - WER #2	SD	48h	CD	56	ppb	E
Cinco Central - WER #2	SD	48h	CD	74	ppb	A
Cinco Central - WER #2	SD	48h	CD	74	ppb	B
Cinco Central - WER #2	SD	48h	CD	74	ppb	C
Cinco Central - WER #2	SD	48h	CD	74	ppb	D
Cinco Central - WER #2	SD	48h	CD	74	ppb	E
Cinco Central - WER #2	SD	48h	CD	99	ppb	A
Cinco Central - WER #2	SD	48h	CD	99	ppb	B
Cinco Central - WER #2	SD	48h	CD	99	ppb	C
Cinco Central - WER #2	SD	48h	CD	99	ppb	D
Cinco Central - WER #2	SD	48h	CD	99	ppb	E
Cinco Central - WER #2	SD	48h	CD	132	ppb	A
Cinco Central - WER #2	SD	48h	CD	132	ppb	B
Cinco Central - WER #2	SD	48h	CD	132	ppb	C
Cinco Central - WER #2	SD	48h	CD	132	ppb	D
Cinco Central - WER #2	SD	48h	CD	132	ppb	E
Cinco Central - WER #2	SD	48h	CD	176	ppb	A
Cinco Central - WER #2	SD	48h	CD	176	ppb	B
Cinco Central - WER #2	SD	48h	CD	176	ppb	C
Cinco Central - WER #2	SD	48h	CD	176	ppb	D
Cinco Central - WER #2	SD	48h	CD	176	ppb	E
Cinco Central - WER #2	SD	48h	CD	235	ppb	A
Cinco Central - WER #2	SD	48h	CD	235	ppb	B
Cinco Central - WER #2	SD	48h	CD	235	ppb	C
Cinco Central - WER #2	SD	48h	CD	235	ppb	D
Cinco Central - WER #2	SD	48h	CD	235	ppb	E
Cinco Central - WER #2	SD	48h	CD	313	ppb	A
Cinco Central - WER #2	SD	48h	CD	313	ppb	B
Cinco Central - WER #2	SD	48h	CD	313	ppb	C
Cinco Central - WER #2	SD	48h	CD	313	ppb	D
Cinco Central - WER #2	SD	48h	CD	313	ppb	E
Cinco Central - WER #2	SD	48h	CD	418	ppb	A
Cinco Central - WER #2	SD	48h	CD	418	ppb	B
Cinco Central - WER #2	SD	48h	CD	418	ppb	C

Cinco Central - WER #2	**SD**	**48h**	**CD**	**418**	**ppb**	**D**
Cinco Central - WER #2	**SD**	**48h**	**CD**	**418**	**ppb**	**E**
Cinco Central - WER #2	**SD**	**48h**	**CD**	**557**	**ppb**	**A**
Cinco Central - WER #2	**SD**	**48h**	**CD**	**557**	**ppb**	**B**
Cinco Central - WER #2	**SD**	**48h**	**CD**	**557**	**ppb**	**C**
Cinco Central - WER #2	**SD**	**48h**	**CD**	**557**	**ppb**	**D**
Cinco Central - WER #2	**SD**	**48h**	**CD**	**557**	**ppb**	**E**

Project ID: **Cinco Central - WER #2**
JobNo: **470153.02-0203**
SampDateTime: **9/5/2007**

ID No.	Sample		Date/Time	Container Size	Preservation	Analysis Requested
1	Cinco Central	Effluent	9-5-07 / 0900	250 mL, Plastic	H_2SO_4	Total Organic Carbon
2	"	"	"	250 mL, Plastic	H_2SO_4	Dissolved Organic Carbon
3	"	"	"	1 Liter, Plastic	None, Cool (1-6 ˚C)	Carbonaceous BOD
4	"	"	"	1 Liter, Plastic	None, Cool (1-6 ˚C)	TDS, TSS, Alk, Hardness, Chloride, Sulfate
5	"	"	"	1 Liter, Plastic	Asorbic Acid, NaOH	Sulfide
6	"	"	"	250 mL, Plastic	HNO_3	Na, K, Ca, Mg (Total)
7	Cinco Central	Rec H2O	9-5-07 / 1000	250 mL, Plastic	H_2SO_4	Total Organic Carbon
8	"	"	"	250 mL, Plastic	H_2SO_4	Dissolved Organic Carbon
9	"	"	"	1 Liter, Plastic	None, Cool (1-6 ˚C)	Carbonaceous BOD
10	"	"	"	1 Liter, Plastic	None, Cool (1-6 ˚C)	TDS, TSS, Alk, Hardness, Chloride, Sulfate
11	"	"	"	1 Liter, Plastic	Asorbic Acid, NaOH	Sulfide
12	"	"	"	250 mL, Plastic	HNO_3	Na, K, Ca, Mg (Total)
13	Cinco Central	SD	9-5-07 / 1000	250 mL, Plastic	H_2SO_4	Total Organic Carbon
14	"	"	"	250 mL, Plastic	H_2SO_4	Dissolved Organic Carbon
15	"	"	"	1 Liter, Plastic	None, Cool (1-6 ˚C)	Carbonaceous BOD
16	"	"	"	1 Liter, Plastic	None, Cool (1-6 ˚C)	TDS, TSS, Alk, Hardness, Chloride, Sulfate
17	"	"	"	1 Liter, Plastic	Asorbic Acid, NaOH	Sulfide
18	"	"	"	250 mL, Plastic	HNO_3	Na, K, Ca, Mg (Total)
19	Cinco Central	Lab Water	9/5/07 / 1000	250 mL, Plastic	H_2SO_4	Total Organic Carbon
20	"	"	"	250 mL, Plastic	H_2SO_4	Dissolved Organic Carbon
21	"	"	"	1 Liter, Plastic	None, Cool (1-6 ˚C)	Carbonaceous BOD
22	"	"	"	1 Liter, Plastic	None, Cool (1-6 ˚C)	TDS, TSS, Alk, Hardness, Chloride, Sulfate
23	"	"	"	1 Liter, Plastic	Asorbic Acid, NaOH	Sulfide
24	"	"	"	250 mL, Plastic	HNO_3	Na, K, Ca, Mg (Total)

Project ID: Cinco Central - WER #2
JobNo: 470153.02-0203
SampDateTime: 9/5/2007

ID No.	Sample		NomConc	Date/Time	Container Size	Preservation	Analysis Requested
1016	LW	0 hr	20	9-5-07 / 1000	250 mL, plastic	HNO3	Total Copper
1017	"	"	26	"	"	"	
1018	"	"	35	"	"	"	
1019	"	"	46	"	"	"	
1020	"	"	62	"	"	"	
2016	LW	0 hr	20	9-5-07 / 1000	250 mL, plastic	HNO3	Dissolved Copper
2017	"	"	26	"	"	"	
2018	"	"	35	"	"	"	
2019	"	"	46	"	"	"	
2020	"	"	62	"	"	"	
3012	SD	0 hr	56	9-5-07 / 1000	250 mL, plastic	HNO3	Total Copper
3013	"	"	74	"	"	"	
3014	"	"	99	"	"	"	
3015	"	"	132	"	"	"	
3016	"	"	176	"	"	"	
3017	"	"	235	"	"	"	
3018	"	"	313	"	"	"	
3019	"	"	418	"	"	"	
3020	"	"	557	"	"	"	
4012	SD	0 hr	56	9-5-07 / 1000	250 mL, plastic	HNO3	Dissolved Copper
4013	"	"	74	"	"	"	
4014	"	"	99	"	"	"	
4015	"	"	132	"	"	"	
4016	"	"	176	"	"	"	
4017	"	"	235	"	"	"	
4018	"	"	313	"	"	"	
4019	"	"	418	"	"	"	
4020	"	"	557	"	"	"	
5016	LW	48 hr	20	9-5-07 / 1000	250 mL, plastic	HNO3	Total Copper
5017	"	"	26	"	"	"	
5018	"	"	35	"	"	"	
5019	"	"	46	"	"	"	
5020	"	"	62	"	"	"	
6016	LW	48 hr	20	9-5-07 / 1000	250 mL, plastic	HNO3	

Project ID: Cinco Central - WER #2
JobNo: 470153.02-0203
SampDateTime: 9/5/2007

ID No.	Sample		NomConc	Date/Time	Container Size	Preservation	Analysis Requested
6017	"	"	26	"	"	"	Dissolved Copper
6018	"	"	35	"	"	"	
6019	"	"	46	"	"	"	
6020	"	"	62	"	"	"	
7012	SD	48 hr	56	9-5-07 / 1000	250 mL, plastic	HNO3	Total Copper
7013	"	"	74	"	"	"	
7014	"	"	99	"	"	"	
7015	"	"	132	"	"	"	
7016	"	"	176	"	"	"	
7017	"	"	235	"	"	"	
7018	"	"	313	"	"	"	
7019	"	"	418	"	"	"	
7020	"	"	557	"	"	"	
8012	SD	48 hr	56	9-5-07 / 1000	250 mL, plastic	HNO3	Dissolved Copper
8013	"	"	74	"	"	"	
8014	"	"	99	"	"	"	
8015	"	"	132	"	"	"	
8016	"	"	176	"	"	"	
8017	"	"	235	"	"	"	
8018	"	"	313	"	"	"	
8019	"	"	418	"	"	"	
8020	"	"	557	"	"	"	

Project ID: Cinco Central - WER #2
JobNo: 470153.02-0203
SampDateTime: 9/5/2007

ID No.	Sample		NomConc	Date/Time	Container Size	Preservation	Analysis Requested
1011	LW	0 hr	0	9-5-07 / 1000	250 mL, plastic	HNO3	Total Copper
1012	"	"	6	"	"	"	
1013	"	"	8	"	"	"	
1014	"	"	11	"	"	"	
1015	"	"	15	"	"	"	
2011	LW	0 hr	0	9-5-07 / 1000	250 mL, plastic	HNO3	Dissolved Copper
2012	"	"	6	"	"	"	
2013	"	"	8	"	"	"	
2014	"	"	11	"	"	"	
2015	"	"	15	"	"	"	
3011	SD	0 hr	0	9-5-07 / 1000	250 mL, plastic	HNO3	Total Copper
4011	SD	0 hr	0	9-5-07 / 1000	250 mL, plastic	HNO3	Dissolved Copper
5011	LW	48 hr	0	9-5-07 / 1000	250 mL, plastic	HNO3	Total Copper
5012	"	"	6	"	"	"	
5013	"	"	8	"	"	"	
5014	"	"	11	"	"	"	
5015	"	"	15	"	"	"	
6011	LW	48 hr	0	9-5-07 / 1000	250 mL, plastic	HNO3	Dissolved Copper
6012	"	"	6	"	"	"	
6013	"	"	8	"	"	"	
6014	"	"	11	"	"	"	
6015	"	"	15	"	"	"	
7011	SD	48 hr	0	9-5-07 / 1000	250 mL, plastic	HNO3	Total Copper
8011	SD	48 hr	0	9-5-07 / 1000	250 mL, plastic	HNO3	Dissolved Copper
EFF-T	N/A			9-5-07 / 0900	250 mL, plastic	HNO3	Total Copper
RW-T	N/A			9-5-07 / 1000	"	"	
SD-T	N/A			"	"	"	
LW-T	N/A			"	"	"	
EFF-D	N/A			9-5-07 / 0900	250 mL, plastic	HNO3	Dissolved Copper
RW-D	N/A			9-5-07 / 1000	"	"	
SD-D	N/A			"	"	"	
LW-D	N/A			"	"	"	

Project ID:	**Cinco Central - WER #2**					
JobNo:	**470153.02-0203**					
SampDateTime:	**9/5/2007**					
ID No.	**Sample**			**Data Modifier**	**Reported**	**Analysis Requested**
1	Effluent	0 hr	As Rec'd		6.02	Total Organic Carbon
2	"	"	"		6.03	Dissolved Organic Carbon
3	"	"	"	<	2.4	Carbonaceous BOD
4	"	"	"		484	TDS
4	"	"	"		13	TSS
4	"	"	"		148	Alk
4	"	"	"		127	Hardness
4	"	"	"		92.2	Chloride
4	"	"	"		30	Sulfate
5	"	"	"	<	10	Sulfide
6	"	"	"		97.9	Sodium
6	"	"	"		15	Potassium
6	"	"	"		39.7	Calcium
6	"	"	"		6.69	Magnesium
EFF-T	"	"	"		7.5	Total Copper
EFF-D	"	"	"		6.9	Dissolved Copper
7	Rec H2O	0 hr	As Rec'd		11.7	Total Organic Carbon
8	"	"	"		12.6	Dissolved Organic Carbon
9	"	"	"	<	2.4	Carbonaceous BOD
10	"	"	"		226	TDS
10	"	"	"		42	TSS
10	"	"	"		92.4	Alk
10	"	"	"		90.6	Hardness
10	"	"	"		31.7	Chloride
10	"	"	"		7.24	Sulfate
11	"	"	"	<	5	Sulfide
12	"	"	"		20.5	Sodium
12	"	"	"		5.1	Potassium
12	"	"	"		30.6	Calcium
12	"	"	"		3.43	Magnesium
RW-T	"	"	"		11.1	Total Copper
RW-D	"	"	"		7.6	Dissolved Copper
13	SD	0 hr	As Rec'd		6.42	Total Organic Carbon
14	"	"	"		7.29	Dissolved Organic Carbon
15	"	"	"	<	2.4	Carbonaceous BOD
16	"	"	"		406	TDS
16	"	"	"		17	TSS
16	"	"	"		136	Alk
16	"	"	"		122	Hardness
16	"	"	"		80.3	Chloride
16	"	"	"		26	Sulfate
17	"	"	"	<	10	Sulfide

18	"	"	"		86.7	Sodium
18	"	"	"		13.3	Potassium
18	"	"	"		38.7	Calcium
18	"	"	"		6.23	Magnesium
SD-T	"	"	"		8.1	Total Copper
SD-D	"	"	"		7.5	Dissolved Copper
19	LW	0 hr	As Rec'd	<	1	Total Organic Carbon
20	"	"	"	<	1	Dissolved Organic Carbon
21	"	"	"	<	2.4	Carbonaceous BOD
22	"	"	"		194	TDS
22	"	"	"	<	10	TSS
22	"	"	"		60.7	Alk
22	"	"	"		86.4	Hardness
22	"	"	"		2.7	Chloride
22	"	"	"		86.2	Sulfate
23	"	"	"	<	5	Sulfide
24	"	"	"		24.4	Sodium
24	"	"	"		2.35	Potassium
24	"	"	"		14.2	Calcium
24	"	"	"		12.4	Magnesium
LW-T	"	"	"		0.95	Total Copper
LW-D	"	"	"		1	Dissolved Copper
ID No.	**Sample**		**Nominal**		**Reported**	**Analysis Requested**
1011	LW	0 hr	0		0.92	Total Copper
1012			6		7.1	
1013			8		8.5	
1014			11		11.8	
1015			15		547	
1016			20		16.2	
1017			26		23.1	
1018			35		29.5	
1019			46		41.2	
1020			62		53.7	
2011	LW	0 hr	0		0.94	Dissolved Copper
2012			6		6.3	
2013			8		9.2	
2014			11		10.5	
2015			15		14	
2016			20		13.5	
2017			26		18.7	
2018			35		26	
2019			46		40.7	
2020			62		53.6	
3011			0		8.8	
3012			56		59.4	
3013			74		76.1	
3014			99		102	

3015	SD	0 hr	132		134	Total Copper
3016			176		173	
3017			235		229	
3018			313		416	
3019			418		300	
3020			557		550	
4011	SD	0 hr	0		7	Dissolved Copper
4012			56		53.1	
4013			74		67.8	
4014			99		89.8	
4015			132		119	
4016			176		152	
4017			235		193	
4018			313		251	
4019			418		346	
4020			557		455	
5011	LW	48 hr	0		1.8	Total Copper
5012			6		6.2	
5013			8		7.3	
5014			11		10.8	
5015			15		11.9	
5016			20		15	
5017			26		20.2	
5018			35		29.9	
5019			46		39.3	
5020			62		52.9	
6011	LW	48 hr	0		2.2	Dissolved Copper
6012			6		5.3	
6013			8		6.7	
6014			11		9.3	
6015			15		12.8	
6016			20		10.8	
6017			26		18	
6018			35		26	
6019			46		36.5	
6020			62		49.2	
7011	SD	48 hr	0		8.6	Total Copper
7012			56		59.6	
7013			74		74.9	
7014			99		98.5	
7015			132		135	
7016			176		172	
7017			235		211	
7018			313		271	
7019			418		410	
7020			557		529	
8011			0		8	

8012	SD	48 hr	56		55.6	Dissolved Copper
8013			74		71.5	
8014			99		96.4	
8015			132		127	
8016			176		169	
8017			235		239	
8018			313		318	
8019			418		343	
8020			557		443	

Project ID: **Cinco Central - WER #2**
JobNo: **470153.02-0203** **EPA Calculated WER**
SampDateTime: **9/5/2007**

Labwater

Total Cu (µg/L)				Dissolved Cu (µg/L)					
0h	48h	Accept	Average	0h	48h	Accept	Average	# Dead	Nominal
1	2	Y	1.4	1	2.2	Y	1.6	0	0
7	6	Y	6.7	6	5.3	Y	5.8	1	6
9	7	Y	7.9	9	6.7	Y	8.0	14	8
12	11	Y	11.3	11	9.3	Y	9.9	38	11
547	12	N	279.5	14	12.8	Y	13.4	48	15
16	15	Y	15.6	14	10.8	Y	12.2	50	20
23	20	Y	21.7	19	18	Y	18.4	50	26
30	30	Y	29.7	26	26	Y	26.0	50	35
41	39	Y	40.3	41	36.5	Y	38.6	50	46
54	53	Y	53.3	54	49.2	Y	51.4	50	62

Simulated Downstream Water

Total Cu (µg/L)				Dissolved Cu (µg/L)					
0h	48h	Accept	Average	0h	48h	Accept	Average	# Dead	Nominal
8.8	8.6	Y	8.7	7	8	Y	7.5	0	0
59.4	59.6	Y	59.5	**53.1**	55.6	Y	54.4	0	56
76.1	74.9	Y	75.5	**67.8**	71.5	Y	69.7	0	74
102	98.5	Y	100.3	**89.8**	96.4	Y	93.1	0	99
134	135	Y	134.5	**119**	127	Y	123.0	0	132
173	172	Y	172.5	**152**	169	Y	160.5	0	176
229	211	Y	220.0	**193**	239	Y	216.0	7	235
416	271	Y	343.5	**251**	318	Y	284.5	47	313
300	410	Y	355.0	**346**	343	Y	344.5	50	418
550	529	Y	539.5	**455**	443	Y	449.0	50	557

Medium	Hardness	Method	Copper	$LC50_{amb}$	$LC50_{100}$	WER_{100}
LW	86.4	TSK	Dissolved	8.67	9.95	
			Total	9.49	10.89	
SD	122	TSK	Dissolved	**216.26**	179.31	**8.1100**
			Total	265.75	220.35	9.1811