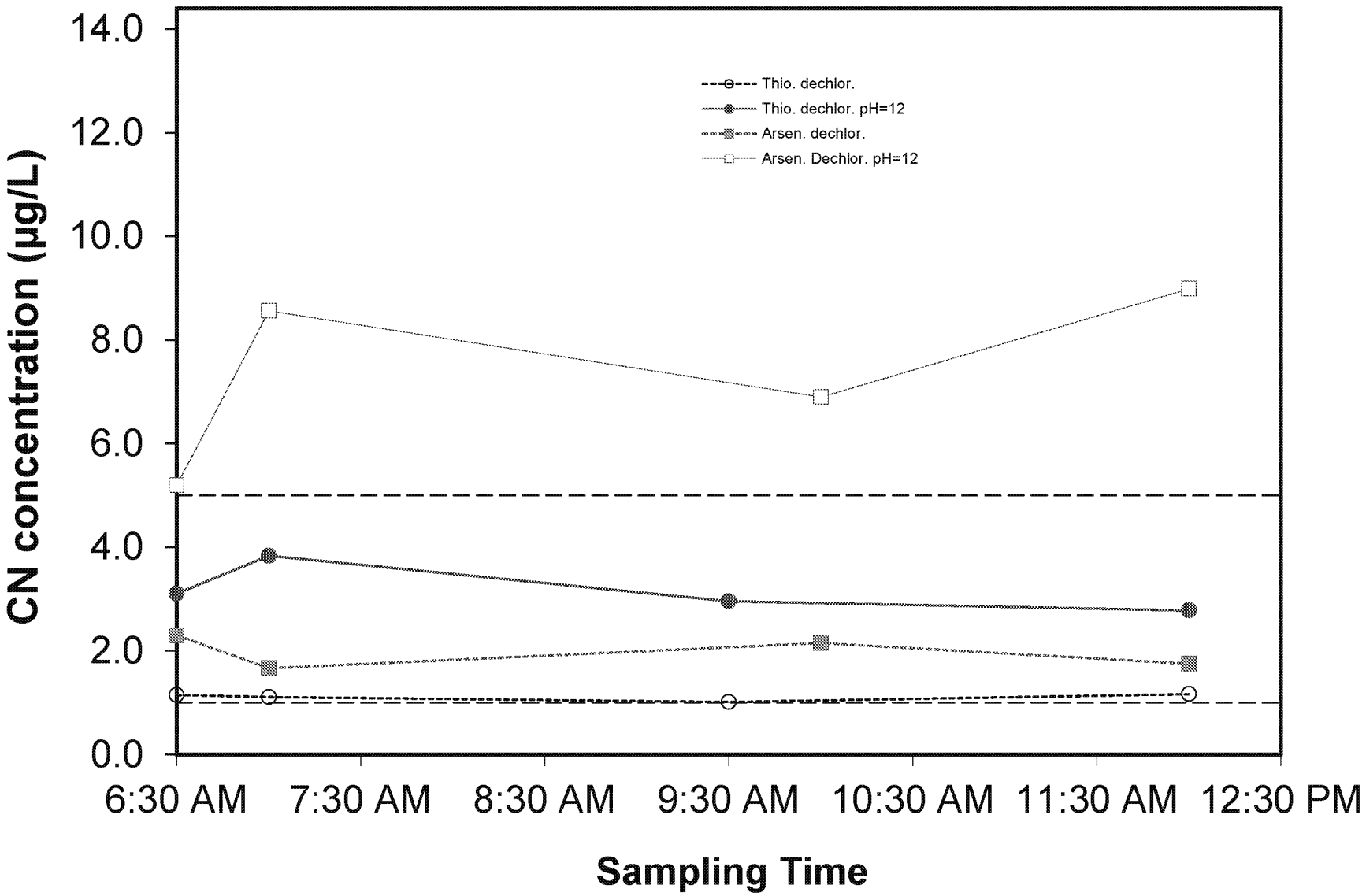
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12.0
10.0
8.0
6.0
4.0
2.0
0.0
CN concentration (µg/L)
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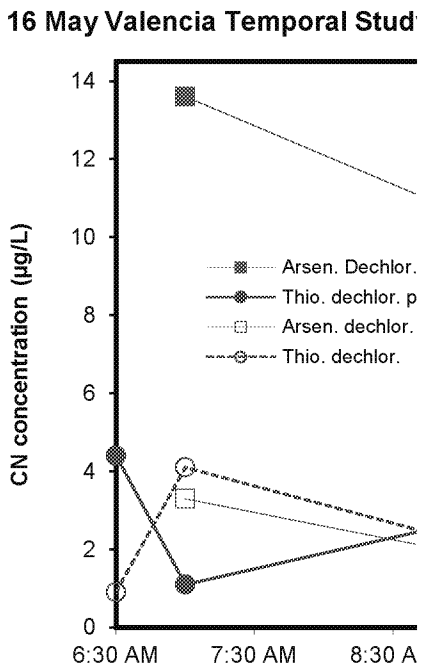
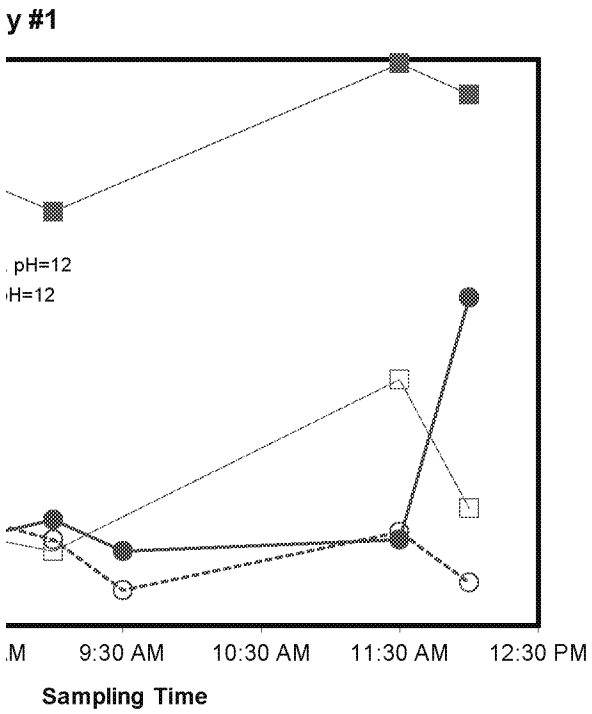
Thio. dechlor. pH=12
Arsen. dechlor.
Arsen. Dechlor. pH=12
6:30 AM
7:30 AM
8:30 AM
9:30 AM
10:30 AM
11:30 AM
12:30 PM
Sampling Time

CYANIDE PROJECT
VALENCIA FINAL EFFLUENT DATA FOR TEMPORAL STUDY-1
DATE: 05/16/05

	Description	Login #	Time collected	Cyanide ppb
2	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28368	6:30 AM	4.40
4	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28370	7:00 AM	1.10
8	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28374	9:00 AM	2.70
12	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28378	9:30 AM	1.90
14	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28380	11:30 AM	2.20
18	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28384	12:00 PM	8.40
5	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28371	7:00 AM	3.30
9	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28375	9:00 AM	1.90
15	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28381	11:30 AM	6.30
19	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28385	12:00 PM	3.00
6	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28372	7:00 AM	13.6
10	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28376	9:00 AM	10.60
16	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28382	11:30 AM	14.40
20	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28386	12:00 PM	13.6
1	Valencia FE w/ NaThio & No Pres.	SJ28367	6:30 AM	0.90
3	Valencia FE w/ NaThio & No Pres.	SJ28369	7:00 AM	4.10
7	Valencia FE w/ NaThio & No Pres.	SJ28373	9:00 AM	2.20
11	Valencia FE w/ NaThio & No Pres.	SJ28377	9:30 AM	0.90
13	Valencia FE w/ NaThio & No Pres.	SJ28379	11:30 AM	2.40
17	Valencia FE w/ NaThio & No Pres.	SJ28383	12:00 PM	1.10

Any values less than 1 were entered as 0.9 for graphing and averaging purposes




y #1
pH=12
H=12
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9:30 AM
10:30 AM
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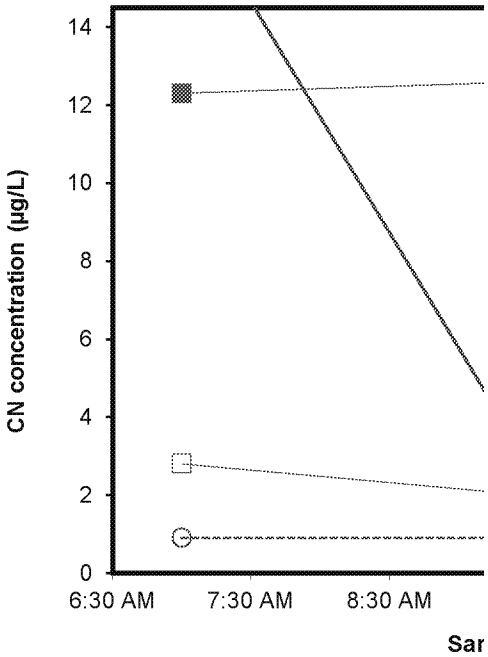
Sampling Time

CYANIDE PROJECT
VALENCIA AND SAUGUS FINAL EFFLUENT DATA FOR TEMPORAL STUDY-2
DATE: 05/17/05

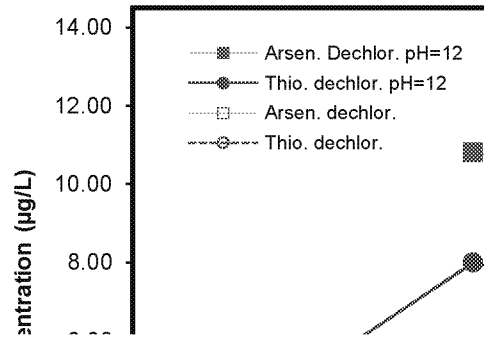
	Description	Login #	Time collected	Cyanide ppb
4	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28423	7:00 AM	17.60
12	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28431	9:30 AM	2.80
18	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28437	12:00 PM	8.30
5	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28424	7:00 AM	2.80
19	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28438	12:00 PM	1.20
6	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28425	7:00 AM	12.3
20	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28439	12:00 PM	12.9
3	Saugus FE w/ NaThio & No Pres.	SJ28422	7:00 AM	0.90
11	Saugus FE w/ NaThio & No Pres.	SJ28430	9:30 AM	0.90
17	Saugus FE w/ NaThio & No Pres.	SJ28436	12:00 PM	0.90
2	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28421	6:30 AM	2.20
8	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28427	9:00 AM	8.00
14	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28433	11:30 AM	6.20
9	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28428	9:00 AM	3.70
15	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28434	11:30 AM	3.10
10	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28429	9:00 AM	10.80
16	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28435	11:30 AM	9.60
1	Valencia FE w/ NaThio & No Pres.	SJ28420	6:30 AM	1.80
7	Valencia FE w/ NaThio & No Pres.	SJ28426	9:00 AM	1.50
13	Valencia FE w/ NaThio & No Pres.	SJ28432	11:30 AM	3.70

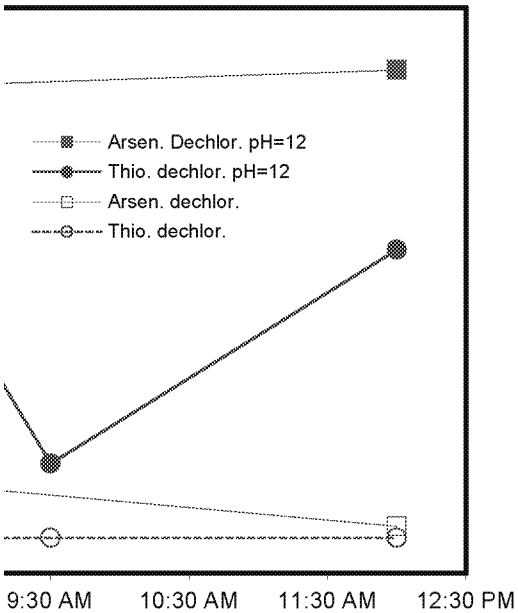
Any values less than 1 were entered as 0.9 for graphing and averaging purposes

17 May Saugus Temporal Study #2



17 May Valencia Temporal Study #2




Arsen. Dechlor. pH=12
Thio. dechlor. pH=12
Arsen. dechlor.
Thio. dechlor.
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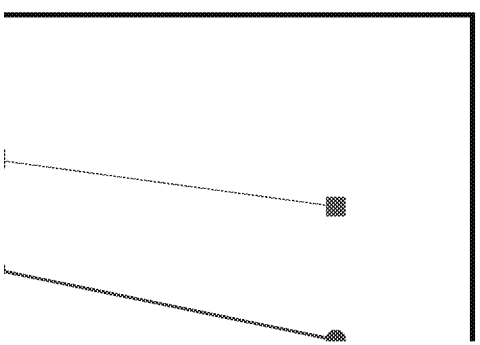
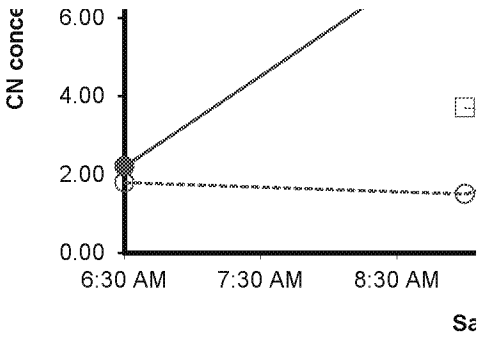
npling Time

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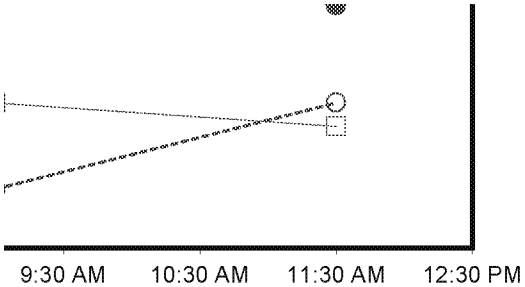


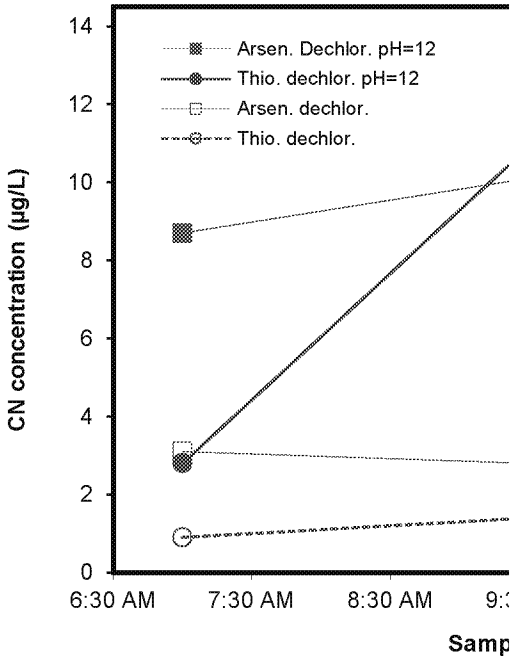
ampling Time

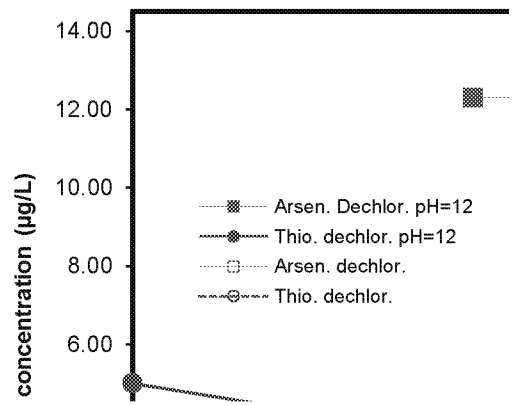
CYANIDE PROJECT
VALENCIA AND SAUGUS FINAL EFFLUENT DATA FOR TEMPORAL STUDY-3
DATE: 05/18/05

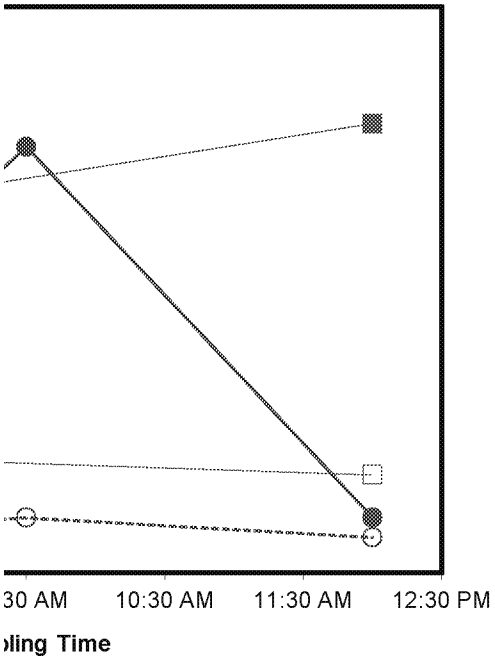
	Description	Login #	Time collected	Cyanide ppb
4	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28443	7:00 AM	2.80
12	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28451	9:30 AM	10.90
18	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28457	12:00 PM	1.40
5	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28444	7:00 AM	3.10
19	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28458	12:00 PM	2.50
6	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28445	7:00 AM	8.7
20	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28459	12:00 PM	11.5
3	Saugus FE w/ NaThio & No Pres.	SJ28442	7:00 AM	0.90
11	Saugus FE w/ NaThio & No Pres.	SJ28450	9:30 AM	1.40
17	Saugus FE w/ NaThio & No Pres.	SJ28456	12:00 PM	0.90
2	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28441	6:30 AM	5.00
8	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28447	9:00 AM	3.60
14	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28453	11:30 AM	7.00
9	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28448	9:00 AM	2.50
15	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28454	11:30 AM	3.40
10	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28449	9:00 AM	12.30
16	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28455	11:30 AM	12.30
1	Valencia FE w/ NaThio & No Pres.	SJ28440	6:30 AM	2.50
7	Valencia FE w/ NaThio & No Pres.	SJ28446	9:00 AM	2.20
13	Valencia FE w/ NaThio & No Pres.	SJ28452	11:30 AM	2.00

Any values less than 1 were entered as 0.9 for graphing and averaging purposes

18 May Saugus Temporal Study #3



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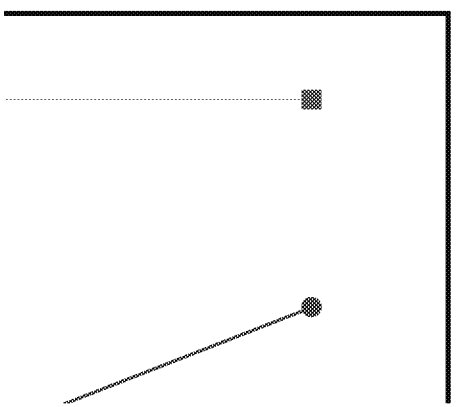

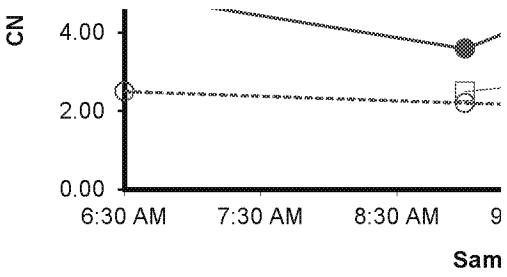
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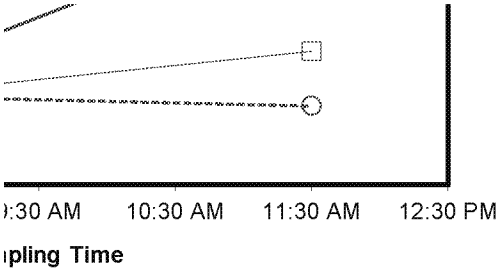
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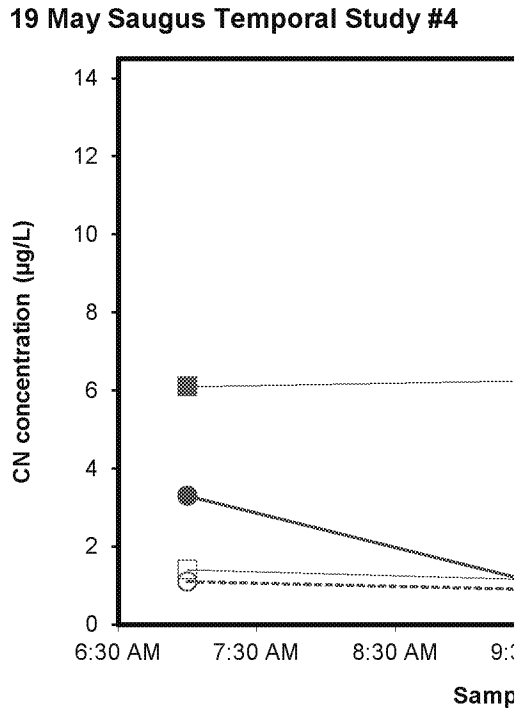
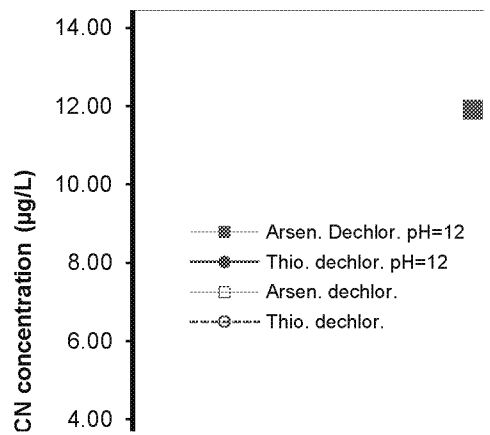
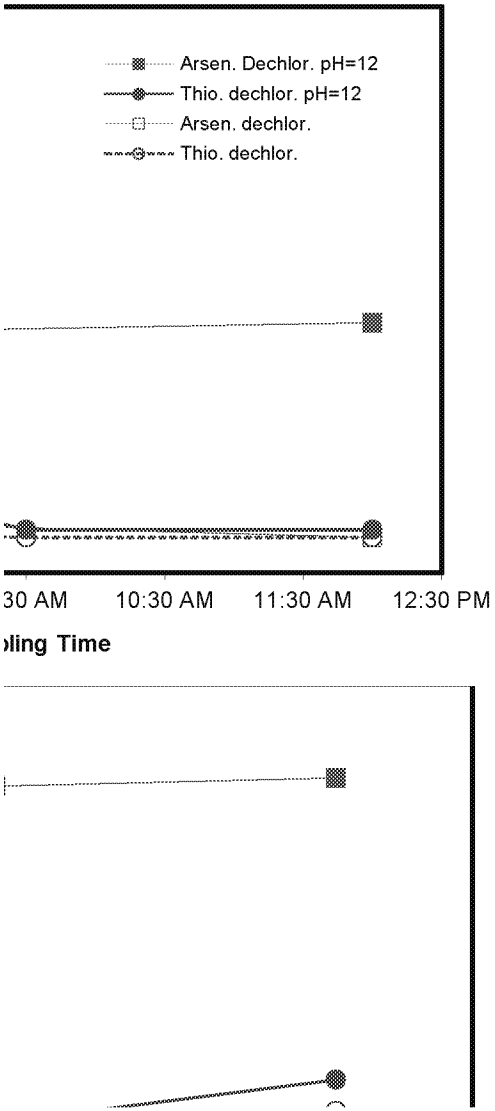
CYANIDE PROJECT
VALENCIA AND SAUGUS FINAL EFFLUENT DATA FOR TEMPORAL STUDY-4
DATE: 05/19/05

	Description	Login #	Time collected	Cyanide ppb
4	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28463	7:00 AM	3.30
12	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28471	9:30 AM	1.10
18	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28477	12:00 PM	1.10
5	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28464	7:00 AM	1.40
19	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28478	12:00 PM	0.90
6	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28465	7:00 AM	6.1
20	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28479	12:00 PM	6.4
3	Saugus FE w/ NaThio & No Pres.	SJ28462	7:00 AM	1.10
11	Saugus FE w/ NaThio & No Pres.	SJ28470	9:30 AM	0.90
17	Saugus FE w/ NaThio & No Pres.	SJ28476	12:00 PM	0.90
2	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28461	6:30 AM	2.20
8	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28467	9:00 AM	3.30
14	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28473	11:30 AM	4.40
9	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28468	9:00 AM	2.50
15	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28474	11:30 AM	3.00
10	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28469	9:00 AM	11.90
16	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28475	11:30 AM	12.10
1	Valencia FE w/ NaThio & No Pres.	SJ28460	6:30 AM	1.90
7	Valencia FE w/ NaThio & No Pres.	SJ28466	9:00 AM	2.50
13	Valencia FE w/ NaThio & No Pres.	SJ28472	11:30 AM	3.60

Any values less than 1 were entered as 0.9 for graphing and averaging purposes



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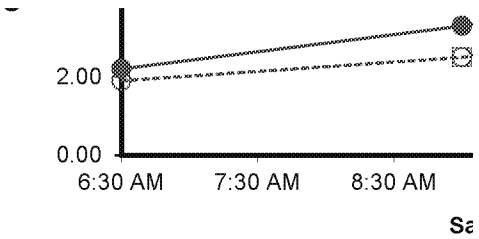
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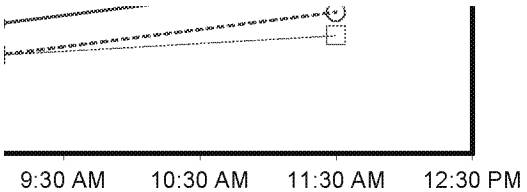


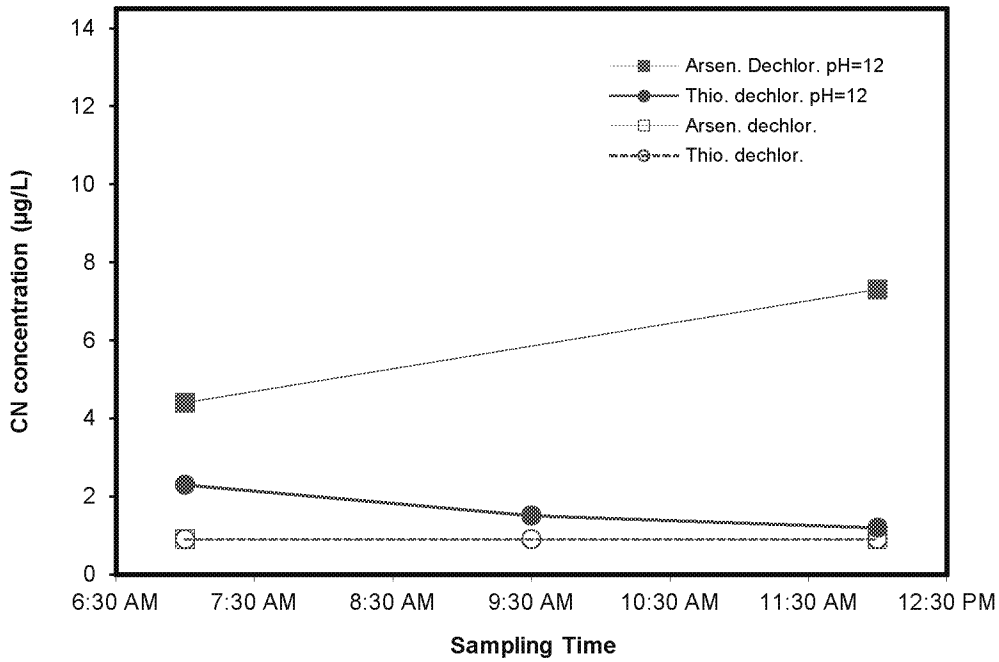
ampling Time

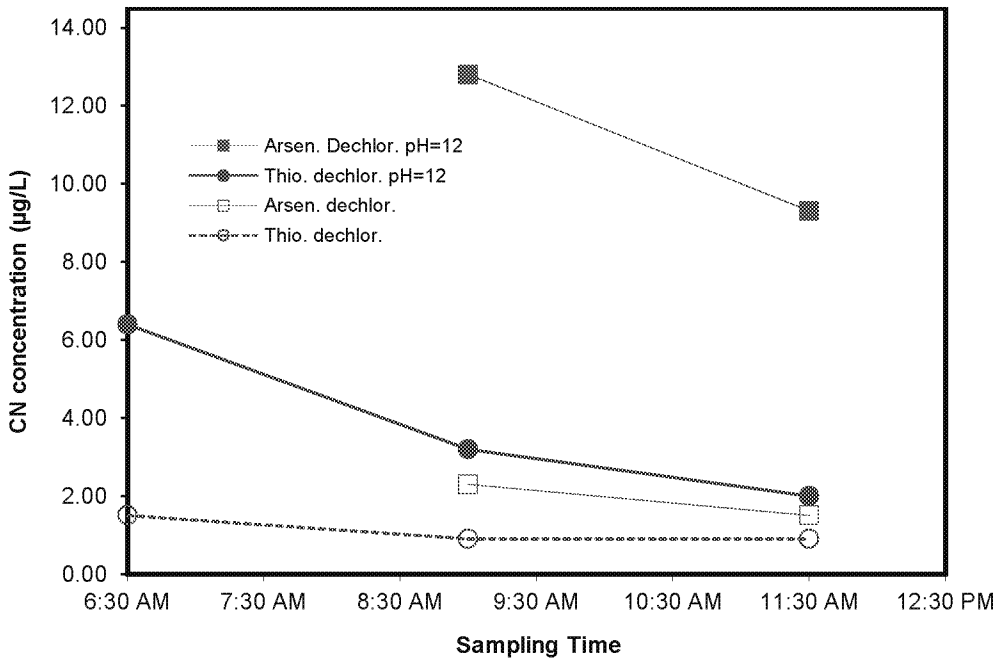
CYANIDE PROJECT
VALENCIA AND SAUGUS FINAL EFFLUENT DATA FOR TEMPC
DATE: 05/23/05

	Description	Login #	Time collected	Cyanide ppb
4	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28905	7:00 AM	2.30
12	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28913	9:30 AM	1.50
18	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28919	12:00 PM	1.20
5	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28906	7:00 AM	0.90
19	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28920	12:00 PM	0.90
6	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28907	7:00 AM	4.4
20	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28921	12:00 PM	7.3
3	Saugus FE w/ NaThio & No Pres.	SJ28904	7:00 AM	0.90
11	Saugus FE w/ NaThio & No Pres.	SJ28912	9:30 AM	0.90
17	Saugus FE w/ NaThio & No Pres.	SJ28918	12:00 PM	0.90
2	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28903	6:30 AM	6.40
8	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28909	9:00 AM	3.20
14	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28915	11:30 AM	2.00
9	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28910	9:00 AM	2.30
15	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28916	11:30 AM	1.50
10	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28911	9:00 AM	12.80
16	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28917	11:30 AM	9.30
1	Valencia FE w/ NaThio & No Pres.	SJ28902	6:30 AM	1.50
7	Valencia FE w/ NaThio & No Pres.	SJ28908	9:00 AM	0.90
13	Valencia FE w/ NaThio & No Pres.	SJ28914	11:30 AM	0.90
	Any values less than 1 were entered as 0.9 for graphing and averaging purposes			

)RAL STUDY-5

23 May Saugus Temporal Study #5

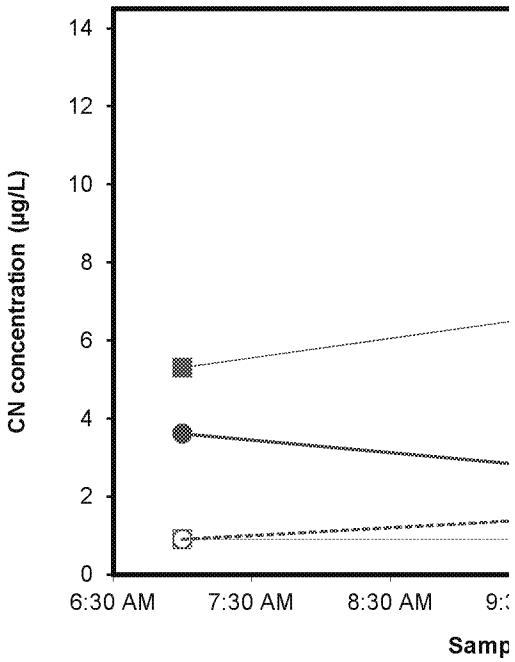


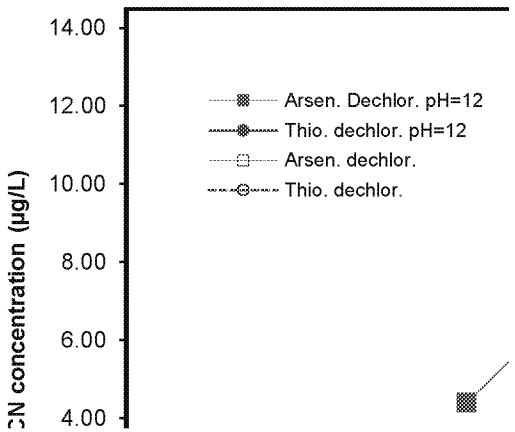


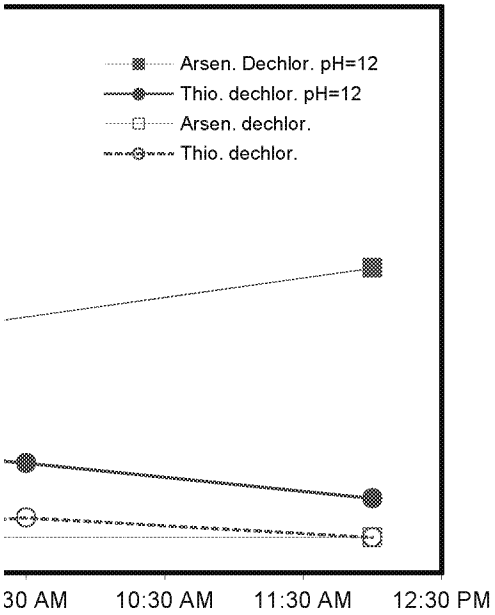
CYANIDE PROJECT
VALENCIA AND SAUGUS FINAL EFFLUENT DATA FOR TEMPORAL STUDY-6
DATE: 05/24/05

	Description	Login #	Time collected	Cyanide ppb
4	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28925	7:00 AM	3.60
12	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28933	9:30 AM	2.80
18	Saugus FE Grab w/ 50% NaOH to pH 12	SJ28939	12:00 PM	1.90
5	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28926	7:00 AM	0.90
19	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28940	12:00 PM	0.90
6	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28927	7:00 AM	5.3
20	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28941	12:00 PM	7.8
3	Saugus FE w/ NaThio & No Pres.	SJ28924	7:00 AM	0.90
11	Saugus FE w/ NaThio & No Pres.	SJ28932	9:30 AM	1.40
17	Saugus FE w/ NaThio & No Pres.	SJ28938	12:00 PM	0.90
2	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28923	6:30 AM	1.70
8	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28929	9:00 AM	2.50
14	Valencia FE Grab w/ 50% NaOH to pH 12	SJ28935	11:30 AM	3.90
9	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28930	9:00 AM	0.90
15	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	SJ28936	11:30 AM	2.20
10	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28931	9:00 AM	4.40
16	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	SJ28937	11:30 AM	13.00
1	Valencia FE w/ NaThio & No Pres.	SJ28922	6:30 AM	0.90
7	Valencia FE w/ NaThio & No Pres.	SJ28928	9:00 AM	0.90
13	Valencia FE w/ NaThio & No Pres.	SJ28934	11:30 AM	0.90
	Any values less than 1 were entered as 0.9 for graphing and averaging purposes			

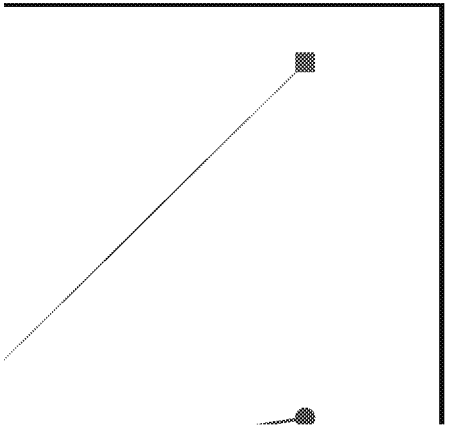
24 May Saugus Temporal Study #6

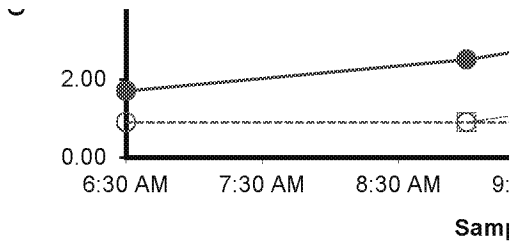


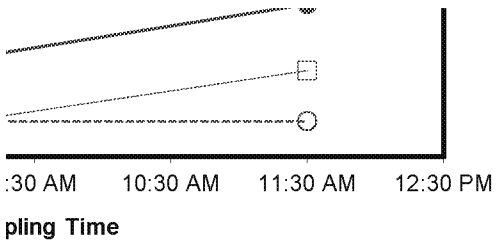



Arsen. Dechlor. pH=12
Thio. dechlor. pH=12
Arsen. dechlor.
Thio. dechlor.
30 AM
10:30 AM
11:30 AM
12:30 PM

ling Time



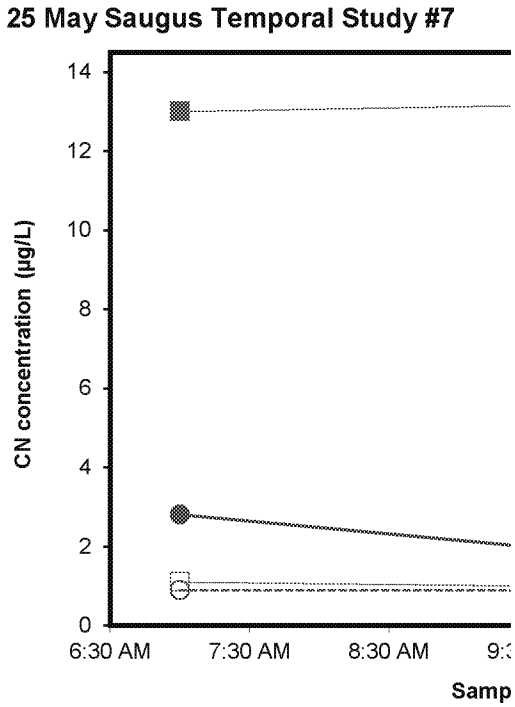

2.00
0.00
6:30 AM
7:30 AM
8:30 AM
9:
Sam

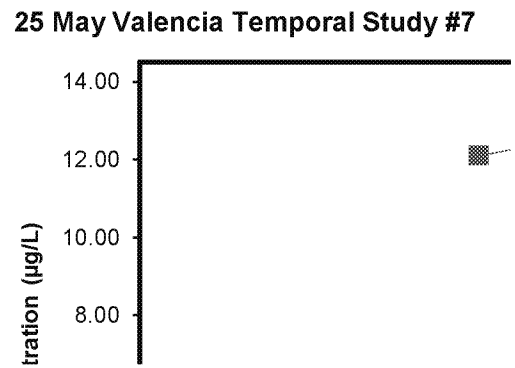

:30 AM
10:30 AM
11:30 AM
12:30 PM
pling Time

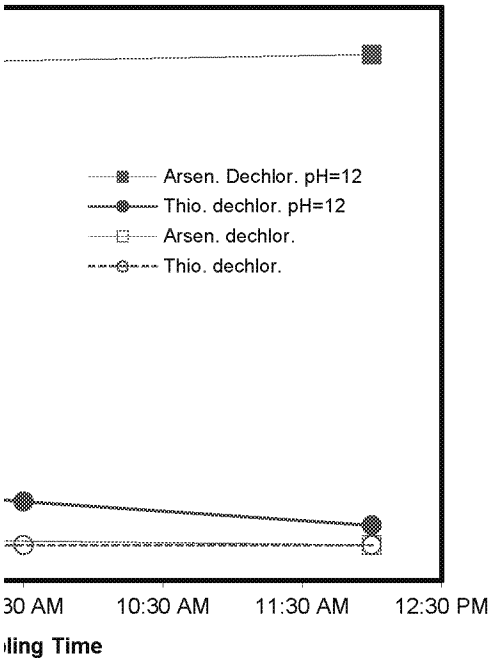
CYANIDE PROJECT
VALENCIA AND SAUGUS FINAL EFFLUENT DATA FOR TEMPORAL STUDY-7
DATE: 05/25/05

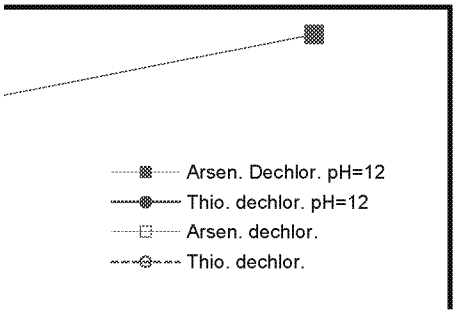
	Description	Login #	Time collected	Cyanide ppb
1	Saugus FE Grab w/ 50% NaOH to pH 12	29094	7:00 AM	2.80
2	Saugus FE Grab w/ 50% NaOH to pH 12	29102	9:30 AM	2.00
3	Saugus FE Grab w/ 50% NaOH to pH 12	29108	12:00 PM	1.40
4	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29095	7:00 AM	1.10
5	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29109	12:00 PM	0.90
6	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29096	7:00 AM	13
7	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29110	12:00 PM	13.3
8	Saugus FE w/ NaThio & No Pres.	29093	7:00 AM	0.90
9	Saugus FE w/ NaThio & No Pres.	29101	9:30 AM	0.90
10	Saugus FE w/ NaThio & No Pres.	29107	12:00 PM	0.90
11	Valencia FE Grab w/ 50% NaOH to pH 12	29092	6:30 AM	2.80
12	Valencia FE Grab w/ 50% NaOH to pH 12	29098	9:00 AM	4.20
13	Valencia FE Grab w/ 50% NaOH to pH 12	29104	11:30 AM	2.00
14	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29099	9:00 AM	0.90
15	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29105	11:30 AM	1.70
16	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29100	9:00 AM	12.10
17	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29106	11:30 AM	13.80
18	Valencia FE w/ NaThio & No Pres.	29091	6:30 AM	0.90
19	Valencia FE w/ NaThio & No Pres.	29097	9:00 AM	0.90
20	Valencia FE w/ NaThio & No Pres.	29103	11:30 AM	1.10

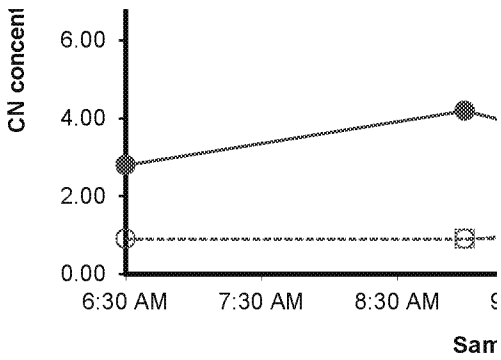
Any values less than 1 were entered as 0.9 for graphing and averaging purposes






Arsen. Dechlor. pH=12
Thio. dechlor. pH=12
Arsen. dechlor.
Thio. dechlor.
30 AM
10:30 AM
11:30 AM
12:30 PM
ling Time


Arsen. Dechlor. pH=12
Thio. dechlor. pH=12
Arsen. dechlor.
Thio. dechlor.


CN concent
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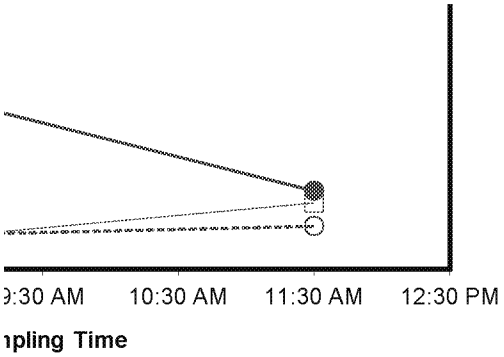
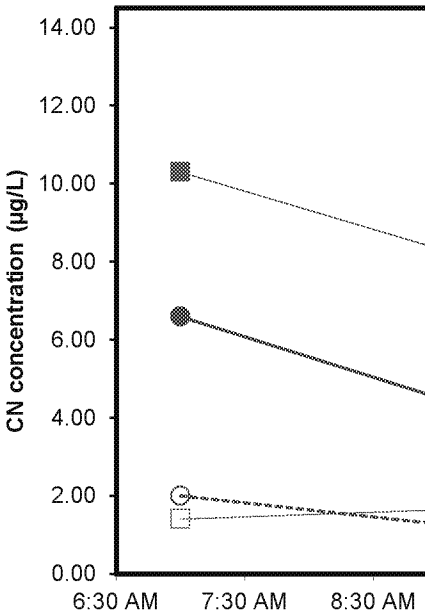

9:30 AM
10:30 AM
11:30 AM
12:30 PM
npling Time

CYANIDE PROJECT
VALENCIA AND SAUGUS FINAL EFFLUENT DATA FOR TEMPORAL STUDY-8
DATE: 05/26/05

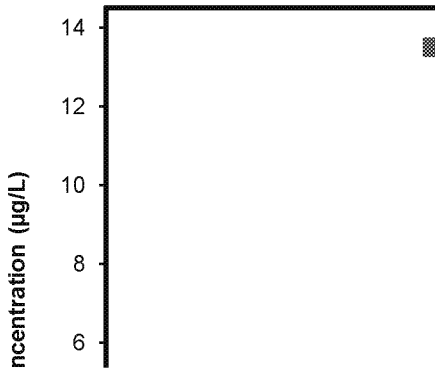
	Description	Login #	Time collected	Cyanide ppb
1	Saugus FE Grab w/ 50% NaOH to pH 12	29114	7:00 AM	6.60
2	Saugus FE Grab w/ 50% NaOH to pH 12	29122	9:30 AM	4.00
3	Saugus FE Grab w/ 50% NaOH to pH 12	29128	12:00 PM	2.60
4	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29115	7:00 AM	1.40
5	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29129	12:00 PM	2.00
6	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29116	7:00 AM	10.30
7	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29130	12:00 PM	5.40
8	Saugus FE w/ NaThio & No Pres.	29113	7:00 AM	2.00
9	Saugus FE w/ NaThio & No Pres.	29121	9:30 AM	1.10
10	Saugus FE w/ NaThio & No Pres.	29127	12:00 PM	0.90
11	Valencia FE Grab w/ 50% NaOH to pH 12	29112	6:30 AM	4.30
12	Valencia FE Grab w/ 50% NaOH to pH 12	29118	9:00 AM	2.00
13	Valencia FE Grab w/ 50% NaOH to pH 12	29124	11:30 AM	1.40
14	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29119	9:00 AM	1.70
15	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29125	11:30 AM	1.10
16	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29120	9:00 AM	13.50
17	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29126	11:30 AM	17.50
18	Valencia FE w/ NaThio & No Pres.	29111	6:30 AM	0.90
19	Valencia FE w/ NaThio & No Pres.	29117	9:00 AM	0.9
20	Valencia FE w/ NaThio & No Pres.	29123	11:30 AM	0.90

Any values less than 1 were entered as 0.9 for graphing and averaging purposes

26 May Saugus Temporal Study



26 May Valencia Temporal Study



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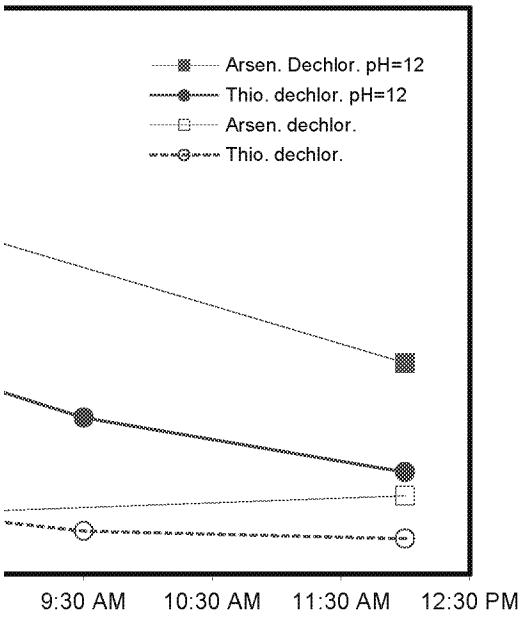
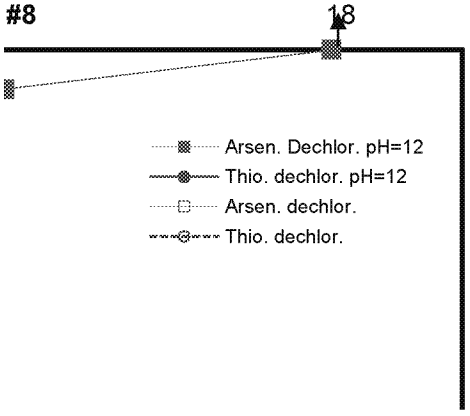
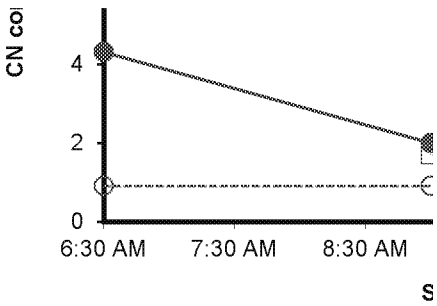


Sampling Time

#8

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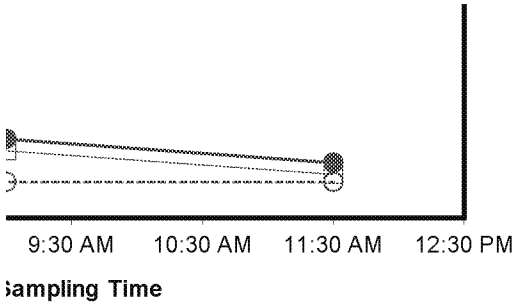
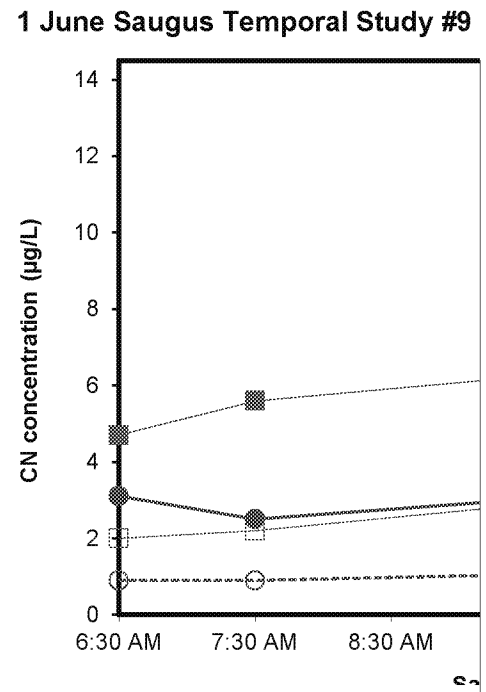

9:30 AM
10:30 AM
11:30 AM
12:30 PM
Sampling Time

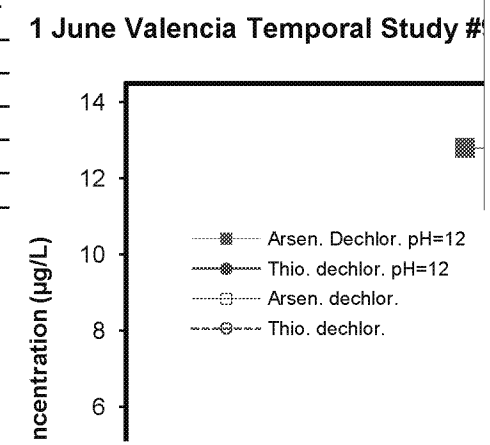
	Description
2	Saugus FE Grab w/ 50% NaOH to pH 12
6	Saugus FE Grab w/ 50% NaOH to pH 12
14	Saugus FE Grab w/ 50% NaOH to pH 12
22	Saugus FE Grab w/ 50% NaOH to pH 12
3	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
7	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
15	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
23	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
4	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
8	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
16	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
24	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
1	Saugus FE w/ NaThio & No Pres.
5	Saugus FE w/ NaThio & No Pres.
13	Saugus FE w/ NaThio & No Pres.
21	Saugus FE w/ NaThio & No Pres.
10	Valencia FE Grab w/ 50% NaOH to pH 12
18	Valencia FE Grab w/ 50% NaOH to pH 12
11	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
19	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
12	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
20	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
9	Valencia FE w/ NaThio & No Pres.
17	Valencia FE w/ NaThio & No Pres.

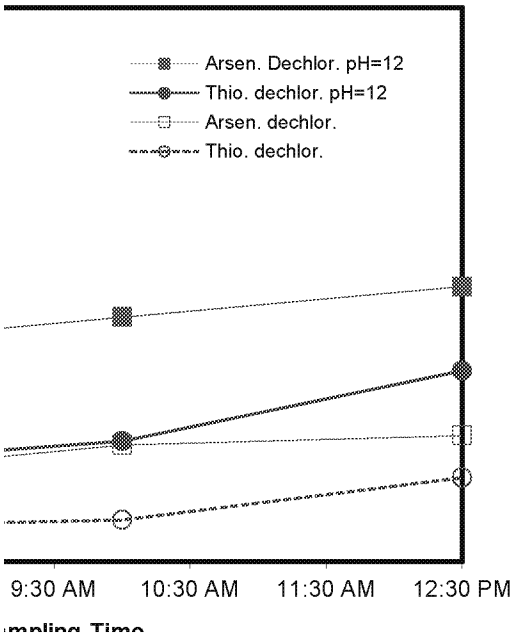
Any values less than 1 were entered as 0.9 for graphing and averaging purposes

CYANIDE PROJECT
VALENCIA / SAUGUS FINAL EFFLUENT pH RECORD FOR TEMPORAL STUDY-9
DATE FOR DAY 0: 06/01/05

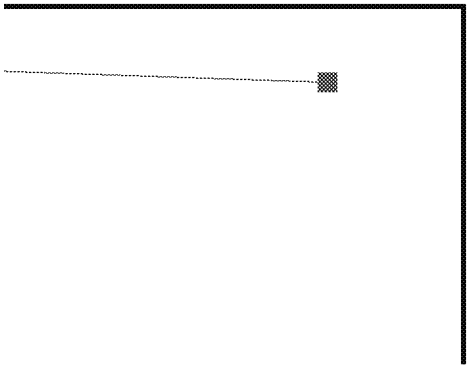
Log -In #	Time Collected	Cyanide ppb	
29491	6:30 AM	3.1	
29495	7:30 AM	2.5	
29503	10:00 AM	3.1	
29511	12:30 PM	5	
29492	6:30 AM	2	
29496	7:30 AM	2.2	
29504	10:00 AM	3.1	
29512	12:30 PM	3.3	
29493	6:30 AM	4.7	
29497	7:30 AM	5.6	
29505	10:00 AM	6.4	
29513	12:30 PM	7.2	
29490	6:30 AM	0.9	
29494	7:30 AM	0.9	
29502	10:00 AM	1.1	
29510	12:30 PM	2.2	
29499	9:00 AM	3.1	
29507	11:30 AM	3.9	
29500	9:00 AM	2	
29508	11:30 AM	2.2	
29501	9:00 AM	12.8	
29509	11:30 AM	12.5	
29498	9:00 AM	1.4	
29506	11:30 AM	2.2	

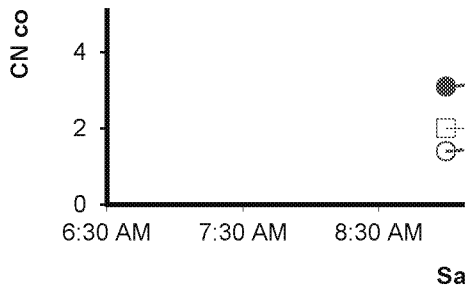





Arsen. Dechlor. pH=12
Thio. dechlor. pH=12
Arsen. dechlor.
Thio. dechlor.
9:30 AM
10:30 AM
11:30 AM
12:30 PM

9

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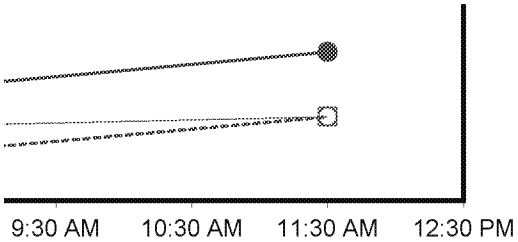
Sa

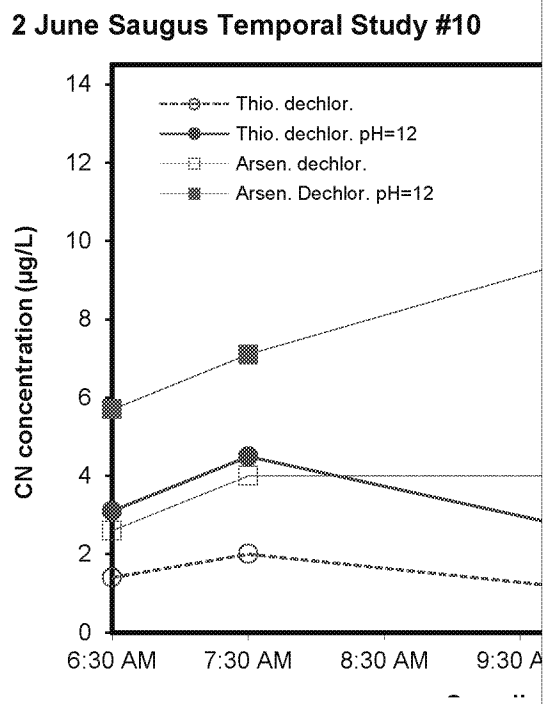


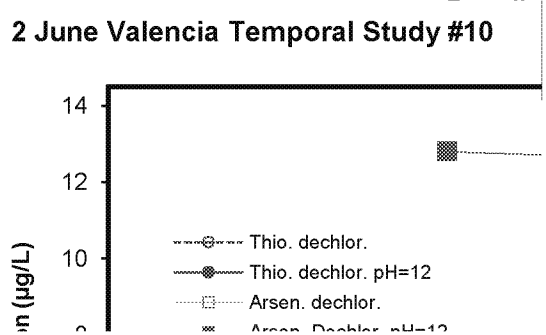
ımpling Time

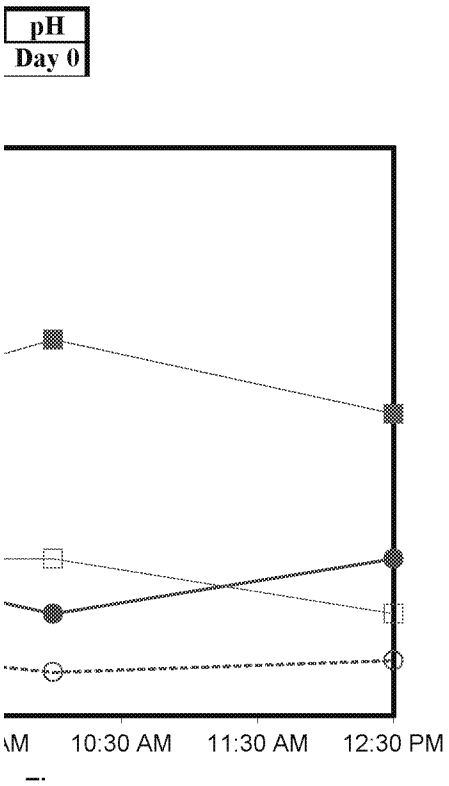
	Description
2	Saugus FE Grab w/ 50% NaOH to pH 12
6	Saugus FE Grab w/ 50% NaOH to pH 12
14	Saugus FE Grab w/ 50% NaOH to pH 12
22	Saugus FE Grab w/ 50% NaOH to pH 12
3	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
7	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
15	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
23	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
4	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
8	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
16	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
24	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
1	Saugus FE w/ NaThio & No Pres.
5	Saugus FE w/ NaThio & No Pres.
13	Saugus FE w/ NaThio & No Pres.
21	Saugus FE w/ NaThio & No Pres.
10	Valencia FE Grab w/ 50% NaOH to pH 12
18	Valencia FE Grab w/ 50% NaOH to pH 12
11	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
19	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.
12	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
20	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH
9	Valencia FE w/ NaThio & No Pres.
17	Valencia FE w/ NaThio & No Pres.

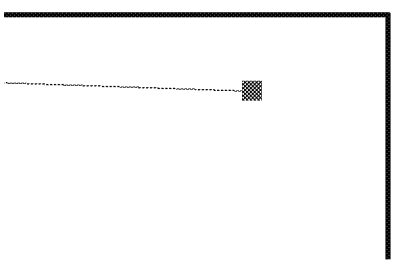
CYANIDE PROJECT
VALENCIA / SAUGUS FINAL EFFLUENT pH RECORD FOR TEMPORAL STUDY-10
DATE FOR DAY 0: 06/02/05

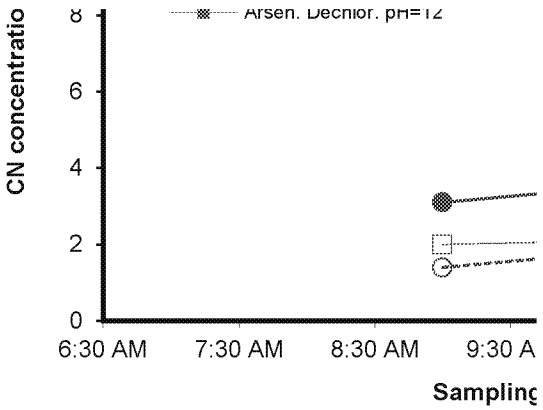
Log -In #	Time Collected	Cyanide ppb		Initial pH	Initial Vol. (mL)	Vol. Of 50% NaOH in mL
29515	6:30 AM	3.1				
29519	7:30 AM	4.5				
29527	10:00 AM	2.6				
29535	12:30 PM	4				
29516	6:30 AM	2.6				
29520	7:30 AM	4				
29528	10:00 AM	4				
29536	12:30 PM	2.6				
29517	6:30 AM	5.7				
29521	7:30 AM	7.1				
29529	10:00 AM	9.6				
29537	12:30 PM	7.7				
29514	6:30 AM	1.4				
29518	7:30 AM	2				
29526	10:00 AM	1.1				
29534	12:30 PM	1.4				
29523	9:00 AM	4				
29531	11:30 AM	3.1				
29524	9:00 AM	3.4				
29532	11:30 AM	3.7				
29525	9:00 AM	16.7				
29533	11:30 AM	17.6				
29522	9:00 AM	2.3				
29530	11:30 AM	2.3				

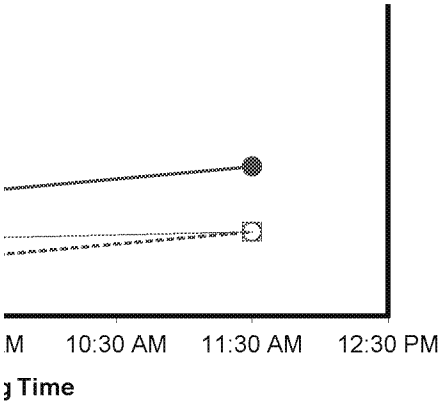





pH
Day 0
AM
10:30 AM
11:30 AM
12:30 PM

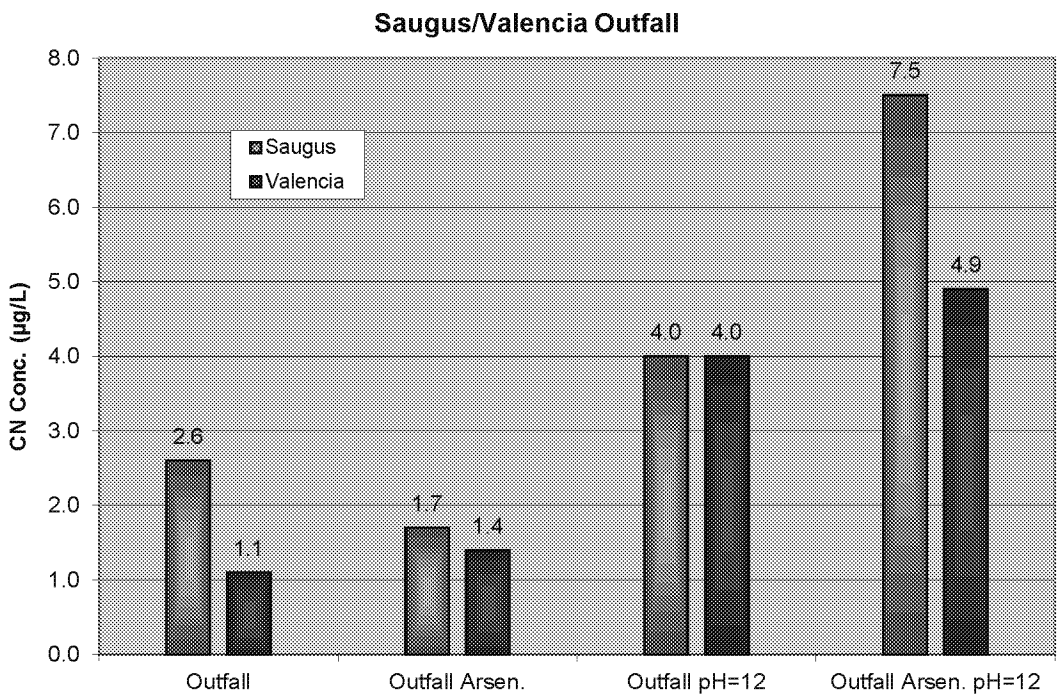



Arsen. Dechlor. pH=12
CN concentratio
8
6
4
2
0
6:30 AM
7:30 AM
8:30 AM
9:30 A
Sampling

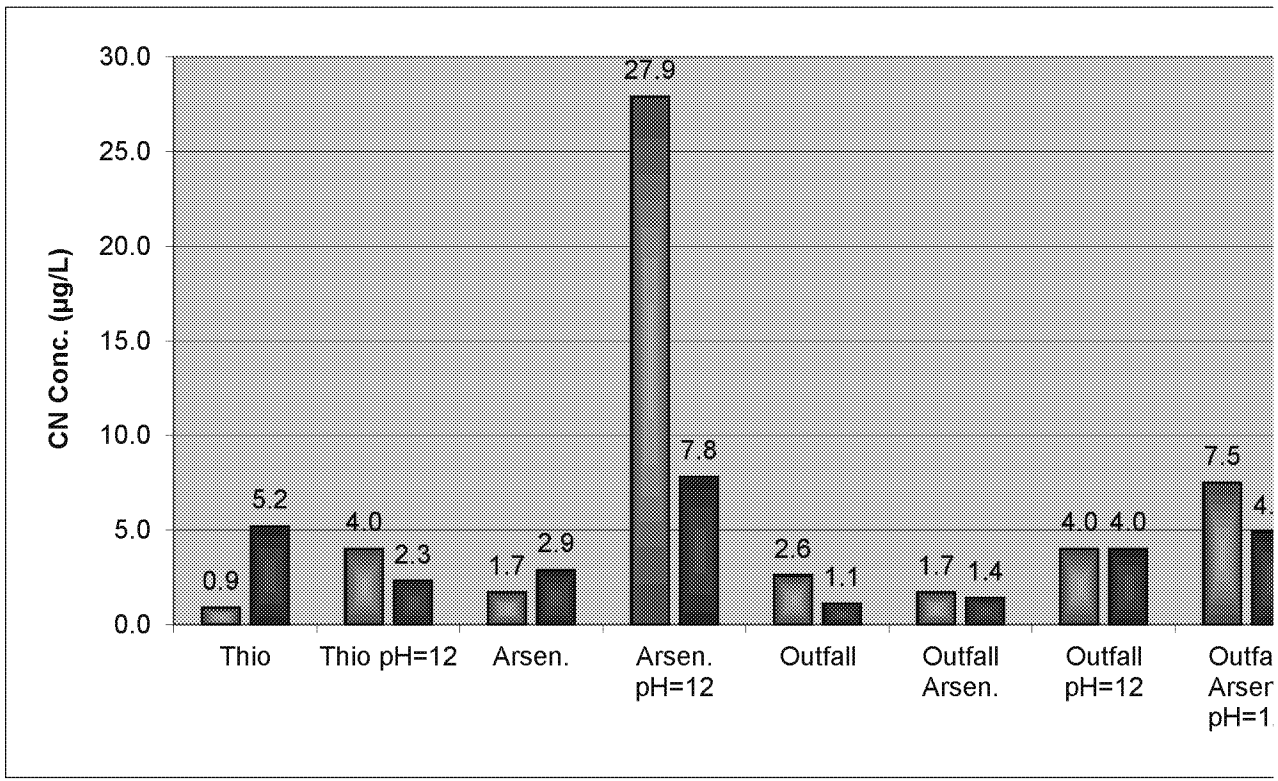

M
10:30 AM
11:30 AM
12:30 PM
g Time

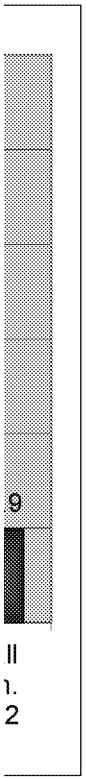
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-11
DATE: 06/06/05

	Description		Log -In #	Time Collected	Cyanide µg/L		Initial pH
33	Valencia FE w/ NaThio & No Pres.	Thio	29953	11:30 AM	0.9		7.83
34	Valencia FE Grab w/ 50% NaOH to pH 12	Thio pH=12	29954	11:30 AM	4.0		7.83
35	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	Arsen.	29955	11:30 AM	1.7		8.21
36	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	Arsen. pH=12	29956	11:30 AM	27.9		8.21
37	Valencia Outfall pH7	Outfall	29957	11:30 AM	2.6		7.65
39	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	Outfall Arsen.	29959	11:30 AM	1.7		8.25
38	Valencia Outfall w/ 50% NaOH to pH 12	Outfall pH=12	29958	11:30 AM	4.0		7.65
40	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	Outfall Arsen. pH=12	29960	11:30 AM	7.5		8.25
41	Saugus FE w/ NaThio & No Pres.	Thio	29961	12:30 PM	5.2		7.61
42	Saugus FE Grab w/ 50% NaOH to pH 12	Thio pH=12	29962	12:30 PM	2.3		7.61
43	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	Arsen.	29963	12:30 PM	2.9		8.03
44	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	Arsen. pH=12	29964	12:30 PM	7.8		8.03
45	Saugus Outfall pH7.	Outfall	29965	12:30 PM	1.1		7.50
47	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	Outfall Arsen.	29967	12:30 PM	1.4		8.02
46	Saugus Outfall w/ 50% NaOH to pH 12	Outfall pH=12	29966	12:30 PM	4.0		7.50
48	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	Outfall Arsen. pH=12	29968	12:30 PM	4.9		8.02



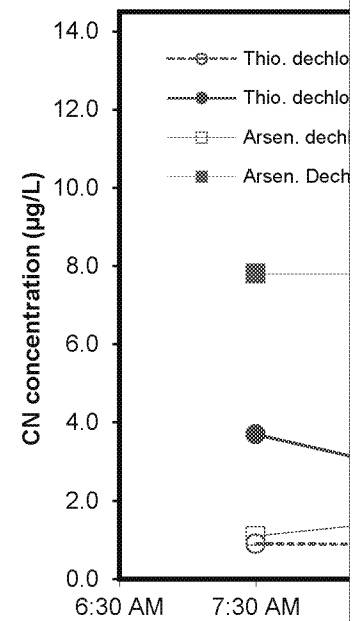
Initial Vol. (mL)	Vol. Of 50% NaOH in mL	pH Day 0
500		7.83
500	1.0	12.00
500		8.21
500	1.0	12.05
500		7.65
500		8.25
500	1.0	12.00
500	1.0	12.00
500		7.61
500	1.2	12.00
500		8.03
500	1.2	12.01
500		7.50
500		8.02
500	1.2	12.01
500	1.1	12.01

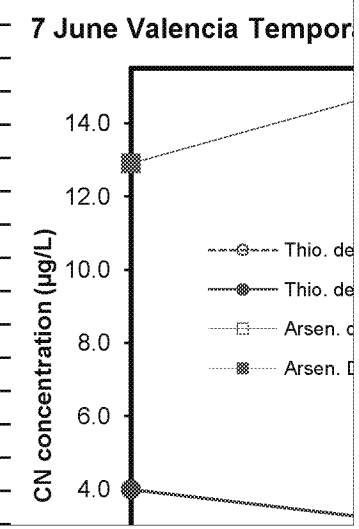

CN Conc. (µg/L)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
0.9
5.2
4.0
2.3
1.7
2.9
27.9
7.8
2.6
1.1
1.7
1.4
4.0
4.0
7.5
Thio
Thio pH=12
Arsen.
Arsen. pH=12
Outfall
Outfall Arsen.
Outfall pH=12
Outfa Arser pH=1


9
II
1.
2

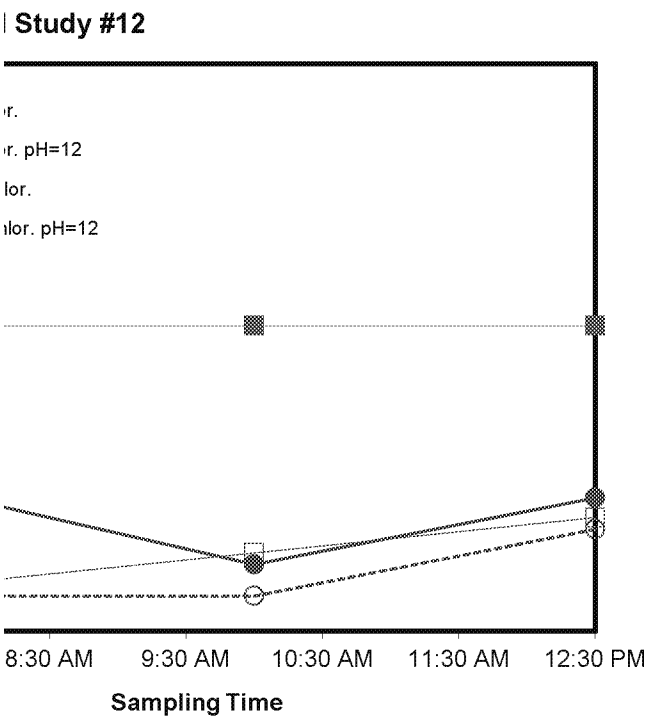
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-12 pH RECORD
DATE: 06/07/05

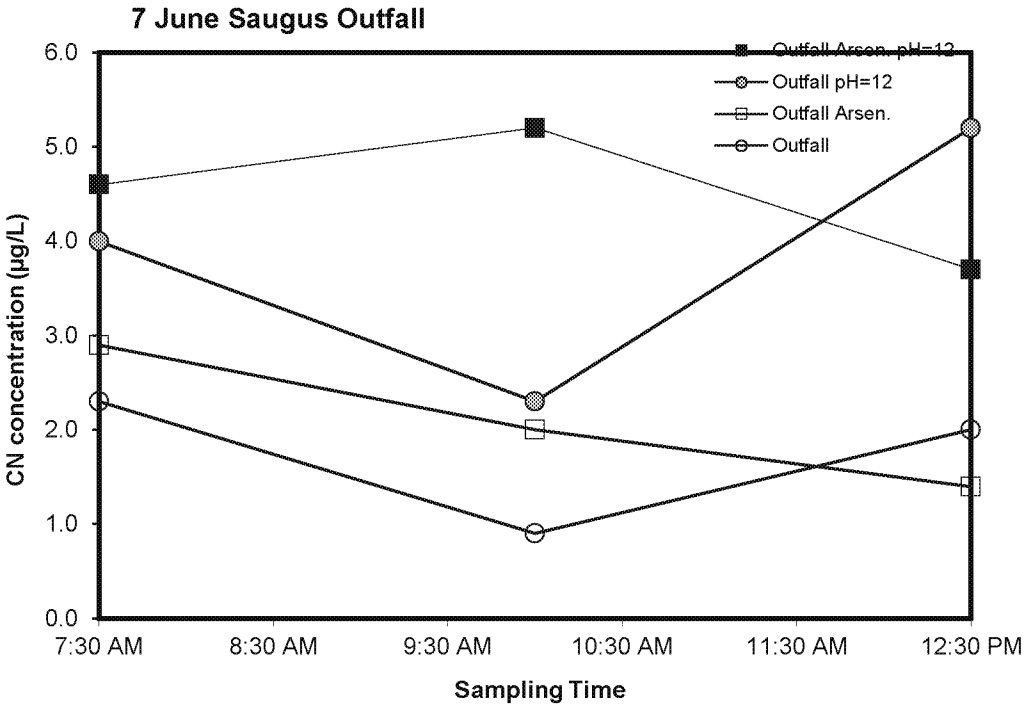
	Description	Log -In #	Time Collected	Cyanide µg/L	Initial	Initial
10	Saugus FE Grab w/ 50% NaOH to pH 12	29978	7:30 AM	3.7		
26	Saugus FE Grab w/ 50% NaOH to pH 12	29994	10:00 AM	1.7		
42	Saugus FE Grab w/ 50% NaOH to pH 12	30010	12:30 PM	3.4		
11	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29979	7:30 AM	1.1		
27	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29995	10:00 AM	2.0		
43	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30011	12:30 PM	2.9		
12	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29980	7:30 AM	7.8		
28	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29996	10:00 AM	7.8		
44	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30012	12:30 PM	7.8		
9	Saugus FE w/ NaThio & No Pres.	29977	7:30 AM	0.9		
25	Saugus FE w/ NaThio & No Pres.	29993	10:00 AM	0.9		
41	Saugus FE w/ NaThio & No Pres.	30009	12:30 PM	2.6		
13	Saugus Outfall pH7.	29981	7:30 AM	2.3		
29	Saugus Outfall pH7.	29997	10:00 AM	0.9		
45	Saugus Outfall pH7.	30013	12:30 PM	2.0		
14	Saugus Outfall w/ 50% NaOH to pH 12	29982	7:30 AM	4.0		
30	Saugus Outfall w/ 50% NaOH to pH 12	29998	10:00 AM	2.3		
46	Saugus Outfall w/ 50% NaOH to pH 12	30014	12:30 PM	5.2		
15	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29983	7:30 AM	2.9		
31	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29999	10:00 AM	2.0		
47	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30015	12:30 PM	1.4		
16	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29984	7:30 AM	4.6	7.73	500
32	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30000	10:00 AM	5.2	8.12	500
48	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30016	12:30 PM	3.7		
2	Valencia FE Grab w/ 50% NaOH to pH 12	29970	6:30 AM	4.0		
18	Valencia FE Grab w/ 50% NaOH to pH 12	29986	9:00 AM	2.9		
34	Valencia FE Grab w/ 50% NaOH to pH 12	30002	11:30 AM	1.4		
3	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29971	6:30 AM	0.9		
19	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29987	9:00 AM	2.3		
35	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30003	11:30 AM	1.1		
4	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29972	6:30 AM	12.9		
20	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29988	9:00 AM	15.5		
36	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30004	11:30 AM	13.2		
1	Valencia FE w/ NaThio & No Pres.	29969	6:30 AM	0.9		
17	Valencia FE w/ NaThio & No Pres.	29985	9:00 AM	0.9		
33	Valencia FE w/ NaThio & No Pres.	30001	11:30 AM	0.9		
5	Valencia Outfall pH7	29973	6:30 AM	0.9		
21	Valencia Outfall pH7	29989	9:00 AM	1.1		
37	Valencia Outfall pH7	30005	11:30 AM	1.4		

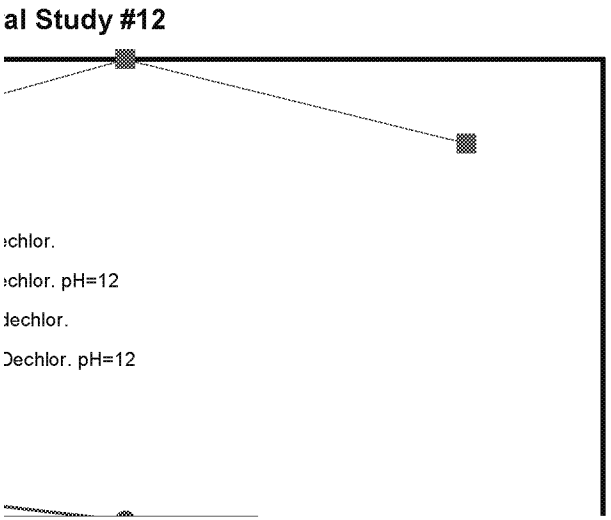


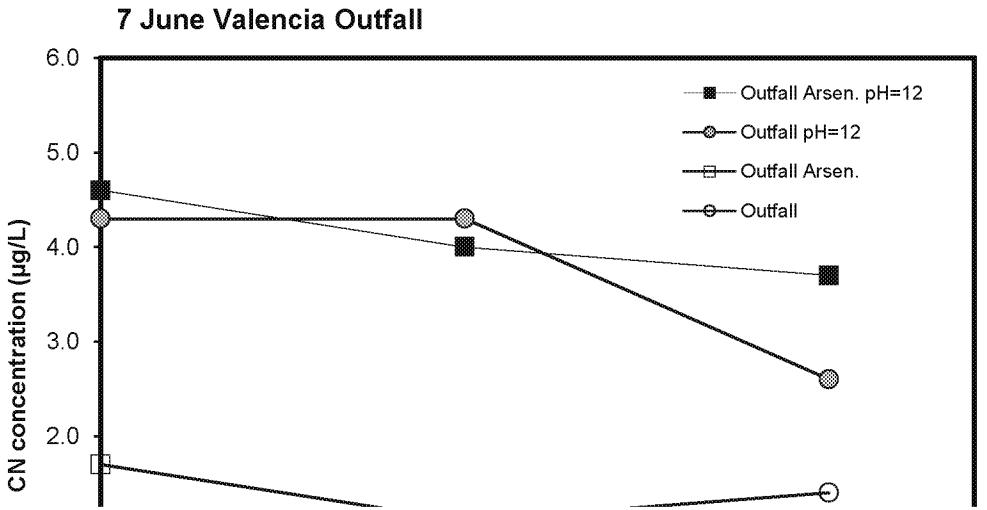


Vol. Of 50%	pH
0.8	12.05
0.8	12.01

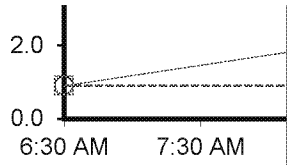




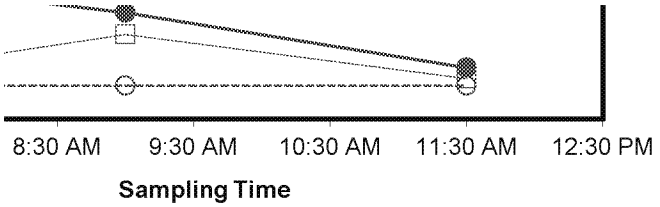


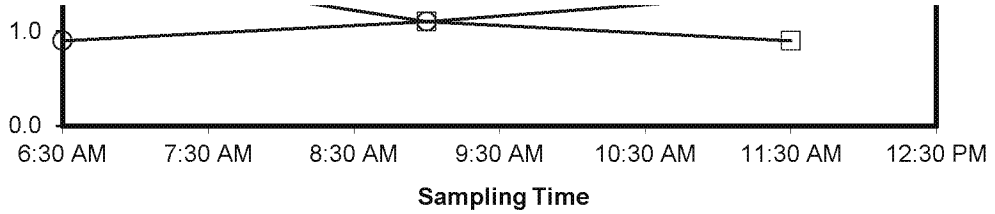


6	Valencia Outfall w/ 50% NaOH to pH 12	29974	6:30 AM	4.3			
22	Valencia Outfall w/ 50% NaOH to pH 12	29990	9:00 AM	4.3			
38	Valencia Outfall w/ 50% NaOH to pH 12	30006	11:30 AM	2.6			
7	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29975	6:30 AM	1.7			
23	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	29991	9:00 AM	1.1			
39	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30007	11:30 AM	0.9			
8	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29976	6:30 AM	4.6			
24	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	29992	9:00 AM	4.0		8.25	500
40	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30008	11:30 AM	3.7		8.17	500



Any values less than 1 were entered as 0.9 for graphing and averaging purposes

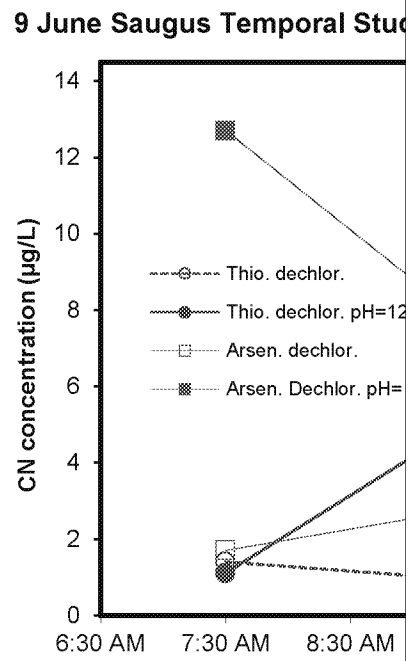


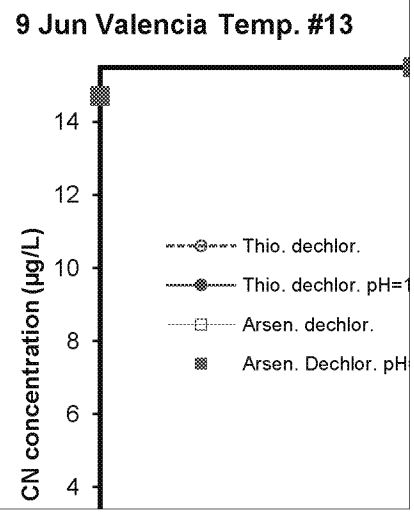


0.8	12.00
1.0	12.01

CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-13 pH RECORD
DATE: 06/09/05

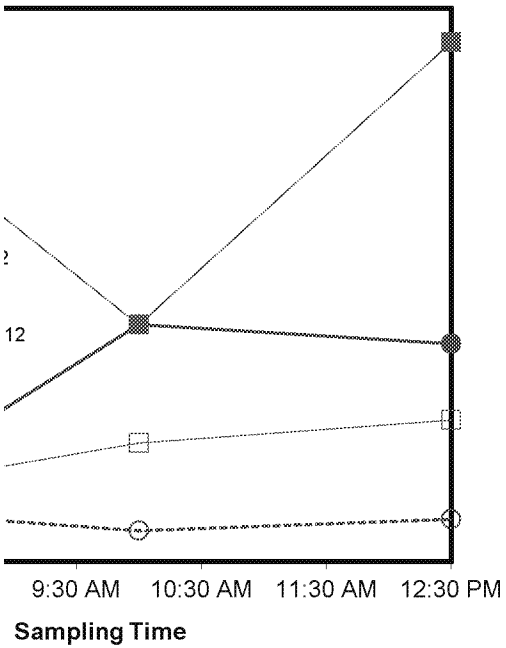
	Description	Log -In #	Time Collected	Cyanide µg/L		Initial pH	Initial Vol. (mL)	Vol. Of 50% NaOH in mL
10	Saugus FE Grab w/ 50% NaOH to pH 12	30159	7:30 AM	1.1				
26	Saugus FE Grab w/ 50% NaOH to pH 12	30175	10:00 AM	6.2				
42	Saugus FE Grab w/ 50% NaOH to pH 12	30191	12:30 PM	5.7				
11	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30160	7:30 AM	1.7				
27	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30176	10:00 AM	3.1				
43	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30192	12:30 PM	3.7				
12	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30161	7:30 AM	12.7				
28	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	3077	10:00 AM	6.2				
44	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30193	12:30 PM	13.6				
9	Saugus FE w/ NaThio & No Pres.	30158	7:30 AM	1.4				
25	Saugus FE w/ NaThio & No Pres.	30174	10:00 AM	0.8				
41	Saugus FE w/ NaThio & No Pres.	30190	12:30 PM	1.1				
13	Saugus Outfall pH7.	30162	7:30 AM	1.7				
29	Saugus Outfall pH7.	30178	10:00 AM	2.3				
45	Saugus Outfall pH7.	30194	12:30 PM	0.6				
14	Saugus Outfall w/ 50% NaOH to pH 12	30163	7:30 AM	2.8				
30	Saugus Outfall w/ 50% NaOH to pH 12	30179	10:00 AM	4				
46	Saugus Outfall w/ 50% NaOH to pH 12	30195	12:30 PM	1.1				
15	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30164	7:30 AM	2				
31	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30180	10:00 AM	2.3				
47	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30196	12:30 PM	0.8				
16	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30165	7:30 AM	2.5				
32	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30181	10:00 AM	4		7.60	500	
48	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30197	12:30 PM	1.4			500	
2	Valencia FE Grab w/ 50% NaOH to pH 12	30151	6:30 AM	2.3				
18	Valencia FE Grab w/ 50% NaOH to pH 12	30167	9:00 AM	2.5				
34	Valencia FE Grab w/ 50% NaOH to pH 12	30183	11:30 AM	8.8				
3	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30152	6:30 AM	1.4				
19	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30168	9:00 AM	2.8				
35	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30184	11:30 AM	2.5				
4	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30153	6:30 AM	14.7	14.			
20	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30169	9:00 AM	20.4	15.			
36	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30185	11:30 AM	18.1	15.			
1	Valencia FE w/ NaThio & No Pres.	30150	6:30 AM	1.7				
17	Valencia FE w/ NaThio & No Pres.	30166	9:00 AM	2				
33	Valencia FE w/ NaThio & No Pres.	30182	11:30 AM	1.4				
5	Valencia Outfall pH7	30154	6:30 AM	1.4				
21	Valencia Outfall pH7	30170	9:00 AM	3.4				
37	Valencia Outfall pH7	30186	11:30 AM	3.4				

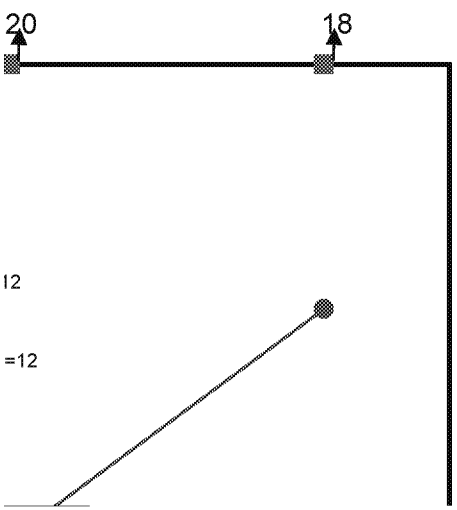


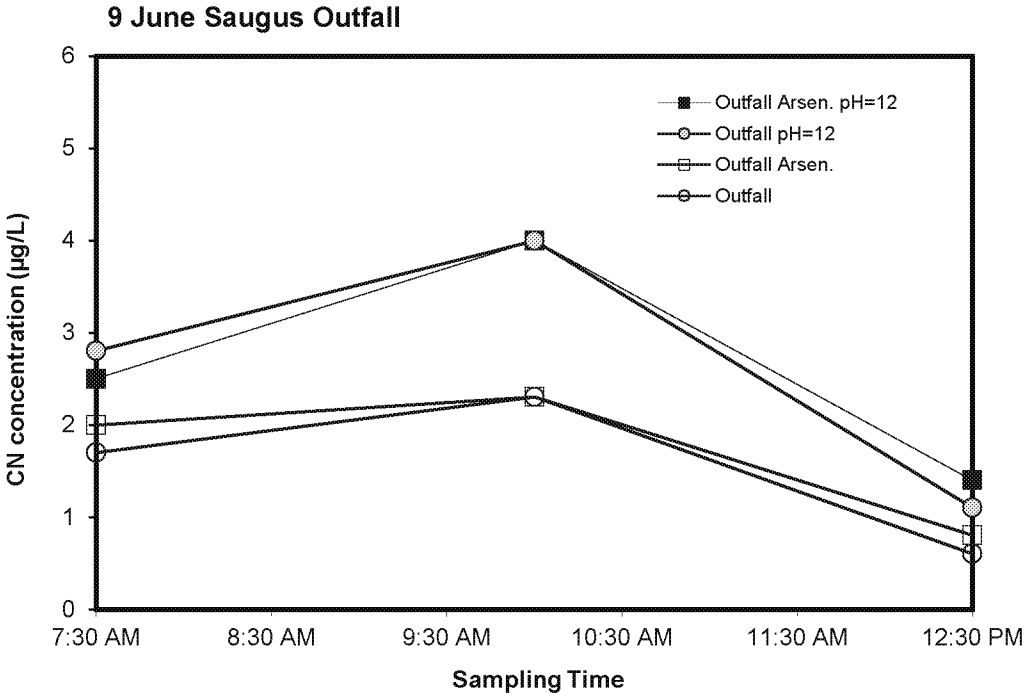


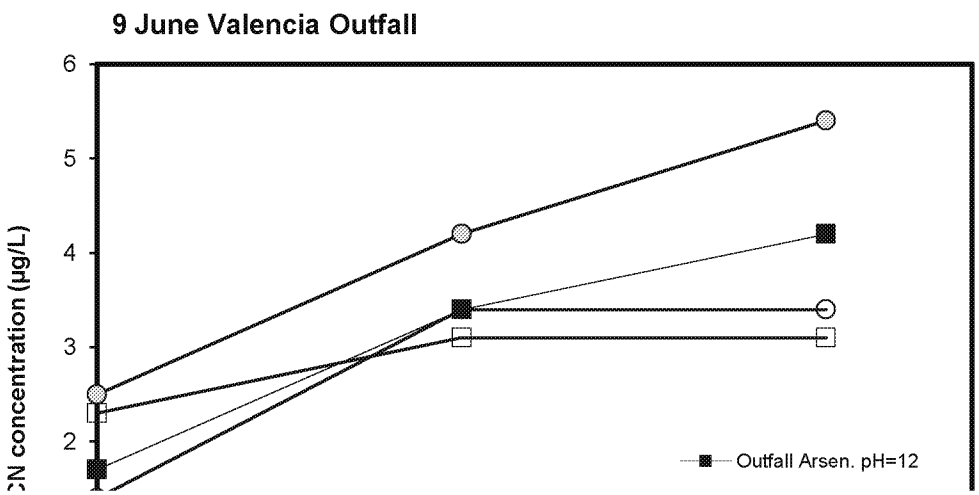
pH
Day 0

dy #13

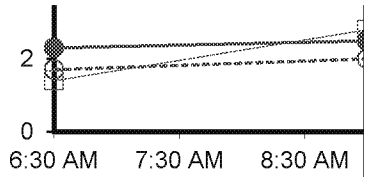

12
9:30 AM
10:30 AM
11:30 AM
12:30 PM
Sampling Time

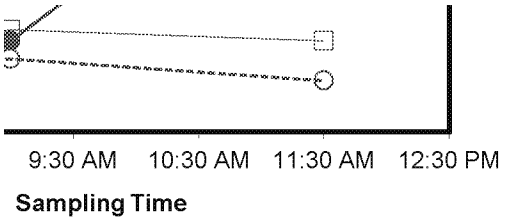

20
18
12
=12

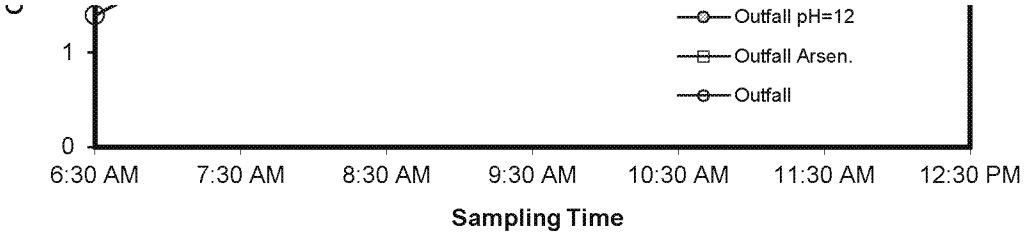

9 June Saugus Outfall
Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall
CN concentration (µg/L)
0
1
2
3
4
5
6
7:30 AM
8:30 AM
9:30 AM
10:30 AM
11:30 AM
12:30 PM
Sampling Time


9 June Valencia Outfall
CN concentration (µg/L)
2
3
4
5
6
Outfall Arsen. pH=12

6	Valencia Outfall w/ 50% NaOH to pH 12	30155	6:30 AM	2.5				
22	Valencia Outfall w/ 50% NaOH to pH 12	30171	9:00 AM	4.2				
38	Valencia Outfall w/ 50% NaOH to pH 12	30187	11:30 AM	5.4				
7	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30156	6:30 AM	2.3				
23	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30172	9:00 AM	3.1				
39	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30188	11:30 AM	3.1				
8	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30157	6:30 AM	1.7				
24	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30173	9:00 AM	3.4		7.7	500	
40	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30189	11:30 AM	4.2			500	

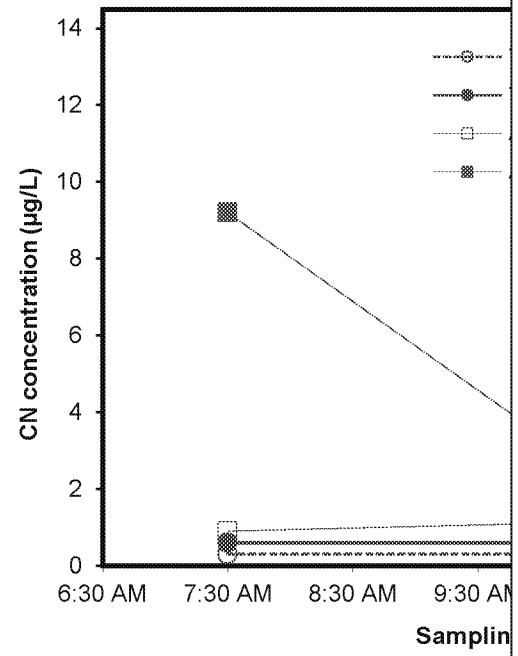



9:30 AM
10:30 AM
11:30 AM
12:30 PM
Sampling Time

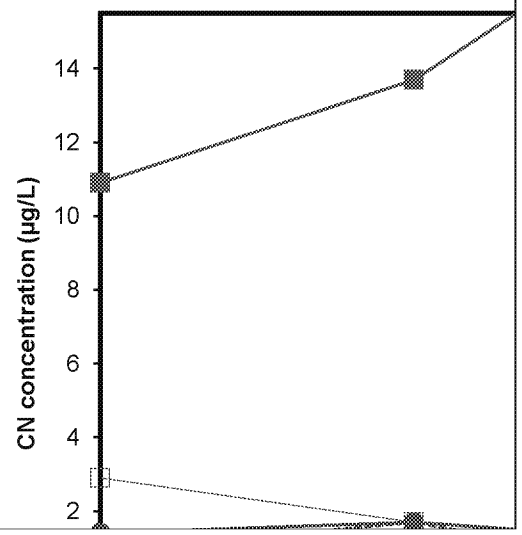

1
0
6:30 AM
7:30 AM
8:30 AM
9:30 AM
10:30 AM
11:30 AM
12:30 PM
Sampling Time
Outfall pH=12
Outfall Arsen.
Outfall

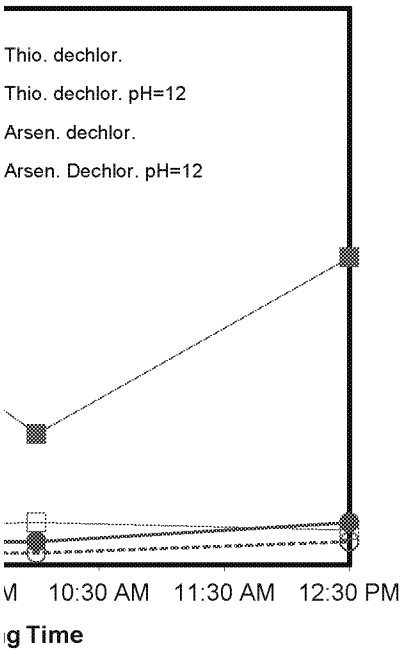
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-14 pH RECORD
DATE: 06/13/05

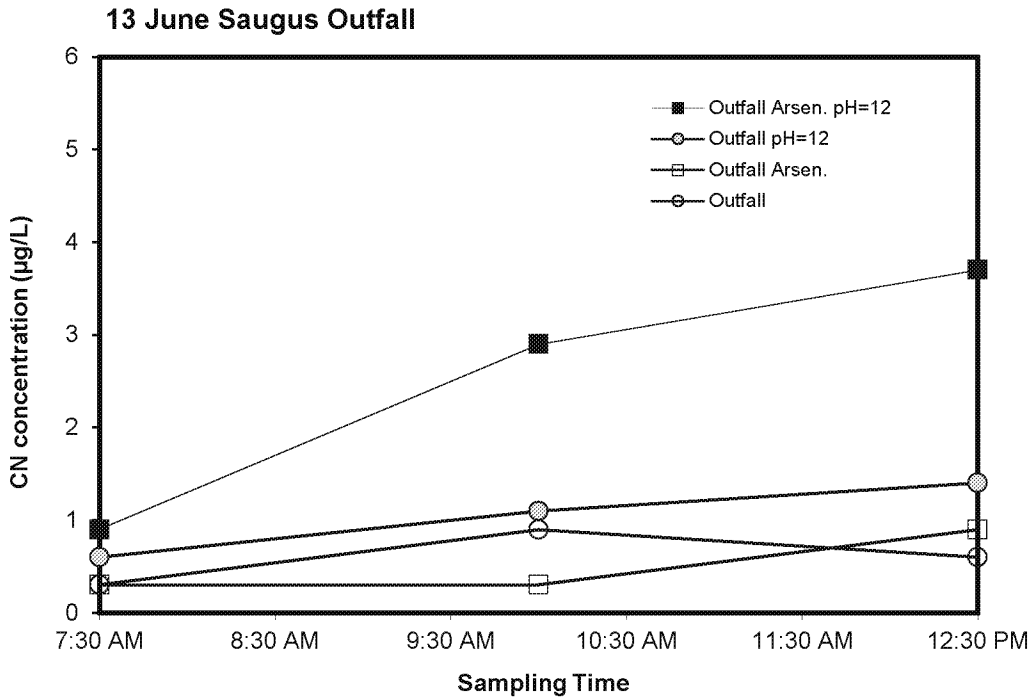
	Description	Log -In #	Time Collected	Cyanide µg/L
10	Saugus FE Grab w/ 50% NaOH to pH 12	30382	7:30 AM	0.6
26	Saugus FE Grab w/ 50% NaOH to pH 12	30398	10:00 AM	0.6
42	Saugus FE Grab w/ 50% NaOH to pH 12	30414	12:30 PM	1.1
11	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30383	7:30 AM	0.9
27	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30399	10:00 AM	1.1
43	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30415	12:30 PM	0.9
12	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30384	7:30 AM	9.2
28	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30400	10:00 AM	3.4
44	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30416	12:30 PM	8
9	Saugus FE w/ NaThio & No Pres.	30381	7:30 AM	0.3
25	Saugus FE w/ NaThio & No Pres.	30397	10:00 AM	0.3
41	Saugus FE w/ NaThio & No Pres.	30413	12:30 PM	0.6
13	Saugus Outfall pH7.	30385	7:30 AM	0.3
29	Saugus Outfall pH7.	30401	10:00 AM	0.9
45	Saugus Outfall pH7.	30417	12:30 PM	0.6
14	Saugus Outfall w/ 50% NaOH to pH 12	30386	7:30 AM	0.6
30	Saugus Outfall w/ 50% NaOH to pH 12	30402	10:00 AM	1.1
46	Saugus Outfall w/ 50% NaOH to pH 12	30418	12:30 PM	1.4
15	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30387	7:30 AM	0.3
31	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30403	10:00 AM	0.3
47	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30419	12:30 PM	0.9
16	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30388	7:30 AM	0.9
32	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30404	10:00 AM	2.9
48	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30420	12:30 PM	3.7
2	Valencia FE Grab w/ 50% NaOH to pH 12	30374	6:30 AM	1.4
18	Valencia FE Grab w/ 50% NaOH to pH 12	30390	9:00 AM	1.7
34	Valencia FE Grab w/ 50% NaOH to pH 12	30406	11:30 AM	1.1
3	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30375	6:30 AM	2.9
19	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30391	9:00 AM	1.7
35	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30407	11:30 AM	0.9
4	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30376	6:30 AM	10.9
20	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30392	9:00 AM	13.7
36	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30408	11:30 AM	19.2
1	Valencia FE w/ NaThio & No Pres.	30373	6:30 AM	0.9
17	Valencia FE w/ NaThio & No Pres.	30389	9:00 AM	1.7
33	Valencia FE w/ NaThio & No Pres.	30405	11:30 AM	0.1
5	Valencia Outfall pH7	30377	6:30 AM	1.7
21	Valencia Outfall pH7	30393	9:00 AM	0.6
37	Valencia Outfall pH7	30409	11:30 AM	0.3

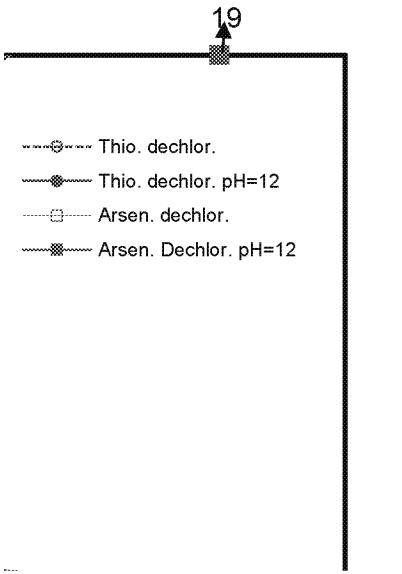


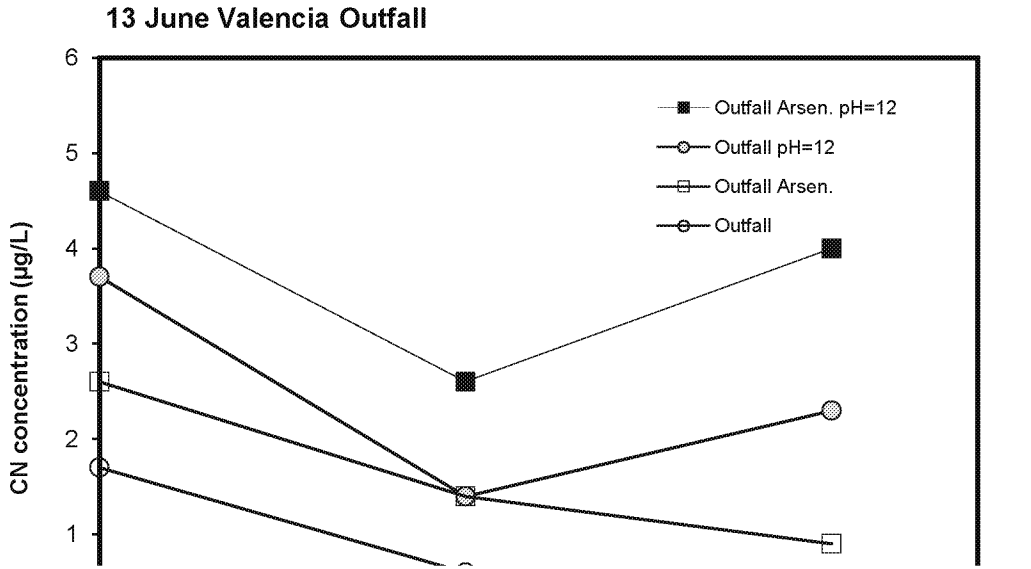
8.12	250		8.12



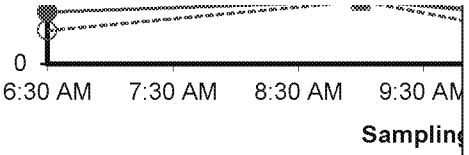

Thio. dechlor.
Thio. dechlor. pH=12
Arsen. dechlor.
Arsen. Dechlor. pH=12
M
10:30 AM
11:30 AM
12:30 PM
g Time

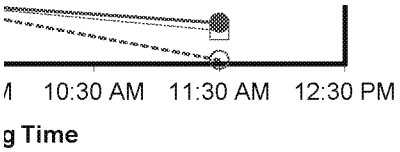

13 June Saugus Outfall
Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall
CN concentration (µg/L)
0
1
2
3
4
5
6
7:30 AM
8:30 AM
9:30 AM
10:30 AM
11:30 AM
12:30 PM
Sampling Time

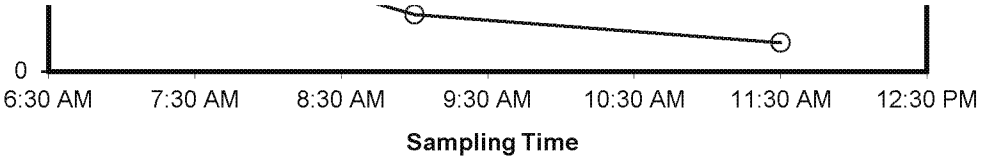

19
Thio. dechlor.
Thio. dechlor. pH=12
Arsen. dechlor.
Arsen. Dechlor. pH=12


13 June Valencia Outfall
Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall
CN concentration (µg/L)
1
2
3
4
5
6

6	Valencia Outfall w/ 50% NaOH to pH 12	30378	6:30 AM	3.7					
22	Valencia Outfall w/ 50% NaOH to pH 12	30394	9:00 AM	1.4					
38	Valencia Outfall w/ 50% NaOH to pH 12	30410	11:30 AM	2.3					
7	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30379	6:30 AM	2.6					
23	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30395	9:00 AM	1.4					
39	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30411	11:30 AM	0.9		8.16	250		8.16
8	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30380	6:30 AM	4.6		8.41	250	0.5	12.07
24	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30396	9:00 AM	2.6		8.19	250	0.5	12.05
40	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30412	11:30 AM	4		8.16	250	0.5	12.04

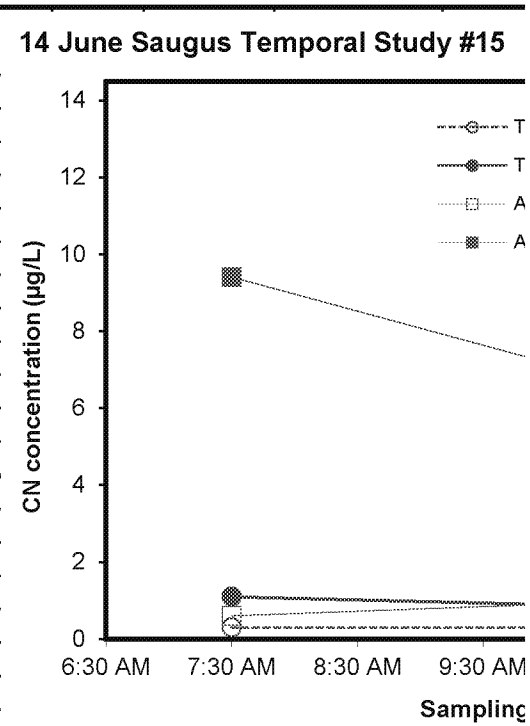



10:30 AM
11:30 AM
12:30 PM
g Time

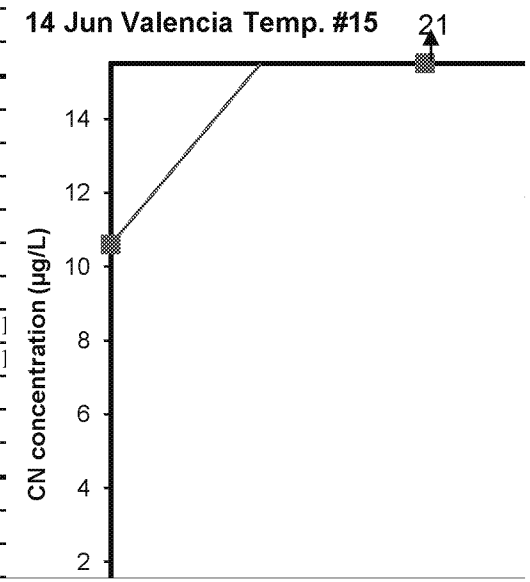

0
6:30 AM
7:30 AM
8:30 AM
9:30 AM
10:30 AM
11:30 AM
12:30 PM
Sampling Time

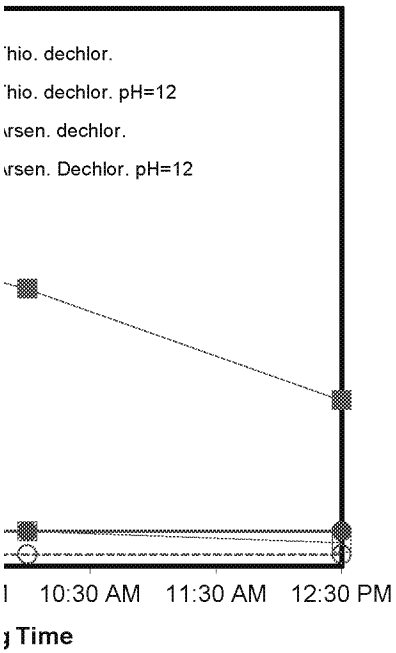
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-15 pH RECORD
DATE: 06/14/05

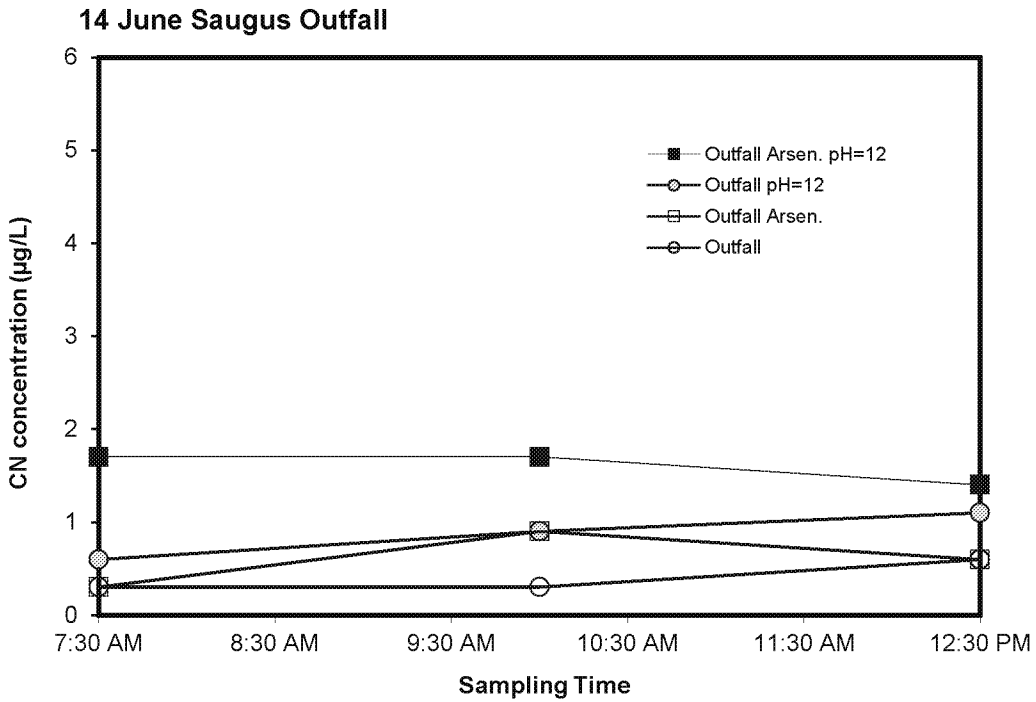
	Description	Log -In #	Time Collected	Cyanide µg/L
10	Saugus FE Grab w/ 50% NaOH to pH 12	30430	7:30 AM	1.1
26	Saugus FE Grab w/ 50% NaOH to pH 12	30446	10:00 AM	0.9
42	Saugus FE Grab w/ 50% NaOH to pH 12	30462	12:30 PM	0.9
11	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30431	7:30 AM	0.6
27	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30447	10:00 AM	0.9
43	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30463	12:30 PM	0.6
12	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30432	7:30 AM	9.4
28	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30448	10:00 AM	7.2
44	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30464	12:30 PM	4.3
9	Saugus FE w/ NaThio & No Pres.	30429	7:30 AM	0.3
25	Saugus FE w/ NaThio & No Pres.	30445	10:00 AM	0.3
41	Saugus FE w/ NaThio & No Pres.	30461	12:30 PM	0.3
13	Saugus Outfall pH7.	30433	7:30 AM	0.3
29	Saugus Outfall pH7.	30449	10:00 AM	0.3
45	Saugus Outfall pH7.	30465	12:30 PM	0.6
14	Saugus Outfall w/ 50% NaOH to pH 12	30434	7:30 AM	0.6
30	Saugus Outfall w/ 50% NaOH to pH 12	30450	10:00 AM	0.9
46	Saugus Outfall w/ 50% NaOH to pH 12	30466	12:30 PM	1.1
15	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30435	7:30 AM	0.3
31	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30451	10:00 AM	0.9
47	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30467	12:30 PM	0.6
16	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30436	7:30 AM	1.7
32	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30452	10:00 AM	1.7
48	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30468	12:30 PM	1.4
2	Valencia FE Grab w/ 50% NaOH to pH 12	30422	6:30 AM	1.1
18	Valencia FE Grab w/ 50% NaOH to pH 12	30438	9:00 AM	0.9
34	Valencia FE Grab w/ 50% NaOH to pH 12	30454	11:30 AM	2.3
3	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30423	6:30 AM	0.6
19	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30439	9:00 AM	0.9
35	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30455	11:30 AM	2.9
4	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	30424	6:30 AM	10.6
20	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	30440	9:00 AM	20.9
36	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	30456	11:30 AM	17.2
1	Valencia FE w/ NaThio & No Pres.	30421	6:30 AM	0.6
17	Valencia FE w/ NaThio & No Pres.	30437	9:00 AM	0.1
33	Valencia FE w/ NaThio & No Pres.	30453	11:30 AM	1.1
5	Valencia Outfall pH7	30425	6:30 AM	0.3
21	Valencia Outfall pH7	30441	9:00 AM	1.4
37	Valencia Outfall pH7	30457	11:30 AM	1.7

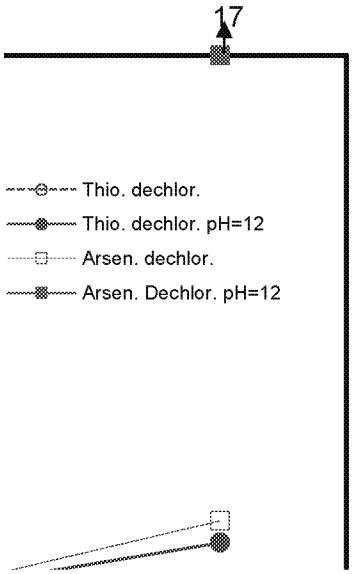


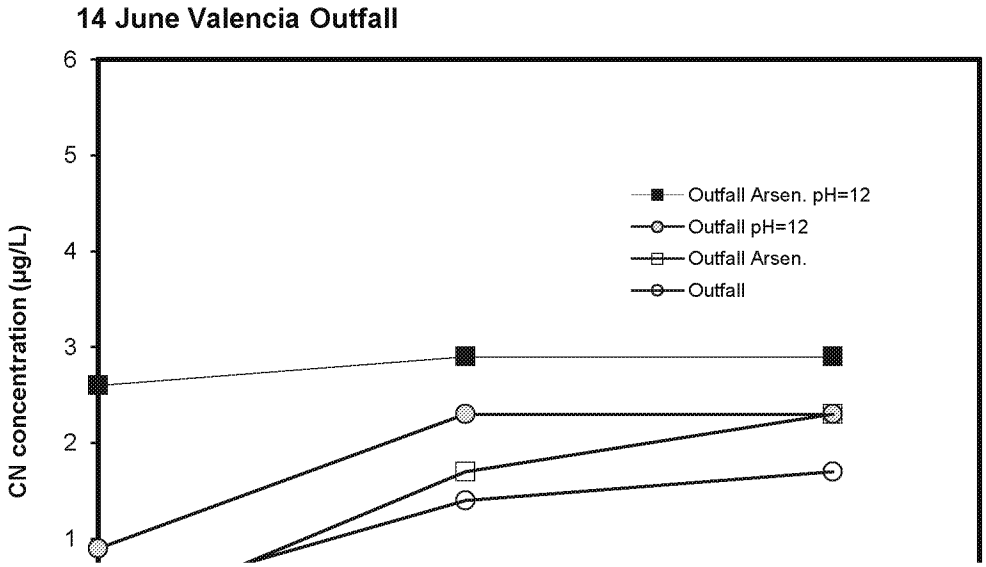
8.06	250		8.06



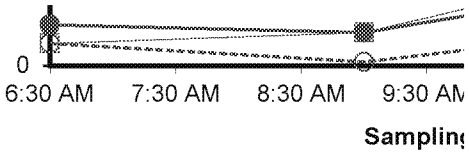

hio. dechlor.
hio. dechlor. pH=12
rsen. dechlor.
rsen. Dechlor. pH=12
10:30 AM
11:30 AM
12:30 PM
Time

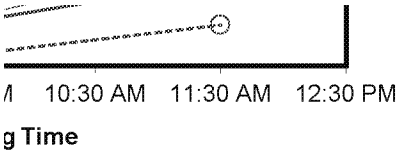

14 June Saugus Outfall
CN concentration (µg/L)
0
1
2
3
4
5
6
7:30 AM
8:30 AM
9:30 AM
10:30 AM
11:30 AM
12:30 PM
Sampling Time
Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall

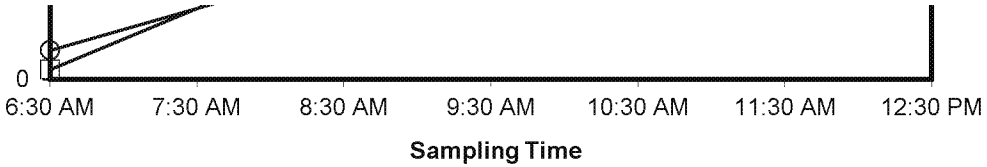

17
Thio. dechlor.
Thio. dechlor. pH=12
Arsen. dechlor.
Arsen. Dechlor. pH=12


14 June Valencia Outfall
CN concentration (µg/L)
1
2
3
4
5
6
Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall

6	Valencia Outfall w/ 50% NaOH to pH 12	30426	6:30 AM	0.9					
22	Valencia Outfall w/ 50% NaOH to pH 12	30442	9:00 AM	2.3					
38	Valencia Outfall w/ 50% NaOH to pH 12	30458	11:30 AM	2.3					
7	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30427	6:30 AM	0.1					
23	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30443	9:00 AM	1.7					
39	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	30459	11:30 AM	2.3		8.25	250		8.25
8	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30428	6:30 AM	2.6		8.32	250	0.5	12.05
24	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30444	9:00 AM	2.9		8.27	250	0.5	12.00
40	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	30460	11:30 AM	2.9		8.25	250	0.6	12.01

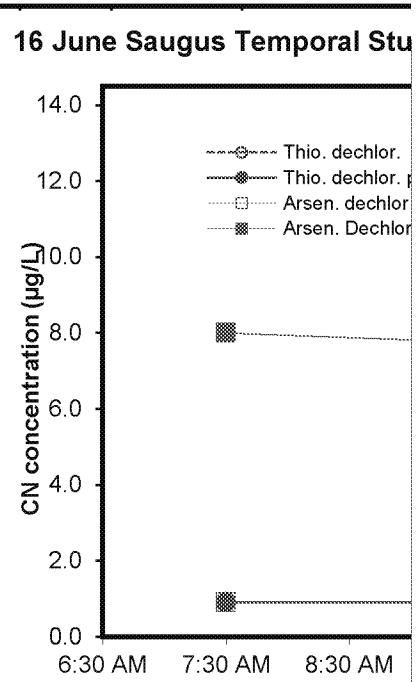


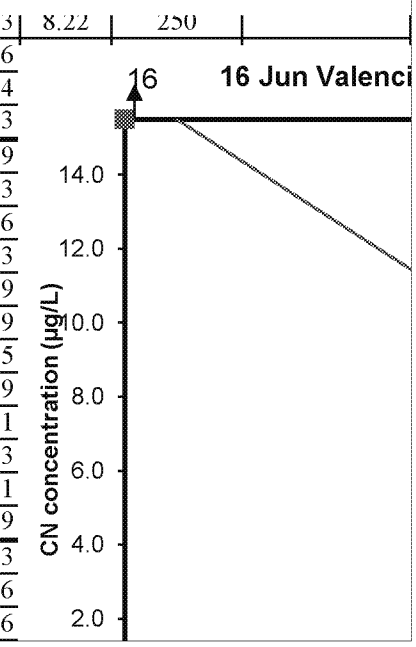

/ 10:30 AM 11:30 AM 12:30 PM
g Time


0
6:30 AM 7:30 AM 8:30 AM 9:30 AM 10:30 AM 11:30 AM 12:30 PM
Sampling Time

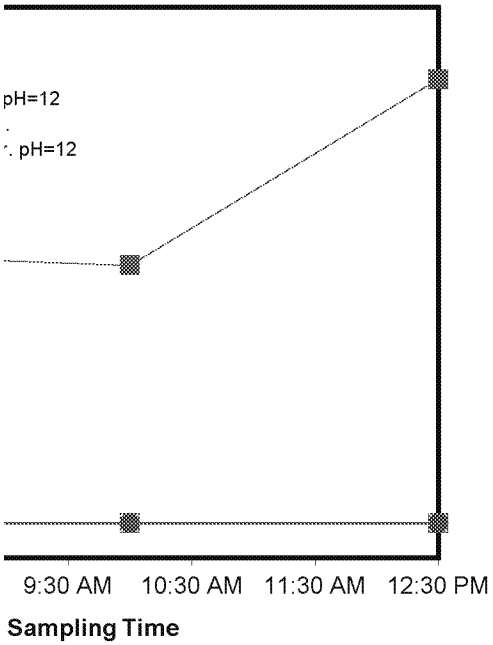
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-16 pH RECORD
DATE: 06/16/05

	Description	Log -In #	Time Collected	Cyanide µg/L	
10	Saugus FE Grab w/ 50% NaOH to pH 12	31031	7:30 AM	0.9	0
26	Saugus FE Grab w/ 50% NaOH to pH 12	31047	10:00 AM	0.9	0
42	Saugus FE Grab w/ 50% NaOH to pH 12	31063	12:30 PM	0.9	0
11	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31032	7:30 AM	0.9	0
27	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31048	10:00 AM	0.9	0
43	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31064	12:30 PM	0.9	0
12	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31033	7:30 AM	8.0	8
28	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31049	10:00 AM	7.7	7
44	Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31065	12:30 PM	12.6	12
9	Saugus FE w/ NaThio & No Pres.	31030	7:30 AM	0.9	0
25	Saugus FE w/ NaThio & No Pres.	31046	10:00 AM	0.9	0
41	Saugus FE w/ NaThio & No Pres.	31062	12:30 PM	0.9	0
13	Saugus Outfall pH7.	31034	7:30 AM	0.9	0
29	Saugus Outfall pH7.	31050	10:00 AM	0.9	0
45	Saugus Outfall pH7.	31066	12:30 PM	0.9	0
14	Saugus Outfall w/ 50% NaOH to pH 12	31035	7:30 AM	0.9	0
30	Saugus Outfall w/ 50% NaOH to pH 12	31051	10:00 AM	0.9	0
46	Saugus Outfall w/ 50% NaOH to pH 12	31067	12:30 PM	0.9	0
15	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31036	7:30 AM	0.9	0
31	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31052	10:00 AM	0.9	0
47	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31068	12:30 PM	0.9	0.3
16	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31037	7:30 AM	0.9	0.6
32	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31053	10:00 AM	1.4	1.4
48	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31069	12:30 PM	0.9	0.3
2	Valencia FE Grab w/ 50% NaOH to pH 12	31023	6:30 AM	0.9	0.9
18	Valencia FE Grab w/ 50% NaOH to pH 12	31039	9:00 AM	0.9	0.3
34	Valencia FE Grab w/ 50% NaOH to pH 12	31055	11:30 AM	0.9	0.6
3	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31024	6:30 AM	0.9	0.3
19	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31040	9:00 AM	0.9	0.9
35	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31056	11:30 AM	2.9	2.9
4	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31025	6:30 AM	16.4	15.5
20	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31041	9:00 AM	10.9	10.9
36	Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31057	11:30 AM	14.1	14.1
1	Valencia FE w/ NaThio & No Pres.	31022	6:30 AM	0.9	0.3
17	Valencia FE w/ NaThio & No Pres.	31038	9:00 AM	1.1	1.1
33	Valencia FE w/ NaThio & No Pres.	31054	11:30 AM	0.9	0.9
5	Valencia Outfall pH7	31026	6:30 AM	0.9	0.3
21	Valencia Outfall pH7	31042	9:00 AM	0.9	0.6
37	Valencia Outfall pH7	31058	11:30 AM	0.9	0.6

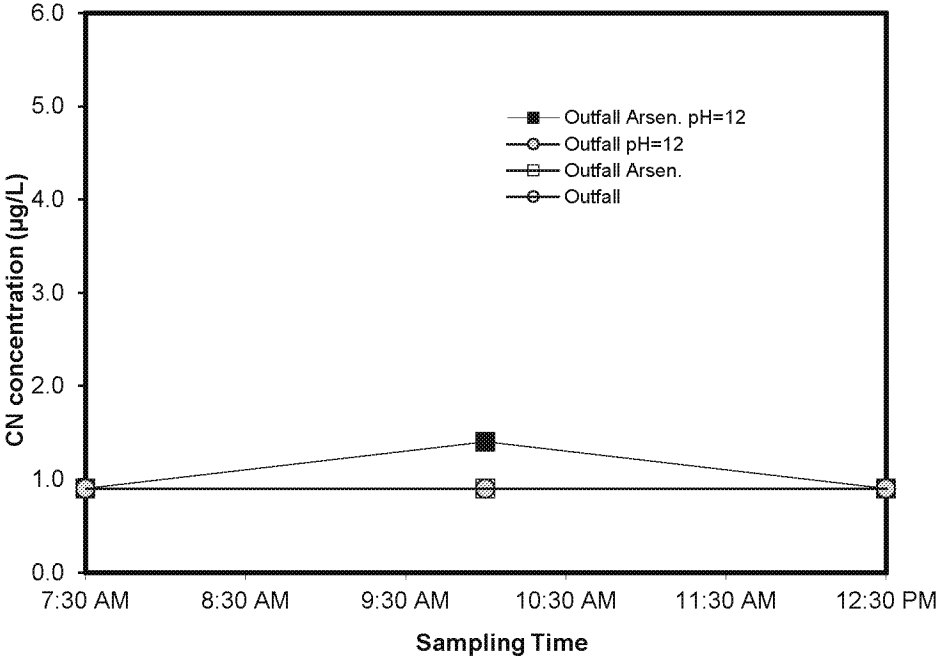




ıdy #16

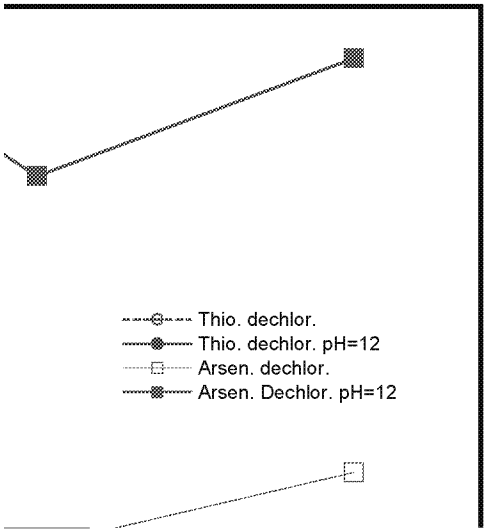


16 June Saugus Outfall

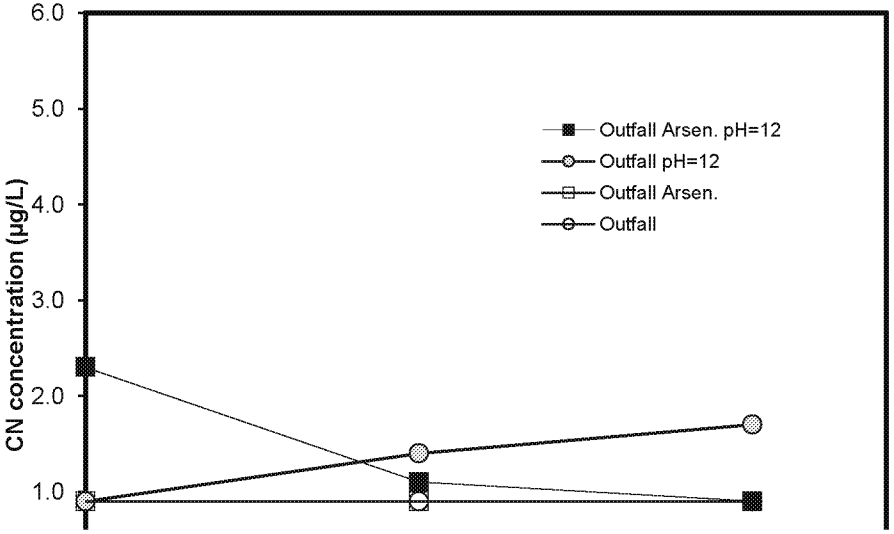


8.22

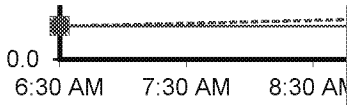
ia Temp. #16



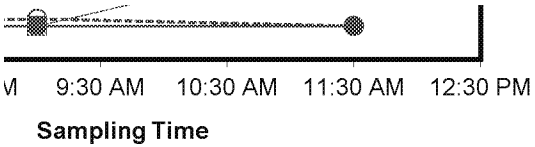
16 June Valencia Outfall

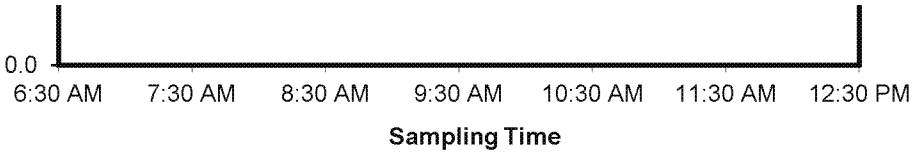


6	Valencia Outfall w/ 50% NaOH to pH 12	31027	6:30 AM	0.9	0.6			
22	Valencia Outfall w/ 50% NaOH to pH 12	31043	9:00 AM	1.4	1.4			
38	Valencia Outfall w/ 50% NaOH to pH 12	31059	11:30 AM	1.7	1.7			
7	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31028	6:30 AM	0.9	0.3			
23	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31044	9:00 AM	0.9	0.3			
39	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31060	11:30 AM	0.9	0.3	8.17	250	
8	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31029	6:30 AM	2.3	2.3	8.42	250	0.4
24	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31045	9:00 AM	1.1	1.1	8.19	250	0.5
40	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31061	11:30 AM	0.9	0.6	8.17	250	0.6



Any values less than 1 were entered as 0.9 for graphing and averaging purposes



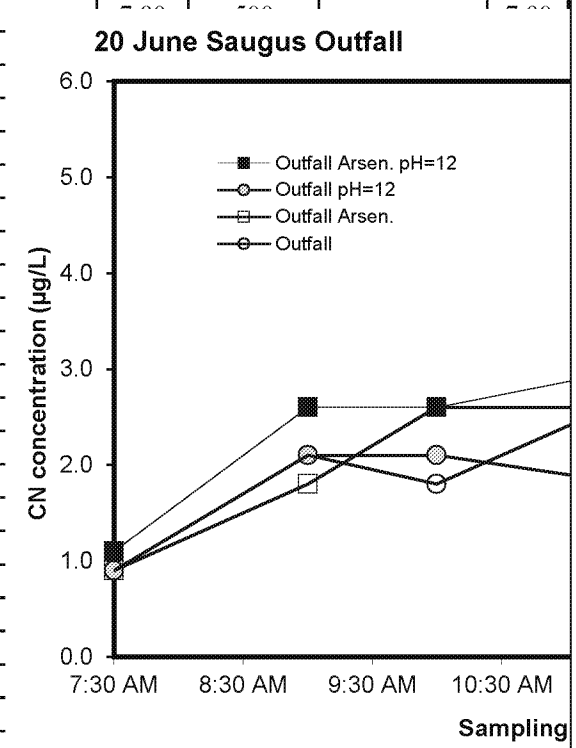


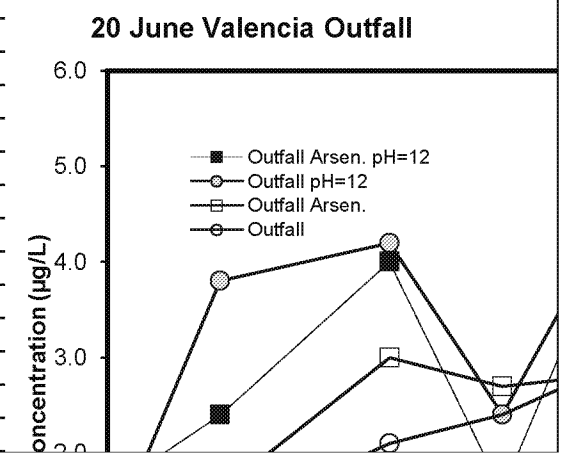
8.17
12.02
12.06
12.04

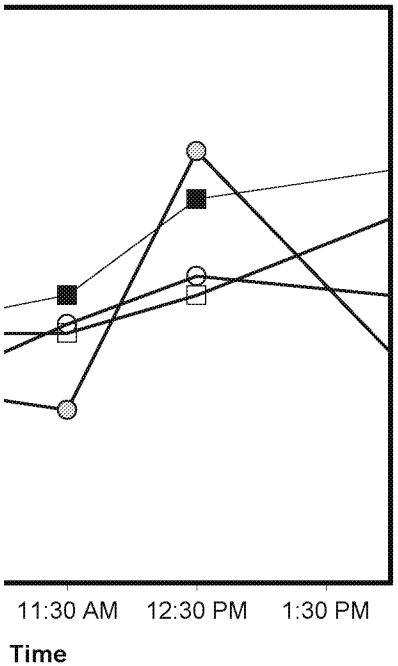
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-17 pH RECORD

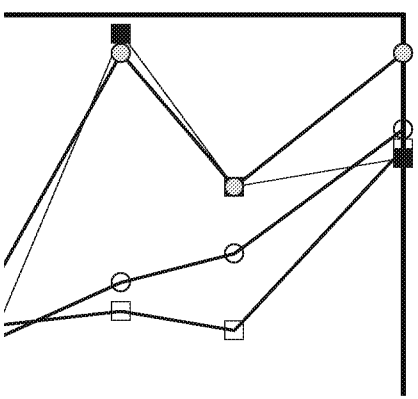
DATE: 06/20/05 5 cm cell

	Description	Log -In #	Time Collected	Cyanide µg/L	Initial pH	Initial Vol. (mL)	Vol. Of 50% NaOH in mL	pH Day 0
1	Saugus Outfall pH7.	31262	6:30 AM	0.9				
9	Saugus Outfall pH7.	31270	7:30 AM	0.9				
17	Saugus Outfall pH7.	31278	9:00 AM	2.1				
25	Saugus Outfall pH7.	31286	10:00 AM	1.8				
33	Saugus Outfall pH7.	31294	11:30 AM	2.7				
41	Saugus Outfall pH7.	31302	12:30 PM	3.2				
49	Saugus Outfall pH7.	31310	2:00 PM	3.0				
2	Saugus Outfall w/ 50% NaOH to pH 12	31263	6:30 AM	0.9				
10	Saugus Outfall w/ 50% NaOH to pH 12	31271	7:30 AM	0.9				
18	Saugus Outfall w/ 50% NaOH to pH 12	31279	9:00 AM	2.1				
26	Saugus Outfall w/ 50% NaOH to pH 12	31287	10:00 AM	2.1				
34	Saugus Outfall w/ 50% NaOH to pH 12	31295	11:30 AM	1.8				
42	Saugus Outfall w/ 50% NaOH to pH 12	31303	12:30 PM	4.5				
50	Saugus Outfall w/ 50% NaOH to pH 12	31311	2:00 PM	2.4				
3	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31264	6:30 AM	0.9				
11	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31272	7:30 AM	0.9				
19	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31280	9:00 AM	1.8				
27	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31288	10:00 AM	2.6				
35	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31296	11:30 AM	2.6				
43	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31304	12:30 PM	3.0				
51	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31312	2:00 PM	3.8				
4	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31265	6:30 AM	0.9				
12	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31273	7:30 AM	1.1				
20	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31281	9:00 AM	2.6	8.17	500	0.9	12.02
28	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31289	10:00 AM	2.6	8.21	500	1.0	12.04
36	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31297	11:30 AM	3.0				
44	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31305	12:30 PM	4.0				
52	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31313	2:00 PM	4.3				
5	Valencia Outfall pH7	31266	6:30 AM	0.9				
13	Valencia Outfall pH7	31274	7:30 AM	1.3				
21	Valencia Outfall pH7	31282	9:00 AM	2.1				
29	Valencia Outfall pH7	31290	10:00 AM	2.4				
37	Valencia Outfall pH7	31298	11:30 AM	3.2				
45	Valencia Outfall pH7	31306	12:30 PM	3.5				
53	Valencia Outfall pH7	31314	2:00 PM	4.8				
6	Valencia Outfall w/ 50% NaOH to pH 12	31267	6:30 AM	1.0				
14	Valencia Outfall w/ 50% NaOH to pH 12	31275	7:30 AM	3.8				
22	Valencia Outfall w/ 50% NaOH to pH 12	31283	9:00 AM	4.2				
30	Valencia Outfall w/ 50% NaOH to pH 12	31291	10:00 AM	2.4				



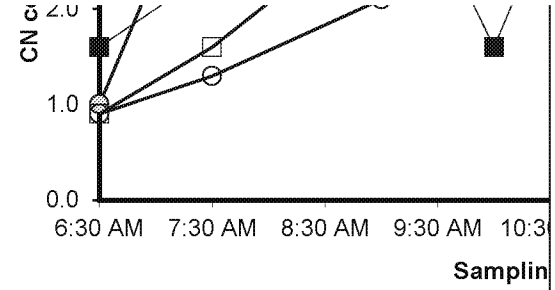


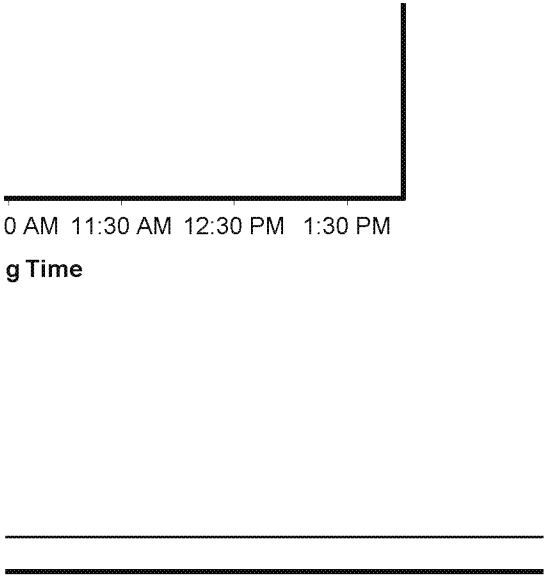

11:30 AM
12:30 PM
1:30 PM
Time



38	Valencia Outfall w/ 50% NaOH to pH 12	31299	11:30 AM	5.6					
46	Valencia Outfall w/ 50% NaOH to pH 12	31307	12:30 PM	4.2					
54	Valencia Outfall w/ 50% NaOH to pH 12	31315	2:00 PM	5.6					
7	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31268	6:30 AM	0.9					
15	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31276	7:30 AM	1.6					
23	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31284	9:00 AM	3.0					
31	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31292	10:00 AM	2.7					
39	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31300	11:30 AM	2.9					
47	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31308	12:30 PM	2.7					
55	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31316	2:00 PM	4.6		8.27	500		8.27
8	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31269	6:30 AM	1.6		8.25	500	1.0	12.03
16	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31277	7:30 AM	2.4		8.30	500	1.0	12.01
24	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31285	9:00 AM	4.0		8.20	500	0.9	12.03
32	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31293	10:00 AM	1.6		8.23	500	0.9	12.01
40	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31301	11:30 AM	5.8		8.20	500	1.0	12.02
48	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31309	12:30 PM	4.2		8.25	500	0.9	12.02
56	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31317	2:00 PM	4.5		8.27	500	0.9	12.00

Any values less than 1 were entered as 0.9 for graphing and averaging

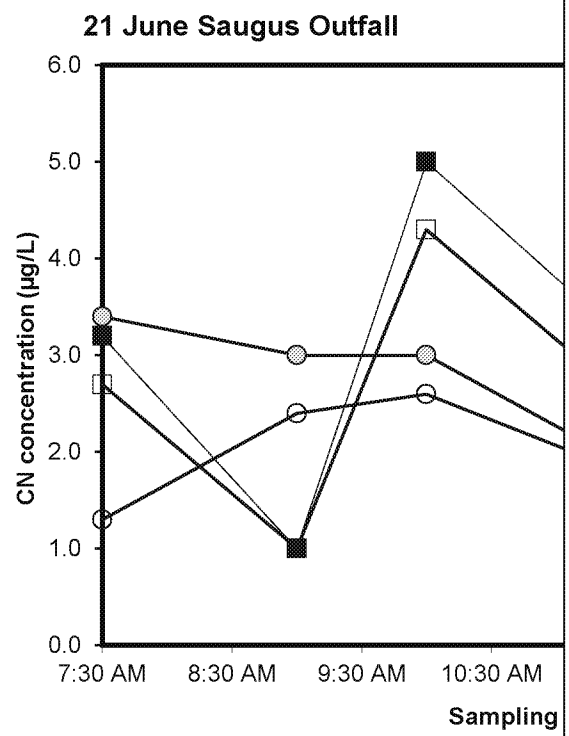


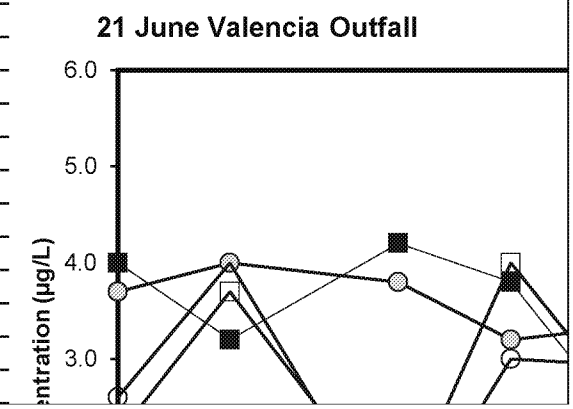

0 AM
11:30 AM
12:30 PM
1:30 PM
g Time

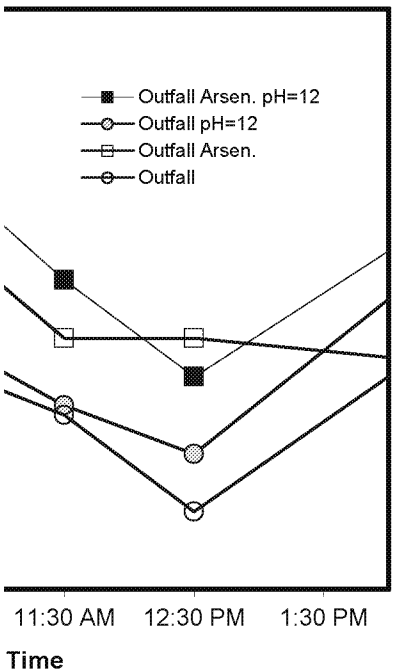
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-17 pH RECORD

DATE: 06/21/05 5 cm cell

	Description	Log -In #	Time Collected	Cyanide µg/L	Initial pH	Initial Vol. (mL)	Vol. Of 50% NaOH in mL	pH Day 0
1	Saugus Outfall pH7.	31362	6:30 AM	1.6				
9	Saugus Outfall pH7.	31370	7:30 AM	1.3				
17	Saugus Outfall pH7.	31378	9:00 AM	2.4				
25	Saugus Outfall pH7.	31386	10:00 AM	2.6				
33	Saugus Outfall pH7.	31394	11:30 AM	1.8				
41	Saugus Outfall pH7.	31402	12:30 PM	0.8				
49	Saugus Outfall pH7.	31410	2:00 PM	2.2				
2	Saugus Outfall w/ 50% NaOH to pH 12	31363	6:30 AM	1.6				
10	Saugus Outfall w/ 50% NaOH to pH 12	31371	7:30 AM	3.4				
18	Saugus Outfall w/ 50% NaOH to pH 12	31379	9:00 AM	3.0				
26	Saugus Outfall w/ 50% NaOH to pH 12	31387	10:00 AM	3.0				
34	Saugus Outfall w/ 50% NaOH to pH 12	31395	11:30 AM	1.9				
42	Saugus Outfall w/ 50% NaOH to pH 12	31403	12:30 PM	1.4				
50	Saugus Outfall w/ 50% NaOH to pH 12	31411	2:00 PM	3.0				
3	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31364	6:30 AM	1.4				
11	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31372	7:30 AM	2.7				
19	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31380	9:00 AM	1.0				
27	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31388	10:00 AM	4.3				
35	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31396	11:30 AM	2.6				
43	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31404	12:30 PM	2.6				
51	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31412	2:00 PM	2.4				
4	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	31365	6:30 AM	1.8				
12	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	31373	7:30 AM	3.2				
20	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	31381	9:00 AM	1.0	8.35	500	0.9	12.01
28	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	31389	10:00 AM	5.0	8.19	500	0.9	12.01
36	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	31397	11:30 AM	3.2	8.32	500	1.0	12.02
44	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	31405	12:30 PM	2.2	8.40	500	1.0	12.02
52	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaO	31413	2:00 PM	3.5				
5	Valencia Outfall pH7	31366	6:30 AM	2.6				
13	Valencia Outfall pH7	31374	7:30 AM	4.0				
21	Valencia Outfall pH7	31382	9:00 AM	1.1				
29	Valencia Outfall pH7	31390	10:00 AM	3.0				
37	Valencia Outfall pH7	31398	11:30 AM	2.9				
45	Valencia Outfall pH7	31406	12:30 PM	1.6				
53	Valencia Outfall pH7	31414	2:00 PM	1.6				
6	Valencia Outfall w/ 50% NaOH to pH 12	31367	6:30 AM	3.7				
14	Valencia Outfall w/ 50% NaOH to pH 12	31375	7:30 AM	4.0				
22	Valencia Outfall w/ 50% NaOH to pH 12	31383	9:00 AM	3.8				
30	Valencia Outfall w/ 50% NaOH to pH 12	31391	10:00 AM	3.2				



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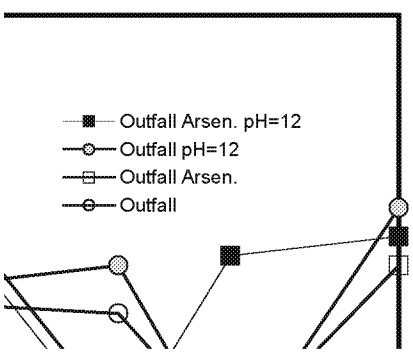
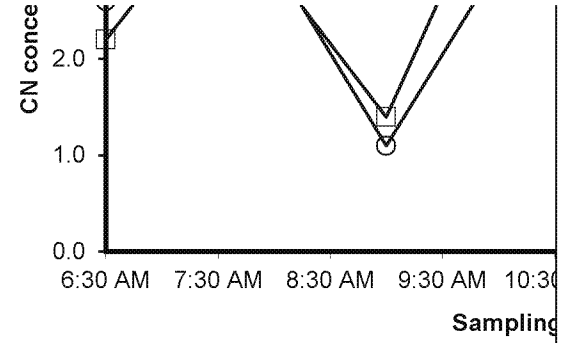
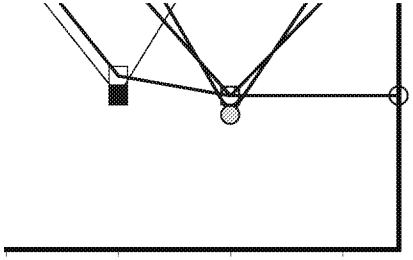
Outfall pH=12
Outfall Arsen.
Outfall
11:30 AM
12:30 PM
1:30 PM
Time


Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall

38	Valencia Outfall w/ 50% NaOH to pH 12	31399	11:30 AM	3.4					
46	Valencia Outfall w/ 50% NaOH to pH 12	31407	12:30 PM	1.4					
54	Valencia Outfall w/ 50% NaOH to pH 12	31415	2:00 PM	4.0					
7	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31368	6:30 AM	2.2					
15	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31376	7:30 AM	3.7					
23	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31384	9:00 AM	1.4					
31	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31392	10:00 AM	4.0					
39	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31400	11:30 AM	1.8					
47	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31408	12:30 PM	1.6					
55	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31416	2:00 PM	3.4					
8	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50N	31369	6:30 AM	4.0					
16	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50N	31377	7:30 AM	3.2		8.3	500	1.0	12.02
24	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50N	31385	9:00 AM	4.2		8.22	500	1.0	12.02
32	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50N	31393	10:00 AM	3.8		8.14	500	1.0	12.02
40	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50N	31401	11:30 AM	1.6		8.25	500	0.9	12.01
48	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50N	31409	12:30 PM	3.5		8.28	500	0.9	12.01
56	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50N	31417	2:00 PM	3.7		8.2	500	1.0	12.01
	Any values less than 1 were entered as 0.9 for graphing and aver								





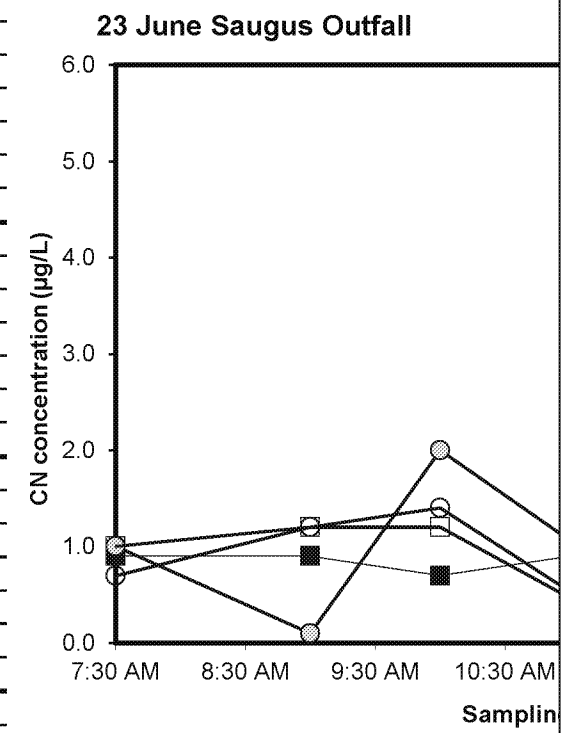
0 AM 11:30 AM 12:30 PM 1:30 PM

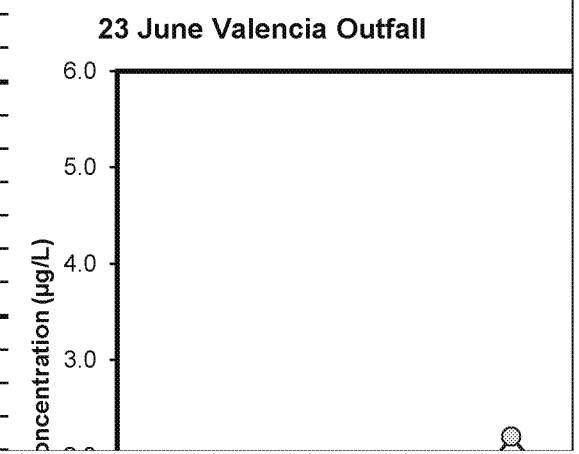
g Time

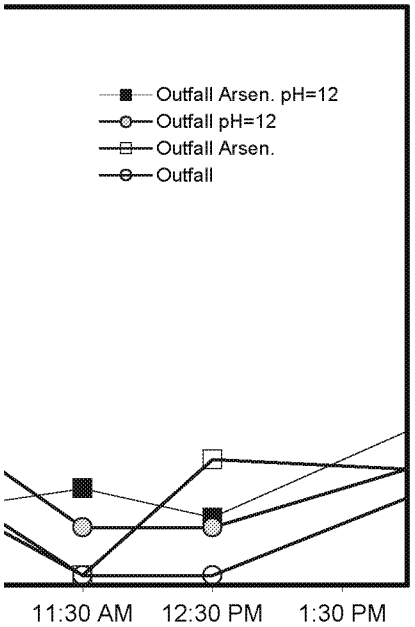
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-19 pH RECORD

DATE: 06/23/05 5 cm cell

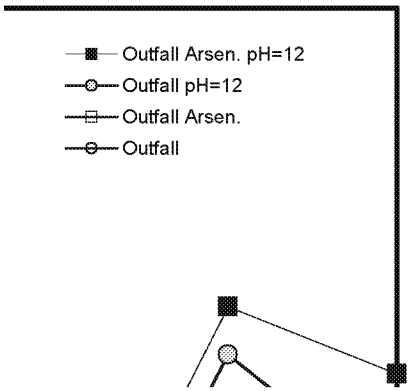
	Description	Log -In #	Time Collected	Cyanide µg/L	Initial pH	Initial Vol. (mL)	Vol. Of 50% NaOH in mL	pH Day 0
1	Saugus Outfall pH7.	31418	6:30 AM	0.3				
2	Saugus Outfall pH7.	31426	7:30 AM	0.7				
3	Saugus Outfall pH7.	31434	9:00 AM	1.2				
4	Saugus Outfall pH7.	31442	10:00 AM	1.4				
5	Saugus Outfall pH7.	31450	11:30 AM	0.1				
6	Saugus Outfall pH7.	31458	12:30 PM	0.1				
7	Saugus Outfall pH7.	31466	2:00 PM	0.9				
8	Saugus Outfall w/ 50% NaOH to pH 12	31419	6:30 AM	0.3				
9	Saugus Outfall w/ 50% NaOH to pH 12	31427	7:30 AM	1.0				
10	Saugus Outfall w/ 50% NaOH to pH 12	31435	9:00 AM	0.1				
11	Saugus Outfall w/ 50% NaOH to pH 12	31443	10:00 AM	2.0				
12	Saugus Outfall w/ 50% NaOH to pH 12	31451	11:30 AM	0.6				
13	Saugus Outfall w/ 50% NaOH to pH 12	31459	12:30 PM	0.6				
14	Saugus Outfall w/ 50% NaOH to pH 12	31467	2:00 PM	1.2				
15	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31420	6:30 AM	1.0				
16	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31428	7:30 AM	1.0				
17	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31436	9:00 AM	1.2				
18	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31444	10:00 AM	1.2				
19	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31452	11:30 AM	0.1				
20	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31460	12:30 PM	1.3				
21	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31468	2:00 PM	1.2				
22	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31421	6:30 AM	1.2				
23	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31429	7:30 AM	0.9				
24	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31437	9:00 AM	0.9	8.25	500	0.9	12.02
25	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31445	10:00 AM	0.7	8.30	500	0.9	12.00
26	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31453	11:30 AM	1.0	8.40	500	1.0	12.01
27	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31461	12:30 PM	0.7				
28	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31469	2:00 PM	1.6				
29	Valencia Outfall pH7	31422	6:30 AM	0.9				
30	Valencia Outfall pH7	31430	7:30 AM	0.9				
31	Valencia Outfall pH7	31438	9:00 AM	0.9				
32	Valencia Outfall pH7	31446	10:00 AM	0.1				
33	Valencia Outfall pH7	31454	11:30 AM	0.3				
34	Valencia Outfall pH7	31462	12:30 PM	1.3				
35	Valencia Outfall pH7	31470	2:00 PM	0.7				
36	Valencia Outfall w/ 50% NaOH to pH 12	31423	6:30 AM	1.0				
37	Valencia Outfall w/ 50% NaOH to pH 12	31431	7:30 AM	0.6				
38	Valencia Outfall w/ 50% NaOH to pH 12	31439	9:00 AM	0.7				
39	Valencia Outfall w/ 50% NaOH to pH 12	31447	10:00 AM	2.2				





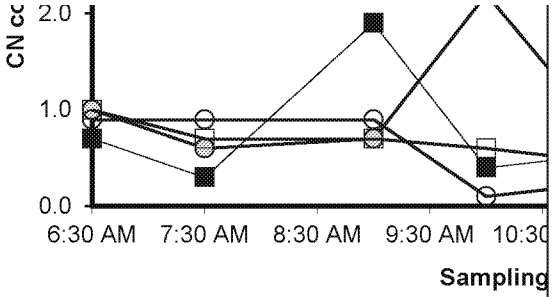

Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall
11:30 AM
12:30 PM
1:30 PM

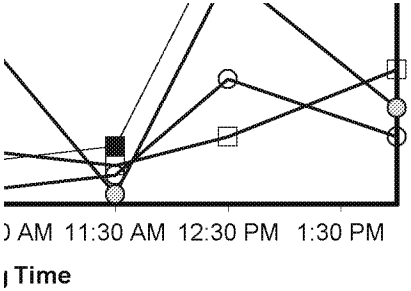
g Time


Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall

40	Valencia Outfall w/ 50% NaOH to pH 12	31455	11:30 AM	0.1					
41	Valencia Outfall w/ 50% NaOH to pH 12	31463	12:30 PM	2.4					
42	Valencia Outfall w/ 50% NaOH to pH 12	31471	2:00 PM	1.0					
43	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31424	6:30 AM	1.0					
44	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31432	7:30 AM	0.7					
45	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31440	9:00 AM	0.7					
46	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31448	10:00 AM	0.6					
47	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31456	11:30 AM	0.4					
48	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31464	12:30 PM	0.7					
49	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31472	2:00 PM	1.4		8.17	500		8.17
50	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31425	6:30 AM	0.7		8.31	500	0.9	12.02
51	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31433	7:30 AM	0.3		8.3	500	0.8	12.00
52	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31441	9:00 AM	1.9		8.26	500	0.9	12.01
53	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31449	10:00 AM	0.4		8.22	500	1.0	12.04
54	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31457	11:30 AM	0.6		8.20	500	1.0	12.05
55	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31465	12:30 PM	2.9		8.31	500	0.9	12.04
56	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31473	2:00 PM	2.2		8.17	500	1.0	12.03

Any values less than 1 were entered as 0.9 for graphing and averaging

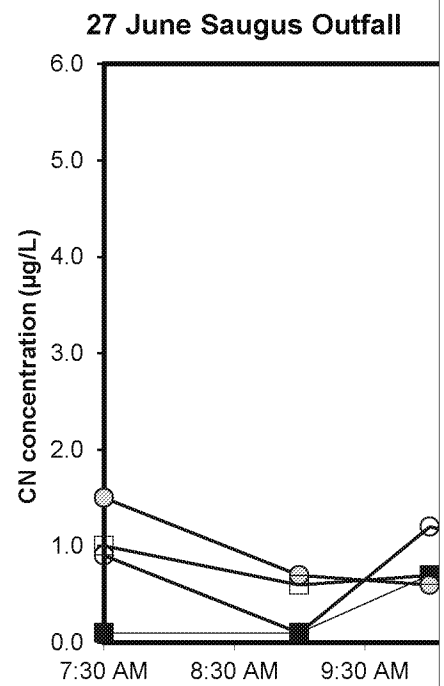


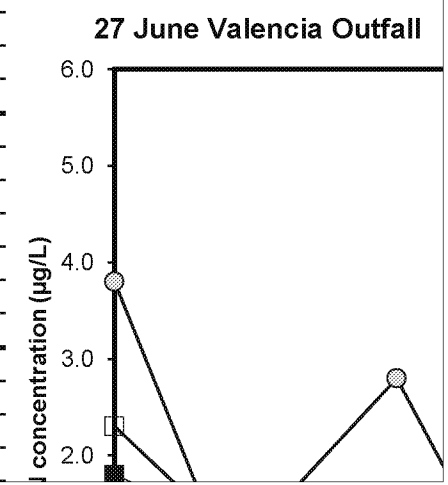

) AM 11:30 AM 12:30 PM 1:30 PM
Time

CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-20 pH RECORD

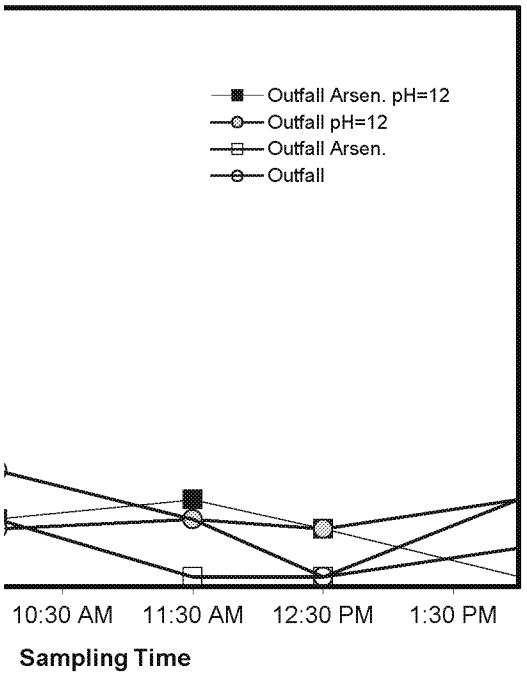
DATE: 06/27/05 5 cm cell

	Description	Log -In #	Time Collected	Cyanide µg/L	Initial pH	Initial Vol. (mL)	Vol. Of 50% NaOH in mL
1	CN Res. Saugus Outfall pH7.	31732	6:30 AM	0.1			
9	CN Res. Saugus Outfall pH7.	31740	7:30 AM	0.9			
17	CN Res. Saugus Outfall pH7.	31748	9:00 AM	0.1			
25	CN Res. Saugus Outfall pH7.	31756	10:00 AM	1.2			
33	CN Res. Saugus Outfall pH7.	31764	11:30 AM	0.7			
41	CN Res. Saugus Outfall pH7.	31772	12:30 PM	0.1			
49	CN Res. Saugus Outfall pH7.	31780	2:00 PM	0.4			
2	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31733	6:30 AM	0.3			
10	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31741	7:30 AM	1.5			
18	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31749	9:00 AM	0.7			
26	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31757	10:00 AM	0.6			
34	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31765	11:30 AM	0.7			
42	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31773	12:30 PM	0.6			
50	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31781	2:00 PM	0.9			
3	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31734	6:30 AM	0.1			
11	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31742	7:30 AM	1.0			
19	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31750	9:00 AM	0.6			
27	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31758	10:00 AM	0.7			
35	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31766	11:30 AM	0.1			
43	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31774	12:30 PM	0.1			
51	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31782	2:00 PM	0.9			
4	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31735	6:30 AM	0.1			
12	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31743	7:30 AM	0.1			
20	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31751	9:00 AM	0.1	8.27	500	0.9
28	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31759	10:00 AM	0.7	8.35	500	0.9
36	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31767	11:30 AM	0.9			
44	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31775	12:30 PM	0.6			
52	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31783	2:00 PM	0.1			
5	CN Res. Valencia Outfall pH7	31736	6:30 AM	1.6			
13	CN Res. Valencia Outfall pH7	31744	7:30 AM	0.1			
21	CN Res. Valencia Outfall pH7	31752	9:00 AM	0.7			
29	CN Res. Valencia Outfall pH7	31760	10:00 AM	0.4			
37	CN Res. Valencia Outfall pH7	31768	11:30 AM	0.9			
45	CN Res. Valencia Outfall pH7	31776	12:30 PM	0.4			
53	CN Res. Valencia Outfall pH7	31784	2:00 PM	0.6			
6	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31737	6:30 AM	3.8			
14	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31745	7:30 AM	0.9			
22	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31753	9:00 AM	2.8			
30	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31761	10:00 AM	0.6			

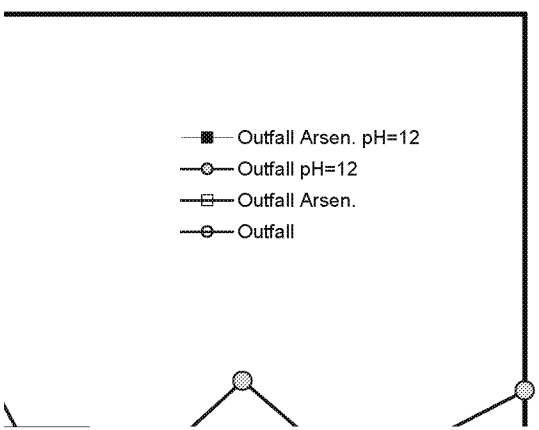




pH
Day 0

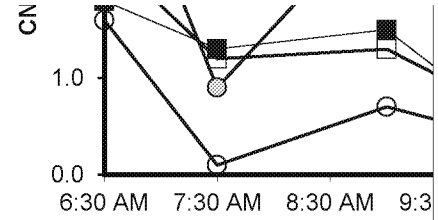


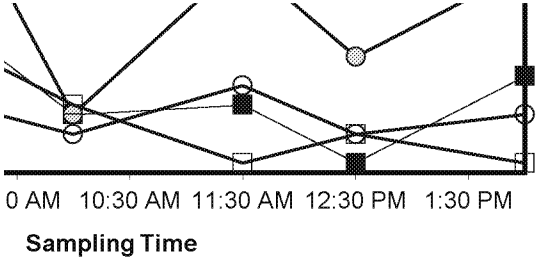
12.02
12.01



38	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31769	11:30 AM	2.2				
46	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31777	12:30 PM	1.2				
54	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31785	2:00 PM	2.1				
7	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31738	6:30 AM	2.3				
15	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31746	7:30 AM	1.2				
23	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31754	9:00 AM	1.3				
31	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31762	10:00 AM	0.7				
39	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31770	11:30 AM	0.1				
47	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31778	12:30 PM	0.4		8.34	500	
55	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31786	2:00 PM	0.1		8.26	500	
8	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31739	6:30 AM	1.8		8.30	500	0.9
16	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31747	7:30 AM	1.3		8.41	500	0.9
24	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31755	9:00 AM	1.5		8.4	500	1.0
32	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31763	10:00 AM	0.6		8.52	500	0.9
40	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31771	11:30 AM	0.7		8.48	500	0.9
48	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31779	12:30 PM	0.1		8.34	500	0.9
56	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31787	2:00 PM	1.0		8.26	500	1.0

Any values less than 1 were entered as 0.9 for graphing and averaging purposes



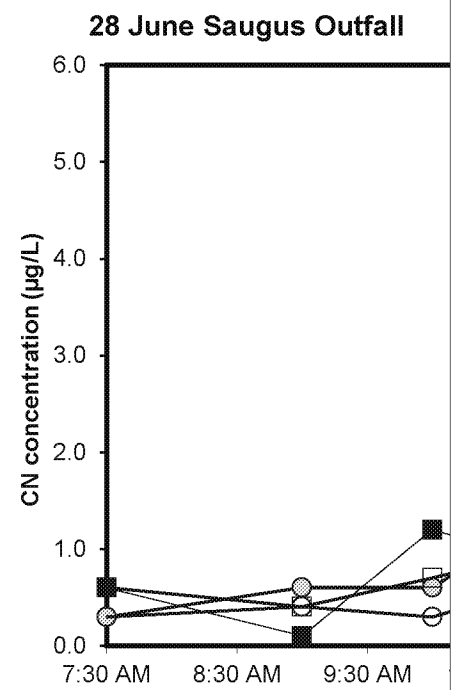


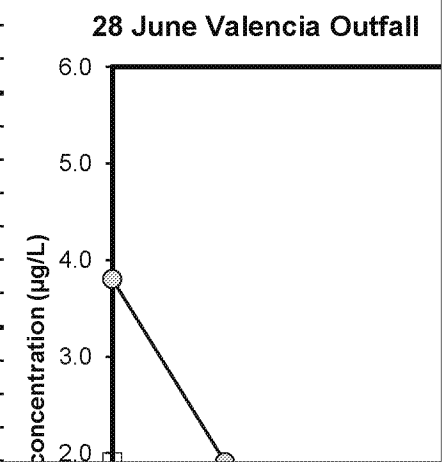
8.34
8.26
12.03
12.00
12.03
12.02
12.01
12.01
12.02

CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-21 pH RECORD

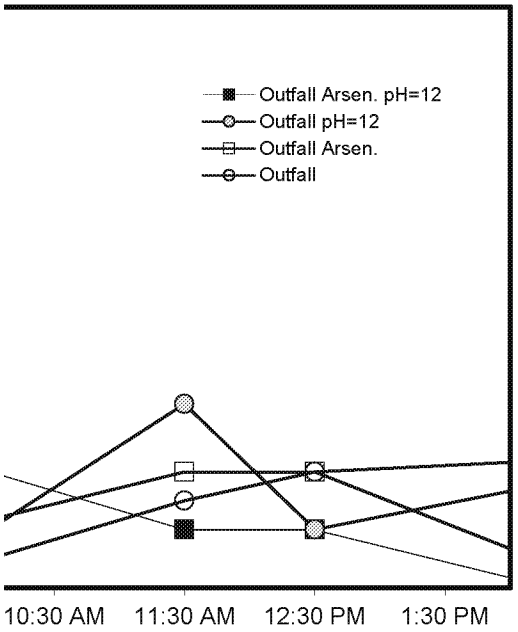
DATE: 06/28/05 5 cm cell

	Description	Log -In #	Time Collected	Cyanide µg/L	Initial pH	Initial Vol. (mL)	Vol. Of 50% NaOH in mL
1	CN Res. Saugus Outfall pH7.	31788	6:30 AM	0.1			
9	CN Res. Saugus Outfall pH7.	31796	7:30 AM	0.3			
17	CN Res. Saugus Outfall pH7.	31804	9:00 AM	0.4			
25	CN Res. Saugus Outfall pH7.	31812	10:00 AM	0.3			
33	CN Res. Saugus Outfall pH7.	31820	11:30 AM	0.9			
41	CN Res. Saugus Outfall pH7.	31828	12:30 PM	1.2			
49	CN Res. Saugus Outfall pH7.	31836	2:00 PM	1.3			
2	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31789	6:30 AM	0.3			
10	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31797	7:30 AM	0.3			
18	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31805	9:00 AM	0.6			
26	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31813	10:00 AM	0.6			
34	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31821	11:30 AM	1.9			
42	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31829	12:30 PM	0.6			
50	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	31837	2:00 PM	1.0			
3	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31790	6:30 AM	0.1			
11	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31798	7:30 AM	0.6			
19	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31806	9:00 AM	0.4			
27	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31814	10:00 AM	0.7			
35	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31822	11:30 AM	1.2			
43	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31830	12:30 PM	1.2			
51	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31838	2:00 PM	0.4			
4	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31791	6:30 AM	0.1			
12	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31799	7:30 AM	0.6			
20	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31807	9:00 AM	0.1	8.41	500	0.9
28	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31815	10:00 AM	1.2	8.52	500	0.7
36	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31823	11:30 AM	0.6			
44	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31831	12:30 PM	0.6			
52	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31839	2:00 PM	0.1			
5	CN Res. Valencia Outfall pH7	31792	6:30 AM	1.3			
13	CN Res. Valencia Outfall pH7	31800	7:30 AM	0.4			
21	CN Res. Valencia Outfall pH7	31808	9:00 AM	0.3			
29	CN Res. Valencia Outfall pH7	31816	10:00 AM	1.3			
37	CN Res. Valencia Outfall pH7	31824	11:30 AM	0.1			
45	CN Res. Valencia Outfall pH7	31832	12:30 PM	0.4			
53	CN Res. Valencia Outfall pH7	31840	2:00 PM	0.4			
6	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31793	6:30 AM	3.8			
14	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31801	7:30 AM	1.9			
22	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31809	9:00 AM	1.0			
30	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31817	10:00 AM	1.3			

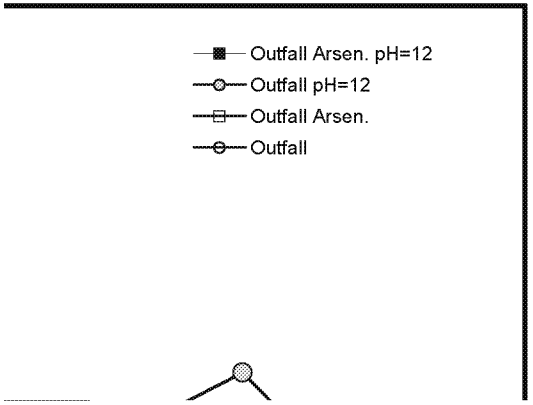




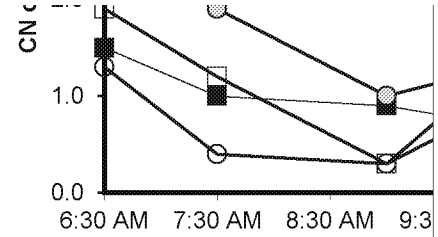
pH
Day 0

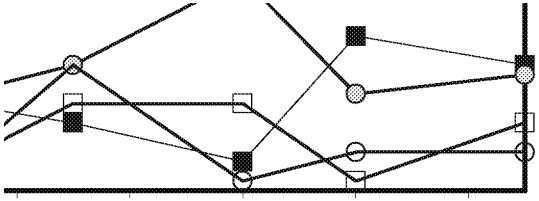


12.02
12.01



38	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31825	11:30 AM	2.2				
46	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31833	12:30 PM	1.0				
54	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	31841	2:00 PM	1.2				
7	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31794	6:30 AM	1.9				
15	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31802	7:30 AM	1.2				
23	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31810	9:00 AM	0.3				
31	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31818	10:00 AM	0.9				
39	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31826	11:30 AM	0.9				
47	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31834	12:30 PM	0.1				
55	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	31842	2:00 PM	0.7		8.33	500	
8	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31795	6:30 AM	1.5		8.26	500	0.9
16	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31803	7:30 AM	1.0		8.30	500	1.0
24	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31811	9:00 AM	0.9		8.54	500	1.0
32	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31819	10:00 AM	0.7		8.44	500	0.9
40	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31827	11:30 AM	0.3		8.34	500	0.7
48	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31835	12:30 PM	1.6		8.33	500	0.7
56	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	31843	2:00 PM	1.3		8.33	500	0.8
	Any values less than 1 were entered as 0.9 for graphing and averaging purposes							





0 AM 10:30 AM 11:30 AM 12:30 PM 1:30 PM

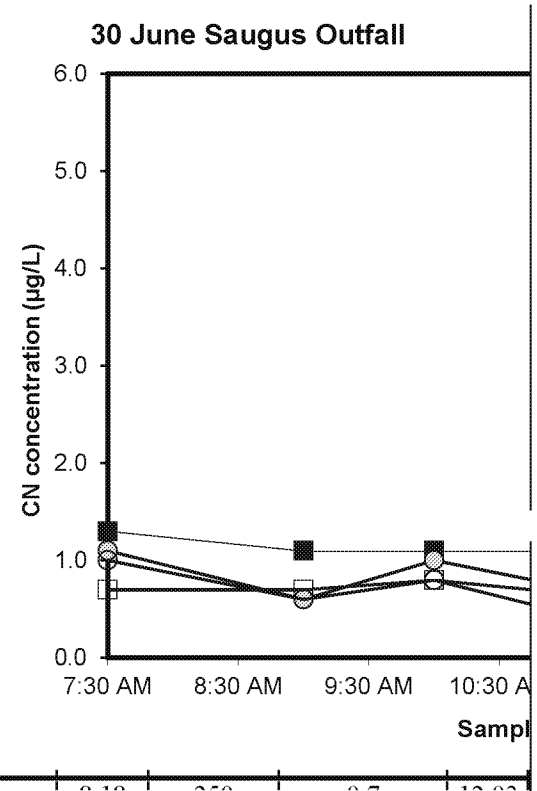
Sampling Time

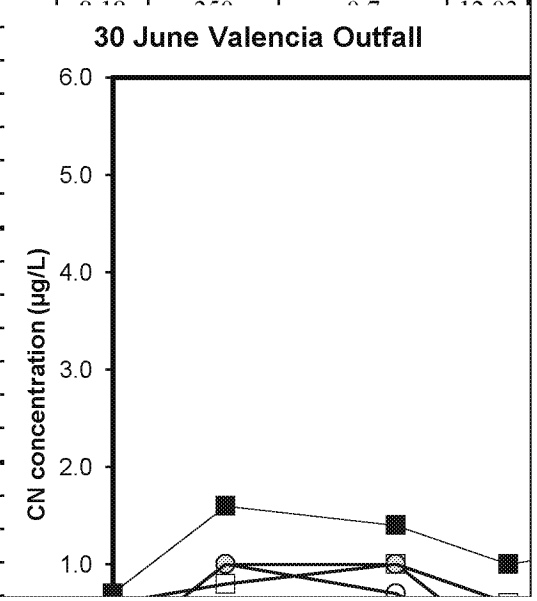
8.33
12.01
12.04
12.04
12.02
12.01
12.01
12.02

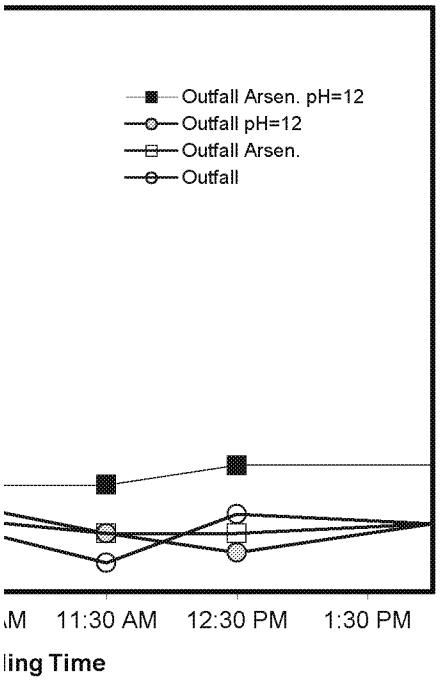
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-22 pH RECORD

DATE: 06/30/05 **5 cm cell**

	Description	Log -In #	Time Collected	Cyanide µg/L
1	Saugus Outfall pH7.	32225	6:30 AM	0.4
9	Saugus Outfall pH7.	32233	7:30 AM	1.0
17	Saugus Outfall pH7.	32241	9:00 AM	0.6
25	Saugus Outfall pH7.	32249	10:00 AM	0.8
33	Saugus Outfall pH7.	32257	11:30 AM	0.3
41	Saugus Outfall pH7.	32265	12:30 PM	0.8
49	Saugus Outfall pH7.	32273	2:00 PM	0.7
2	Saugus Outfall w/ 50% NaOH to pH 12	32226	6:30 AM	0.8
10	Saugus Outfall w/ 50% NaOH to pH 12	32234	7:30 AM	1.1
18	Saugus Outfall w/ 50% NaOH to pH 12	32242	9:00 AM	0.6
26	Saugus Outfall w/ 50% NaOH to pH 12	32250	10:00 AM	1.0
34	Saugus Outfall w/ 50% NaOH to pH 12	32258	11:30 AM	0.6
42	Saugus Outfall w/ 50% NaOH to pH 12	32266	12:30 PM	0.4
50	Saugus Outfall w/ 50% NaOH to pH 12	32274	2:00 PM	0.7
3	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32227	6:30 AM	0.3
11	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32235	7:30 AM	0.7
19	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32243	9:00 AM	0.7
27	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32251	10:00 AM	0.8
35	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32259	11:30 AM	0.6
43	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32267	12:30 PM	0.6
51	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32275	2:00 PM	0.7
4	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32228	6:30 AM	1.0
12	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32236	7:30 AM	1.3
20	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32244	9:00 AM	1.1
28	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32252	10:00 AM	1.1
36	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32260	11:30 AM	1.1
44	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32268	12:30 PM	1.3
52	Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32276	2:00 PM	1.3
5	Valencia Outfall pH7	32229	6:30 AM	0.1
13	Valencia Outfall pH7	32237	7:30 AM	1.0
21	Valencia Outfall pH7	32245	9:00 AM	0.7
29	Valencia Outfall pH7	32253	10:00 AM	0.1
37	Valencia Outfall pH7	32261	11:30 AM	0.1
45	Valencia Outfall pH7	32269	12:30 PM	0.4
53	Valencia Outfall pH7	32277	2:00 PM	0.3
6	Valencia Outfall w/ 50% NaOH to pH 12	32230	6:30 AM	0.1
14	Valencia Outfall w/ 50% NaOH to pH 12	32238	7:30 AM	1.0
22	Valencia Outfall w/ 50% NaOH to pH 12	32246	9:00 AM	1.0
30	Valencia Outfall w/ 50% NaOH to pH 12	32254	10:00 AM	0.1






Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall
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11:30 AM
12:30 PM
1:30 PM
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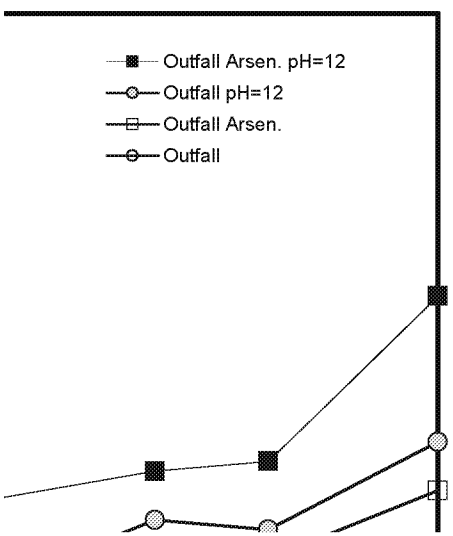
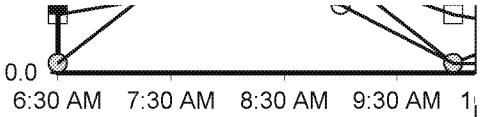

Outfall Arsen. pH=12
Outfall pH=12
Outfall Arsen.
Outfall

38	Valencia Outfall w/ 50% NaOH to pH 12	32262	11:30 AM	0.8					
46	Valencia Outfall w/ 50% NaOH to pH 12	32270	12:30 PM	0.7					
54	Valencia Outfall w/ 50% NaOH to pH 12	32278	2:00 PM	1.6					
7	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32231	6:30 AM	0.6					
15	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32239	7:30 AM	0.8					
23	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32247	9:00 AM	1.0		8.21	250		8.21
31	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32255	10:00 AM	0.6		8.19	250		8.19
39	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32263	11:30 AM	0.3		8.20	250		8.2
47	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32271	12:30 PM	0.4		8.34	250		8.34
55	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32279	2:00 PM	1.1		8.27	250		8.27
8	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32232	6:30 AM	0.7		8.22	250	0.7	12.01
16	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32240	7:30 AM	1.6		8.33	250	0.7	12.02
24	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32248	9:00 AM	1.4		8.21	250	0.7	12.01
32	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32256	10:00 AM	1.0		8.19	250	0.7	12.01
40	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32264	11:30 AM	1.3		8.2	250	0.7	12.01
48	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32272	12:30 PM	1.4		8.34	250	0.7	12.01
56	Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32280	2:00 PM	3.1		8.27	250	0.8	12.05
	Any values less than 1 were entered as 0.9 for graphing and averagin								



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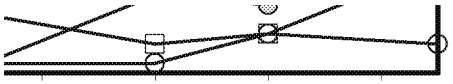

0:30 AM 11:30 AM 12:30 PM 1:30 PM

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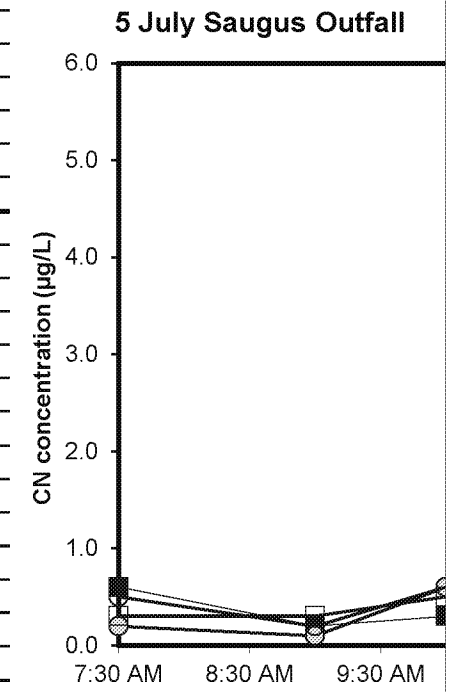
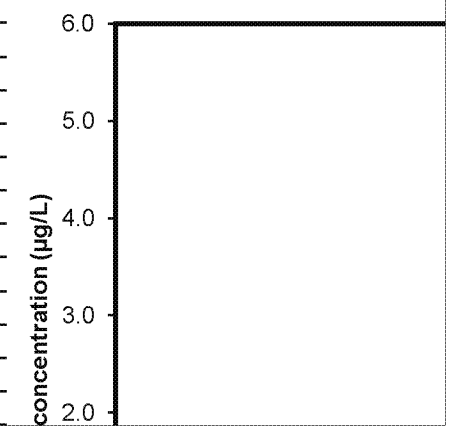
CYANIDE PROJECT: VALENCIA / SAUGUS FINAL EFFLUENT TEMPORAL STUDY-23 pH RECORD

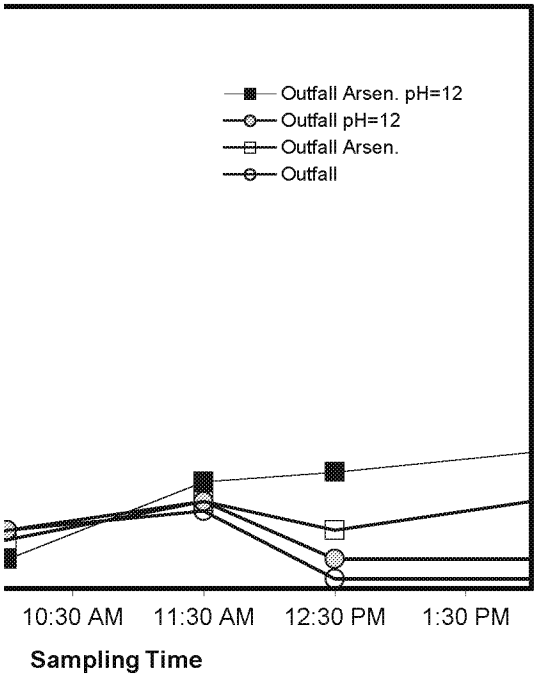
DATE: 07/05/05 5 cm cell

	Description	Log -In #	Time Collected	Cyanide µg/L	Initial pH	Initial Vol. (mL)	Vol. Of 50% NaOH in mL
1	CN Res. Saugus Outfall pH7.	32366	6:30 AM	0.1			
9	CN Res. Saugus Outfall pH7.	32374	7:30 AM	0.5			
17	CN Res. Saugus Outfall pH7.	32382	9:00 AM	0.2			
25	CN Res. Saugus Outfall pH7.	32390	10:00 AM	0.6			
33	CN Res. Saugus Outfall pH7.	32398	11:30 AM	0.8			
41	CN Res. Saugus Outfall pH7.	32406	12:30 PM	0.1			
49	CN Res. Saugus Outfall pH7.	32414	2:00 PM	0.1			
2	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	32367	6:30 AM	0.9			
10	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	32375	7:30 AM	0.2			
18	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	32383	9:00 AM	0.1			
26	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	32391	10:00 AM	0.6			
34	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	32399	11:30 AM	0.9			
42	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	32407	12:30 PM	0.3			
50	CN Res. Saugus Outfall w/ 50% NaOH to pH 12	32415	2:00 PM	0.3			
3	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32368	6:30 AM	0.2			
11	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32376	7:30 AM	0.3			
19	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32384	9:00 AM	0.3			
27	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32392	10:00 AM	0.5			
35	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32400	11:30 AM	0.9			
43	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32408	12:30 PM	0.6			
51	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32416	2:00 PM	0.9			
4	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32369	6:30 AM	0.3			
12	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32377	7:30 AM	0.6			
20	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32385	9:00 AM	0.2	8.55	250	0.7
28	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32393	10:00 AM	0.3	8.21	250	0.6
36	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32401	11:30 AM	1.1			
44	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32409	12:30 PM	1.2			
52	CN Res. Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32417	2:00 PM	1.4			
5	CN Res. Valencia Outfall pH7	32370	6:30 AM	0.1			
13	CN Res. Valencia Outfall pH7	32378	7:30 AM	0.1			
21	CN Res. Valencia Outfall pH7	32386	9:00 AM	0.1			
29	CN Res. Valencia Outfall pH7	32394	10:00 AM	0.1			
37	CN Res. Valencia Outfall pH7	32402	11:30 AM	0.6			
45	CN Res. Valencia Outfall pH7	32410	12:30 PM	0.6			
53	CN Res. Valencia Outfall pH7	32418	2:00 PM	0.3			
6	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	32371	6:30 AM	0.8			
14	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	32379	7:30 AM	0.9			
22	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	32387	9:00 AM	1.1			
30	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	32395	10:00 AM	1.1			

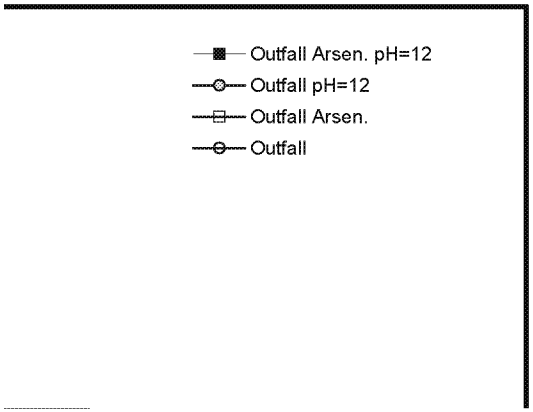




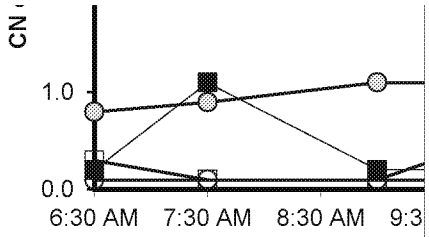
pH
Day 0

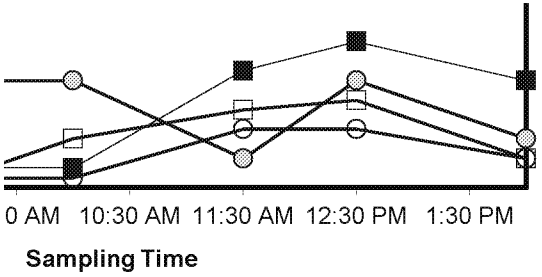


12.01
12.01



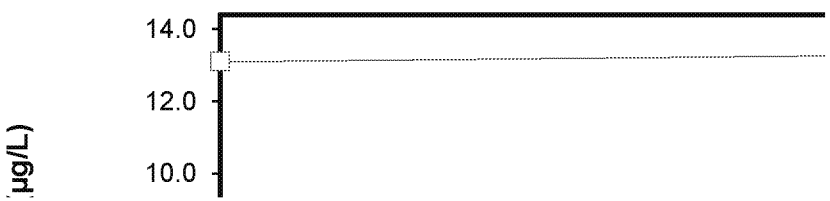
38	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	32403	11:30 AM	0.3			
46	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	32411	12:30 PM	1.1			
54	CN Res. Valencia Outfall w/ 50% NaOH to pH 12	32419	2:00 PM	0.5			
7	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32372	6:30 AM	0.3			
15	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32380	7:30 AM	0.1			
23	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32388	9:00 AM	0.1			
31	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32396	10:00 AM	0.5			
39	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32404	11:30 AM	0.8			
47	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32412	12:30 PM	0.9			
55	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	32420	2:00 PM	0.3	8.19	250	
8	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32373	6:30 AM	0.2	8.35	250	0.6
16	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32381	7:30 AM	1.1	8.33	250	0.7
24	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32389	9:00 AM	0.2	8.27	250	0.6
32	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32397	10:00 AM	0.2	8.24	250	0.6
40	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32405	11:30 AM	1.2	8.30	250	0.7
48	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32413	12:30 PM	1.5	8.23	250	0.6
56	CN Res. Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	32421	2:00 PM	1.1	8.19	250	0.6
	Any values less than 1 were entered as 0.9 for graphing and averaging purposes						





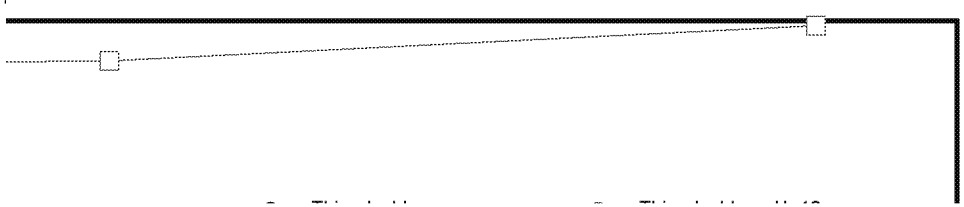
8.19
12.00
12.01
12.00
12.01
12.02
12.01
12.02

	Study: Date:
CN Res. Saugus FE Grab w/ 50% NaOH to pH 12	6:30 AM
CN Res. Saugus FE Grab w/ 50% NaOH to pH 12	7:00 AM
CN Res. Saugus FE Grab w/ 50% NaOH to pH 12	9:30 AM
CN Res. Saugus FE Grab w/ 50% NaOH to pH 12	12:00 PM
CN Res. Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	6:30 AM
CN Res. Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	7:00 AM
CN Res. Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	10:00 AM
CN Res. Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	12:00 PM
CN Res. Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	6:30 AM
CN Res. Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	7:00 AM
CN Res. Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	10:00 AM
CN Res. Saugus FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	12:00 PM
CN Res. Saugus FE w/ NaThio & No Pres.	6:30 AM
CN Res. Saugus FE w/ NaThio & No Pres.	7:00 AM
CN Res. Saugus FE w/ NaThio & No Pres.	9:30 AM
CN Res. Saugus FE w/ NaThio & No Pres.	12:00 PM
CN Res. Valencia FE Grab w/ 50% NaOH to pH 12	6:30 AM
CN Res. Valencia FE Grab w/ 50% NaOH to pH 12	9:00 AM
CN Res. Valencia FE Grab w/ 50% NaOH to pH 12	11:30 AM
CN Res. Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	6:30 AM
	9:00 AM
CN Res. Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	11:30 AM
CN Res. Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	6:30 AM
	9:00 AM
CN Res. Valencia FE Grab w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	11:30 AM
CN Res. Valencia FE w/ NaThio & No Pres.	6:30 AM
CN Res. Valencia FE w/ NaThio & No Pres.	9:00 AM
CN Res. Valencia FE w/ NaThio & No Pres.	11:30 AM

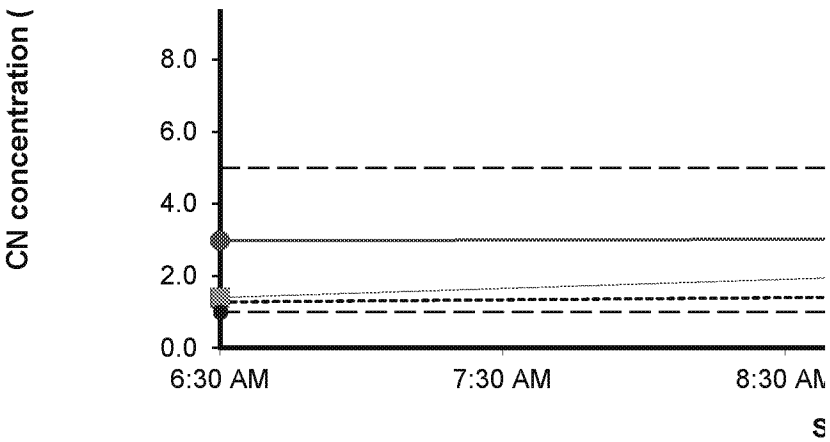


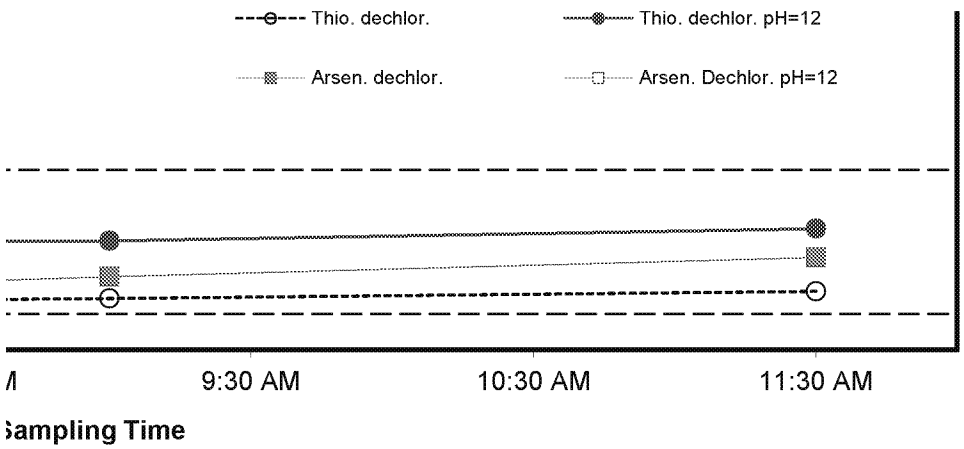
1	2	3	4	5	6	7	8	9	10	12
16-May	17-May	18-May	19-May	23-May	24-May	25-May	26-May	1-Jun	2-Jun	7-Jun
								3.1	3.1	
	17.60	2.80	3.30	2.30	3.60	2.80	6.60	2.5	4.5	3.7
	2.80	10.90	1.10	1.50	2.80	2.00	4.00	3.1	2.6	1.7
	8.30	1.40	1.10	1.20	1.90	1.40	2.60	5	4	3.4
								2	2.6	
	2.80	3.10	1.40	0.90	0.90	1.10	1.40	2.2	4	1.1
								3.1	4	2.0
	1.20	2.50	0.90	0.90	0.90	0.90	2.00	3.3	2.6	2.9
								4.7	5.7	
	12.3	8.7	6.1	4.4	5.3	13	10.30	5.6	7.1	7.8
								6.4	9.6	7.8
	12.9	11.5	6.4	7.3	7.8	13.3	5.40	7.2	7.7	7.8
								0.9	1.4	
	0.90	0.90	1.10	0.90	0.90	0.90	2.00	0.9	2	0.9
	0.90	1.40	0.90	0.90	1.40	0.90	1.10	1.1	1.1	0.9
	0.90	0.90	0.90	0.90	0.90	0.90	0.90	2.2	1.4	2.6
4.40	2.20	5.00	2.20	6.40	1.70	2.80	4.30			4.00
2.70	8.00	3.60	3.30	3.20	2.50	4.20	2.00	3.1	4	2.90
2.20	6.20	7.00	4.40	2.00	3.90	2.00	1.40	3.9	3.1	1.40
										0.90
1.90	3.70	2.50	2.50	2.30	0.90	0.90	1.70	2	3.4	2.30
6.30	3.10	3.40	3.00	1.50	2.20	1.70	1.10	2.2	3.7	1.10
										12.90
10.60	10.80	12.30	11.90	12.80	4.40	12.10	13.50	12.8	16.7	15.50
14.40	9.60	12.30	12.10	9.30	13.00	13.80	17.50	12.5	17.6	13.20
0.90	1.80	2.50	1.90	1.50	0.90	0.90	0.90			0.90
2.20	1.50	2.20	2.50	0.90	0.90	0.90	0.9	1.4	2.3	0.90
2.40	3.70	2.00	3.60	0.90	0.90	1.10	0.90	2.2	2.3	0.9

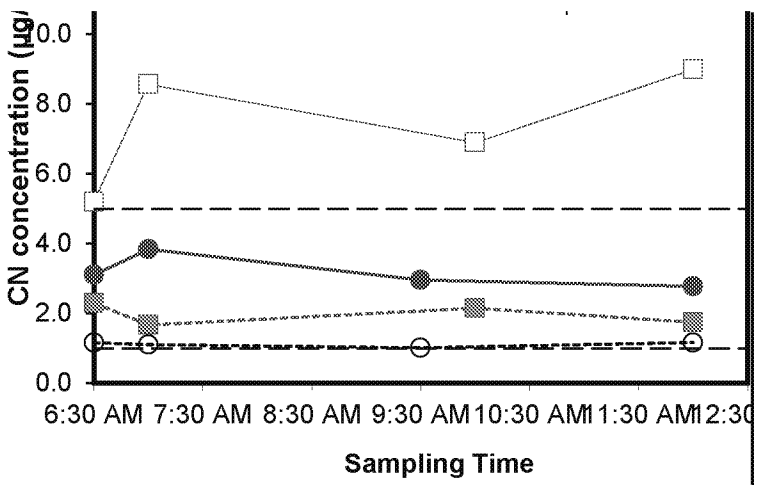
Any values less than 1 were entered as 0.9 for graphing and averaging purposes



13 9-Jun	14 13-Jun	15 14-Jun	16 16-Jun	AVG			
				3.10			
1.1	0.9	1.1	0.9	3.84	6:30 AM	4.40	5 1
6.2	0.9	0.9	0.9	2.96	7:00 AM	1.10	
5.7	1.1	0.9	0.9	2.78	9:00 AM	2.70	
				2.30			
1.7	0.9	0.9	0.9	1.66	9:30 AM	1.90	
3.1	1.1	0.9	0.9	2.15			
3.7	0.9	0.9	0.9	1.75	11:30 AM	2.20	
				5.20			
12.7	9.2	9.4	8.0	8.56	12:00 PM	8.40	5 1
6.2	3.4	7.2	7.7	6.90	12:30 PM		5 1
13.6	8	4.3	12.6	8.99	7:00 AM	3.30	
				1.15			
1.4	0.9	0.9	0.9	1.11	9:00 AM	1.90	
0.9	0.9	0.9	0.9	1.01	11:30 AM	6.30	
1.1	0.9	0.9	0.9	1.16	12:00 PM	3.00	
2.3	1.4	1.1	0.9	2.98	7:00 AM	13.6	
2.5	1.7	0.9	0.9	3.03	9:00 AM	10.60	
8.8	1.1	2.3	0.9	3.37	11:30 AM	14.40	
1.4	2.9	0.9	0.9	1.40			
2.8	1.7	0.9	0.9	2.03	12:00 PM	13.6	
2.5	0.9	2.9	2.9	2.57	6:30 AM	0.90	
14.7	10.9	10.6	16.4	13.10			
20.4	13.7	20.9	10.9	13.29	7:00 AM	4.10	
18.1	19.2	17.2	14.1	14.26	9:00 AM	2.20	
1.7	0.9	0.9	0.9	1.28	9:30 AM	0.90	
2	1.7	0.1	1.1	1.43	11:30 AM	2.40	
1.4	0.1	1.1	0.9	1.63	12:00 PM	1.10	


CN concentration (
8.0
6.0
4.0
2.0
0.0
6:30 AM
7:30 AM
8:30 AM
s


Thio. dechlor.
Thio. dechlor. pH=12
Arsen. dechlor.
Arsen. Dechlor. pH=12
9:30 AM
10:30 AM
11:30 AM
Sampling Time

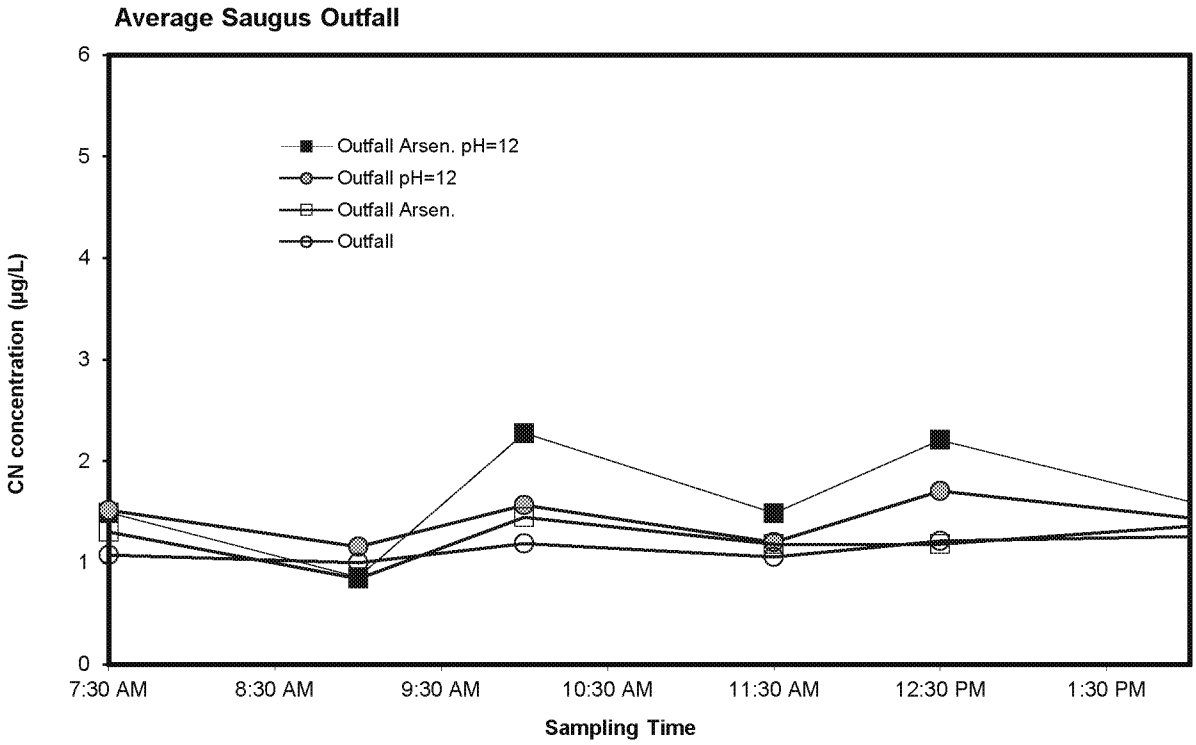

CN concentration (µg/
10.0
8.0
6.0
4.0
2.0
0.0
6:30 AM
7:30 AM
8:30 AM
9:30 AM
10:30 AM
11:30 AM
12:30
Sampling Time

) PM

	Time	6-Jun	7-Jun	9-Jun
Saugus Outfall pH7.	6:30 AM			
Saugus Outfall pH7.	7:30 AM		2.3	1.7
Saugus Outfall pH7.	9:00 AM			
Saugus Outfall pH7.	10:00 AM		0.9	2.3
Saugus Outfall pH7.	11:30 AM			
Saugus Outfall pH7.	12:30 PM	2.6	2.0	0.9
Saugus Outfall pH7.	2:00 PM			
Saugus Outfall w/ 50% NaOH to pH 12	6:30 AM			
Saugus Outfall w/ 50% NaOH to pH 12	7:30 AM		4.0	2.8
Saugus Outfall w/ 50% NaOH to pH 12	9:00 AM			
Saugus Outfall w/ 50% NaOH to pH 12	10:00 AM		2.3	4
Saugus Outfall w/ 50% NaOH to pH 12	11:30 AM			
Saugus Outfall w/ 50% NaOH to pH 12	12:30 PM	4.0	5.2	1.1
Saugus Outfall w/ 50% NaOH to pH 12	2:00 PM			
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	6:30 AM			
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	7:30 AM		2.9	2
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	9:00 AM			
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	10:00 AM		2.0	2.3
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	11:30 AM			
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	12:30 PM	1.7	1.4	0.9
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	2:00 PM			
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	6:30 AM			
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	7:30 AM		4.6	2.5
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	9:00 AM			
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	10:00 AM		5.2	4
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	11:30 AM			
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	12:30 PM	7.5	3.7	1.4
Saugus Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	2:00 PM			
Valencia Outfall pH7	6:30 AM		0.9	1.4
Valencia Outfall pH7	7:30 AM			
Valencia Outfall pH7	9:00 AM		1.1	3.4
Valencia Outfall pH7	10:00 AM			
Valencia Outfall pH7	11:30 AM	1.1	1.4	3.4
Valencia Outfall pH7	12:30 PM			
Valencia Outfall pH7	2:00 PM			
Valencia Outfall w/ 50% NaOH to pH 12	6:30 AM		4.3	2.5
Valencia Outfall w/ 50% NaOH to pH 12	7:30 AM			
Valencia Outfall w/ 50% NaOH to pH 12	9:00 AM		4.3	4.2
Valencia Outfall w/ 50% NaOH to pH 12	10:00 AM			
Valencia Outfall w/ 50% NaOH to pH 12	11:30 AM	4.0	2.6	5.4
Valencia Outfall w/ 50% NaOH to pH 12	12:30 PM			
Valencia Outfall w/ 50% NaOH to pH 12	2:00 PM			
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	6:30 AM		1.7	2.3
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	7:30 AM			
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	9:00 AM		1.1	3.1
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	10:00 AM			
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	11:30 AM	1.4	0.9	3.1
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	12:30 PM			
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LNo Pres.	2:00 PM			

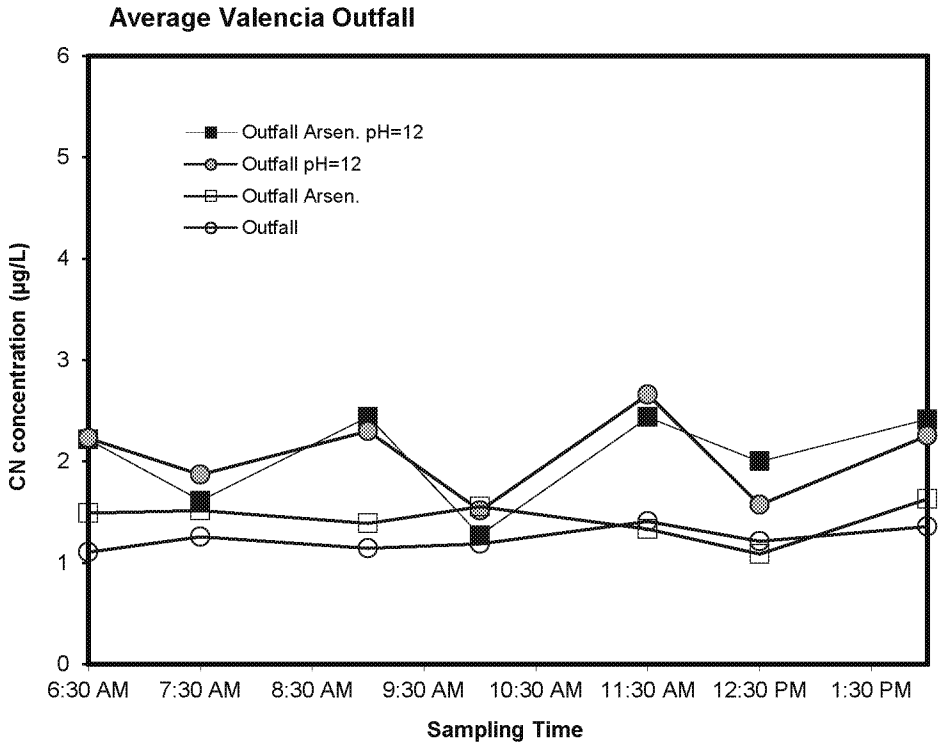
			5 cm cell	5 cm cell	5 cm cell	5 cm cell	5 cm cell	5 cm cell	5 cm cell	5 cm cell	
13-Jun	14-Jun	16-Jun	20-Jun	21-Jun	23-Jun	27-Jun	28-Jun	30-Jun	5-Jul		Average
			0.9	1.6	0.9	0.1	0.1	0.4	0.1		**0.6**
0.9	0.9	0.9	0.9	1.3	0.9	0.9	0.3	1.0	0.9		**1.1**
			2.1	2.4	1.2	0.1	0.4	0.6	0.2		**1.0**
0.9	0.9	0.9	1.8	2.6	1.4	1.2	0.3	0.8	0.3		**1.2**
			2.7	1.8	0.9	0.7	0.9	0.3	0.1		**1.1**
0.6	0.9	0.9	3.2	0.9	0.9	0.1	1.2	0.8	0.8		**1.2**
			3.0	2.2	0.9	0.4	1.3	0.7	0.3		**1.3**
			0.9	1.6	0.9	0.3	0.3	0.8	0.2		**0.7**
0.9	0.9	0.9	0.9	3.4	1.0	1.5	0.3	1.1	0.5		**1.5**
			2.1	3.0	0.9	0.7	0.6	0.6	0.2		**1.2**
1.1	0.9	0.9	2.1	3.0	2.0	0.6	0.6	1.0	0.3		**1.6**
			1.8	1.9	0.9	0.7	1.9	0.6	0.6		**1.2**
1.4	1.1	0.9	4.5	1.4	0.9	0.6	0.6	0.4	0.1		**1.7**
			2.4	3.0	1.2	0.9	1.0	0.7	0.9		**1.4**
			0.9	1.4	1.0	0.1	0.1	0.3	0.1		**0.6**
0.9	0.9	0.9	0.9	2.7	1.0	1.0	0.6	0.7	1.1		**1.3**
			1.8	1.0	1.2	0.6	0.4	0.7	0.2		**0.8**
0.9	0.9	0.9	2.6	4.3	1.2	0.7	0.7	0.8	0.1		**1.5**
			2.6	2.6	0.9	0.1	1.2	0.6	0.3		**1.2**
0.9	0.6	0.9	3.0	2.6	1.3	0.1	1.2	0.6	0.2		**1.2**
			3.8	2.4	1.2	0.9	0.4	0.7	0.1		**1.4**
			0.9	1.8	1.2	0.1	0.1	1.0	1.1		**0.9**
0.9	1.7	0.9	1.1	3.2	0.9	0.1	0.6	1.3	0.1		**1.5**
			2.6	1.0	0.9	0.1	0.1	1.1	0.2		**0.9**
2.9	1.7	1.4	2.6	5.0	0.9	0.7	1.2	1.1	0.6		**2.3**
			3.0	3.2	1.0	0.9	0.6	1.1	0.6		**1.5**
3.7	1.4	0.9	4.0	2.2	0.9	0.6	0.6	1.3	0.5		**2.2**
			4.3	3.5	1.6	0.1	0.1	1.3	0.3		**1.6**
1.7	0.9	0.9	0.9	2.6	0.9	1.6	1.3	0.1	0.1		**1.1**
			1.3	4.0	0.9	0.1	0.4	1.0	1.1		**1.3**
0.6	1.4	0.9	2.1	1.1	0.9	0.7	0.3	0.7	0.5		**1.1**
			2.4	3.0	0.9	0.4	1.3	0.1	0.2		**1.2**
0.9	1.7	0.9	3.2	2.9	0.9	0.9	0.1	0.1	0.8		**1.4**
			3.5	1.6	1.3	0.4	0.4	0.4	0.9		**1.2**
			4.8	1.6	0.9	0.6	0.4	0.3	0.9		**1.4**
3.7	0.9	0.9	1.0	3.7	1.0	3.8	3.8	0.1	1.1		**2.2**
			3.8	4.0	0.9	0.9	1.9	1.0	0.6		**1.9**
1.4	2.3	1.4	4.2	3.8	0.9	2.8	1.0	1.0	0.3		**2.3**
			2.4	3.2	2.2	0.6	1.3	0.1	0.8		**1.5**
2.3	2.3	1.7	5.6	3.4	0.9	2.2	2.2	0.8	1.2		**2.7**
			4.2	1.4	2.4	1.2	1.0	0.7	0.1		**1.6**
			5.6	4.0	1.0	2.1	1.2	1.6	0.3		**2.3**
2.6	0.9	0.9	0.9	2.2	1.0	2.3	1.9	0.6	0.6		**1.5**
			1.6	3.7	0.9	1.2	1.2	0.8	1.2		**1.5**
1.4	1.7	0.9	3.0	1.4	0.9	1.3	0.3	1.0	0.6		**1.4**
			2.7	4.0	0.9	0.7	0.9	0.6	1.1		**1.6**
0.9	2.3	0.9	2.9	1.8	0.9	0.1	0.9	0.3	0.9		**1.3**
			2.7	1.6	0.9	0.4	0.1	0.4	1.5		**1.1**
			4.6	3.4	1.4	0.1	0.7	1.1	0.1		**1.6**

Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	6:30 AM		4.6	1.7
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	7:30 AM			
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	9:00 AM		4.0	3.4
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	10:00 AM			
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	11:30 AM	4.9	3.7	4.2
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	12:30 PM			
Valencia Outfall w/NaAsO2 3.0mL of 0.1N to 0.5LpH12 w/ 50NaOH	2:00 PM			
Any values less than 1 were entered as 0.9 for graphing and averaging purposes				



Time	Fraction
6	0.25
6:30	0.270833333
7	0.291666667
7:30	0.3125
8	0.333333333
8:30	0.354166667
9	0.375
9:30	0.395833333
10	0.416666667
10:30	0.4375
11	0.458333333
11:30	0.479166667

4.6	2.6	2.3	1.6	4.0	0.9	1.8	1.5	0.7	0.3	**2.2**
			2.4	3.2	0.9	1.3	1.0	1.6	0.9	**1.6**
2.6	2.9	1.1	4.0	4.2	1.9	1.5	0.9	1.4	1.4	**2.4**
			1.6	3.8	0.9	0.6	0.7	1.0	0.3	**1.3**
4	2.9	0.9	5.8	1.6	0.9	0.7	0.3	1.3	0.5	**2.4**
			4.2	3.5	2.9	0.1	1.6	1.4	0.3	**2.0**
			4.5	3.7	2.2	1.0	1.3	3.1	1.1	**2.4**



12	0.5
12:30	0.520833333
1	0.541666667
1:30	0.5625
2	0.583333333
2:30	0.604166667
3	0.625
3:30	0.645833333
4	0.666666667
4:30	0.6875
5	0.708333333
5:30	0.729166667
6	0.75
6:30	0.770833333