



Pall Corporation

Sample Analysis Report

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June, 2012

Analyst Initials: SEOP
Date: 07-12-12

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
Residential Wells							
D0							
5005 Jackson Rd-06-05-12-14:15-1	26	1.0					
D2							
3161 Dexter Rd-06-14-12-11:40-1	nd	1.0					
Not Determined							
639 Barber-06-11-12-10:30-1	nd	1.0					
697 South Wagner Rd-06-15-12-10:55-1	nd	1.0					
Extraction Wells							
C3							
DOLPH-06-04-12-09:40-1	62	1.0					
TW-1-06-15-12-12:05-1	114	1.0					
TW-10-06-04-12-09:30-1	679	1.0					
TW-14-06-15-12-11:37-1	33	1.0					
TW-20-06-04-12-09:25-1	801	1.0					
TW-3-06-15-12-12:07-1	34	1.0					
TW-6-06-14-12-13:50-1	45	1.0					
D2							
LB-1-06-04-12-07:47-1	625	1.0					
LB-3-06-04-12-07:49-1	506	1.0					

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
TW-21-06-04-12-09:04-1	150	1.0					
TW-5-06-04-12-09:15-1	794	1.0					
TW-9-06-04-12-09:35-1	822	1.0					
E							
TW-11-06-04-12-09:17-1	204	1.0					
TW-12-06-15-12-11:25-1	25	1.0					
TW-17-06-15-12-11:35-1	390	1.0					
TW-18-06-04-12-09:09-1	341	1.0					
TW-19-06-04-12-07:51-1	760	1.0					
Marshy							
PW-1-06-04-12-09:54-1	888	1.0					
SW							
TW-22-06-04-12-10:08-1	690	1.0					
TW-4-06-18-12-14:00-1	193	1.0					
TW-8-06-04-12-10:10-1	479	1.0					
Monitoring Wells							
C3							
MW-1-06-13-12-14:05-1	2181	1.0					
MW-125-06-11-12-14:10-1	280	1.0					
MW-127s-06-11-12-08:40-1	nd	1.0					
MW-75-06-05-12-13:40-1	96	1.0					
D0							
A2 Cleaning Supply-06-07-12-08:05-1	77	1.0					
MW-41d-06-05-12-14:52-1	36	1.0					
MW-41s-06-05-12-14:50-1	22	1.0					

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
D2							
175 Jackson Plaza-06-14-12-10:00-1	1324	1.0					
2819 Dexter Rd-06-01-12-13:55-1	737	1.0					
373 Pinewood Shallow-06-13-12-10:35-1	560	1.0					
465 Dupont-06-13-12-11:40-1	1484	1.0					
593 Allison-06-12-12-14:25-1	453	1.0					
HZ-S-06-15-12-12:15-1	614	1.0					
MW-113-06-04-12-13:45-1	56	1.0					
MW-117-06-04-12-14:10-1	nd	1.0					
MW-118-06-04-12-14:50-1	77	1.0					
MW-47d-06-01-12-10:35-1	nd	1.0					
MW-47s-06-01-12-10:15-1	nd	1.0					
MW-4d-06-13-12-09:25-1	1947	1.0					
MW-BE-1d-06-04-12-11:30-1	4	1.0					
MW-BE-1s-06-04-12-11:50-1	638	1.0					
MW-KD-1d-06-06-12-11:45-1	114	1.0					
MW-KD-1s-06-06-12-11:15-1	40	1.0					
E							
MW-103d-06-05-12-11:25-1	16	1.0					
MW-103s-06-05-12-11:35-1	54	1.0					
MW-119-06-01-12-12:15-1	94	1.0					
MW-127d-06-11-12-09:25-1	nd	1.0					
MW-65d-06-12-12-11:55-1	33	1.0					
MW-65i-06-12-12-10:00-1	1	1.0					
MW-65s-06-12-12-10:40-1	21	1.0					
MW-81-06-01-12-11:25-1	484	1.0					
MW-85-06-01-12-14:45-1	1637	1.0					

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
MW-90-06-14-12-14:20-1	39	1.0					
Saginaw Forest Cabin #1-06-11-12-12:00-1	22	1.0					
Saginaw Forest Cabin #2-06-11-12-10:40-1	1	1.0					
SH							
MW-5d-06-15-12-10:35-1	102983	1.0					
SW							
MW-57-06-05-12-13:25-1	2	1.0					
MW-78-06-11-12-13:40-1	26	1.0					
Surface Water							
Not Applicable							
HC/HR-06-01-12-08:00-1			nd	5.0			
HC/HR-06-04-12-08:10-1			nd	2.0			
HC/HR-06-05-12-08:05-1			nd	2.0			
HC/HR-06-06-12-07:35-1			nd	2.0			
HC/HR-06-07-12-07:20-1			nd	2.0			
HC/HR-06-08-12-07:15-1			nd	2.0			
HC/HR-06-11-12-07:50-1			nd	2.0			
HC/HR-06-12-12-08:20-1			nd	2.0			
HC/HR-06-13-12-07:20-1			nd	2.0			
HC/HR-06-14-12-08:10-1			nd	2.0			
HC/HR-06-15-12-07:45-1			nd	2.0			
HC/HR-06-18-12-08:15-1			nd	2.0			
HC/HR-06-19-12-08:10-1			nd	2.0			
HC/HR-06-20-12-08:35-1			nd	2.0			
HC/HR-06-21-12-08:35-1			nd	2.0			
HC/HR-06-22-12-08:30-1			nd	2.0			

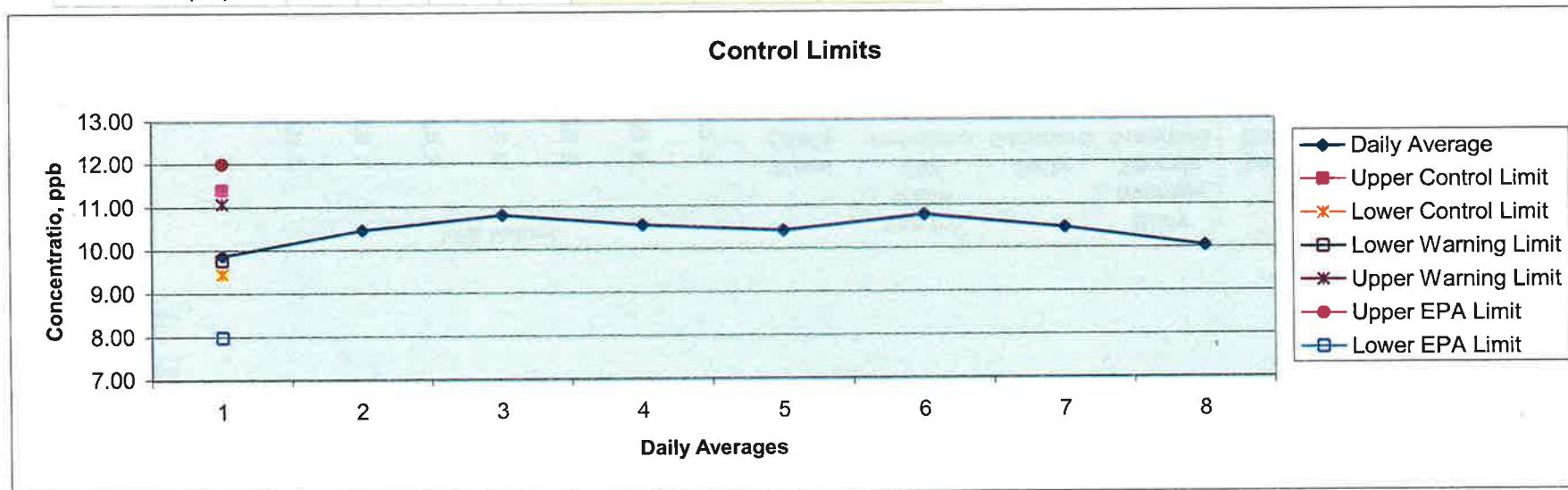
Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
HC/HR-06-25-12-08:15-1			nd	2.0			
HC/HR-06-26-12-08:40-1			nd	2.0			
HC/HR-06-27-12-08:25-1			nd	2.0			
HC/HR-06-28-12-08:15-1			nd	2.0			
HC/HR-06-29-12-08:15-1			nd	2.0			
Treatment System							
OUTFALL-06-03-12-1	6	1.0					
OUTFALL-06-03-12-2			nd	5.0			
OUTFALL-06-04-12-1	7	1.0					
OUTFALL-06-04-12-2			6	5.0			
OUTFALL-06-05-12-1	6	1.0					
OUTFALL-06-05-12-2			nd	5.0			
OUTFALL-06-06-12-1	6	1.0					
OUTFALL-06-06-12-2			nd	5.0			
OUTFALL-06-07-12-1	5	1.0					
OUTFALL-06-07-12-2			nd	5.0			
OUTFALL-06-10-12-1	6	1.0					
OUTFALL-06-10-12-2			nd	5.0			
OUTFALL-06-11-12-2			nd	5.0			
OUTFALL-06-11-12-1	7	1.0					
OUTFALL-06-12-12-1	7	1.0					
OUTFALL-06-12-12-2			nd	5.0			
OUTFALL-06-13-12-1	7	1.0					
OUTFALL-06-13-12-2			nd	5.0			
OUTFALL-06-14-12-1	7	1.0					
OUTFALL-06-14-12-2			nd	5.0			
OUTFALL-06-17-12-2			nd	5.0			

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
OUTFALL-06-17-12-1	7	1.0					
OUTFALL-06-18-12-2			nd	5.0			
OUTFALL-06-18-12-1	7	1.0					
OUTFALL-06-19-12-1	7	1.0					
OUTFALL-06-19-12-2			nd	5.0			
OUTFALL-06-20-12-1	7	1.0					
OUTFALL-06-20-12-2			nd	5.0			
OUTFALL-06-21-12-2			nd	5.0			
OUTFALL-06-21-12-1	6	1.0					
OUTFALL-06-24-12-2			nd	5.0			
OUTFALL-06-24-12-1	6	1.0					
OUTFALL-06-25-12-2			nd	5.0			
OUTFALL-06-25-12-1	8	1.0					
OUTFALL-06-26-12-2			nd	5.0			
OUTFALL-06-26-12-1	7	1.0					
OUTFALL-06-27-12-2			nd	5.0			
OUTFALL-06-27-12-1	7	1.0					
OUTFALL-06-28-12-2			nd	5.0			
OUTFALL-06-28-12-1	7	1.0					
Red Pond-06-04-12-07:50-1	582	1.0					
Red Pond-06-11-12-09:00-1	570	1.0					
Red Pond-06-18-12-08:30-1	586	1.0					
Red Pond-06-25-12-08:45-1	490	1.0					

Control Chart for 06/2012 CVS

GC/MS Data: #2
Report Date: 7/11/2012
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: 1,4-dioxane
Start date: 6/1/2012
End date: 6/30/2012
Desired level: 100%

Date	CVS Values				Mean (Daily Average)	Sample Mean (All Individual Data)	Daily Standard Deviation	Daily Average Sample Standard Deviation	Lower Control Limit	Upper Control Limit	Lower Warning Limit	Upper Warning Limit
	CVS 1	CVS 2	CVS 3	CVS 4								
6/5/2012	10.25	9.51			9.88	10.43	0.52	0.32	9.45	11.40	9.78	11.08
6/6/2012	10.16	10.78			10.47	10.43	0.44					
6/7/2012	10.81	10.81			10.81	10.43	0.00					
6/8/2012	10.57				10.57	10.43	na					
6/11/2012	10.43				10.43	10.43	na					
6/18/2012	10.38	11.19			10.79	10.43	0.57					
6/19/2012	10.38	10.59			10.49	10.43	0.15					
6/20/2012	10.41	9.70			10.06	10.43	0.50					

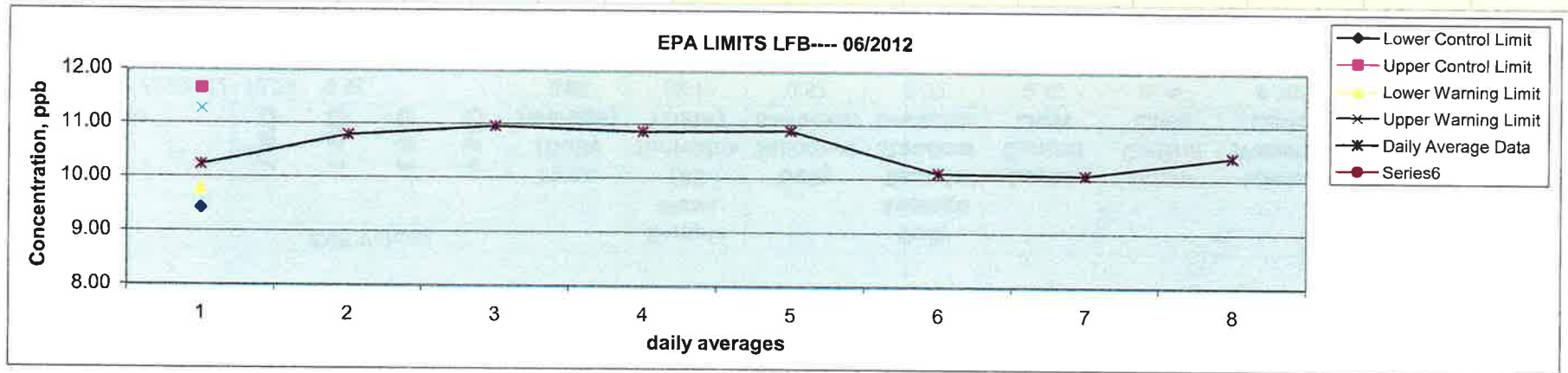


Control Chart for 06/2012 LFB

Analyst: SECP 07-12-12

GC/MS Data: #2
Report Date: 7/11/2012
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: 1,4-dioxane
Start date: 6/1/2012
End date: 6/30/2012
Desired level: 100%

Date	LFB Values							Mean (Daily Average)	Sample Mean (All Individual Data)	Daily Standard Deviation	Daily Average Sample Standard Deviation	Lower Control Limit	Upper Control Limit	Lower Warning Limit	Upper Warning Limit
	LFB 1	LFB 2	LFB 3	LFB 4	LFB 5	LFB 6	LFB 7								
6/5/2012	10.81	9.96	10.06	10.34	10.01			10.24	10.54	0.35	0.37	9.43	11.65	9.80	11.28
6/6/2012	10.04	10.73	11.23	11.06	10.89			10.79	10.54	0.46					
6/7/2012	11.54	9.70	11.27	11.27	10.64	11.32		10.96	10.54	0.69					
6/8/2012	11.56	10.59	10.45					10.87	10.54	0.60					
6/11/2012	10.67	11.01	11.00					10.89	10.54	0.19					
6/18/2012	10.01	10.34	10.35	9.84	10.03			10.11	10.54	0.22					
6/19/2012	9.70	9.85	10.70					10.08	10.54	0.54					
6/20/2012	10.79	10.82	9.54	9.80	10.44	10.68	10.96	10.43	10.54	0.55					



Control Chart for 06/2012 MS/MSD %Recoveries

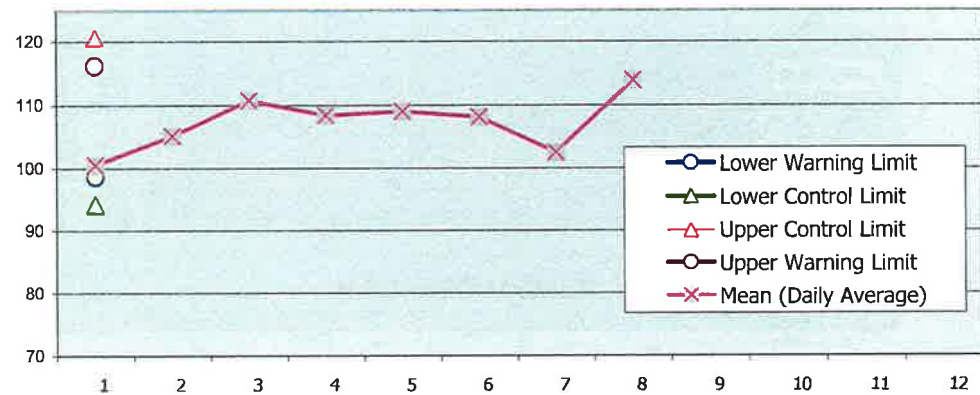
Analyst: SEOP · 07-12-12

GC/MS Data: #2
 Report Date: 7/11/2012
 Chemist: Susan E.O. Peters
 Dept: Environmental
 Analyte: 1,4-dioxane
 Start date: 6/1/2012
 End date: 6/30/2012
 Desired level: 100%

EPA LIMITS +/-20%

Date	Matrix Spike % Recovery Values						Mean (Daily Average)	Sample Mean (All Individual Data)	Daily Standard Deviation	Daily Average Sample Standard Deviation	Lower Control Limit	Upper Control Limit	Lower Warning Limit	Upper Warning Limit
	MS 1	MSD 1	MS 2	MSD 2	MS 3	MSD 3								
6/5/2012	101	112	87	102			100.53	107.43	8.31	4.37	94.31	120.55	98.68	116.18
6/6/2012	91	107	105	117			105.08							
6/7/2012	112	114	98	119			110.73							
6/8/2012	111	106					108.40							
6/11/2012	111	107					109.00							
6/18/2012	113	98	106	115			108.13							
6/19/2012	101	104					102.50							
6/20/2012	117	104	120	114			113.90							

06/2012 MS/MSD with Control Limits

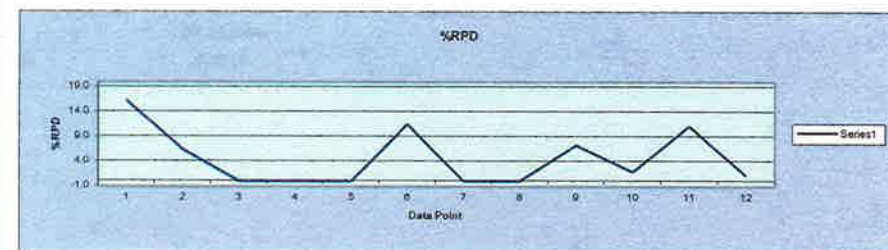
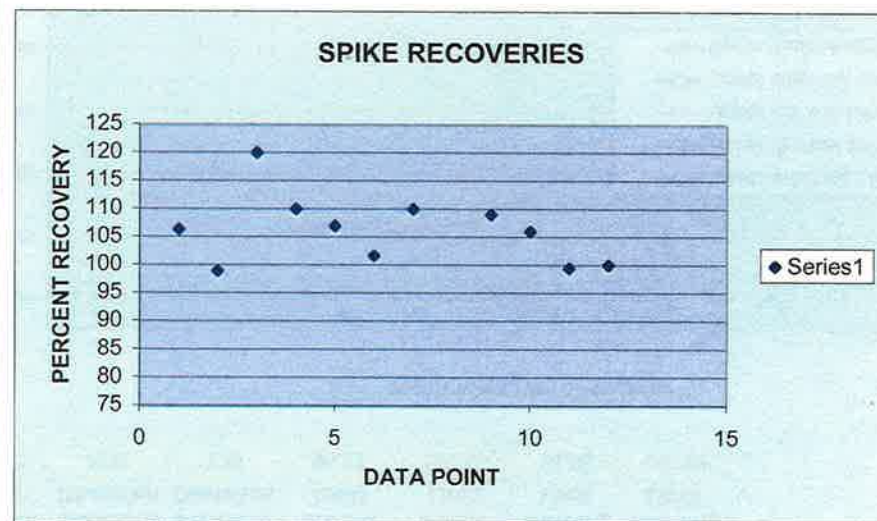


Control Chart for 06/2012 MS/MSD & Repeat %Recoveries

Analyst: SEOP 07-12-12

IC: Metrohm
Report Date: 7/11/2012
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: Bromate
Start date: 6/1/2012
End date: 6/30/2012
Desired level: 100%

MS Recoveries and Replicate Recoveries									
Analysis Date	Spike 1 ---- % Rec	Spike 2 ----- % Rec	Ave. Spike Recovery (75-125%)	%RPD Spike Recovery (0-20%)	Std. Dev. Spikes	Ave. Sample Replicates	Std. Dev. Sample Replicates	n =	
6/1/2012	115	98	106	16.3	12.3	1.99	0.100	2	
6/1/2012	105	99	99	6.5	4.5	1.86	0.0600	2	
6/1/2012	105		120	0.00	na				
6/1/2012	94		110	0.0	na				
6/1/2012	104		107	0.0	na				
6/11/2012	108	96	102	11.5	8.3	4.56	0.41	2	
6/11/2012	110		110	na	0.26	4.46	0.13	2	
6/11/2012			na	na	na	6.08	0.32	2	
6/20/2012	113	105	109	7.3	5.7				
6/20/2012	107	105	106	1.9	1.4				
6/20/2012	94	105	100	11.1	7.8				
6/20/2012	101	99	100	1.1	0.8				

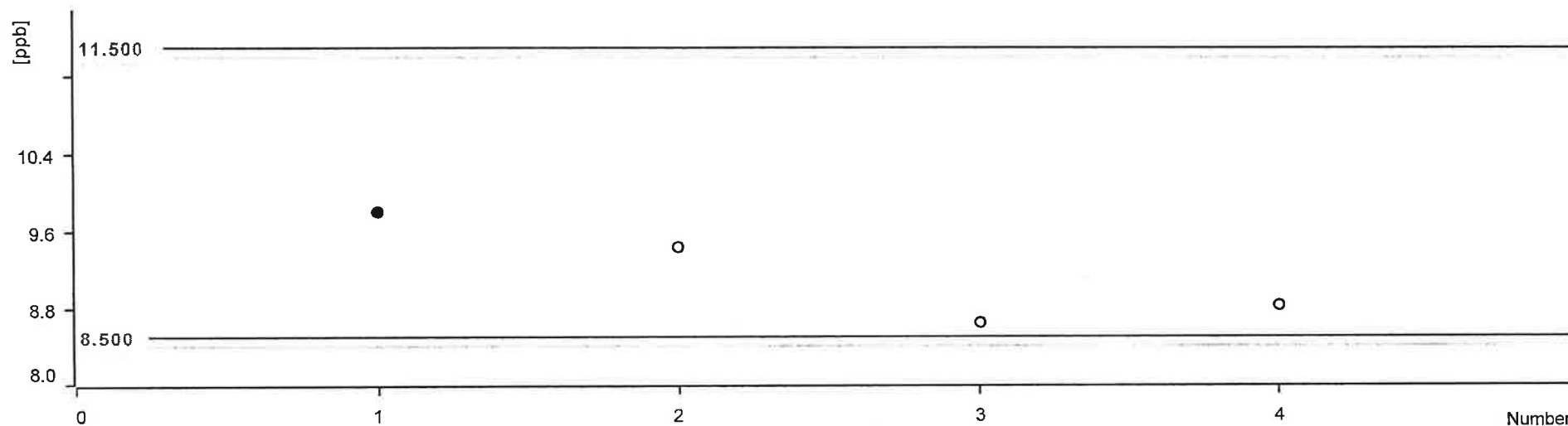


Control chart

SEOP 07-12-12

Comment

Bromate QCS concentration, ppb



Statistics

Mean value:	9.181 ppb	Absolute standard deviation:	0.538 ppb
Minimum:	8.647 ppb	Relative standard deviation:	5.861 %
Maximum:	9.808 ppb	Number of determinations:	4

Date	Number	Ident	Sample type	Method	Bromate QCS concentration, ppb	Statistics
2012-06-02 17:47:40 UTC-4	1	QCS	Sample	300.1 05092012	9.808 ppb	on
2012-06-12 20:19:57 UTC-4	2	QCS	Sample	300.1 05092012	9.439 ppb	on
2012-06-21 07:44:23 UTC-4	3	QCS	Sample	300.1 05092012	8.647 ppb	on
2012-06-26 15:21:23 UTC-4	4	QCS	Sample	06262012	8.830 ppb	on

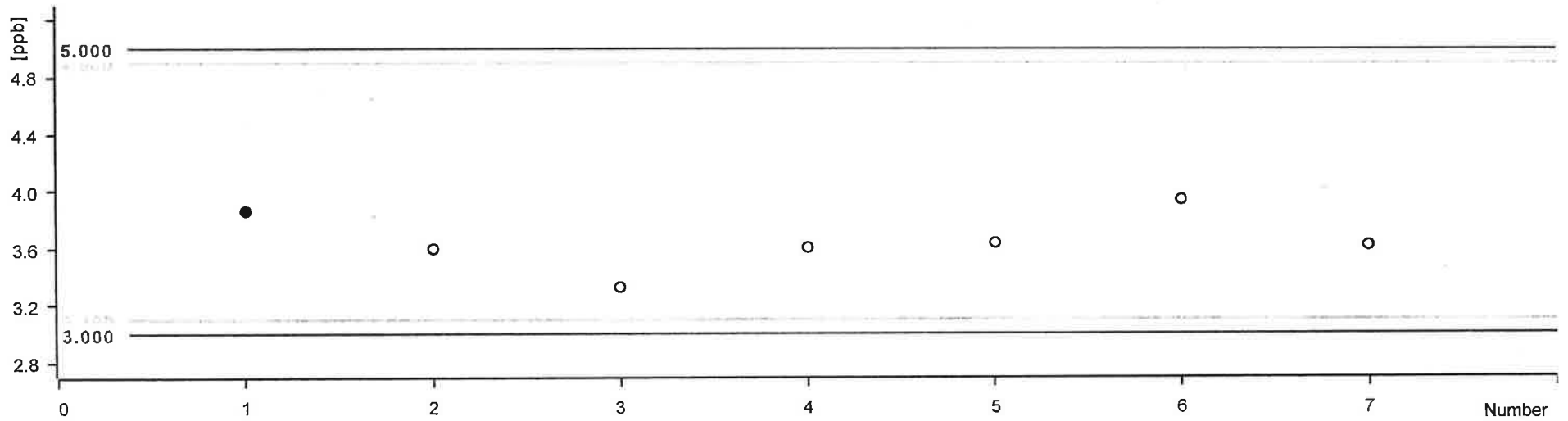
Control chart

Control chart

SEOP-07-12-12

Comment

ECCS. CCCS Bromate std 4ppb



Statistics

Mean value:	3.657 ppb	Absolute standard deviation:	0.200 ppb
Minimum:	3.327 ppb	Relative standard deviation:	5.475 %
Maximum:	3.942 ppb	Number of determinations:	7

Date	Number	Ident	Sample type	Method	ECCS. CCCS Bromate std 4ppb	Statistics
2012-06-02 03:13:06 UTC-4	1	ECCS/CCCS	Sample	300.1 05092012	3.864 ppb	on
2012-06-02 17:03:56 UTC-4	2	ECCS/CCCS	Sample	300.1 05092012	3.599 ppb	on
2012-06-12 06:15:59 UTC-4	3	ECCS/CCCS	Sample	300.1 05092012	3.327 ppb	on
2012-06-20 21:40:54 UTC-4	4	ECCS/CCCS	Sample	300.1 05092012	3.605 ppb	on

Control chart

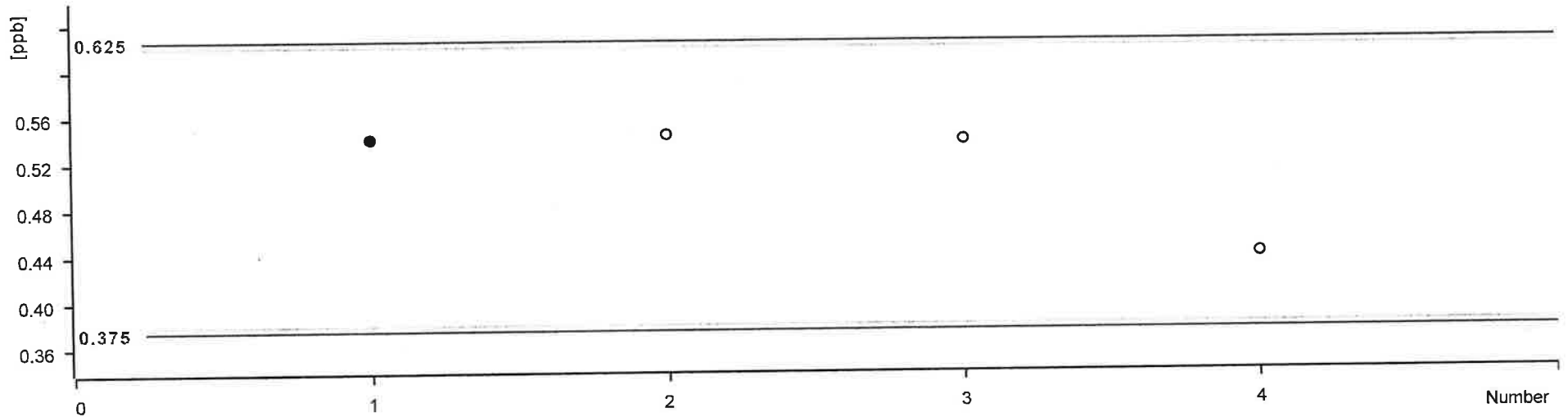
	Date	Number	Ident	Sample type	Method	ECSS. CCCS Bromate std 4ppb	Statistics
5	2012-06-21 07:06:40 UTC-4	5	ECSS/CCCS	Sample	300.1 05092012	3.637 ppb	on
6	2012-06-29 02:16:31 UTC-4	6	ECSS/CCCS	Sample	06262012	3.942 ppb	on
7	2012-06-29 16:44:15 UTC-4	7	ECSS/CCCS	Sample	06262012	3.622 ppb	on

Control chart

SEUR 07-12-12

Comment

ICCS/LFB concentration, ppb



Statistics

Mean value:	0.516 ppb	Absolute standard deviation:	0.051 ppb
Minimum:	0.440 ppb	Relative standard deviation:	9.842 %
Maximum:	0.544 ppb	Number of determinations:	4

Date	Number	Ident	Sample type	Method	ICCS/LFB concentration, ppb	Statistics
2012-06-01 15:33:28 UTC-4	1	ICCS/LFB	Sample	300.1 05092012	0.541 ppb	on
2012-06-11 16:24:53 UTC-4	2	ICCS/LFB	Sample	300.1 05092012	0.544 ppb	on
2012-06-20 10:59:41 UTC-4	3	ICCS/LFB	Sample	300.1 05092012	0.539 ppb	on
2012-06-28 13:42:01 UTC-4	4	ICCS/LFB	Sample	06262012	0.440 ppb	on

Control chart
