



Pall Corporation

Sample Analysis Report

600 Wagner Road
Ann Arbor, MI 48103-9019 US
Phone: 734.665.0651
Web: www.pall.com

November, 2012

Analyst Initials: SEUP
Date: 12-17-12

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-11-05-12-14:35-1	24	1.0					
Extraction Wells							
C3							
DOLPH-11-05-12-07:54-1	75	1.0					
TW-1-11-05-12-10:25-1	103	1.0					
TW-10-11-05-12-09:55-1	300	1.0					
TW-14-11-05-12-10:04-1	19	1.0					
TW-20-11-05-12-10:20-1	920	1.0					
TW-3-11-05-12-10:27-1	8	1.0					
TW-6-11-12-12-10:05-1	43	1.0					
D2							
LB-1-11-05-12-07:22-1	590	1.0					
LB-3-11-05-12-07:24-1	460	1.0					
TW-21-11-05-12-09:23-1	170	1.0					
TW-5-11-05-12-09:30-1	890	1.0					
TW-9-11-05-12-10:07-1	730	1.0					
E							
TW-11-11-05-12-09:35-1	800	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-12-11-05-12-09:50-1	21	1.0					
TW-17-11-05-12-10:00-1	420	1.0					
TW-18-11-05-12-07:52-1	300	1.0					
TW-19-11-05-12-07:25-1	880	1.0					
Marshy							
PW-1-11-05-12-10:40-1	1240	1.0					
SW							
TW-22-11-05-12-11:02-1	660	1.0					
TW-8-11-05-12-11:00-1	450	1.0					
Monitoring Wells							
C3							
MW-105s-11-12-12-12:20-1	680	1.0					
D0							
A2 Cleaning Supply-11-02-12-10:30-1	72	1.0					
D2							
175 Jackson Plaza-11-09-12-11:00-1	1100	1.0					
2819 Dexter Rd-11-12-12-14:20-1	660	1.0					
373 Pinewood Shallow-11-02-12-11:30-1	470	1.0					
456 Clarendon-11-02-12-12:00-1	870	1.0					
465 Dupont-11-02-12-11:15-1	1430	1.0					
593 Allison-11-02-12-13:40-1	300	1.0					
HZ-S-11-05-12-10:10-1	630	1.0					
MW-4d-11-09-12-11:30-1	2730	1.0					
MW-56s-11-21-12-11:45-1	92	1.0					
MW-62i-11-21-12-09:15-1	nd	1.0					
MW-62s-11-21-12-08:50-1	nd	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-63i-11-21-12-08:20-1	nd	1.0					
MW-63s-11-21-12-08:32-1	nd	1.0					
MW-77-11-02-12-10:25-1	1620	1.0					
MW-94s-11-08-12-13:20-1	510	1.0					
MW-BE-1d-11-02-12-14:35-1	nd	1.0					
MW-BE-1s-11-02-12-14:10-1	486	1.0					
E							
MW-105d-11-12-12-12:05-1	440	1.0					
MW-106s-11-12-12-10:40-1	242	1.0					
MW-108d-11-13-12-14:20-1	2020	1.0					
MW-108s-11-13-12-13:30-1	850	1.0					
MW-119-11-09-12-13:10-1	118	1.0					
MW-56d-11-21-12-11:20-1	nd	1.0					
MW-62d-11-21-12-10:00-1	nd	1.0					
MW-64-11-06-12-14:35-1	54	1.0					
MW-65d-11-08-12-11:40-1	32	1.0					
MW-65i-11-08-12-10:00-1	2	1.0					
MW-65s-11-08-12-10:35-1	30	1.0					
MW-66-11-06-12-13:40-1	2	1.0					
MW-71-11-13-12-11:40-1	1590	1.0					
MW-81-11-02-12-09:40-1	417	1.0					
MW-85-11-13-12-10:35-1	1560	1.0					
MW-87d-11-09-12-14:10-1	580	1.0					
MW-87s-11-09-12-14:25-1	990	1.0					
MW-88-11-09-12-13:25-1	311	1.0					
MW-94d-11-08-12-13:05-1	1	1.0					
MW-95-11-08-12-14:05-1	38	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-96-11-09-12-09:45-1	206	1.0					
Surface Water							
Not Applicable							
HC/HR-11-01-12-08:05-1			nd	2.0			
HC/HR-11-02-12-08:55-1			nd	2.0			
HC/HR-11-05-12-07:40-1			nd	2.0			
HC/HR-11-06-12-08:10-1			nd	2.0			
HC/HR-11-07-12-08:15-1			nd	2.0			
HC/HR-11-08-12-08:05-1			nd	2.0			
HC/HR-11-09-12-08:10-1			nd	2.0			
HC/HR-11-12-12-08:30-1			nd	2.0			
HC/HR-11-13-12-08:00-1			nd	2.0			
HC/HR-11-14-12-08:15-1			nd	2.0			
HC/HR-11-15-12-08:15-1			nd	2.0			
HC/HR-11-16-12-08:10-1			nd	2.0			
HC/HR-11-19-12-08:10-1			nd	2.0			
HC/HR-11-20-12-08:10-1			nd	2.0			
HC/HR-11-21-12-07:25-1			nd	2.0			
HC/HR-11-26-12-08:25-1			nd	2.0			
HC/HR-11-27-12-08:15-1			nd	2.0			
HC/HR-11-28-12-08:30-1			nd	2.0			
HC/HR-11-29-12-08:35-1			nd	2.0			
HC/HR-11-30-12-08:35-1			nd	2.0			
Treatment System							
OUTFALL-11-01-12-1	3	1.0					
OUTFALL-11-01-12-2			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-11-04-12-1	3	1.0					
OUTFALL-11-04-12-2			nd	5.0			
OUTFALL-11-05-12-1	2	1.0					
OUTFALL-11-05-12-2			7	5.0			
OUTFALL-11-06-12-1	2	1.0					
OUTFALL-11-06-12-2			nd	5.0			
OUTFALL-11-07-12-1	2	1.0					
OUTFALL-11-07-12-2			7	5.0			
OUTFALL-11-08-12-1	3	1.0					
OUTFALL-11-08-12-2			8	5.0			
OUTFALL-11-11-12-1	3	1.0					
OUTFALL-11-11-12-2			nd	5.0			
OUTFALL-11-12-12-1	3	1.0					
OUTFALL-11-12-12-2			7	5.0			
OUTFALL-11-13-12-1	3	1.0					
OUTFALL-11-13-12-2			8	5.0			
OUTFALL-11-14-12-1	2	1.0					
OUTFALL-11-14-12-2			nd	5.0			
OUTFALL-11-15-12-1	2	1.0					
OUTFALL-11-15-12-2			8	5.0			
OUTFALL-11-18-12-1	2	1.0					
OUTFALL-11-18-12-2			8	5.0			
OUTFALL-11-19-12-1	2	1.0					
OUTFALL-11-19-12-2			7	5.0			
OUTFALL-11-20-12-1	3	1.0					
OUTFALL-11-20-12-2			nd	5.0			
OUTFALL-11-25-12-1	2	1.0					

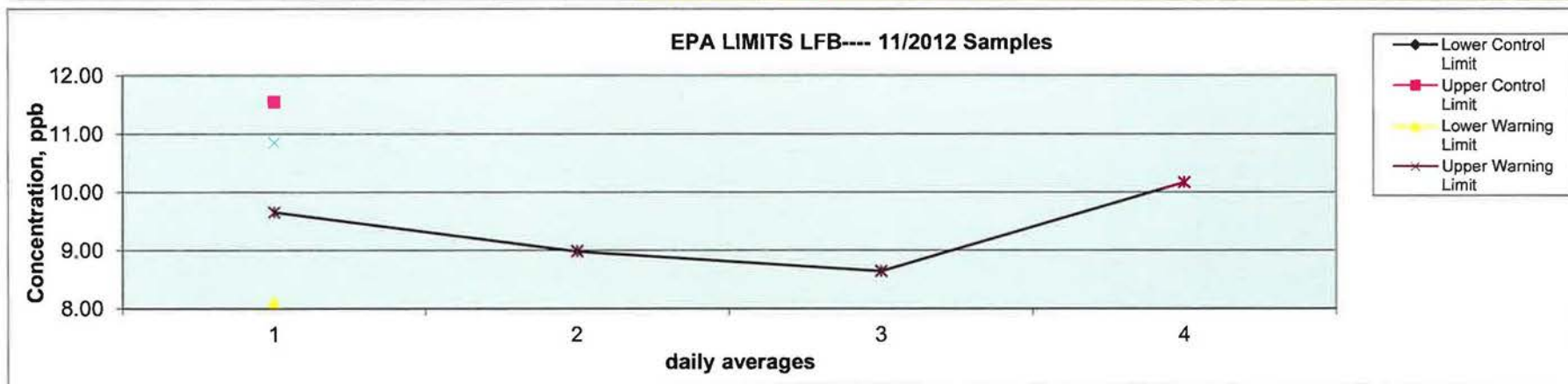
Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
OUTFALL-11-25-12-2			nd	5.0			
OUTFALL-11-26-12-1	2	1.0					
OUTFALL-11-26-12-2			nd	5.0			
OUTFALL-11-27-12-1	3	1.0					
OUTFALL-11-27-12-2			nd	5.0			
OUTFALL-11-28-12-1	3	1.0					
OUTFALL-11-28-12-2			nd	5.0			
OUTFALL-11-29-12-2			nd	5.0			
OUTFALL-11-29-12-1	2	1.0					
Red Pond-11-05-12-07:50-1	510	1.0					
Red Pond-11-12-12-09:00-1	470	1.0					
Red Pond-11-19-12-08:50-1	530	1.0					
Red Pond-11-26-12-09:35-1	510	1.0					

Control Chart for 11/2012 LFB

Analyst: SEOP 12-17-12

GC/MS Data: #2
 Report Date: ~~15/05/2012~~ 12/17/12 SEOP
 Chemist: Susan E.O. Peters
 Dept: Environmental
 Analyte: 1,4-dioxane
 Start date: 11/1/2012
 End date: 11/30/2012
 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								
11/9/2012	10.73	9.83	9.64	9.15	8.87	9.70	9.65	9.49	0.64	0.68	7.44	11.54	8.12	10.85
11/19/2012	8.73	9.82	8.27	9.10			8.98	9.49	0.65					
11/26/2012	8.24	9.04					8.64	9.49	0.57					
11/29/2012	11.61	9.30	9.79	9.97			10.17	9.49	1.00					



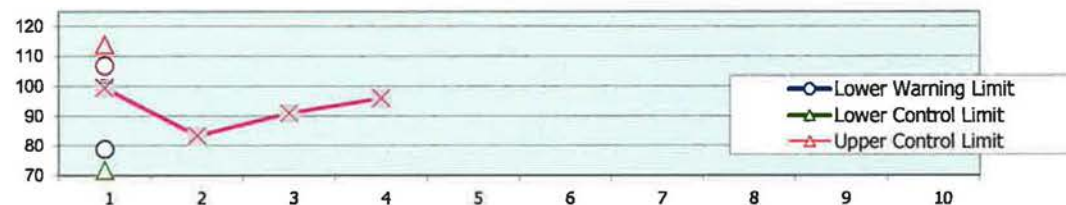
Control Chart for 11/2012 MS/MSD %Recoveries

Analyst: 12-17-12 SEUP

GC/MS Data: #2
 Report Date: ~~12/6/2012~~ 12/17/12 SEUP
 Chemist: Susan E.O. Peters
 Dept: Environmental
 Analyte: 1,4-dioxane
 Start date: 11/1/2012
 End date: 11/30/2012
 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								
11/9/2012	94	100	104		99.43	92.86	10.49	6.99	71.89	113.83	78.88	106.84
11/19/2012	81	80	89		83.33							
11/26/2012	85	97			91.00							
11/29/2012	99	81	114	90	96.00							

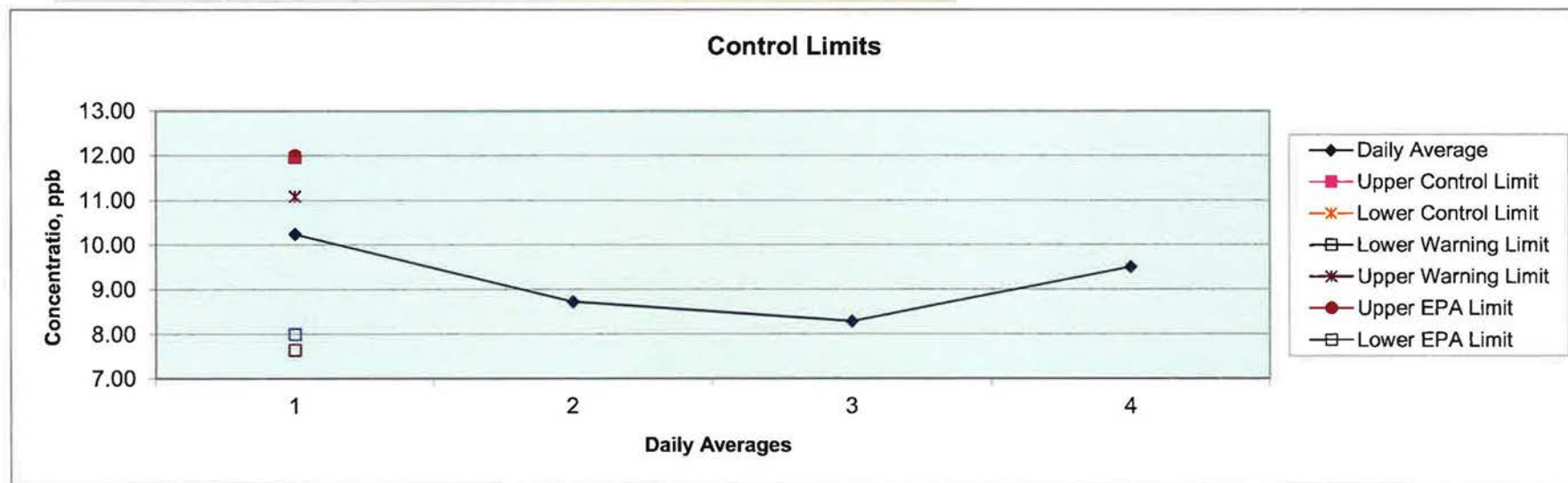


Control Chart for 11/2012 CVS

Analyst: SEOP 12-17-12

GC/MS Data: #2
 Report Date: ~~12/6/2012~~ 12/17/12 SEOP
 Chemist: Susan E.O. Peters
 Dept: Environmental
 Analyte: 1,4-dioxane
 Start date: 11/1/2012
 End date: 11/30/2012
 Desired level: 100%

Analysis 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								
11/9/2012	9.74	10.42	10.56		10.24	9.37	0.44	0.86	6.79	11.95	7.65	11.09
11/19/2012	8.84	8.11	9.23		8.73	9.37	0.57					
11/26/2012	8.29				8.29	9.37	na					
11/29/2012	8.76	8.55	11.20		9.50	9.37	1.47					

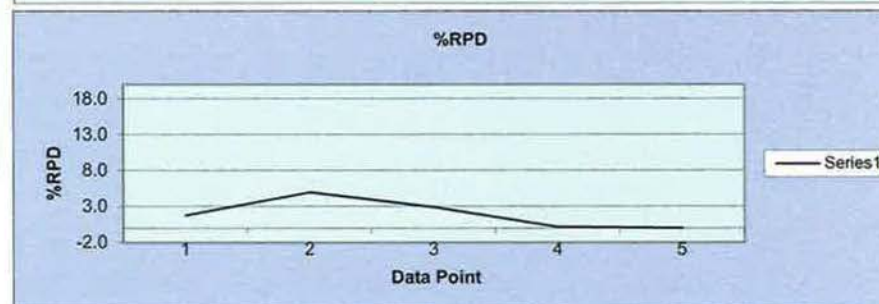
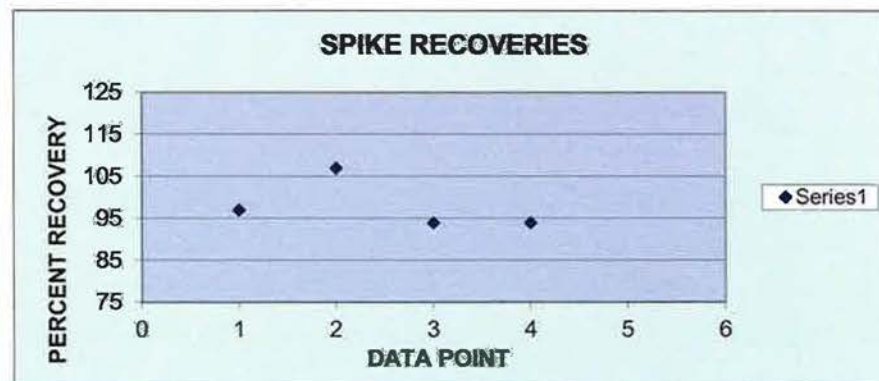


Control Chart for 11/2012 MS/MSD & Repeat %Recoveries

Analyst: SFO9 12-17-12

IC: Metrohm
 Report Date: ~~12/13/2012~~ 12/17/12 SFO9
 Chemist: Susan E.O. Peters
 Dept: Environmental
 Analyte: Bromate
 Start date: 11/1/2012
 End date: 11/30/2012
 Desired level: 100%

Analysis Date	MS Recoveries and Replicate Recoveries							
	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=
12/8/2012	96	98	97	1.8	0.7	7.26	0.46	2
12/8/2012	104	110	107	5.0	4.2			
12/8/2012	96	92	94	2.9	2.8			
12/10/2012	94	94	94	0.16	0.14	3.21	0.65	2
12/10/2012						4.12	0.94	2

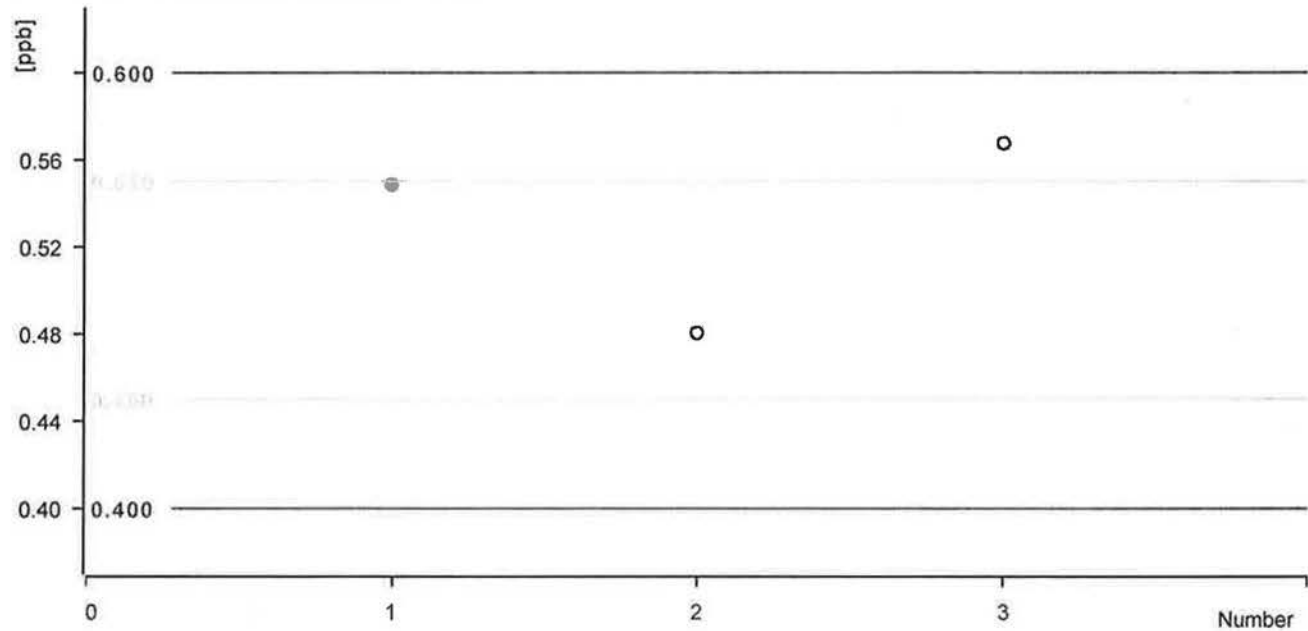


Control chart

SEOP 12-17-12

Comment

ICCS/LFB concentration, ppb



Statistics

Mean value:	0.532 ppb	Absolute standard deviation:	0.046 ppb
Minimum:	0.480 ppb	Relative standard deviation:	8.607 %
Maximum:	0.568 ppb	Number of determinations:	3

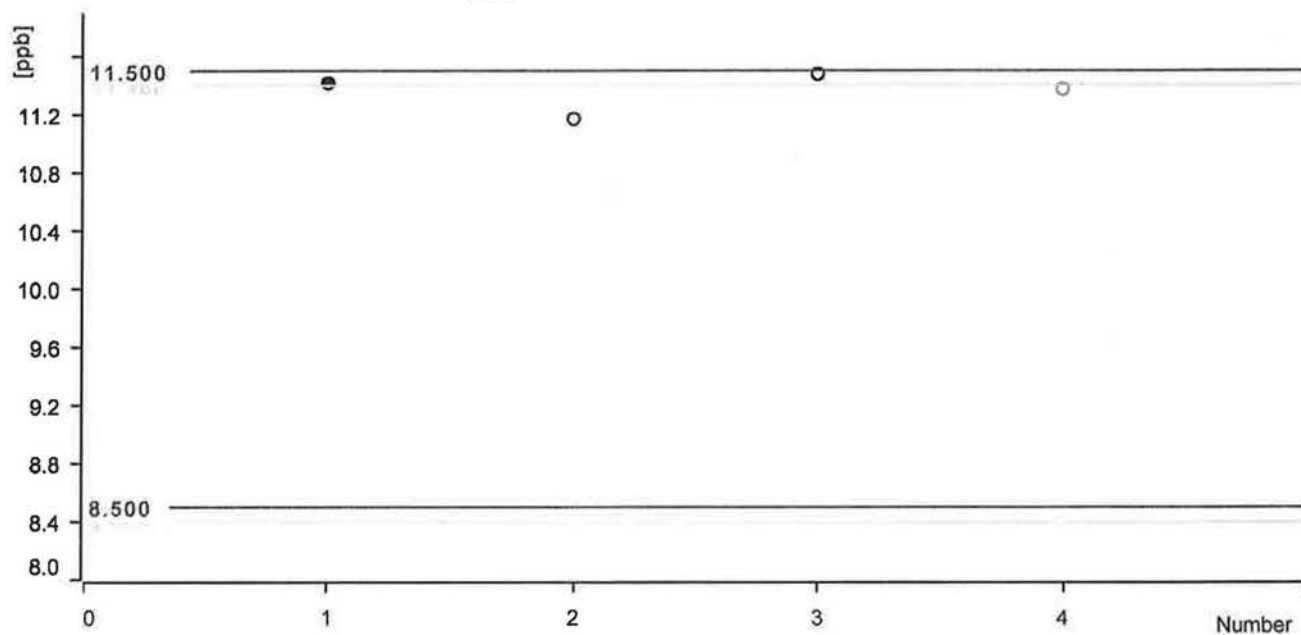
Date	Number	Ident	Sample type	Method	ICCS/LFB concentration, ppb	Statistics
1 2012-12-08 13:17:59 UTC-5	1	ICCS	Sample	12072012 300.1	0.545 ppb	on
2 2012-12-08 13:55:50 UTC-5	2	ICCS	Sample	12072012 300.1	0.480 ppb	on
3 2012-12-10 13:52:15 UTC-5	3	ICCS	Sample	12072012 300.1	0.568 ppb	on

Control chart

SEOP 12-17-12

Comment

Bromate QCS concentration, ppb



Statistics

Mean value:	11.359 ppb	Absolute standard deviation:	0.134 ppb
Minimum:	11.169 ppb	Relative standard deviation:	1.180 %
Maximum:	11.478 ppb	Number of determinations:	4

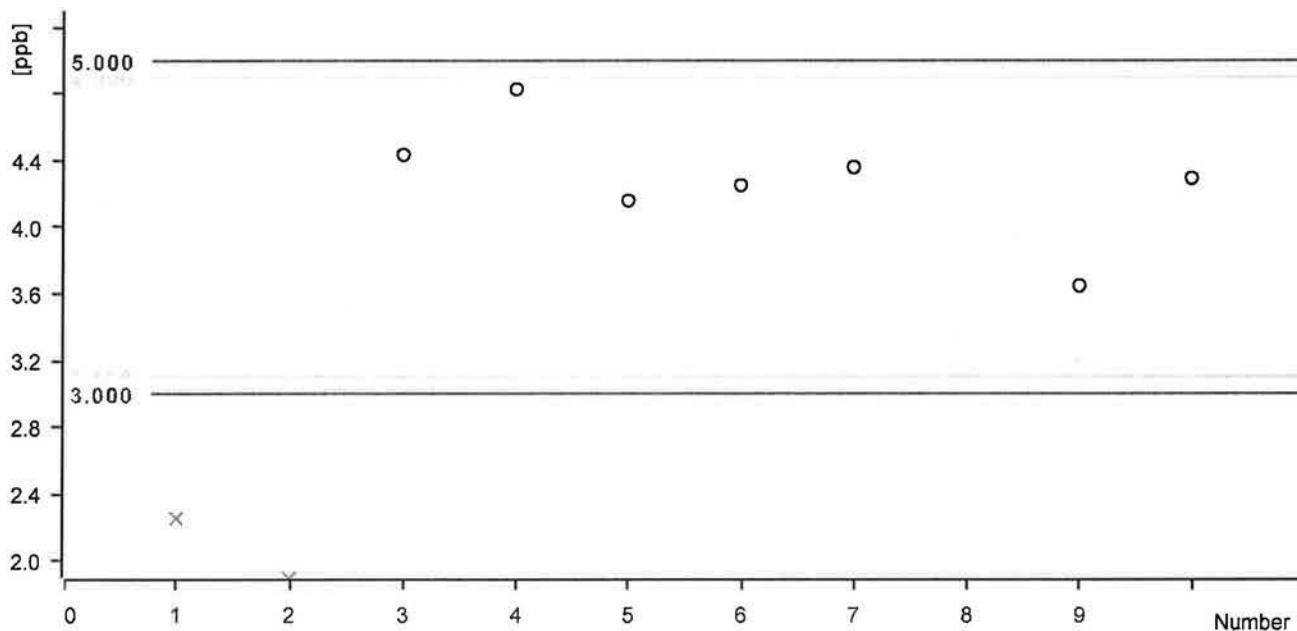
Date	Number	Ident	Sample type	Method	Bromate QCS concentration, ppb	Statistics
1 2012-12-07 22:40:15 UTC-5	1	QCS	Sample	06262012	11.359 ppb	on
2 2012-12-07 23:17:59 UTC-5	2	QCS	Sample	06262012	11.169 ppb	on
3 2012-12-10 03:40:19 UTC-5	3	QCS	Sample	12072012 300.1	11.478 ppb	on
4 2012-12-11 03:03:55 UTC-5	4	QCS	Sample	12072012 300.1	11.372 ppb	on

Control chart

SEOP 12-17-12

Comment

ECCS. CCCS Bromate std 4ppb



Statistics

Mean value:	4.281 ppb	Absolute standard deviation:	0.353 ppb
Minimum:	3.646 ppb	Relative standard deviation:	8.249 %
Maximum:	4.829 ppb	Number of determinations:	7

Date	Number	Ident	Sample type	Method	ECCS, CCCS Bromate std 4ppb	Statistics
2012-12-09 08:47:47 UTC-5	3	ECCS/CCCS	Sample	12072012 300.1	4.434 ppb	on
2012-12-09 09:25:34 UTC-5	4	ECCS/CCCS	Sample	12072012 300.1	4.829 ppb	on
2012-12-09 18:13:55 UTC-5	5	ECCS/CCCS	Sample	12072012 300.1	4.159 ppb	on
2012-12-09 18:51:48 UTC-5	6	ECCS/CCCS	Sample	12072012 300.1	4.250 ppb	on
2012-12-10 02:24:50 UTC-5	7	ECCS/CCCS	Sample	12072012 300.1	4.359 ppb	on
2012-12-11 01:10:44 UTC-5	9	ECCS/CCCS	Sample	12072012 300.1	3.646 ppb	on
2012-12-11 01:48:28 UTC-5	10	ECCS/CCCS	Sample	12072012 300.1	4.292 ppb	on