



Pall Corporation

Sample Analysis Report

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December, 2012

Reissued Rept See Note @ end
Analyst Initials: SEOP
Date: 02-15-13

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	Qualifier(s)
Residential Wells								
D2								
420 Parkwood-12-28-12-11:30-1	46	5.0						D
Extraction Wells								
C3								
DOLPH-12-03-12-09:02-1	71	1.0						
TW-20-12-03-12-09:45-1	1395	25						D
D2								
LB-1-12-03-12-08:10-1	407	8.33						D, H
LB-3-12-03-12-08:11-1	461	25.0						D, H
TW-21-12-03-12-09:30-1	162	10.0						D
TW-5-12-03-12-09:38-1	651	25.0						D, H
TW-9-12-03-12-09:56-1	652	50.0						D, A, H
E								
TW-18-12-03-12-09:04-1	294	10.0						D
TW-19-12-03-12-08:12-1	843	25.0						D
SW								
TW-22-12-03-12-10:10-1	430	25.0						D, H
TW-8-12-03-12-10:11-1	329	10.0						D, H
Monitoring Wells								

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	Qualifier(s)
D0								
A2 Cleaning Supply-12-06-12-08:05-1	56	5.0						D, H
E								
MW-135-12-06-12-14:05-1	nd	1.0						H
Surface Water								
Not Applicable								
HC/HR-12-03-12-08:35-1			nd	2.0				
HC/HR-12-04-12-08:40-1			nd	2.0				
HC/HR-12-05-12-08:10-1			nd	2.0				
HC/HR-12-06-12-09:50-1			nd	2.0				
HC/HR-12-07-12-08:20-1			nd	2.0				
HC/HR-12-10-12-08:20-1			nd	2.0				
HC/HR-12-11-12-08:10-1			nd	2.0				
HC/HR-12-12-12-08:35-1			nd	2.0				
HC/HR-12-13-12-08:15-1			nd	2.0				
HC/HR-12-14-12-09:30-1			nd	2.0				
HC/HR-12-17-12-09:00-1			nd	2.0				
HC/HR-12-18-12-08:55-1			nd	2.0				
HC/HR-12-19-12-08:35-1			nd	2.0				
HC/HR-12-20-12-08:10-1			nd	2.0				
HC/HR-12-21-12-07:45-1			nd	2.0				
HC/HR-12-24-12-10:00-1			nd	2.0				
HC/HR-12-26-12-10:00-1			nd	2.0				
HC/HR-12-28-12-10:00-1			nd	2.0				
HC/HR-12-31-12-10:05-1			nd	2.0				
Treatment System								

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	Qualifier(s)
OUTFALL-12-02-12-1	2	1.0						
OUTFALL-12-02-12-2			nd	5.0				
OUTFALL-12-03-12-01	3	1.0						H
OUTFALL-12-03-12-02			nd	5.0				
OUTFALL-12-04-12-1	4	1.0						H
OUTFALL-12-04-12-2			nd	5.0				
OUTFALL-12-05-12-1	3	1.0						H
OUTFALL-12-05-12-2			nd	5.0				
OUTFALL-12-06-12-1	3	1.0						H
OUTFALL-12-06-12-2			nd	5.0				
OUTFALL-12-09-12-1	3	1.0						H
OUTFALL-12-09-12-2			nd	5.0				
OUTFALL-12-10-12-1	2	1.0						H
OUTFALL-12-10-12-2			nd	5.0				
OUTFALL-12-11-12-1	nd	1.0						H
OUTFALL-12-11-12-2			nd	5.0				
OUTFALL-12-12-12-1	3	1.0						
OUTFALL-12-12-12-2			nd	5.0				
OUTFALL-12-13-12-1	nd	1.0						
OUTFALL-12-13-12-2			nd	5.0				
OUTFALL-12-16-12-1	3	1.0						H
OUTFALL-12-16-12-2			nd	5.0				
OUTFALL-12-17-12-1	3	1.0						
OUTFALL-12-17-12-2			nd	5.0				
OUTFALL-12-18-12-1	2	1.0						
OUTFALL-12-18-12-2			nd	5.0				
OUTFALL-12-19-12-1	4	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	Qualifier(s)
OUTFALL-12-19-12-2			nd	5.0				
OUTFALL-12-20-12-1	2	1.0						
OUTFALL-12-20-12-2			nd	5.0				
OUTFALL-12-23-12-1	2	1.0						H
OUTFALL-12-23-12-2			nd	5.0				
OUTFALL-12-24-12-1	3	1.0						
OUTFALL-12-24-12-2			nd	5.0				
OUTFALL-12-25-12-1	3	1.0						
OUTFALL-12-25-12-2			nd	5.0				
OUTFALL-12-26-12-1	4	1.0						
OUTFALL-12-26-12-2			nd	5.0				
OUTFALL-12-27-12-1	2	1.0						
OUTFALL-12-27-12-2			nd	5.0				
OUTFALL-12-30-12-1	3	1.0						
OUTFALL-12-30-12-2			nd	5.0				
OUTFALL-12-31-12-1	3	1.0						
OUTFALL-12-31-12-2			nd	5.0				
Red Pond-12-03-12-09:00-1	418	10.0						D
Red Pond-12-11-12-09:10-1	315	10.0						D, H
Red Pond-12-17-12-09:20-1	326	10.0						D
Red Pond-12-24-12-10:35-1	368	10.0						D

Note: This report is being reissued due to a change in reporting format. *In the interest of good laboratory practice the following reporting practice has been changed: Reporting limits now reflect the dilution required to keep the sample in the calibrated range of the instrument. It in no way negatively affects the sensitivity of the determination at the instrument.*

Qualifier Code:

Qualifier Description

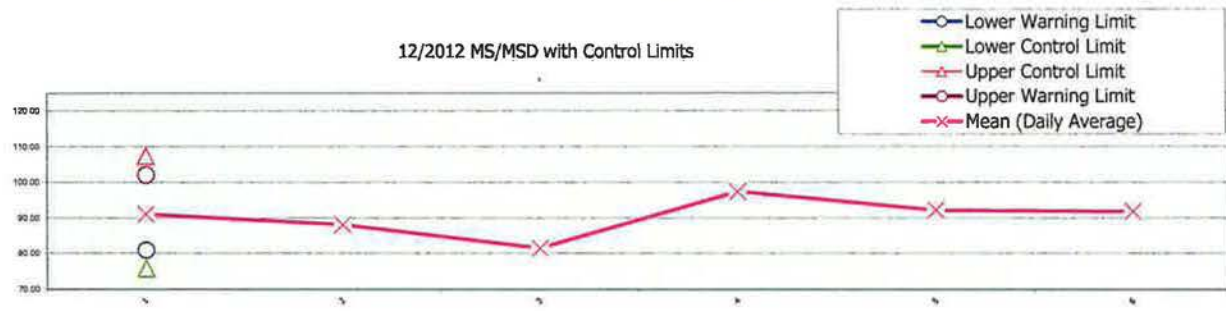
A
D
H

Value reported is the mean of two or more determinations.
Analyte value quantified from a dilution, reporting limit is raised to reflect dilution
Recommended laboratory holding time was exceeded.

Control Chart for 12/2012 MS/MSD %Recoveries

GC/MS Data: #2
Report Date: 1/9/2013
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: 1,4-dioxane
Start date: 12/1/2012
End date: 12/31/2011
Desired level: 100%

Matrix Spike % Recovery Values								Mean (Daily Average)	Sample Mean (All Individual Data)	Daily Standard Deviation	Daily Sample Standard Deviation	Lower Control Limit	Upper Control Limit	Lower Warning Limit	Upper Warning Limit	Mean RPD (Individual Data)
Date	MS 1	MSD 1	MS 2	MSD 2	MS 3	MSD 3	MS 4									
12/4/2012	82	101						91.25	91.68	8.92	5.29	75.81	107.55	81.10	102.26	96.50
12/26/2012	85	91						88.30								
12/28/2012	82							81.65								
12/31/2012	105	90						97.60								
1/3/2013	89	84	99	96	113	80	86	92.37								
1/8/2013	96	92	89					92.02								

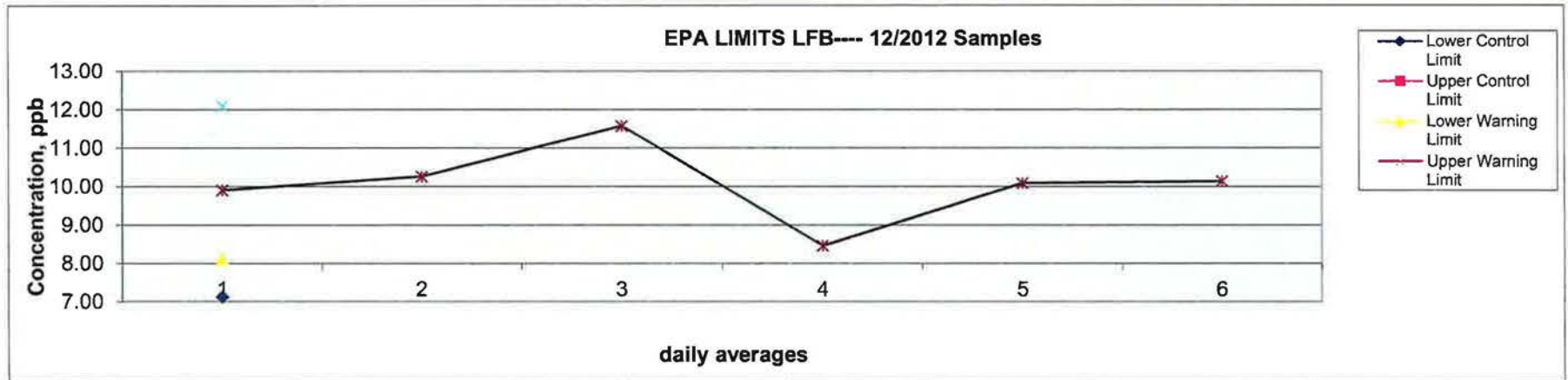


Control Chart for 12/2012 LFB

Analyst: SEOP 01-09-13

GC/MS Data: #2
Report Date: 1/9/2013
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: 1,4-dioxane
Start date: 12/1/2012
End date: 12/31/2012
Desired level: 100%

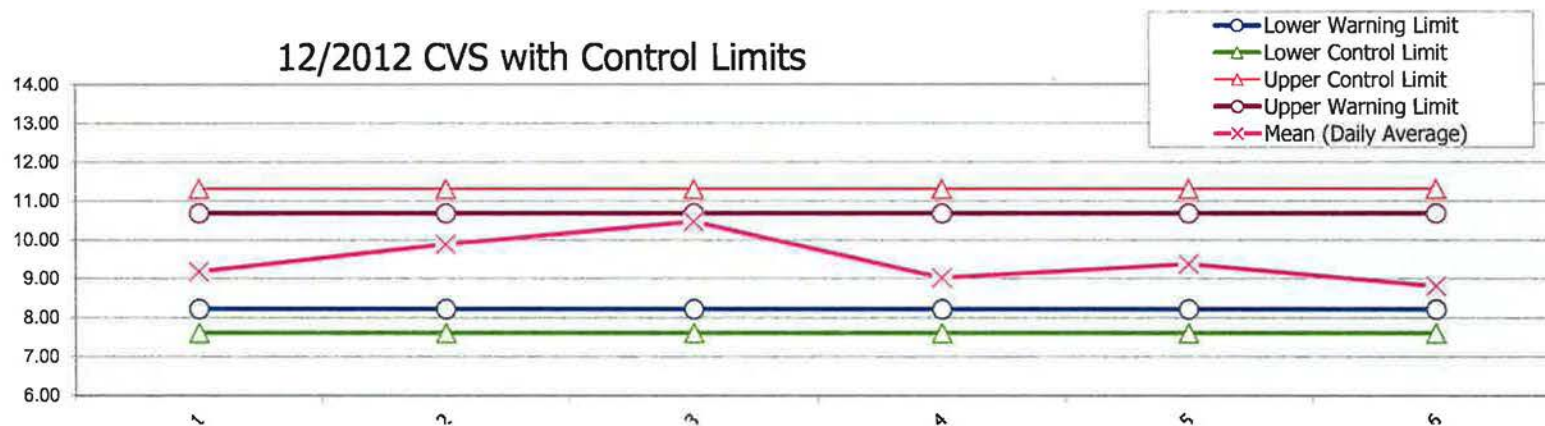
Date	LFB Values						Mean (Daily Average)	Sample Mean (All Individual Data)	Daily Standard Deviation	Daily Average Sample Standard Deviation	Lower Control Limit	Upper Control Limit	Lower Warning Limit	Upper Warning Limit
	LFB 1	LFB 2	LFB 3	LFB 4	LFB 5	LFB 6								
12/4/2012	9.91	9.33	10.47				9.90	10.10	0.57	0.99	7.12	13.08	8.11	12.09
12/26/2012	10.76	10.23	9.21	10.86			10.26	10.10	0.76					
12/28/2012	11.58						11.58	10.10	na					
12/31/2012	8.46						8.46	10.10	na					
1/3/2013	11.06	10.46	9.27	8.68	10.33	10.75	10.09	10.10	0.92					
1/8/2013	8.84	11.18	10.41				10.14	10.10	1.19					



Control Chart for 12/2012 CVS

GC/MS Data: #1 and #2
Report Date: 1/9/2013
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: 1,4-dioxane
Start date: 12/1/2012
End date: 12/31/2012
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								
12/4/2012	9.18				9.18	9.46	na	0.62	7.60	11.31	8.22	10.69
12/26/2012	9.19	10.54	10.22	9.60	9.89	9.46	0.61	0.62	7.60	11.31	8.22	10.69
12/28/2012	10.47				10.47	9.46	na	0.62	7.60	11.31	8.22	10.69
12/31/2012	8.15	9.90			9.03	9.46	1.24	0.62	7.60	11.31	8.22	10.69
1/3/2013	9.19	9.67	8.80	9.86	9.38	9.46	0.34	0.62	7.60	11.31	8.22	10.69
1/8/2013	8.78	8.83			8.81	9.46	0.04	0.62	7.60	11.31	8.22	10.69

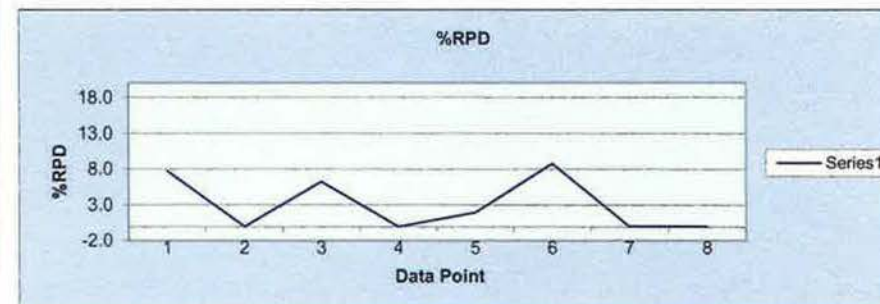
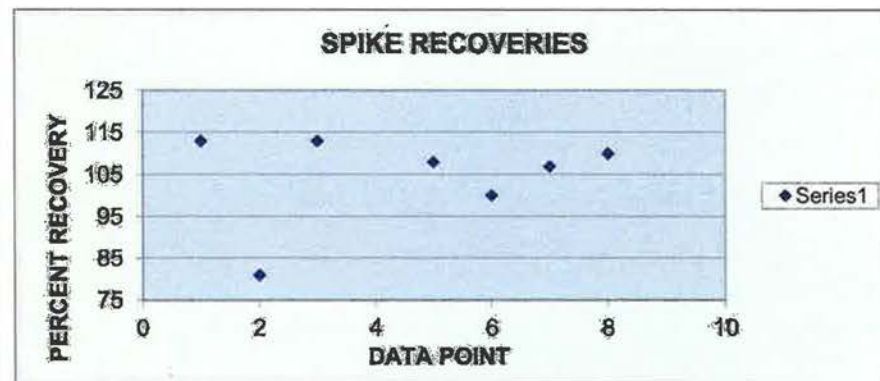


Control Chart for 12/2012 MS/MSD & Repeat %Recoveries

Analyst: Susan E.O. Peters
01-09-13

IC: Metrohm
 Report Date: 1/9/2013
 Chemist: Susan E.O. Peters
 Dept: Environmental
 Analyte: Bromate
 Start date: 12/1/2012
 End date: 12/31/2012
 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
12/21/2012	118	107	113	7.7	7.8	2.58	0.05	2
12/21/2012	81		81			3.49	0.48	2
12/21/2012	120	103	113	6.3	6.3	3.49	0.48	2
12/21/2012						1.77	0.08	2
1/3/2013	106	109	108	2.00	2.12	1.97	0.41	3
1/3/2013	105	95	100	8.80	7.07			
1/3/2013	107		107					
1/3/2013	110		110			2.77	129.00	2

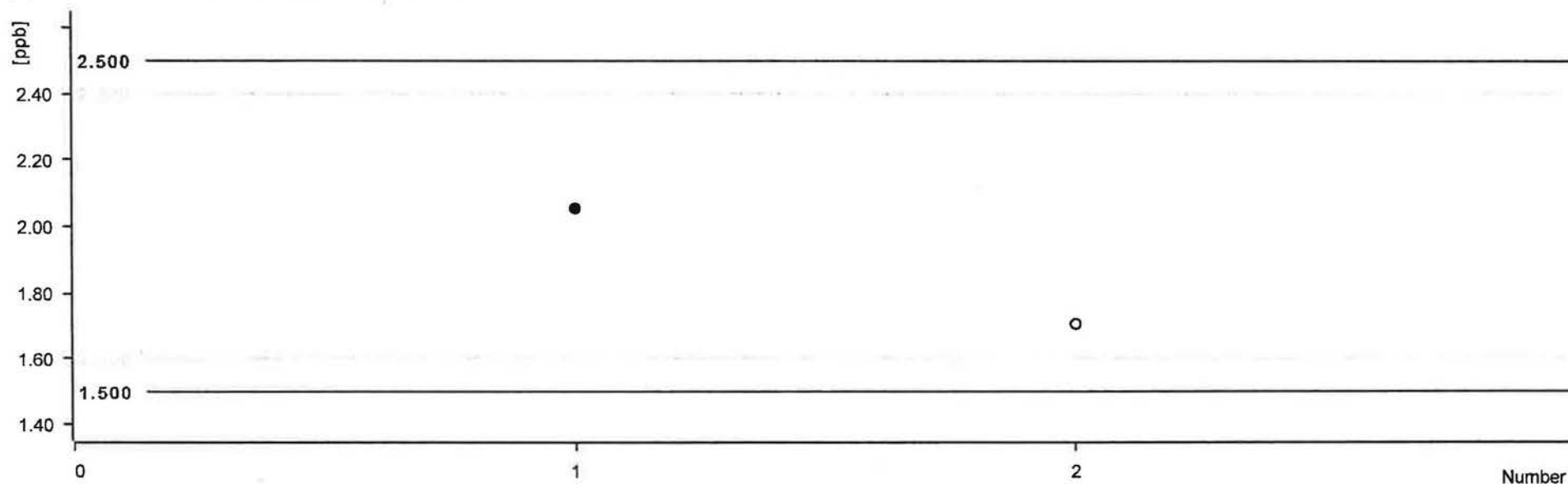


Control chart

SEOP 01-09-13

Comment

ppb Bromate Concentration ECCS



Statistics

Mean value:	1.879 ppb	Absolute standard deviation:	0.247 ppb
Minimum:	1.704 ppb	Relative standard deviation:	13.160 %
Maximum:	2.054 ppb	Number of determinations:	2

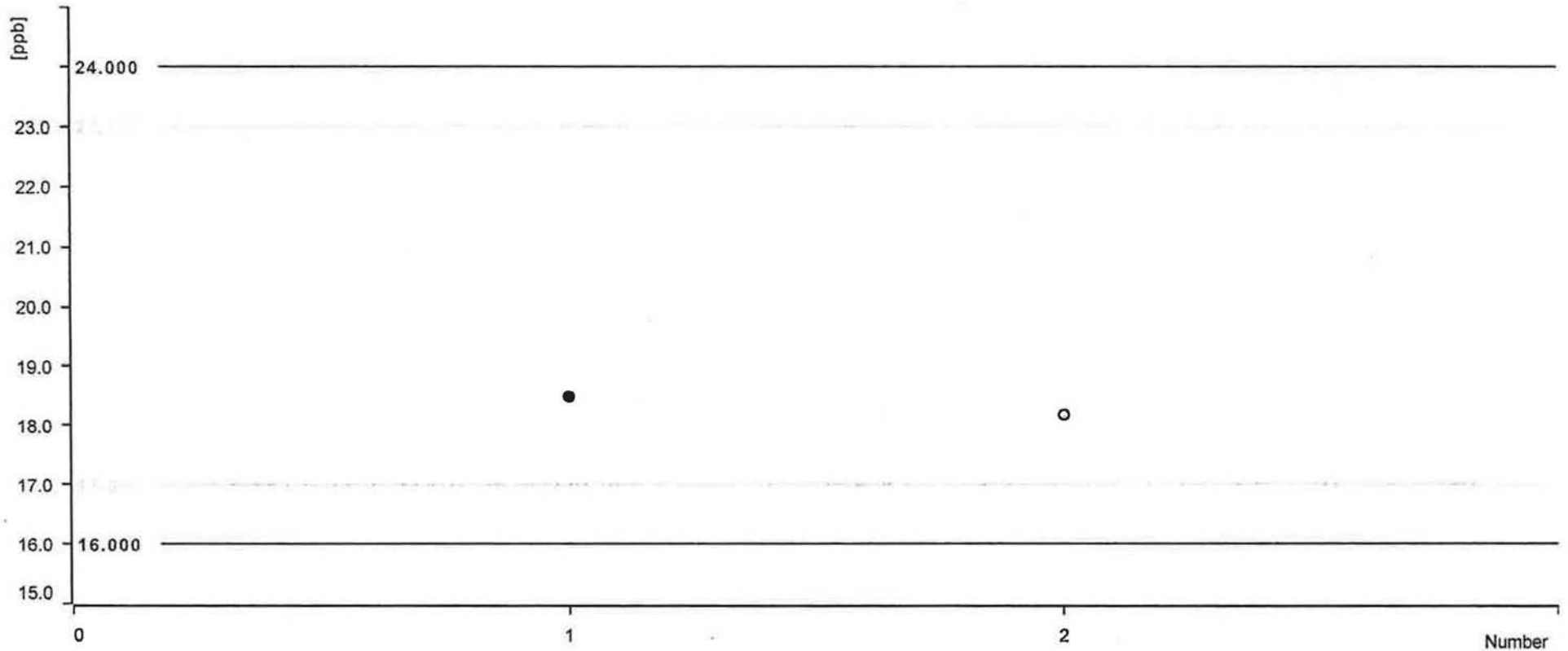
Date	Number	Ident	Sample type	Method	ppb Bromate Concentration ECCS	Statistics
1 2012-12-22 23:09:10 UTC-5	1	ECCS/CCCS STD 3	Sample	12072012 300.1	2.054 ppb	on
2 2012-12-22 23:46:53 UTC-5	2	ECCS/CCCS STD 3	Sample	12072012 300.1	1.704 ppb	on

Control chart

SEOP Q1013-

Comment

20PPB BROMATE



Statistics

Mean value: 18.328 ppb
Minimum: 18.171 ppb
Maximum: 18.484 ppb

Absolute standard deviation: 0.222 ppb
Relative standard deviation: 1.210 %
Number of determinations: 2

Control chart

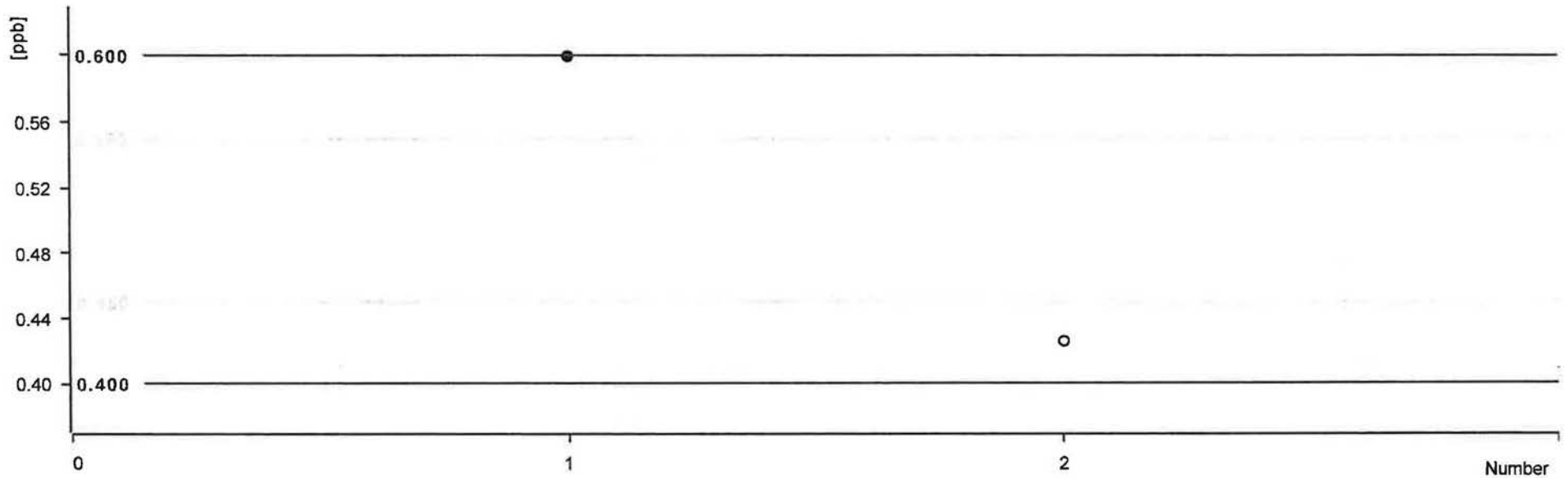
	Date	Number	Ident	Sample type	Method	20PPB BROMATE	Statistics
1	2012-12-23 03:33:16 UTC-5	1	ECCS/CCCS STD 6	Sample	12072012 300.1	18.484 ppb	on
2	2012-12-23 04:11:00 UTC-5	2	ECCS/CCCS STD 6	Sample	12072012 300.1	18.171 ppb	on

Control chart

SEOP 01-09-13

Comment

ICCS/LFB concentration, ppb



Statistics

Mean value:	0.512 ppb	Absolute standard deviation:	0.123 ppb
Minimum:	0.425 ppb	Relative standard deviation:	24.036 %
Maximum:	0.599 ppb	Number of determinations:	2

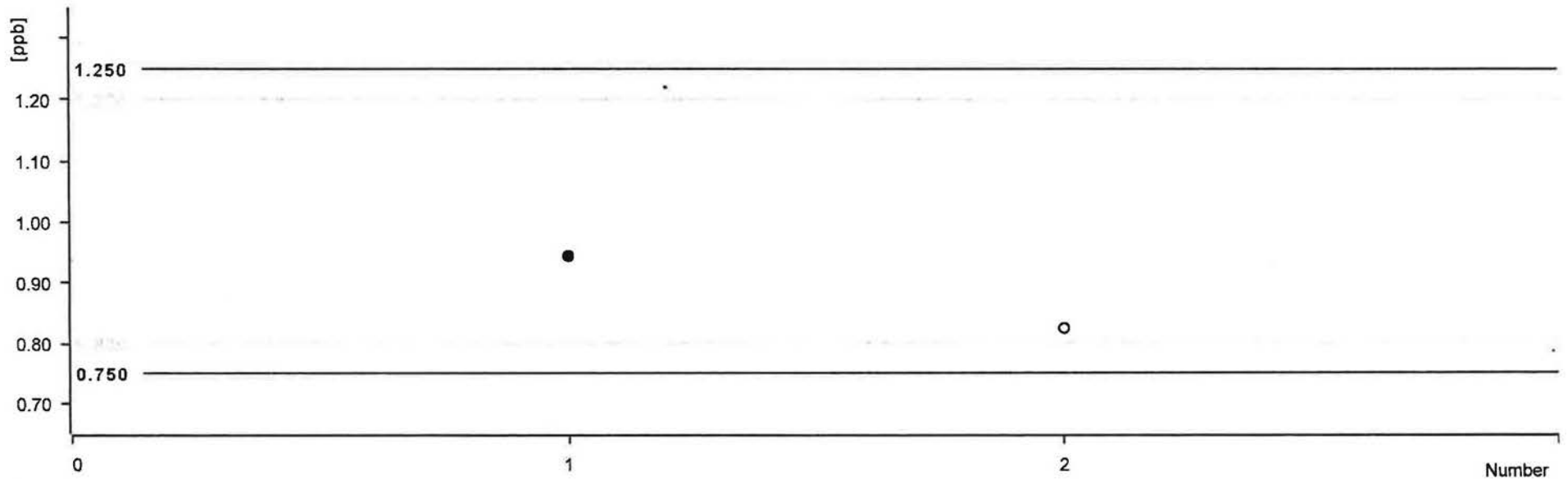
Date	Number	Ident	Sample type	Method	ICCS/LFB concentration, ppb	Statistics
1 2012-12-21 13:11:57 UTC-5	1	ICCS/LFB	Sample	12072012 300.1	0.599 ppb	on
2 2013-01-03 16:30:02 UTC-5	2	ICCS/LFB STD1	Sample	12072012 300.1	0.425 ppb	on

Control chart

SEOP 01-09-13

Comment

ppb Bromate Concentration ICCS



Statistics

Mean value:	0.883 ppb	Absolute standard deviation:	0.085 ppb
Minimum:	0.824 ppb	Relative standard deviation:	9.577 %
Maximum:	0.943 ppb	Number of determinations:	2

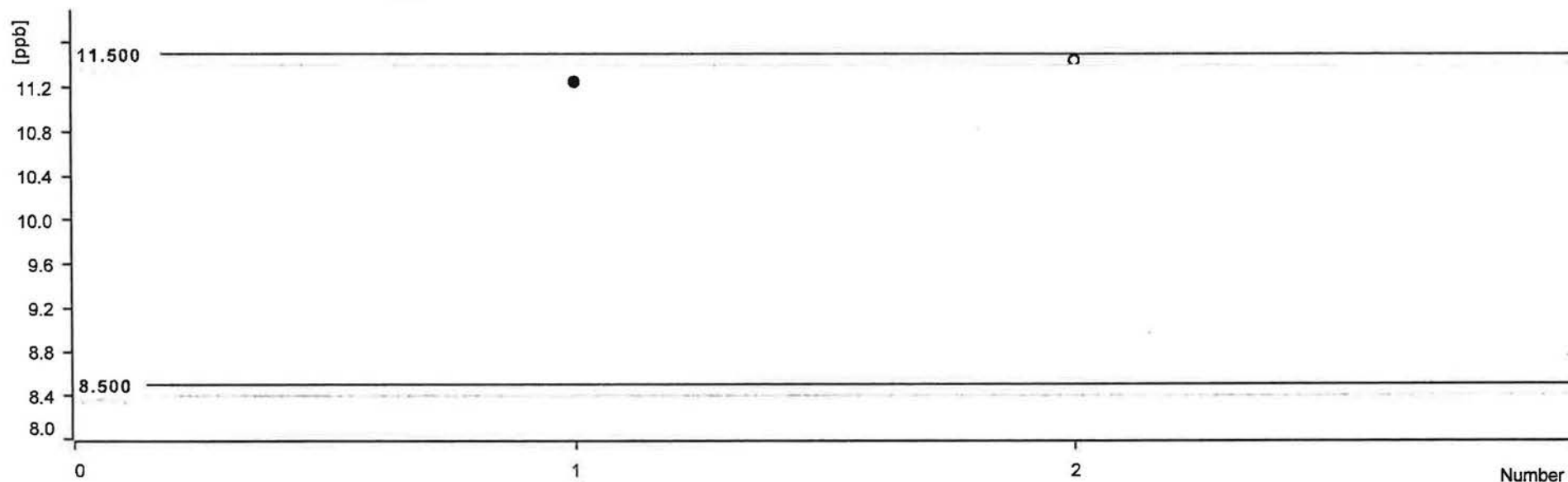
Date	Number	Ident	Sample type	Method	ppb Bromate Concentration ICCS	Statistics
1 2013-01-03 17:07:44 UTC-5	1	ICCS/LFB STD2	Sample	12072012 300.1	0.943 ppb	on
2 2013-01-03 17:45:28 UTC-5	2	ICCS/LFB STD2	Sample	12072012 300.1	0.824 ppb	on

Control chart

SEOP 01-09-13

Comment

Bromate QCS concentration, ppb



Statistics

Mean value:	11.346 ppb	Absolute standard deviation:	0.138 ppb
Minimum:	11.248 ppb	Relative standard deviation:	1.213 %
Maximum:	11.443 ppb	Number of determinations:	2

Date	Number	Ident	Sample type	Method	Bromate QCS concentration, ppb	Statistics
2012-12-23 05:26:30 UTC-5	1	QCS	Sample	12072012 300.1	11.248 ppb	on
2012-12-23 06:04:18 UTC-5	2	QCS	Sample	12072012 300.1	11.443 ppb	on