Pall Corporation
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Sample Analysis Report

May, 2012

Analyst Initials: JEOP
Date: 06-06-12

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
Extraction Wells							
C3							
DOLPH-05-07-12-10:55-1	69	1.0					
TW-10-05-07-12-10:40-1	631	1.0					
TW-20-05-07-12-10:35-1	996	1.0					
D2							
LB-1-05-07-12-08:15-1	582	1.0					
LB-3-05-07-12-08:16-1	507	1.0					
TW-21-05-07-12-10:15-1	163	1.0					
TW-5-05-07-12-10:24-1	792	1.0					
TW-9-05-07-12-10:45-1	829	1.0					
E							
TW-11-05-07-12-10:25-1	203	1.0					
TW-18-05-07-12-10:19-1	344	1.0					
TW-19-05-07-12-08:17-1	862	1.0					
Marshy							
PW-1-05-07-12-10:50-1	680	1.0					
SW							
TW-22-05-07-12-11:15-1	665	1.0					
TW-8-05-07-12-11:14-1	479	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
Monitoring Wells							
C2							
MW-25s-05-23-12-13:40-1	372	1.0					
C3							
MW-105s-05-29-12-14:20-1	1031	1.0					
MW-11i-05-11-12-12:00-1	8	1.0					
MW-22-05-23-12-13:15-1	1815	1.0					
MW-2d-05-30-12-11:15-1	24	1.0					
MW-35-05-11-12-11:35-1	8	1.0					
D0							
A2 Cleaning Supply-05-23-12-09:30-1	82	1.0					
D2							
456 Clarendon-05-14-12-11:35-1	937	1.0					
MW-107-05-14-12-14:55-1	56	1.0					
MW-11d-05-11-12-12:05-1	112	1.0					
MW-120s-05-24-12-09:15-1	nd	1.0					
MW-121s-05-24-12-14:55-1	nd	1.0					
MW-122s-05-25-12-12:50-1	61	1.0					
MW-123s-05-24-12-10:40-1	nd	1.0					
MW-124s-05-16-12-10:20-1	nd	1.0					
MW-126s-05-30-12-13:45-1	nd	1.0					
MW-129i-05-23-12-10:25-1	nd	1.0					
MW-129s-05-22-12-13:10-1	nd	1.0					
MW-130i-05-24-12-13:40-1	nd	1.0					
MW-130s-05-24-12-13:10-1	nd	1.0					
MW-134i-05-30-12-10:20-1	9	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-134s-05-30-12-10:50-1	9	1.0					
MW-54d-05-14-12-13:50-1	48	1.0					
MW-54s-05-14-12-14:10-1	nd	1.0					
MW-55-05-14-12-10:00-1	18	1.0					
MW-77-05-14-12-10:45-1	1450	1.0					
MW-92-05-25-12-15:00-1	19	1.0					
MW-94s-05-29-12-10:30-1	1574	1.0					
E							
IW-2-05-10-12-11:00-1	795	1.0					
MW-101-05-25-12-11:00-1	288	1.0					
MW-104-05-25-12-13:20-1	2	1.0					
MW-105d-05-29-12-14:05-1	459	1.0					
MW-106s-05-29-12-12:00-1	256	1.0					
MW-110-05-25-12-13:50-1	32	1.0					
MW-112d-05-15-12-13:25-1	nd	1.0					
MW-112i-05-15-12-14:10-1	5	1.0					
MW-112s-05-15-12-12:35-1	nd	1.0					
MW-120d-05-24-12-10:05-1	nd	1.0					
MW-121d-05-24-12-15:35-1	nd	1.0					
MW-122d-05-25-12-12:15-1	nd	1.0					
MW-123d-05-24-12-11:35-1	nd	1.0					
MW-124d-05-16-12-11:00-1	nd	1.0					
MW-126d-05-30-12-14:40-1	nd	1.0					
MW-129d-05-23-12-11:15-1	nd	1.0					
MW-130d-05-24-12-14:28-1	nd	1.0					
MW-134d-05-30-12-09:45-1	5	1.0					
MW-64-05-11-12-13:35-1	51	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-66-05-11-12-11:15-1	2	1.0					
MW-68-05-11-12-09:55-1	nd	1.0					
MW-94d-05-29-12-10:15-1	2	1.0					
MW-95-05-29-12-11:20-1	48	1.0					
MW-98d-05-22-12-11:30-1	12	1.0					
Marshy							
NMW-1s-05-31-12-07:20-1	2137	1.0					
NMW-2s-05-31-12-07:45-1	2921	1.0					
SW							
MW-10d-05-10-12-14:25-01	498	1.0					
MW-45d-05-10-12-13:10-1	2	1.0					
MW-45s-05-10-12-12:55-1	5	1.0					
MW-46-05-10-12-12:30-01	114	1.0					
MW-48-05-10-12-11:40-1	80	1.0					
MW-49-05-10-12-12:05-01	nd	1.0					
MW-52s-05-10-12-13:45-01	527	1.0					
Surface Water							
Not Applicable							
HC/HR-05-01-12-09:20-1			nd	2.0			
HC/HR-05-02-12-08:20-1			nd	2.0			
HC/HR-05-03-12-07:40-1			nd	2.0			
HC/HR-05-04-12-08:50-1			nd	2.0			
HC/HR-05-07-12-08:40-1			nd	2.0			
HC/HR-05-08-12-09:20-1			nd	2.0			
HC/HR-05-09-12-08:55-1			nd	2.0			
HC/HR-05-10-12-08:10-1			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-05-11-12-08:15-1			nd	2.0			
HC/HR-05-14-12-09:05-1			nd	2.0			
HC/HR-05-15-12-07:45-1			nd	2.0			
HC/HR-05-16-12-09:05-1			nd	2.0			
HC/HR-05-17-12-08:30-1			nd	2.0			
HC/HR-05-18-12-07:55-1			nd	2.0			
HC/HR-05-21-12-08:20-1			nd	2.0			
HC/HR-05-22-12-07:45-1			nd	2.0			
HC/HR-05-23-12-07:55-1			nd	2.0			
HC/HR-05-24-12-08:10-1			nd	2.0			
HC/HR-05-25-12-08:40-1			nd	2.0			
HC/HR-05-29-12-08:25-1			nd	2.0			
HC/HR-05-30-12-07:45-1			nd	2.0			
HC/HR-05-31-12-08:25-1			nd	2.0			
Treatment System							
OUTFALL-05-01-12-1	4	1.0					
OUTFALL-05-01-12-2			nd	5.0			
OUTFALL-05-02-12-1	5	1.0					
OUTFALL-05-02-12-2			8	5.0			
OUTFALL-05-03-12-2			nd	5.0			
OUTFALL-05-03-12-1	6	1.0					
OUTFALL-05-06-12-1	5	1.0					
OUTFALL-05-06-12-2			nd	5.0			
OUTFALL-05-07-12-2			6	5.0			
OUTFALL-05-07-12-1	5	1.0					
OUTFALL-05-08-12-2			7	5.0			
OUTFALL-05-08-12-1	6	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-05-09-12-02			nd	5.0			
OUTFALL-05-09-12-01	5	1.0					
OUTFALL-05-10-12-2			nd	5.0			
OUTFALL-05-10-12-1	5	1.0					
OUTFALL-05-13-12-2			6	5.0			
OUTFALL-05-13-12-1	5	1.0					
OUTFALL-05-14-12-2			nd	5.0			
OUTFALL-05-14-12-1	6	1.0					
OUTFALL-05-15-12-2			nd	5.0			
OUTFALL-05-15-12-1	6	1.0					
OUTFALL-05-16-12-2			nd	5.0			
OUTFALL-05-16-12-1	7	1.0					
OUTFALL-05-17-12-2			nd	5.0			
OUTFALL-05-17-12-1	7	1.0					
OUTFALL-05-20-12-2			nd	5.0			
OUTFALL-05-20-12-1	8	1.0					
OUTFALL-05-21-12-02			5	5.0			
OUTFALL-05-21-12-01	8	1.0					
OUTFALL-05-22-12-2			nd	5.0			
OUTFALL-05-22-12-1	7	1.0					
OUTFALL-05-23-12-1	8	1.0					
OUTFALL-05-23-12-2			nd	5.0			
OUTFALL-05-24-12-1	8	1.0					
OUTFALL-05-24-12-2			nd	5.0			
OUTFALL-05-27-12-1	7	1.0					
OUTFALL-05-27-12-2			6	5.0			
OUTFALL-05-28-12-1	7	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-05-28-12-2			nd	5.0			
OUTFALL-05-29-12-1	8	1.0					
OUTFALL-05-29-12-2			nd	5.0			
OUTFALL-05-30-12-01	7	1.0					
OUTFALL-05-30-12-02			5	5.0			
OUTFALL-05-31-12-1	6	1.0					
OUTFALL-05-31-12-2			6	5.0			
Red Pond-05-07-12-07:45-1	526	1.0					
Red Pond-05-14-12-14:55-1	519	1.0					
Red Pond-05-21-12-08:00-1	553	1.0					
Red Pond-05-29-12-07:50-1	567	1.0					

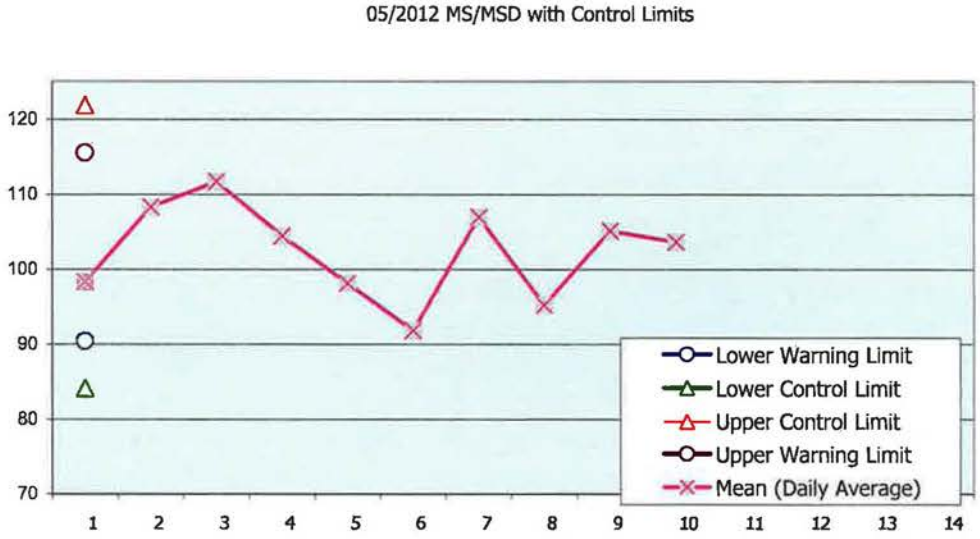
Control Chart for 05/2012 MS/MSD %Recoveries

Analyst: Susan E.O. Peters 06/04/12

GC/MS Data: #2
Report Date: 6/4/2012
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: 1,4-dioxane
Start date: 5/1/2012
End date: 5/31/2012
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								
5/1/2012	94	103					98.30	103.02	9.64	6.27	84.21	121.83	90.48	115.56
5/2/2012	94	121	110				108.33							
5/4/2012	107	104	115	121			111.70							
5/7/2012	98	95	107	118			104.50							
5/16/2012	97	89	101	106			98.15							
5/14/2012	88	98	94	87			91.85							
5/24/2012	101	95	114	118			107.00							
5/25/2012	101	89					95.25							
5/29/2012	98	103	97	116	110	108	105.15							
5/31/2012	100	105	111	116	91	100	103.68							

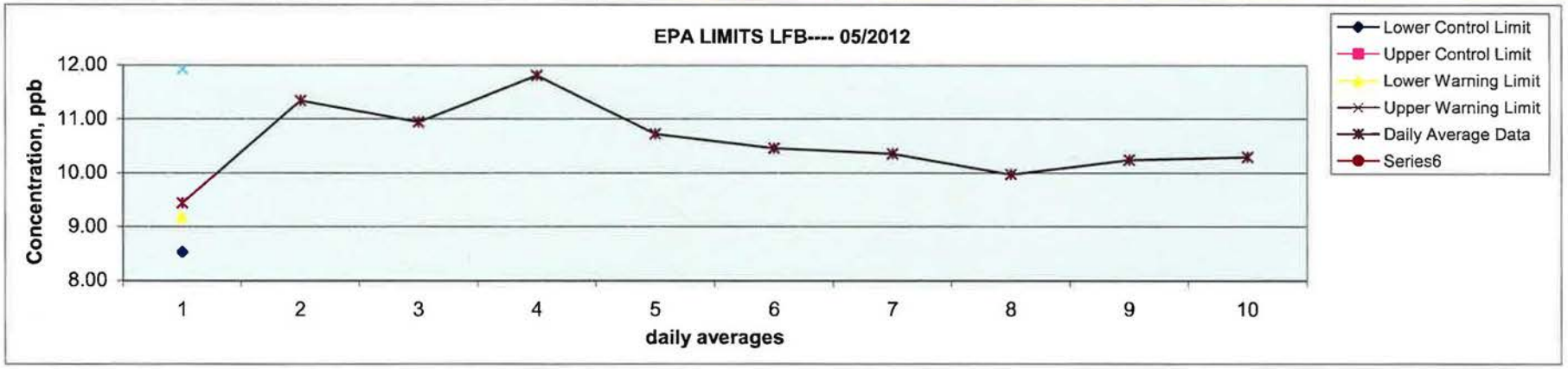


Control Chart for 05/2012 LFB

Analyst: Susan E.O. Peters 06-04-12

GC/MS Data: #2
Report Date: 6/4/2012
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: 1,4-dioxane
Start date: 5/1/2012
End date: 5/31/2012
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	LFB 7								
5/1/2012	9.43	8.44	9.37	10.52				9.44	10.57	0.85	0.68	8.53	12.61	9.21	11.93
5/2/2012	11.14	11.11	11.34	11.78				11.34	10.57	0.31					
5/4/2012	11.48	10.22	11.13					10.94	10.57	0.65					
5/7/2012	11.98	11.38	11.77	11.94	11.96			11.81	10.57	0.25					
5/14/2012	11.27	11.35	10.50	9.83	10.67			10.72	10.57	0.62					
5/16/2012	10.08	9.88	10.84	10.81	10.68			10.46	10.57	0.45					
5/24/2012	9.99	10.30	10.75	10.23	10.50			10.35	10.57	0.29					
5/25/2012	10.31	9.67	9.95					9.98	10.66	0.32					
5/29/2012	10.09	8.91	11.73	9.77	10.70			10.24	10.61	1.05					
5/31/2012	10.48	8.91	10.50	10.75	10.21	10.89		10.29	10.57	0.72					

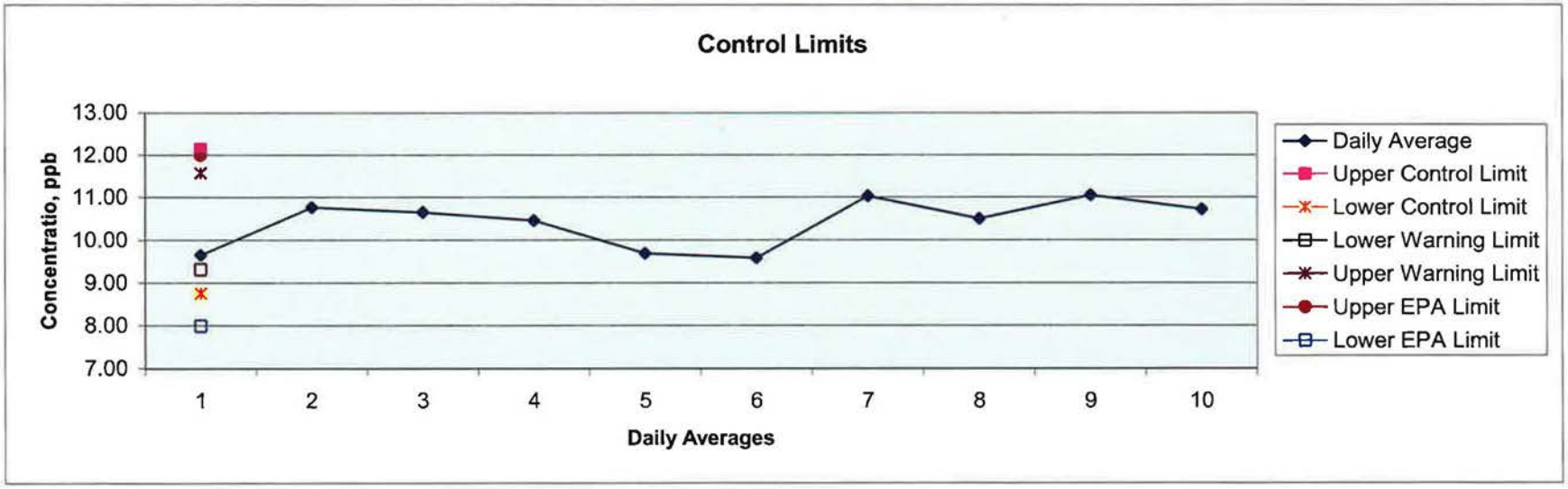


Control Chart for 05/2012 CVS

Susan E.O. Peters 06-04-12

GC/MS Data: #2
Report Date: 6/4/2012
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: 1,4-dioxane
Start date: 5/1/2012
End date: 5/31/2012
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								
5/1/2012	9.60	9.71			9.66	10.45	0.08	0.56	8.75	12.14	9.32	11.57
5/2/2012	10.95	10.59			10.77	10.45	0.25					
5/4/2012	10.66				10.66	10.45	na					
5/7/2012	10.45	10.48			10.47	10.45	0.02					
5/14/2012	9.71	9.68			9.70	10.45	0.02					
5/16/2012	9.70	9.48			9.59	10.45	0.16					
5/24/2012	11.21	10.86			11.04	10.45	0.25					
5/25/2012	10.51				10.51	10.45	na					
5/29/2012	10.00	11.51	11.65		11.05	10.45	0.91					
5/31/2012	10.86	10.52	10.79		10.72	10.45	0.18					

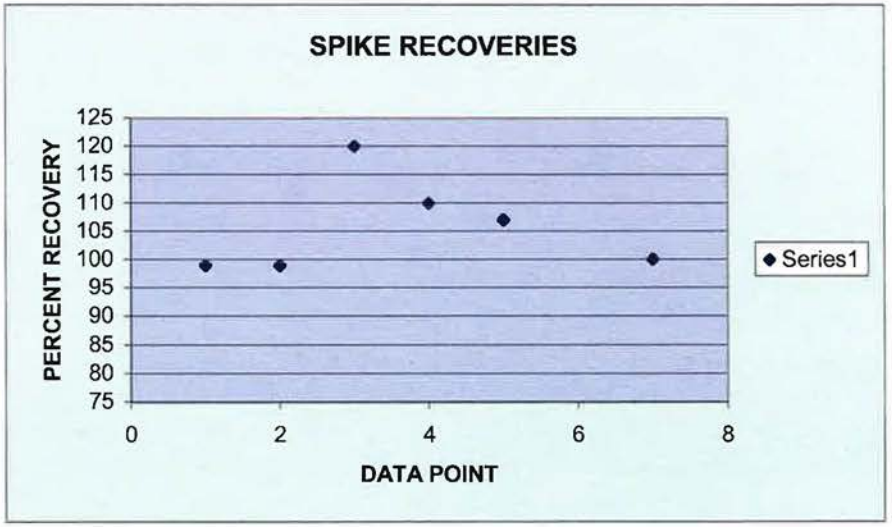


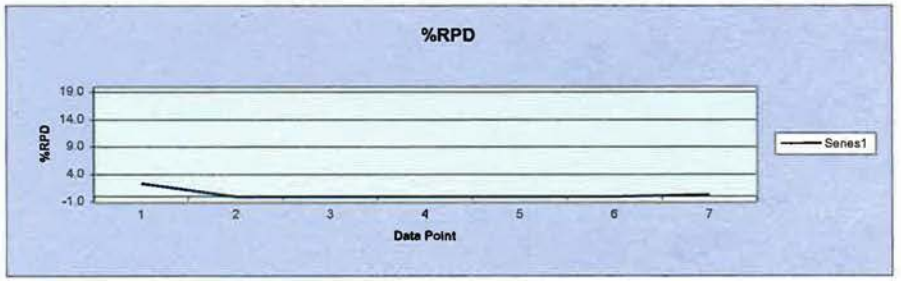
Control Chart for 05/2012 MS/MSD & Repeat %Recoveries

Analyst: Susan E.O. Peters 06-04-12

IC: Metrohm
Report Date: 6/4/2012
Chemist: Susan E.O. Peters
Dept: Environmental
Analyte: Bromate
Start date: 5/1/2012
End date: 5/31/2012
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=**
5/1/2012	102	96	99	2.4	4.2	4.93	0.633	3
5/1/2012	99	na	99	0.0	na	3.00	0.0360	2
5/1/2012	120	na	120	0.00	na	na	na	na
5/7/2012	110	na	110	0.0	na	2.64	0.410	2
5/7/2012	107	na	107	0.0	na	1.10	0.03	2
5/7/2012	na	na	na	na	na	8.14	0.31	2
5/15/2012	100	100	100	0.34	0.26	7.09	0.32	2
5/15/2012	99	93	96	5.4	4.4	6.49	0.35	2
5/15/2012	87	85	86	1.2	1.3	na	na	na
5/28/2012	101	100	100	0.33	0.39	3.77	0.08	2
5/28/2012	114	104	109	5.7	6.97	2.44	0.44	2
5/28/2012	106	na	106	0.0	na	3.37	0.72	2



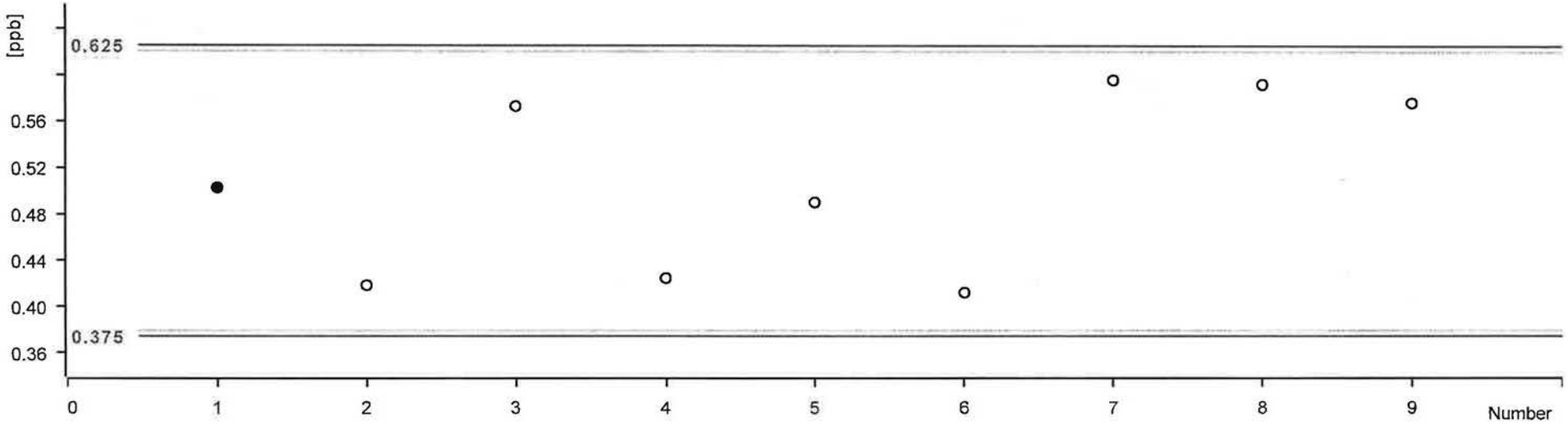


Control chart

Brian Peters
06-04-12

Comment

ICCS/LFB concentration, ppb



Statistics

Mean value:	0.510 ppb	Absolute standard deviation:	0.077 ppb
Minimum:	0.413 ppb	Relative standard deviation:	15.161 %
Maximum:	0.595 ppb	Number of determinations:	9

	Date	Number	Ident	Sample type	Method	ICCS/LFB concentration, ppb	Statistics
1	2012-05-01 11:18:52 UTC-4	1	ICCS	Sample	300.1 03232012	0.503 ppb	on
2	2012-05-01 11:56:36 UTC-4	2	ICCS	Sample	300.1 03232012	0.419 ppb	on
3	2012-05-01 22:37:55 UTC-4	3	ICCS	Sample	300.1 03232012	0.573 ppb	on
4	2012-05-02 15:28:21 UTC-4	4	ICCS	Sample	300.1 03232012	0.425 ppb	on

Control chart

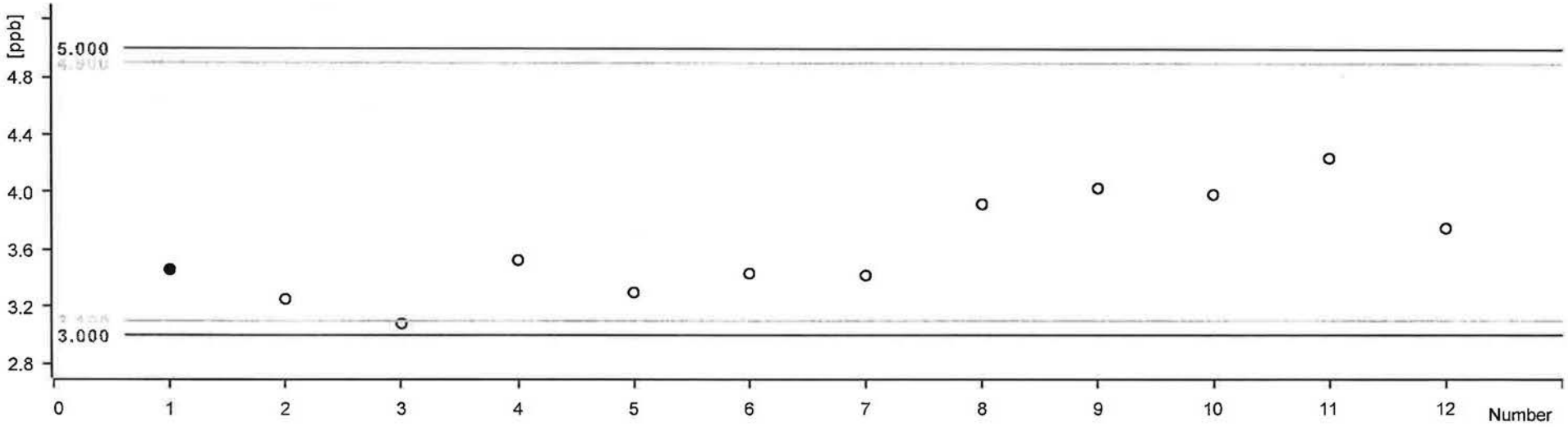
	Date	Number	Ident	Sample type	Method	ICCS/LFB concentration, ppb	Statistics
5	2012-05-07 13:49:20 UTC-4	5	ICCS/LFB	Sample	300.1 03232012	0.491 ppb	on
6	2012-05-07 14:27:03 UTC-4	6	ICCS/LFB	Sample	300.1 03232012	0.413 ppb	on
7	2012-05-10 14:58:19 UTC-4	7	ICCS/LFB	Sample	300.1 05092012	0.595 ppb	on
8	2012-05-15 08:41:35 UTC-4	8	ICCS/LFB	Sample	300.1 05092012	0.592 ppb	on
9	2012-05-24 11:11:45 UTC-4	9	ICCS/LFB	Sample	300.1 05092012	0.576 ppb	on

Control chart

Steven E. Peters
06-04-12

Comment

ECCS. CCCS Bromate std 4ppb



Statistics

Mean value:	3.618 ppb	Absolute standard deviation:	0.361 ppb
Minimum:	3.081 ppb	Relative standard deviation:	9.974 %
Maximum:	4.242 ppb	Number of determinations:	12

	Date	Number	Ident	Sample type	Method	ECCS. CCCS Bromate std 4ppb	Statistics
1	2012-05-01 20:44:40 UTC-4	1	ECCS/CCCS	Sample	300.1 03232012	3.460 ppb	on
2	2012-05-02 19:52:28 UTC-4	2	ECCS/CCCS	Sample	300.1 03232012	3.254 ppb	on
3	2012-05-04 22:10:13 UTC-4	3	ECCS/CCCS	Sample	300.1 03232012	3.081 ppb	on
4	2012-05-05 08:51:28 UTC-4	4	ECCS/CCCS	Sample	300.1 03232012	3.528 ppb	on

Control chart

	Date	Number	Ident	Sample type	Method	ECCS. CCCS Bromate std 4ppb	Statistics
5	2012-05-05 09:29:12 UTC-4	5	ECCS/CCCS	Sample	300.1 03232012	3.300 ppb	on
6	2012-05-07 23:15:05 UTC-4	6	ECCS/CCCS	Sample	300.1 03232012	3.435 ppb	on
7	2012-05-11 05:32:48 UTC-4	7	ECCS/CCCS	Sample	300.1 05092012	3.421 ppb	on
8	2012-05-11 06:16:32 UTC-4	8	ECCS/CCCS	Sample	300.1 05092012	3.921 ppb	on
9	2012-05-16 03:38:25 UTC-4	9	ECCS/CCCS	Sample	300.1 05092012	4.031 ppb	on
10	2012-05-16 04:22:08 UTC-4	10	ECCS/CCCS	Sample	300.1 05092012	3.986 ppb	on
11	2012-05-25 01:02:34 UTC-4	11	ECCS/CCCS	Sample	300.1 05092012	4.242 ppb	on
12	2012-05-25 13:25:55 UTC-4	12	ECCS/CCCS	Sample	300.1 05092012	3.755 ppb	on