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# Sample Analysis Report

## March, 2014

Analyst Initials: BEOP
Date: 04-07-14

| 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) |
|---|---|---|---|---|---|---|---|---|
| **Extraction Wells** | | | | | | | | |
| **C3** | | | | | | | | |
| DOLPH-03-03-14-11:18-1 | 77 | 1.0 | | | | | | |
| TW-20-03-03-14-09:53-1 | 860 | 10.0 | | | | | | D |
| **D2** | | | | | | | | |
| LB-4-03-03-14-08:41-1 | 520 | 10.0 | | | | | | D |
| TW-21-03-03-14-09:11-1 | 120 | 5.0 | | | | | | D |
| TW-5-03-03-14-09:17-1 | 770 | 25.0 | | | | | | D |
| TW-9-03-03-14-09:37-1 | 760 | 10.0 | | | | | | D |
| **E** | | | | | | | | |
| TW-11-03-03-14-09:18-1 | 190 | 5.0 | | | | | | D |
| TW-18-03-03-14-09:31-1 | 280 | 5.0 | | | | | | D |
| TW-19-03-03-14-08:40-1 | 680 | 10.0 | | | | | | D |
| **Marshy** | | | | | | | | |
| PW-1-03-03-14-09:32-1 | 810 | 25.0 | | | | | | D |
| **SW** | | | | | | | | |
| TW-22-03-03-14-10:17-1 | 580 | 10.0 | | | | | | D |
| TW-8-03-03-14-10:16-1 | 640 | 10.0 | | | | | | D |
| **Monitoring Wells** | | | | | | | | |
| **C2** | | | | | | | | |

| 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) |
|---|---|---|---|---|---|---|---|---|
| MW-25s-03-10-14-13:15-1 | 550 | 5.0 | | | | | | D |
| **C3** | | | | | | | | |
| MW-1 Replacement-03-10-14-14:30-1 | 1900 | 50.0 | | | | | | D |
| MW-125-03-07-14-11:05-1 | 230 | 5.0 | | | | | | D |
| MW-127s-03-07-14-09:40-1 | nd | 1.0 | | | | | | |
| MW-128s-03-07-14-12:34-1 | nd | 1.0 | | | | | | |
| MW-20-03-04-14-12:12-1 | nd | 1.0 | | | | | | |
| MW-22-03-10-14-13:40-1 | 830 | 25.0 | | | | | | D |
| MW-39s-03-06-14-11:07-1 | 1 | 1.0 | | | | | | |
| **D0** | | | | | | | | |
| A2 Cleaning Supply-03-06-14-08:49-1 | 70 | 1.0 | | | | | | |
| MW-53d-03-06-14-10:20-1 | nd | 1.0 | | | | | | |
| MW-53i-03-06-14-09:41-1 | 38 | 1.0 | | | | | | |
| MW-53s-03-06-14-10:45-1 | nd | 1.0 | | | | | | |
| MW-93-03-04-14-12:50-1 | 5 | 1.0 | | | | | | |
| **D2** | | | | | | | | |
| 373 Pinewood Shallow-03-10-14-09:43-1 | 400 | 10.0 | | | | | | D |
| 465 Dupont-03-20-14-10:52-1 | 1400 | 50.0 | | | | | | D |
| MW-107-03-10-14-11:10-1 | 650 | 10.0 | | | | | | D |
| MW-113-03-05-14-13:11-1 | 49 | 1.0 | | | | | | |
| MW-118-03-14-14-10:54-1 | 61 | 1.0 | | | | | | |
| MW-122s-03-05-14-10:31-1 | 83 | 1.0 | | | | | | |
| MW-126s-03-04-14-11:03-1 | nd | 1.0 | | | | | | |
| MW-131s-03-04-14-09:31-1 | nd | 1.0 | | | | | | |
| MW-17-03-06-14-12:40-1 | 370 | 10.0 | | | | | | D |
| MW-39d-03-06-14-11:37-1 | 64 | 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) |
|---|---|---|---|---|---|---|---|---|
| MW-47d-03-19-14-09:48-1 | nd | 1.0 | | | | | | |
| MW-47s-03-19-14-10:07-1 | nd | 1.0 | | | | | | |
| MW-4d-03-11-14-09:20-1 | 2100 | 50.0. | | | | | | D |
| MW-54d-03-19-14-11:22-1 | 6 | 1.0 | | | | | | |
| MW-54s-03-19-14-10:45-1 | nd | 1.0 | | | | | | |
| MW-77-03-20-14-13:51-1 | 1600 | 50.0 | | | | | | D |
| MW-94s-03-11-14-09:48-1 | 200 | 5.0 | | | | | | D |
| MW-BE-1d-03-10-14-10:18-1 | 12 | 1.0 | | | | | | |
| MW-BE-1s-03-10-14-10:39-1 | 790 | 10.0 | | | | | | D |
| MW-KD-1d-03-05-14-13:57-1 | 160 | 1.0 | | | | | | |
| MW-KD-1s-03-05-14-13:30-1 | 44 | 1.0 | | | | | | |
| **E** | | | | | | | | |
| MW-100-03-05-14-14:57-1 | 1900 | 25.0 | | | | | | D |
| MW-103s-03-18-14-12:25-1 | 72 | 1.0 | | | | | | |
| MW-104-03-05-14-11:12-1 | 4 | 1.0 | | | | | | |
| MW-108d-03-14-14-14:34-1 | 1700 | 25.0 | | | | | | D |
| MW-108s-03-14-14-13:43-1 | 590 | 25.0 | | | | | | D |
| MW-110-03-05-14-11:51-1 | 40 | 1.0 | | | | | | |
| MW-112i-03-18-14-12:05-1 | 7 | 1.0 | | | | | | |
| MW-112s-03-18-14-11:25-1 | nd | 1.0 | | | | | | |
| MW-119-03-28-14-14:17-1 | 61 | 1.0 | | | | | | |
| MW-122d-03-05-14-09:57-1 | nd | 1.0 | | | | | | |
| MW-126d-03-04-14-11:57-1 | nd | 1.0 | | | | | | |
| MW-127d-03-07-14-10:21-1 | nd | 1.0 | | | | | | |
| MW-128d-03-07-14-12:01-1 | nd | 1.0 | | | | | | |
| MW-131d-03-04-14-10:26-1 | nd | 1.0 | | | | | | |
| MW-135-03-04-14-14:15-1 | 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 | Qualifier(s) |
|---|---|---|---|---|---|---|---|---|
| MW-30d-03-06-14-13:48-1 | 700 | 10.0 | | | | | | D |
| MW-72d-03-21-14-10:51-1 | 1700 | 50.0 | | | | | | D |
| MW-76i-03-18-14-13:20-1 | 82 | 1.0 | | | | | | |
| MW-76s-03-18-14-13:39-1 | 280 | 5.0 | | | | | | D |
| MW-84s-03-18-14-14:35-1 | 100 | 10.0 | | | | | | D |
| MW-90-03-14-14-11:37-1 | 10 | 1.0 | | | | | | |
| **SH** | | | | | | | | |
| MW-5d-03-10-14-14:52-1 | 16000 | 1000.0 | | | | | | D |
| **SW** | | | | | | | | |
| MW-10d-03-10-14-14:04-1 | 1700 | 25.0 | | | | | | D |
| MW-57-03-10-14-13:01-1 | 2 | 1.0 | | | | | | |
| **Surface Water** | | | | | | | | |
| **Not Applicable** | | | | | | | | |
| HC/HR-03-03-14-08:02-1 | | | nd | 2.0 | | | | |
| HC/HR-03-04-14-08:21-1 | | | nd | 2.0 | | | | |
| HC/HR-03-05-14-08:00-1 | | | nd | 2.0 | | | | |
| HC/HR-03-06-14-07:35-1 | | | nd | 2.0 | | | | |
| HC/HR-03-07-14-08:05-1 | | | nd | 2.0 | | | | |
| HC/HR-03-10-14-08:40-1 | | | nd | 2.0 | | | | |
| HC/HR-03-11-14-08:05-1 | | | nd | 2.0 | | | | |
| HC/HR-03-12-14-08:20-1 | | | nd | 2.0 | | | | |
| HC/HR-03-13-14-08:15-1 | | | nd | 2.0 | | | | |
| HC/HR-03-14-14-08:30-1 | | | nd | 2.0 | | | | |
| HC/HR-03-17-14-08:00-1 | | | nd | 2.0 | | | | |
| HC/HR-03-18-14-07:45-1 | | | nd | 2.0 | | | | |
| HC/HR-03-19-14-07:35-1 | | | 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 | Qualifier(s) |
|---|---|---|---|---|---|---|---|---|
| HC/HR-03-20-14-08:10-1 | | | nd | 2.0 | | | | |
| HC/HR-03-21-14-08:35-1 | | | nd | 2.0 | | | | |
| HC/HR-03-24-14-08:23-1 | | | nd | 2.0 | | | | |
| HC/HR-03-25-14-08:00-1 | | | nd | 2.0 | | | | |
| HC/HR-03-26-14-07:50-1 | | | nd | 2.0 | | | | |
| HC/HR-03-27-14-08:15-1 | | | nd | 2.0 | | | | |
| HC/HR-03-28-14-07:35-1 | | | nd | 2.0 | | | | |
| HC/HR-03-31-14-07:40-1 | | | nd | 2.0 | | | | |
| **Treatment System** | | | | | | | | |
| OUTFALL-03-02-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-02-14-2 | | | 8 | 5.0 | | | | |
| OUTFALL-03-03-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-03-14-2 | | | 8 | 5.0 | | | | |
| OUTFALL-03-04-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-04-14-2 | | | 8 | 5.0 | | | | |
| OUTFALL-03-05-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-05-14-2 | | | 8 | 5.0 | | | | |
| OUTFALL-03-06-14-1 | 6 | 1.0 | | | | | | |
| OUTFALL-03-06-14-2 | | | 6 | 5.0 | | | | |
| OUTFALL-03-09-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-09-14-2 | | | 9 | 5.0 | | | | |
| OUTFALL-03-10-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-10-14-2 | | | 6 | 5.0 | | | | |
| OUTFALL-03-11-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-11-14-2 | | | 7 | 5.0 | | | | |
| OUTFALL-03-12-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-12-14-2 | | | 9 | 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 | Qualifier(s) |
|---|---|---|---|---|---|---|---|---|
| OUTFALL-03-13-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-13-14-2 | | | 9 | 5.0 | | | | |
| OUTFALL-03-16-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-16-14-2 | | | 8 | 5.0 | | | | |
| OUTFALL-03-17-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-17-14-2 | | | 6 | 5.0 | | | | |
| OUTFALL-03-18-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-18-14-2 | | | 8 | 5.0 | | | | |
| OUTFALL-03-19-14-1 | 5 | 1.0 | | | | | | |
| OUTFALL-03-19-14-2 | | | 6 | 5.0 | | | | |
| OUTFALL-03-20-14-1 | 6 | 1.0 | | | | | | |
| OUTFALL-03-20-14-2 | | | 5 | 5.0 | | | | |
| OUTFALL-03-23-14-1 | 7 | 1.0 | | | | | | |
| OUTFALL-03-23-14-2 | | | 5 | 5.0 | | | | |
| OUTFALL-03-24-14-1 | 6 | 1.0 | | | | | | |
| OUTFALL-03-24-14-2 | | | 5 | 5.0 | | | | |
| OUTFALL-03-25-14-1 | 6 | 1.0 | | | | | | |
| OUTFALL-03-25-14-2 | | | nd | 5.0 | | | | |
| OUTFALL-03-26-14-1 | 6 | 1.0 | | | | | | |
| OUTFALL-03-26-14-2 | | | nd | 5.0 | | | | |
| OUTFALL-03-27-14-1 | 7 | 1.0 | | | | | | |
| OUTFALL-03-27-14-2 | | | 5 | 5.0 | | | | A |
| OUTFALL-03-30-14-1 | 6 | 1.0 | | | | | | |
| OUTFALL-03-30-14-2 | | | nd | 5.0 | | | | |
| OUTFALL-03-31-14-1 | 6 | 1.0 | | | | | | |
| OUTFALL-03-31-14-2 | | | 5 | 5.0 | | | | |
| Red Pond-03-03-14-07:50-1 | 450 | 10.0 | | | | | | D |

| 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) |
|---|---|---|---|---|---|---|---|---|
| Red Pond-03-10-14-07:05-1 | 470 | 10.0 | | | | | | D |
| Red Pond-03-17-14-08:00-1 | 600 | 10.0 | | | | | | D |
| Red Pond-03-24-14-07:45-1 | 500 | 10.0 | | | | | | D |
| Red Pond-03-31-14-07:05-1 | 470 | 10.0 | | | | | | D |

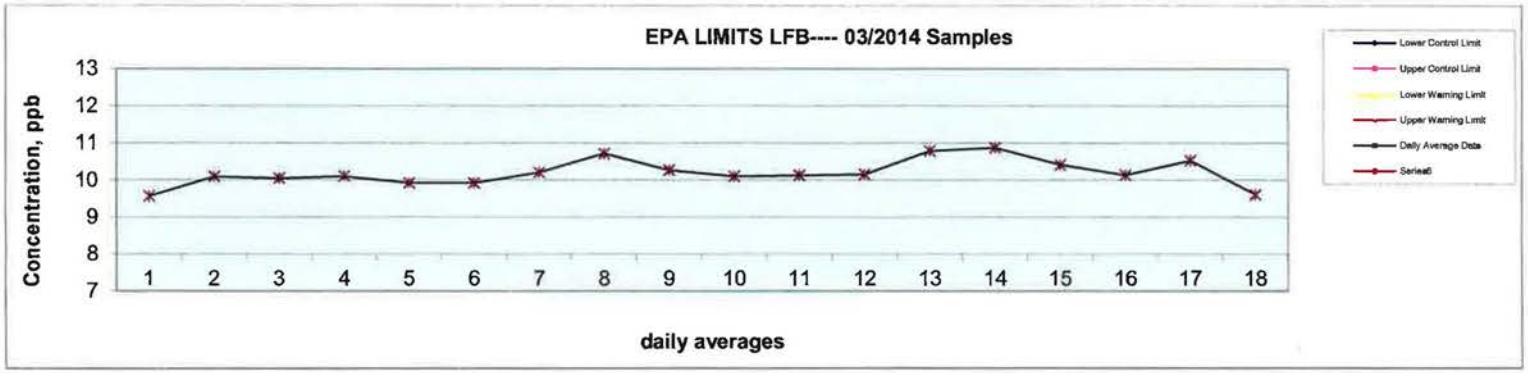
| Qualifier Code: | Qualifier Description |
|---|---|
| D | Analyte value quantified from a dilution, reporting limit is raised to reflect dilution |
| A | Value reported is the mean of two or more determinations, %RSD ≤ 3%. |

# Control Chart for 03/2014 LFB

Analyst: SEOP

**GC/MS Data:** #2
**Report Date:** 4/7/2014
**Chemist:** Susan E.O. Peters
**Dept:** Environmental
**Analyte:** 1,4-dioxane
**Start date:** 3/1/2014
**End date:** 3/31/2014
**Desired level:** 100%

| | LFB Values | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | LFB 1 | LFB 2 | LFB 3 | LFB 4 | LFB 5 | LFB 6 | 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 |
| 3/3/2014 | 9.59 | 9.54 | | | | | 9.57 | 10.21 | 0.04 | 0.36 | 9.14 | 11.29 | 9.49 | 10.93 |
| 3/4/2014 | 10.22 | 10.00 | 10.58 | 9.79 | 9.95 | 10.05 | 10.10 | 10.21 | 0.27 | | | | | |
| 3/5/2014 | 9.92 | 9.98 | 10.26 | | | | 10.05 | 10.21 | 0.18 | | | | | |
| 3/6/2014 | 10.20 | 9.58 | 10.55 | | | | 10.11 | 10.21 | 0.49 | | | | | |
| 3/7/2014 | 9.51 | 10.19 | 10.08 | | | | 9.93 | 10.21 | 0.36 | | | | | |
| 3/11/2014 | 10.03 | 9.72 | 10.01 | | | | 9.92 | 10.21 | 0.17 | | | | | |
| 3/12/2014 | 10.34 | 10.08 | | | | | 10.21 | 10.21 | 0.18 | | | | | |
| 3/17/2014 | 10.42 | 10.53 | 11.20 | | | | 10.72 | 10.21 | 0.42 | | | | | |
| 3/18/2014 | 11.45 | 9.28 | 10.09 | | | | 10.27 | 10.21 | 1.10 | | | | | |
| 3/19/2014 | 10.14 | 9.35 | 10.81 | 10.1 | 9.5 | 10.79 | 10.10 | 10.21 | 0.63 | | | | | |
| 3/20/2014 | 10.46 | 10.19 | 9.75 | | | | 10.13 | 10.21 | 0.36 | | | | | |
| 3/21/2014 | 10.15 | 10.18 | 10.15 | | | | 10.16 | 10.21 | 0.02 | | | | | |
| 3/24/2014 | 10.74 | 11.79 | 9.84 | | | | 10.79 | 10.21 | 0.98 | | | | | |
| 3/25/2014 | 11.29 | 11.83 | 9.51 | | | | 10.88 | 10.24 | 1.21 | | | | | |
| 3/26/2014 | 10.95 | 10.18 | 10.12 | | | | 10.42 | 10.21 | 0.46 | | | | | |
| 3/27/2014 | 10.26 | 10.02 | | | | | 10.14 | 10.21 | 0.17 | | | | | |
| 3/28/2014 | 10.88 | 10.69 | 10.02 | | | | 10.53 | 10.21 | 0.45 | | | | | |
| 3/31/2014 | 9.80 | 9.4 | | | | | 9.61 | 10.21 | 0.27 | | | | | |

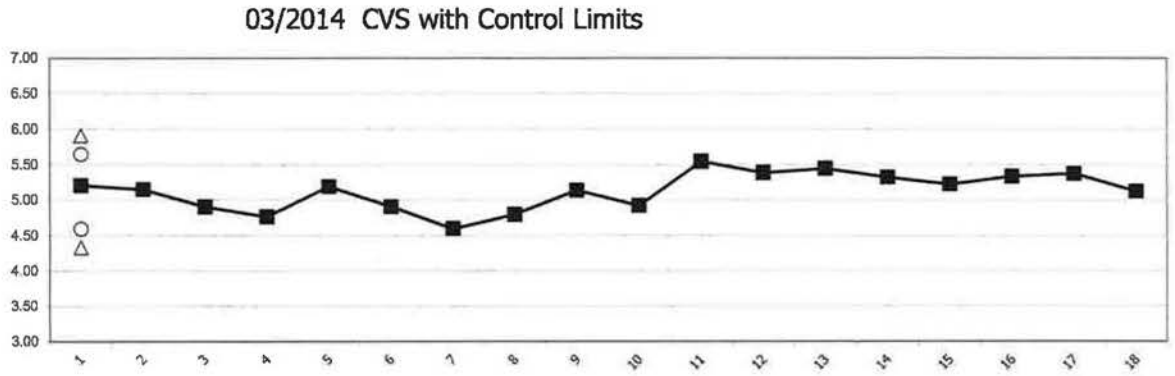


## Control Chart for 03/2014 CVS

Analyst: SEOP

**GC/MS Data:** #2
**Report Date:** 4/7/2014
**Chemist:** Susan E.O. Peters
**Dept:** Environmental
**Analyte:** 1,4-dioxane
**Start date:** 3/1/2014
**End date:** 3/31/2014
**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 | | | | | | | | |
| 3/3/2014 | 5.21 | | | | 5.21 | 5.12 | na | 0.26 | 4.33 | 5.91 | 4.60 | 5.65 |
| 3/4/2014 | 4.91 | 5.39 | | | 5.15 | 5.12 | 0.34 | | | | | |
| 3/5/2014 | 4.91 | | | | 4.91 | 5.12 | na | | | | | |
| 3/6/2014 | 4.77 | | | | 4.77 | 5.12 | na | | | | | |
| 3/7/2014 | 5.19 | | | | 5.19 | 5.12 | na | | | | | |
| 3/11/2014 | 4.91 | | | | 4.91 | 5.12 | na | | | | | |
| 3/12/2014 | 4.60 | | | | 4.60 | 5.12 | na | | | | | |
| 3/17/2014 | 4.80 | | | | 4.80 | 5.12 | na | | | | | |
| 3/18/2014 | 5.14 | | | | 5.14 | 5.12 | na | | | | | |
| 3/19/2014 | 4.85 | 5.00 | | | 4.93 | 5.12 | 0.11 | | | | | |
| 3/20/2014 | 5.55 | | | | 5.55 | 5.12 | na | | | | | |
| 3/21/2014 | 5.39 | | | | 5.39 | 5.12 | na | | | | | |
| 3/24/2014 | 5.45 | | | | 5.45 | 5.12 | na | | | | | |
| 3/25/2014 | 5.33 | | | | 5.33 | 5.12 | na | | | | | |
| 3/26/2014 | 5.23 | | | | 5.23 | 5.12 | na | | | | | |
| 3/27/2014 | 5.34 | | | | 5.34 | 5.12 | na | | | | | |
| 3/28/2014 | 5.38 | | | | 5.38 | 5.12 | na | | | | | |
| 3/31/2014 | 5.13 | | | | 5.13 | 5.12 | na | | | | | |



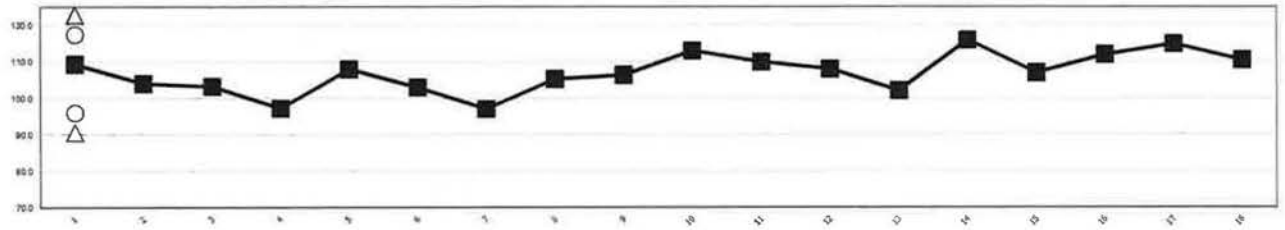
# Control Chart for 03/2014 MS/MSD %Recoveries

Analyst: SEOP

**GC/MS Data:** #2
**Report Date:** 4/7/2014
**Chemist:** Susan E.O. Peters
**Dept:** Environmental
**Analyte:** 1,4-dioxane
**Start date:** 3/1/2014
**End date:** 3/31/2014
**Desired level:** 100%

| | Matrix Spike % Recovery Values | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date** | **MS 1** | **MSD 1** | **MS 2** | **MSD 2** | **Replicate Ave.** | **Std. Dev.** | **# data pts** | **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** | **Mean RPD (Individual Data)** |
| 3/3/2014 | 109 | 110 | | | 4.86 | 0.07 | 2 | 109.35 | 106.8 | 7.1 | 5.4 | 90.6 | 122.9 | 96.0 | 117.5 | 106.8 |
| 3/4/2014 | 103 | 98 | 107 | 108 | na | na | na | 104.05 | | | | | | | | |
| 3/5/2014 | 107 | 100 | | | 4.73 | 0.05 | 2 | 103.30 | | | | | | | | |
| 3/6/2014 | 95 | 100 | | | na | na | na | 97.25 | | | | | | | | |
| 3/7/2014 | 112 | 104 | | | 5.70 | 0.09 | 2 | 108.00 | | | | | | | | |
| 3/11/2014 | 109 | 97 | | | 4.93 | 0.03 | 2 | 103.01 | | | | | | | | |
| 3/12/2014 | 102 | 92 | | | 4.83 | 0.09 | 2 | 97.07 | | | | | | | | |
| 3/17/2014 | 98 | 113 | | | 5.28 | 0.16 | 2 | 105.35 | | | | | | | | |
| 3/18/2014 | 96 | 117 | | | 5.04 | 0.43 | 2 | 106.38 | | | | | | | | |
| 3/19/2014 | 113 | | | | 4.94 | 0.28 | 2 | 113.00 | | | | | | | | |
| 3/20/2014 | 108 | 112 | | | 5.16 | 0.11 | 2 | 110.00 | | | | | | | | |
| 3/21/2014 | 104 | 112 | | | 6.32 | 0.43 | 2 | 108.00 | | | | | | | | |
| 3/24/2014 | 98 | 107 | | | 6.76 | 0.16 | 2 | 102.15 | | | | | | | | |
| 3/25/2014 | 112 | 120 | | | 5.83 | 0.38 | 2 | 116.00 | | | | | | | | |
| 3/26/2014 | 100 | 114 | | | 6.18 | 0.20 | 2 | 107.00 | | | | | | | | |
| 3/27/2014 | 112 | 112 | | | 6.24 | 0.06 | 2 | 112.00 | | | | | | | | |
| 3/28/2014 | 112 | 118 | | | 6.69 | 0.12 | 2 | 115.00 | | | | | | | | |
| 3/31/2014 | 106 | 115 | | | 6.11 | 0.42 | 2 | 110.50 | | | | | | | | |

03/2014 MS/MSD with Control Limits

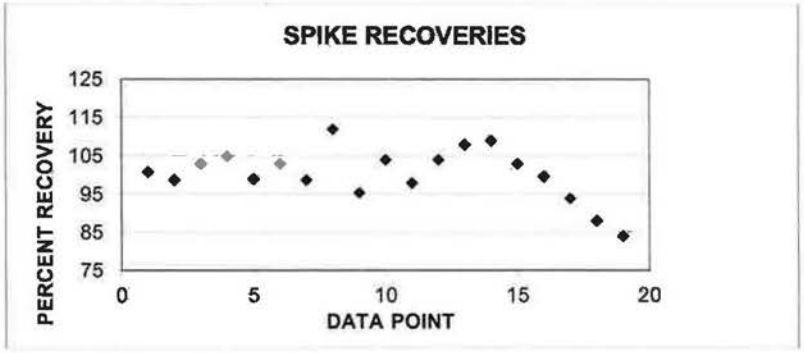


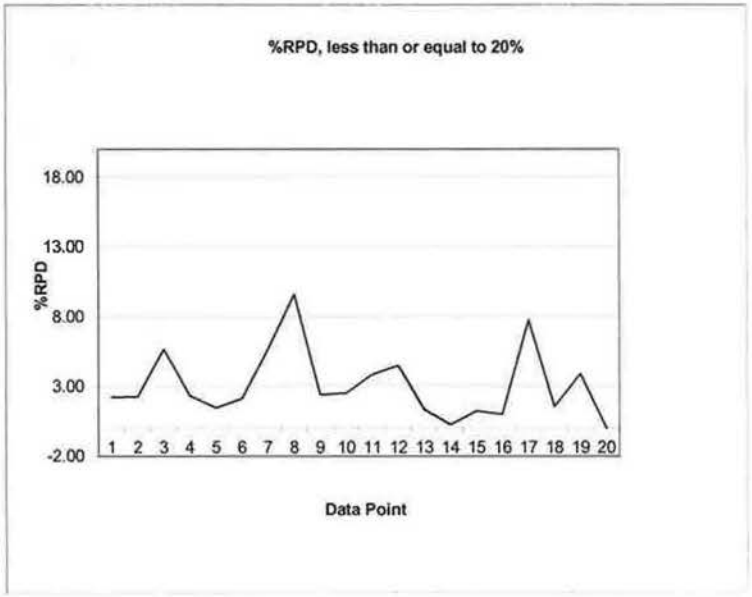
# Control Chart for 03/2014 MS/MSD & Repeat %Recoveries

Analyst: SEOP

**IC:** Metrohm
**Report Date:** 4/7/2014
**Chemist:** Susan E.O. Peters
**Dept:** Environmental
**Analyte:** Bromate
**Start date:** 3/1/2014
**End date:** 3/31/2014
**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=** |
| 3/3/2014 | 99 | 102 | 101 | 2.22 | 1.91 | 3.10 | 0.04 | 2 |
| 3/4/2014 | 100 | 94 | 99 | 2.26 | 2.05 | 3.48 | 0.36 | 2 |
| 3/5/2014 | 107 | 99 | 103 | 5.70 | 5.66 | 3.23 | 0.20 | 2 |
| 3/6/2014 | 107 | 103 | 105 | 2.34 | 2.83 | 3.34 | 0.22 | 2 |
| 3/7/2014 | 99 | 100 | 99 | 1.47 | 1.06 | 2.54 | 0.32 | 2 |
| 3/10/2014 | 105 | 102 | 103 | 2.14 | 2.09 | 3.51 | 0.04 | 2 |
| 3/11/2014 | 95 | 103 | 99 | 5.66 | 5.23 | 2.53 | 0.11 | 2 |
| 3/14/2014 | 106 | 119 | 112 | 9.62 | 9.19 | 2.68 | 0.31 | 2 |
| 3/17/2014 | 94 | 97 | 96 | 2.41 | 2.05 | 1.89 | 0.14 | 2 |
| 3/18/2014 | 103 | 106 | 104 | 2.52 | 2.12 | 1.05 | 0.15 | 2 |
| 3/19/2014 | 100 | 96 | 98 | 3.86 | 3.18 | 1.59 | 0.23 | 2 |
| 3/20/2014 | 102 | 107 | 104 | 4.50 | 3.68 | 1.11 | 0.14 | 2 |
| 3/21/2014 | 108 | 109 | 108 | 1.36 | 1.39 | 1.02 | 0.01 | 2 |
| 3/24/2014 | 108 | 109 | 109 | 0.24 | 0.21 | 1.06 | 0.01 | 2 |
| 3/25/2014 | 104 | 103 | 103 | 1.24 | 0.92 | 1.08 | 0.06 | 2 |
| 3/26/2014 | 99 | 100 | 100 | 1.00 | 0.78 | 0.58 | 0.11 | 2 |
| 3/27/2014 | 98 | 90 | 94 | 7.75 | 5.66 | 0.92 | 0.28 | 2 |
| 3/28/2014 | 87 | 89 | 88 | 1.56 | 1.07 | 1.04 | 0.11 | 2 |
| 3/31/2014 | 89 | 82 | 84 | 3.89 | 2.54 | 0.87 | 0.09 | 2 |



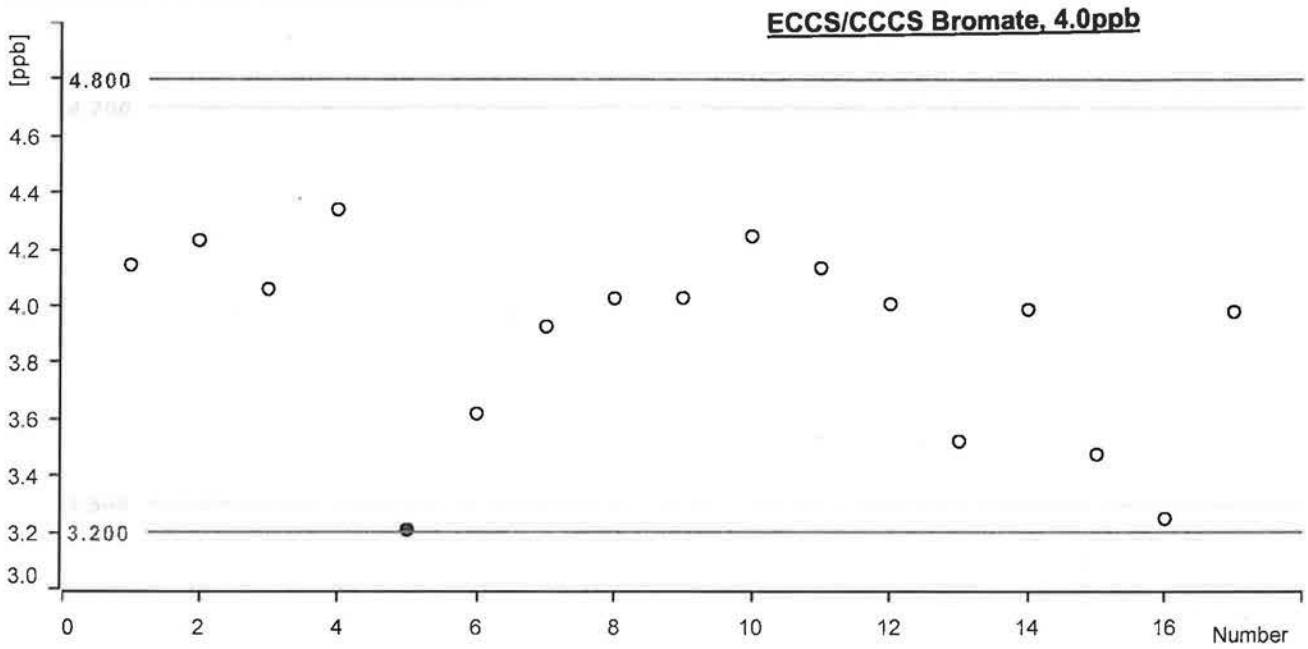



# Control chart

SEQP

**Comment**

## Bromate 4 PPB concentration




**Statistics**

| | | | |
|---|---|---|---|
| Mean value: | 3.893 ppb | Absolute standard deviation: | 0.347 ppb |
| Minimum: | 3.208 ppb | Relative standard deviation: | 8.922 % |
| Maximum: | 4.341 ppb | Number of determinations: | 17 |

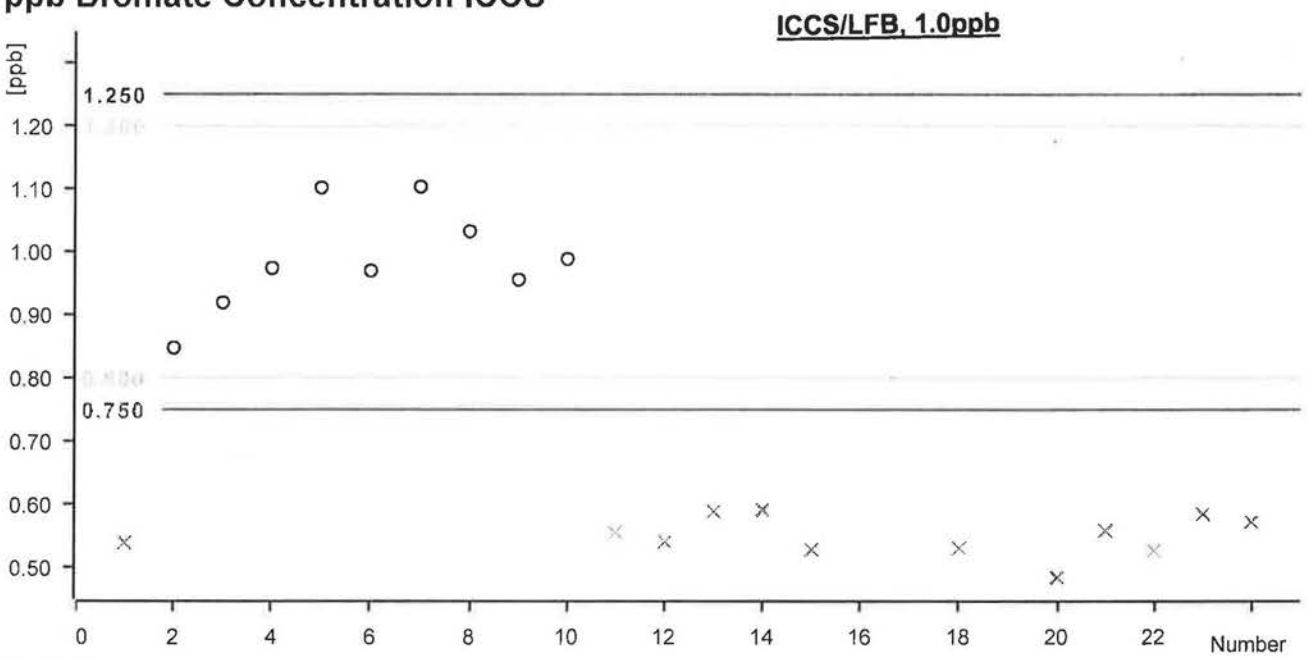
| | Date | Number | Ident | Sample type | Method | Bromate 4 PPB concentration | Statistics |
|---|---|---|---|---|---|---|---|
| 1 | 2014-03-06 16:22:43 UTC-5 | 1 | ECCS/CCCS | Sample | 02192014 300.1 | 4.145 ppb | on |
| 2 | 2014-03-10 15:55:20 UTC-4 | 2 | ECCS/CCCS | Sample | 02192014 300.1 | 4.232 ppb | on |
| 3 | 2014-03-10 16:33:03 UTC-4 | 3 | ECCS/CCCS | Sample | 02192014 300.1 | 4.059 ppb | on |
| 4 | 2014-03-11 18:32:15 UTC-4 | 4 | ECCS/CCCS | Sample | 02192014 300.1 | 4.341 ppb | on |
| 5 | 2014-03-14 00:39:13 UTC-4 | 5 | ECCS/CCCS | Sample | 03122014 300.1 | [illegible] ppb | on |
| 6 | 2014-03-15 06:39:43 UTC-4 | 6 | ECCS/CCCS | Sample | 03142014 300.1 | 3.619 ppb | on |
| 7 | 2014-03-17 17:20:45 UTC-4 | 7 | ECCS/CCCS | Sample | 03142014 300.1 | 3.926 ppb | on |
| 8 | 2014-03-18 17:52:06 UTC-4 | 8 | ECCS/CCCS | Sample | 03142014 300.1 | 4.026 ppb | on |
| 9 | 2014-03-19 18:24:44 UTC-4 | 9 | ECCS/CCCS | Sample | 03142014 300.1 | 4.026 ppb | on |
| 10 | 2014-03-20 19:10:27 UTC-4 | 10 | ECCS/CCCS | Sample | 03142014 300.1 | 4.247 ppb | on |
| 11 | 2014-03-21 16:36:23 UTC-4 | 11 | ECCS/CCCS | Sample | 03142014 300.1 | 4.135 ppb | on |
| 12 | 2014-03-24 16:29:22 UTC-4 | 12 | ECCS/CCCS | Sample | 03142014 300.1 | 4.006 ppb | on |
| 13 | 2014-03-25 16:07:50 UTC-4 | 13 | ECCS/CCCS | Sample | 03142014 300.1 | 3.521 ppb | on |
| 14 | 2014-03-26 18:03:06 UTC-4 | 14 | ECCS/CCCS | Sample | 03142014 300.1 | 3.987 ppb | on |
| 15 | 2014-03-27 19:49:05 UTC-4 | 15 | ECCS/CCCS | Sample | 03272014 300.0 | 3.475 ppb | on |
| 16 | 2014-03-28 16:19:20 UTC-4 | 16 | ECCS/CCCS | Sample | 03272014 300.1 | [illegible] ppb | on |
| 17 | 2014-03-31 16:22:19 UTC-4 | 17 | ECCS/CCCS | Sample | 03272014 300.1 | 3.980 ppb | on |

# Control chart

SEOP

## Comment

## ppb Bromate Concentration ICCS




## Statistics

| | | | |
|---|---|---|---|
| Mean value: | 0.988 ppb | Absolute standard deviation: | 0.082 ppb |
| Minimum: | 0.847 ppb | Relative standard deviation: | 8.338 % |
| Maximum: | 1.103 ppb | Number of determinations: | 9 |

| | Date | Number | Ident | Sample type | Method | ppb Bromate Concentration ICCS | Statistics |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | 2014-03-03 08:23:36 UTC-5 | 2 | ICCS/LFB | Sample | 02192014 300.1 | 0.847 ppb | on |
| 3 | 2014-03-04 09:08:56 UTC-5 | 3 | ICCS/LFB | Sample | 02192014 300.1 | 0.919 ppb | on |
| 4 | 2014-03-04 09:46:44 UTC-5 | 4 | ICCS/LFB | Sample | 02192014 300.1 | 0.974 ppb | on |
| 5 | 2014-03-05 08:11:27 UTC-5 | 5 | ICCS/LFB | Sample | 02192014 300.1 | 1.102 ppb | on |
| 6 | 2014-03-05 08:49:10 UTC-5 | 6 | ICCS/LFB | Sample | 02192014 300.1 | 0.970 ppb | on |
| 7 | 2014-03-06 08:35:34 UTC-5 | 7 | ICCS/LFB | Sample | 02192014 300.1 | 1.103 ppb | on |
| 8 | 2014-03-06 09:13:18 UTC-5 | 8 | ICCS/LFB | Sample | 02192014 300.1 | 1.032 ppb | on |
| 9 | 2014-03-07 08:27:56 UTC-5 | 9 | ICCS/LFB | Sample | 02192014 300.1 | 0.955 ppb | on |
| 10 | 2014-03-07 09:05:39 UTC-5 | 10 | ICCS/LFB | Sample | 02192014 300.1 | 0.988 ppb | on |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
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| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | | | | | | | |
| 22 | | | | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |

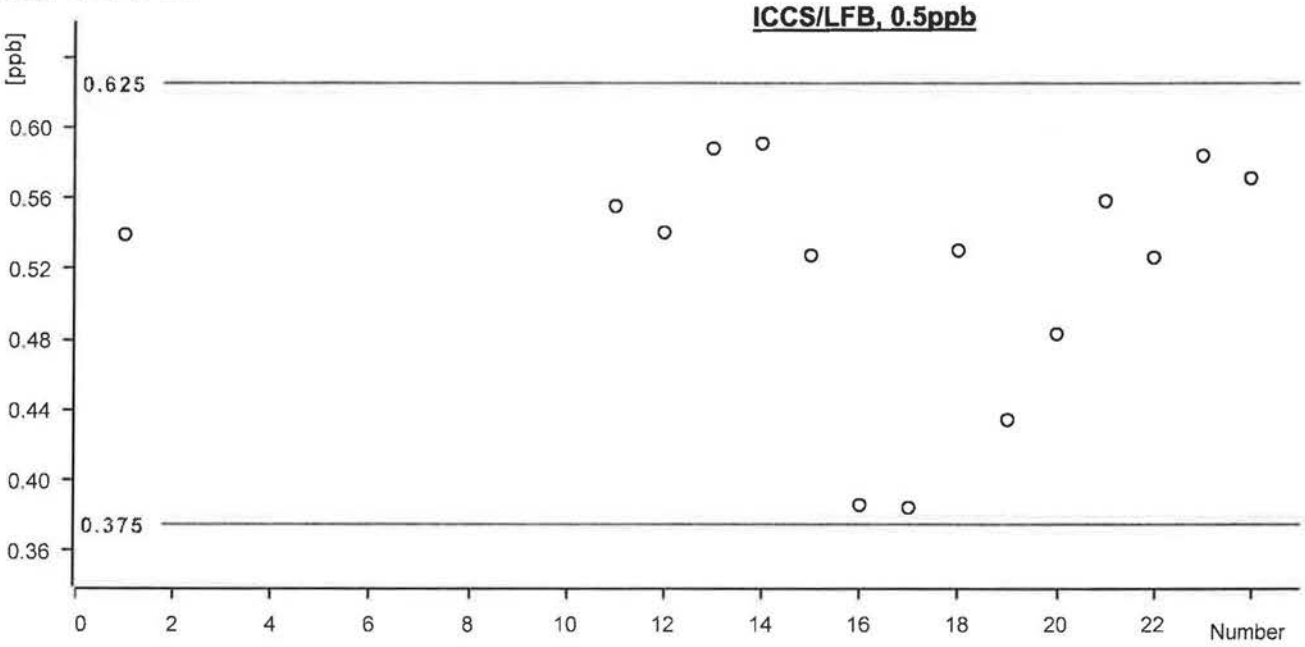
- 0.5 ppb STDS

# Control chart

SEOP

## Comment

## 0.5PPB STD




## Statistics

| | | | |
|---|---|---|---|
| Mean value: | 0.520 ppb | Absolute standard deviation: | 0.068 ppb |
| Minimum: | 0.384 ppb | Relative standard deviation: | 13.117 % |
| Maximum: | 0.591 ppb | Number of determinations: | 15 |

| | Date | Number | Ident | Sample type | Method | 0.5PPB STD | Statistics |
|---|---|---|---|---|---|---|---|
| 1 | 2014-02-26 08:28:50 UTC-5 | 1 | ICCS/LFB | Sample | 02192014 300.1 | 0.539 ppb | on |
| 2 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 3 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 4 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 5 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 6 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 7 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 8 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 9 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 11 | 2014-03-10 09:16:30 UTC-4 | 11 | ICCS/LFB | Sample | 02192014 300.1 | 0.556 ppb | on |
| 12 | 2014-03-10 10:15:53 UTC-4 | 12 | ICCS/LFB | Sample | 02192014 300.1 | 0.541 ppb | on |
| 13 | 2014-03-11 10:49:39 UTC-4 | 13 | ICCS/LFB | Sample | 02192014 300.1 | 0.588 ppb | on |
| 14 | 2014-03-11 11:27:23 UTC-4 | 14 | ICCS/LFB | Sample | 02192014 300.1 | 0.591 ppb | on |
| 15 | 2014-03-14 16:27:22 UTC-4 | 15 | ICCS/LFB | Sample | 03142014 300.1 | 0.528 ppb | on |
| 16 | 2014-03-17 09:46:14 UTC-4 | 16 | ICCS/LFB | Sample | 03142014 300.1 | 0.386 ppb | on |
| 17 | 2014-03-17 10:57:02 UTC-4 | 17 | ICCS/LFB | Sample | 03142014 300.1 | 0.384 ppb | on |
| 18 | 2014-03-18 08:11:18 UTC-4 | 18 | ICCS/LFB | Sample | 03142014 300.1 | 0.531 ppb | on |
| 19 | 2014-03-18 08:50:02 UTC-4 | 19 | ICCS/LFB | Sample | 03142014 300.1 | 0.434 ppb | on |
| 20 | 2014-03-19 08:25:46 UTC-4 | 20 | ICCS/LFB | Sample | 03142014 300.1 | 0.483 ppb | on |
| 21 | 2014-03-20 11:25:46 UTC-4 | 21 | ICCS/LFB | Sample | 03142014 300.1 | 0.558 ppb | on |
| 22 | 2014-03-21 08:51:35 UTC-4 | 22 | ICCS/LFB | Sample | 03142014 300.1 | 0.527 ppb | on |

1ppb stds

# Control chart

SEP

| | Date | Number | Ident | Sample type | Method | 0.5PPB STD | Statistics |
|---|---|---|---|---|---|---|---|
| 23 | 2014-03-28 08:34:31 UTC-4 | 23 | ICCS/LFB | Sample | 03272014 300.1 | 0.584 ppb | on |
| 24 | 2014-03-31 08:37:40 UTC-4 | 24 | ICCS/LFB | Sample | 03272014 300.1 | 0.571 ppb | on |