



Pall Corporation

# Sample Analysis Report

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

October, 2011

Analyst Initials: SEOP  
Date: 11-17-11

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
<b>Extraction Wells</b>							
<b>C3</b>							
DOLPH-10-03-11-08:24-1	61	1.0					
TW-10-10-03-11-09:00-1	597	1.0					
TW-20-10-03-11-09:27-1	1059	1.0					
<b>D2</b>							
LB-1-10-03-11-09:30-1	536	1.0					
LB-3-10-03-11-09:37-1	882	1.0					
TW-21-10-03-11-10:15-1	144	1.0					
TW-5-10-03-11-09:59-1	774	1.0					
TW-9-10-03-11-09:03-1	835	1.0					
<b>E</b>							
TW-11-10-03-11-10:01-1	186	1.0					
TW-18-10-03-11-08:28-1	312	1.0					
<b>Marshy</b>							
PW-1-10-03-11-08:26-1	818	1.0					
<b>Not Applicable</b>							
SW-COMB-10-03-11-08:22-1	421	1.0					
<b>SW</b>							
TW-22-10-03-11-09:49-1	627	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-4-10-25-11-10:35-1	32	1.0					
TW-8-10-03-11-09:51-1	301	1.0					
<b>Monitoring Wells</b>							
<b>C2</b>							
MW-25s-10-26-11-11:00-1	474	1.0					
<b>C3</b>							
MW-1-10-26-11-11:25-1	1538	1.0					
MW-105s-10-26-11-14:30-1	652	1.0					
MW-11i-10-18-11-12:15-1	6	1.0					
MW-18d-10-21-11-11:50-1	167	1.0					
MW-20-10-27-11-11:10-1	nd	1.0					
MW-22-10-26-11-10:40-1	1919	1.0					
MW-32-10-21-11-11:25-1	12	1.0					
MW-34s-10-18-11-10:40-1	nd	1.0					
MW-35-10-18-11-11:50-1	11	0					
MW-39s-10-27-11-10:20-1	19	1.0					
MW-75-10-25-11-13:05-1	25	1.0					
<b>D0</b>							
A2 Cleaning Supply-10-07-11-11:45-1	56	1.0					
MW-53d-10-06-11-13:10-1	2	1.0					
MW-53i-10-06-11-13:55-1	42	1.0					
MW-53s-10-06-11-12:25-1	nd	1.0					
MW-93-10-06-11-11:55-1	5	1.0					
<b>D2</b>							
3365 Jackson Rd-10-11-11-13:20-1	249	1.0					
MW-107-10-31-11-13:30-1	62	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-113-10-31-11-14:20-1	42	1.0					
MW-117-10-17-11-14:40-1	nd	1.0					
MW-11d-10-18-11-12:35-1	102	1.0					
MW-120s-10-13-11-12:55-1	nd	1.0					
MW-121s-10-13-11-11:45-1	nd	1.0					
MW-129i-10-31-11-11:10-1	nd	1.0					
MW-129s-10-31-11-10:20-1	nd	1.0					
MW-131s-10-27-11-11:45-1	nd	1.0					
MW-133i-10-06-11-10:10-1	1	1.0					
MW-133s-10-06-11-09:30-1	nd	1.0					
MW-134i-10-28-11-14:15-1	6	1.0					
MW-134s-10-28-11-14:35-1	8	1.0					
MW-17-10-05-11-11:00-1	415	1.0					
MW-30i-10-11-11-10:45-1	nd	1.0					
MW-34d-10-18-11-10:25-1	nd	1.0					
MW-38d-10-18-11-09:50-1	57	1.0					
MW-39d-10-27-11-10:45-1	193	1.0					
MW-47d-10-27-11-14:15-1	nd	1.0					
MW-47s-10-27-11-13:50-1	nd	1.0					
MW-92-10-05-11-14:05-1	16	1.0					
MW-94s-10-12-11-14:10-1	963	1.0					
MW-KD-1d-10-31-11-12:55-1	88	1.0					
MW-KD-1s-10-31-11-12:30-1	29	1.0					
<b>E</b>							
MW-100-10-20-11-12:35-1	800	1.0					
MW-101-10-27-11-14:50-1	323	1.0					
MW-104-10-19-11-12:25-1	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
MW-105d-10-26-11-14:20-1	481	1.0					
MW-108d-10-19-11-14:40-1	2286	1.0					
MW-108s-10-19-11-13:55-1	1224	1.0					
MW-110-10-17-11-14:15-1	28	1.0					
MW-112d-10-28-11-12:10-1	nd	1.0					
MW-112i-10-28-11-11:20-1	4	1.0					
MW-112s-10-28-11-10:40-1	nd	1.0					
MW-115-10-05-11-13:20-1	580	1.0					
MW-116-10-05-11-12:40-1	606	1.0					
MW-119-10-17-11-12:15-1	299	1.0					
MW-120d-10-13-11-13:50-1	nd	1.0					
MW-121d-10-13-11-12:20-1	nd	1.0					
MW-129d-10-31-11-11:05-1	nd	1.0					
MW-131d-10-27-11-12:40-1	nd	1.0					
MW-133d-10-06-11-11:00-1	2	1.0					
MW-134d-10-28-11-13:40-1	4	1.0					
MW-30d-10-11-11-11:50-1	1037	1.0					
MW-64-10-25-11-14:30-1	43	1.0					
MW-65d-10-24-11-12:10-1	28	1.0					
MW-65i-10-24-11-10:10-1	1	1.0					
MW-65s-10-24-11-10:50-1	19	1.0					
MW-66-10-18-11-11:35-1	2	1.0					
MW-68-10-24-11-13:20-1	nd	1.0					
MW-72d-10-05-11-10:20-1	2713	1.0					
MW-72s-10-05-11-09:40-1	11	1.0					
MW-76d-10-07-11-13:10-1	3	1.0					
MW-76i-10-07-11-13:55-1	31	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-76s-10-07-11-14:15-1	155	1.0					
MW-79d-10-14-11-11:50-1	nd	1.0					
MW-79s-10-14-11-12:30-1	387	1.0					
MW-81-10-19-11-11:40-	428	1.0					
MW-82s-10-19-11-12:55-1	144	1.0					
MW-83s-10-05-11-12:05-1	396	1.0					
MW-84d-10-12-11-10:15-1	nd	1.0					
MW-84s-10-12-11-10:45-1	844	1.0					
MW-85-10-17-11-13:05-1	2061	1.0					
MW-87d-10-14-11-13:10-1	630	1.0					
MW-87s-10-14-11-13:25-1	1360	1.0					
MW-88-10-17-11-11:30-1	249	1.0					
MW-90-10-17-11-13:40-1	35	1.0					
MW-94d-10-12-11-13:55-1	1	1.0					
MW-95-10-13-11-10:50-1	49	1.0					
MW-96-10-13-11-09:55-1	122	1.0					
TW-15-10-20-11-14:40-1	183	1.0					
<b>Marshy</b>							
NMW-1s-10-18-11-14:05-1	1672	1.0					
NMW-2s-10-18-11-13:50-1	2450	1.0					
<b>SH</b>							
MW-5d-10-26-11-12:00-1	41889	1.0					
<b>SW</b>							
MW-10d-10-24-11-14:45-1	567	1.0					
MW-45d-10-24-11-14:20-1	249	1.0					
MW-45s-10-24-11-14:05-1	7	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-46-10-25-11-11:30-1	278	1.0					
MW-48-10-24-11-13:45-1	101	1.0					
MW-49-10-25-11-11:00-1	nd	1.0					
MW-50-10-25-11-11:55-1	644	1.0					
MW-52s-10-25-11-12:30-1	536	1.0					
MW-57-10-25-11-13:25-1	nd	1.0					

## Surface Water

### Not Applicable

HC/HR-10-03-11-1			nd	2			
HC/HR-10-04-11-10:00-1			nd	2			
HC/HR-10-05-11-08:20-1			nd	2.0			
HC/HR-10-06-11-09:35-1			nd	2.0			
HC/HR-10-07-11-1			nd	2			
HC/HR-10-11-11-08:50-1			nd	2.0			
HC/HR-10-12-11-08:50-1			nd	2.0			
HC/HR-10-13-11-08:10-1			nd	2.0			
HC/HR-10-14-11-08:25-1			nd	2.0			
HC/HR-10-17-11-09:20-1			nd	2.0			
HC/HR-10-18-11-08:35-1			nd	2.0			
HC/HR-10-19-11-08:10-1			nd	2.0			
HC/HR-10-20-11-08:40-1			nd	2.0			
HC/HR-10-21-11-08:35-1			nd	2.0			
HC/HR-10-24-11-08:25-1			nd	2.0			
HC/HR-10-25-11-08:30-1			nd	2.0			
HC/HR-10-26-11-08:25-1			nd	2.0			
HC/HR-10-27-11-08:55-1			nd	2.0			
HC/HR-10-28-11-08:35-1			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
HC/HR-10-31-11-08:55-1			nd	2.0			
<b>Treatment System</b>							
OUTFALL-10-02-11-9			nd	5			
OUTFALL-10-02-11-1	4	1.0					
OUTFALL-10-03-11-9			nd	5			
OUTFALL-10-03-11-1	4	1.0					
OUTFALL-10-04-11-4			7	5.0			
OUTFALL-10-04-11-1	4	1.0					
OUTFALL-10-05-11-4			8	5.0			
OUTFALL-10-05-11-1	4	1.0					
OUTFALL-10-06-11-4			7	5.0			
OUTFALL-10-06-11-1	4	1.0					
OUTFALL-10-09-11-1			7	5.0			
OUTFALL-10-09-11-2	4	1.0					
OUTFALL-10-10-11-4			6	5.0			
OUTFALL-10-10-11-1	4	1.0					
OUTFALL-10-11-11-1			7	5.0			
OUTFALL-10-11-11-2	4	1.0					
OUTFALL-10-12-11-4			7	5.0			
OUTFALL-10-12-11-1	4	1.0					
OUTFALL-10-13-11-4			7	5.0			
OUTFALL-10-13-11-1	4	1.0					
OUTFALL-10-16-11-4			8	5.0			
OUTFALL-10-16-11-1	4	1.0					
OUTFALL-10-17-11-4			8	5.0			
OUTFALL-10-17-11-1	4	1.0					
OUTFALL-10-18-11-1			8	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-10-18-11-2	4	1.0					
OUTFALL-10-19-11-1			8	5.0			
OUTFALL-10-20-11-1			8	5.0			
OUTFALL-10-20-11-4	4	1.0					
OUTFALL-10-23-11-4			8	5.0			
OUTFALL-10-23-11-1	4	1.0					
OUTFALL-10-24-11-2	4	1.0					
OUTFALL-10-24-11-1			8	5			
OUTFALL-10-25-11-4			8	5			
OUTFALL-10-25-11-1	4	1.0					
OUTFALL-10-26-11-4	4	1.0					
OUTFALL-10-26-11-1			6	5			
OUTFALL-10-27-11-1			6	5			
OUTFALL-10-27-11-3	4	1.0					
OUTFALL-10-30-11-1			8	5			
OUTFALL-10-30-11-2	3	1.0					
OUTFALL-10-31-11-4			8	5			
OUTFALL-10-31-11-1	3	1.0					
Red Pond-10-03-11-08:20-1	467	1.0					
Red Pond-10-11-11-09:10-1	456	1.0					
Red Pond-10-17-11-08:20-1	463	1.0					
Red Pond-10-24-11-08:15-1	456	1.0					
Red Pond-10-31-11-08:20-1	458	1.0					



# Control Chart for 10/2011 CVS

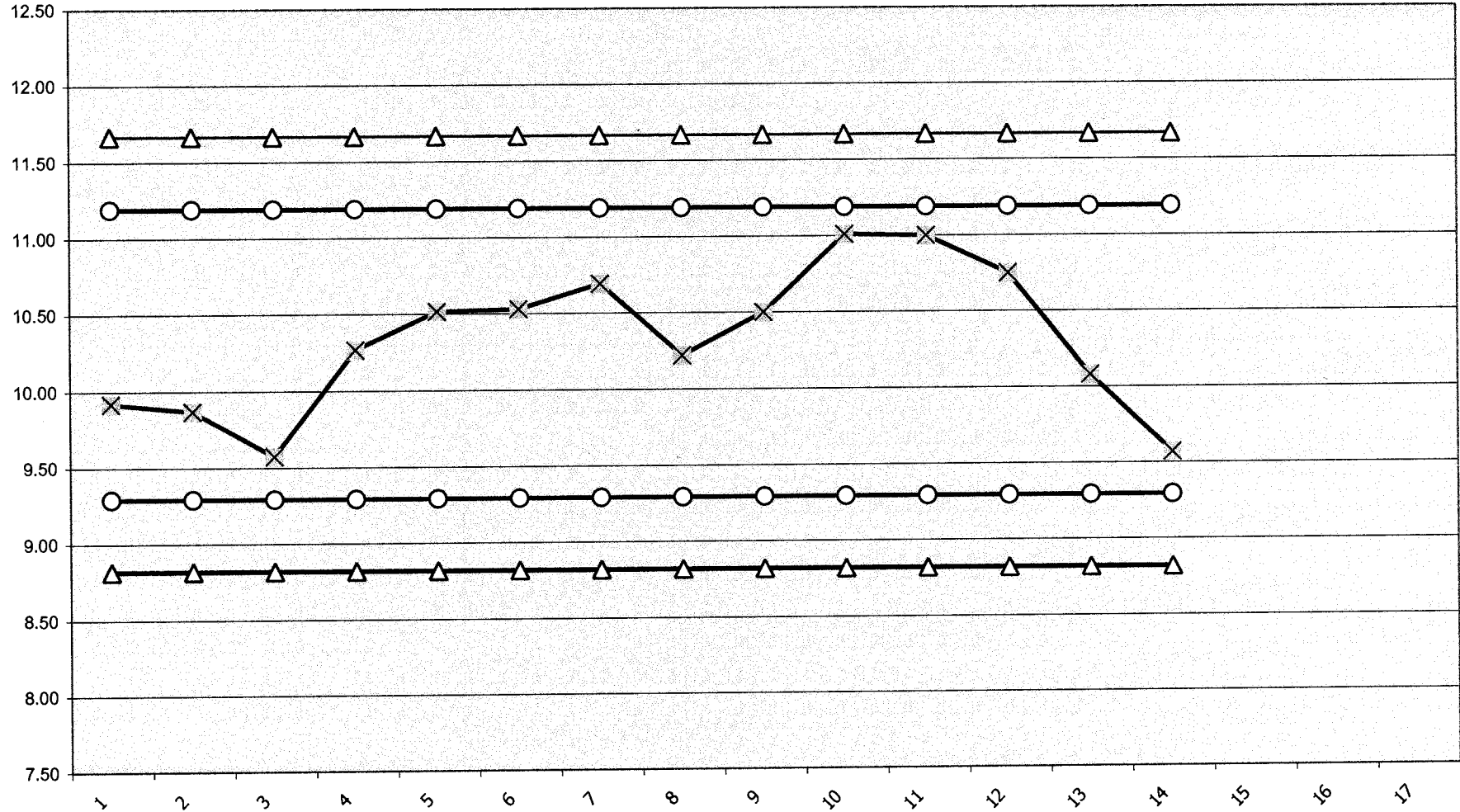
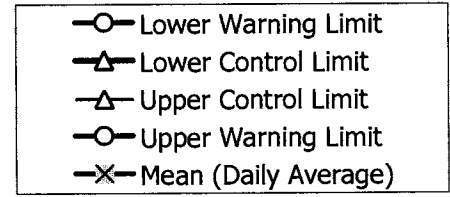
**GC/MS Data:** #2  
**Report Date:** 11/17/2011  
**Chemist:** Susan E.O. Peters  
**Dept:** Environmental  
**Analyte:** 1,4-dioxane  
**Start date:** 10/1/2011  
**End date:** 10/31/2011  
**Desired level:** 100%

Notes: Data from Instrument #1 and #2 for September

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	CVS 5	CVS 6	CVS 7								
10/4/2011	9.94	9.90						9.92	10.24	0.03	0.47	8.82	11.67	9.29	11.19
10/11/2011	9.68	9.93	10.00					9.87	10.24	0.17	0.47	8.82	11.67	9.29	11.19
10/12/2011	9.75	9.55	9.42					9.57	10.24	0.17	0.47	8.82	11.67	9.29	11.19
10/13/2011	9.98	10.73	10.09					10.27	10.24	0.41	0.47	8.82	11.67	9.29	11.19
10/17/2011	10.92	10.11						10.52	10.24	0.57	0.47	8.82	11.67	9.29	11.19
10/18/2011	10.53							10.53	10.24	na	0.47	8.82	11.67	9.29	11.19
10/19/2011	10.79	10.60						10.70	10.24	0.13	0.47	8.82	11.67	9.29	11.19
10/20/2011	10.22							10.22	10.24	na	0.47	8.82	11.67	9.29	11.19
10/21/2011	10.50							10.50	10.24	na	0.47	8.82	11.67	9.29	11.19
10/25/2011	11.01							11.01	10.24	na	0.47	8.82	11.67	9.29	11.19
10/26/2011	11.00							11.00	10.24	na	0.47	8.82	11.67	9.29	11.19
10/27/2011	11.28	10.22						10.75	10.24	0.75	0.47	8.82	11.67	9.29	11.19
10/28/2011	10.08							10.08	10.24	ns	0.47	8.82	11.67	9.29	11.19
10/31/2011	9.57							9.57	10.27		0.47	8.82	11.67	9.29	11.19

Susan E.O. Peters 11/17/11

# 10/2011 CVS with Control Limits



# Control Chart for 10/2011 LFB

**GC/MS Data:** #2  
**Report Date:** 11/17/2011  
**Chemist:** Susan E.O. Peters  
**Dept:** Environmental  
**Analyte:** 1,4-dioxane  
**Start date:** 10/1/2011  
**End date:** 10/31/2011  
**Desired level:** 100%

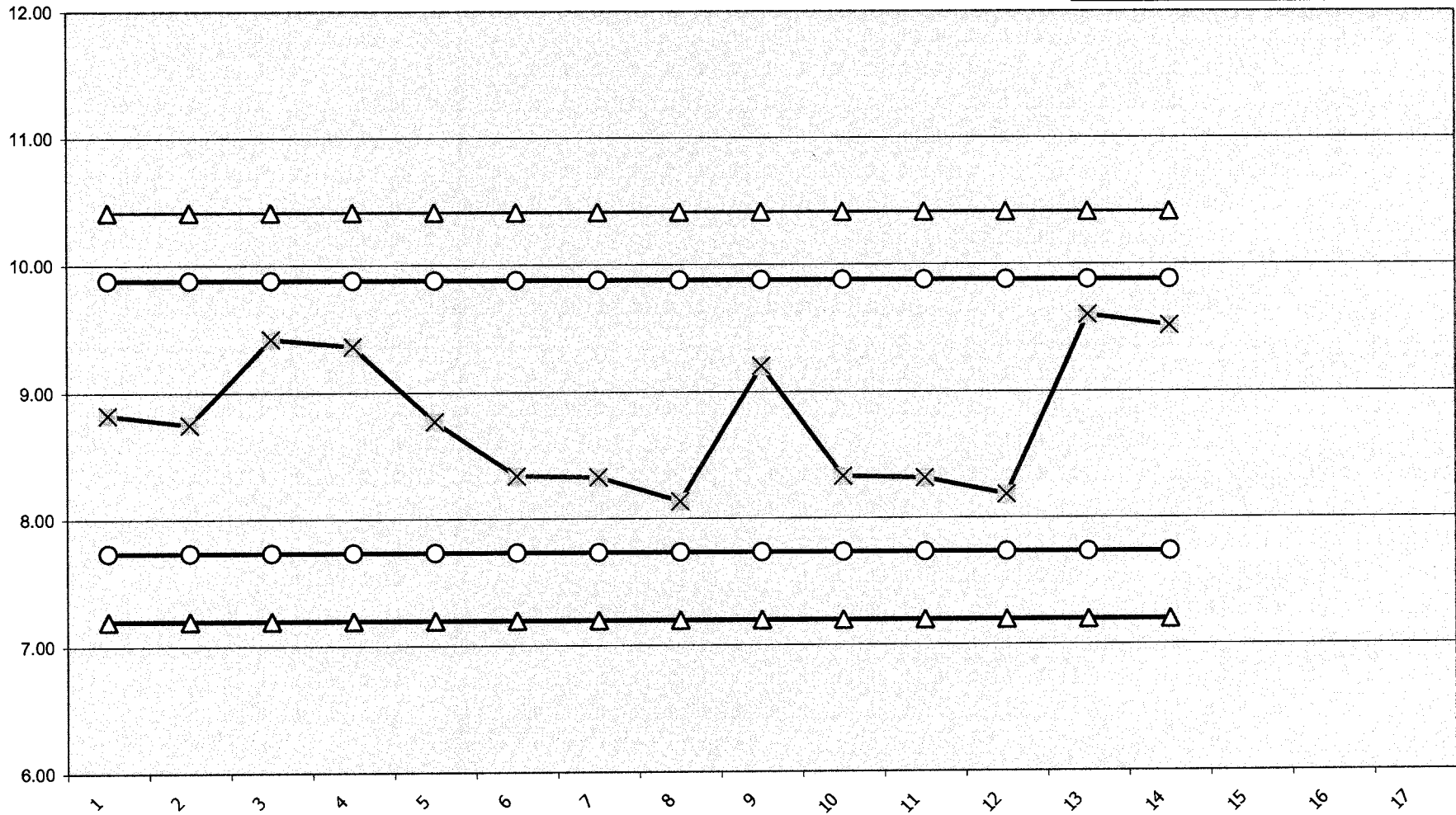
Notes:

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								
10/4/2011	8.27	8.53	9.83	8.74	8.76			8.83	8.81	0.60	0.54	7.20	10.41	7.73	9.88
10/11/2011	8.91	9.09	8.64	8.84	8.45	8.70	8.61	8.75	8.81	0.21	0.54	7.20	10.41	7.73	9.88
10/12/2011	9.58	9.65	9.33	8.67	9.61	9.60	9.50	9.42	8.81	0.35	0.54	7.20	10.41	7.73	9.88
10/13/2011	9.01	9.38	9.20	9.65	9.88	8.83	9.59	9.36	8.81	0.37	0.54	7.20	10.41	7.73	9.88
10/17/2011	9.79	8.42	8.72	8.19	8.73			8.77	8.81	0.61	0.54	7.20	10.41	7.73	9.88
10/18/2011	8.17	8.41	8.67	8.10				8.34	8.81	0.26	0.54	7.20	10.41	7.73	9.88
10/19/2011	8.44	8.10	8.19	8.65	8.26			8.33	8.81	0.22	0.54	7.20	10.41	7.73	9.88
10/20/2011	8.24	8.03						8.14	8.81	0.15	0.54	7.20	10.41	7.73	9.88
10/21/2011	8.23	10.18						9.21	8.81	1.38	0.54	7.20	10.41	7.73	9.88
10/25/2011	8.43	8.23						8.33	8.81	0.14	0.54	7.20	10.41	7.73	9.88
10/26/2011	9.00	8.17	8.01	8.02	8.37			8.31	8.81	0.41	0.54	7.20	10.41	7.73	9.88
10/27/2011	8.22	8.47	8.01	8.03				8.18	8.81	0.21	0.54	7.20	10.41	7.73	9.88
10/28/2011	9.71	9.49						9.60	8.81	0.16	0.54	7.20	10.41	7.73	9.88
10/31/2011	9.78	9.25						9.52	8.81	0.37	0.54	7.20	10.41	7.73	9.88

Susan E.O. Peters 11/17/11

# 10/2011 LFB with Control Limits

- Lower Warning Limit
- ▲ Lower Control Limit
- △ Upper Control Limit
- Upper Warning Limit
- × Mean (Daily Average)



# Control Chart for 10/2011 MS/MSD %Recoveries

**GC/MS Data:** #2  
**Report Date:** 11/17/2011  
**Chemist:** Susan E.O. Peters  
**Dept:** Environmental  
**Analyte:** 1,4-dioxane  
**Start date:** 10/1/2011  
**End date:** 10/31/2011  
**Desired level:** 100%

**Notes: Data from Instrument #2 for October**

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	Mean RPD (Individual Data)
	MS 1	MSD 1	MS 2	MSD 2	RPD 1	RPD 2									
10/4/2011	112	111			0.32		111.50	97.67	0.71	5.41	81.45	113.88	86.86	108.48	3.10
10/11/2011	104	104	97.00	91.00	0.64	4.20	99.00	97.67	6.27	5.41	81.45	113.88	86.86	108.48	1.59
10/12/2011	83	92	91.00	97.00	6.90	4.40	90.75	97.67	5.80	5.41	81.45	113.88	86.86	108.48	1.59
10/13/2011	97	95	92	94	1.40	1.30	94.50	97.67	2.08	5.41	81.45	113.88	86.86	108.48	1.59
10/17/2011	101	96	101	100	3.60	0.42	99.50	97.67	2.38	5.41	81.45	113.88	86.86	108.48	1.59
10/18/2011	102	100			1.40		101.00	97.67	1.41	5.41	81.45	113.88	86.86	108.48	1.59
10/19/2011	105	91	95	108	10.50	9.20	99.75	97.67	8.06	5.41	81.45	113.88	86.86	108.48	1.59
10/20/2011	98	100			1.90		99.00	97.67	1.41	5.41	81.45	113.88	86.86	108.48	1.59
10/21/2011	104	101			2.50		102.50	97.67	2.12	5.41	81.45	113.88	86.86	108.48	1.59
10/25/2011	96	95			0.84		95.50	97.67	0.71	5.41	81.45	113.88	86.86	108.48	1.59
10/27/2011	91	98			5.20		94.50	97.67	4.95	5.41	81.45	113.88	86.86	108.48	1.59
10/28/2011	91	92			0.47		91.50	97.67	0.71	5.41	81.45	113.88	86.86	108.48	1.59
10/31/2011	96	95			0.69		95.50	97.67	0.71	5.41	81.45	113.88	86.86	108.48	1.59

*Susan E.O. Peters 11/17/11*

# 10/2011 MS/MSD with Control Limits

- Lower Warning Limit
- △ Lower Control Limit
- △ Upper Control Limit
- Upper Warning Limit
- × Mean (Daily Average)

