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

Sample Analysis Report

June, 2011

Analyst Initials: F.F.
Date: 7-28-11

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
Extraction Wells							
C3							
DOLPH-06-06-11-08:44-1	65	1.0					
TW-10-06-06-11-13:14-1	675	1.0					
TW-20-06-06-11-13:06-1	1405	1.0					
D2							
LB-1-06-06-11-09:57-1	246	1.0					
LB-3-06-06-11-10:00-1	463	1.0					
TW-21-06-06-11-10:15-1	190	1.0					
TW-5-06-06-11-10:27-1	452	1.0					
TW-9-06-06-11-13:19-1	978	1.0					
E							
TW-11-06-06-11-10:35-1	219	1.0					
TW-18-06-06-11-08:46-1	325	1.0					
Marshy							
PW-1-06-06-11-08:48-1	949	1.0					
Not Applicable							
SW-COMB-06-06-11-08:42-1	482	1.0					
SW							
TW-22-06-06-11-13:27-1	658	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-8-06-06-11-14:20-1	489	1.0					
Monitoring Wells							
D0							
A2 Cleaning Supply-06-02-11-13:00-1	97	1.0					
E							
MW-100-06-02-11-14:10-1	754	1.0					
MW-115-06-01-11-14:45-1	734	1.0					
MW-79s-06-01-11-14:30-1	403	1.0					
MW-85-06-01-11-11:55-1	2336	1.0					
MW-87d-06-01-11-10:20-1	595	1.0					
MW-87s-06-01-11-09:50-1	770	1.0					
MW-88-06-01-11-11:10-1	316	1.0					
TW-15-06-02-11-11:50-1	197	1.0					
Surface Water							
Not Applicable							
HC/HR-06-01-11-08:10-1			nd	2.0			
HC/HR-06-02-11-07:45-1			nd	2.0			
HC/HR-06-03-11-08:30-1			nd	2.0			
HC/HR-06-06-11-09:30-1			nd	2.0			
HC/HR-06-07-11-08:18-1			nd	2.0			
HC/HR-06-08-11-08:40-1			nd	2.0			
HC/HR-06-09-11-07:10-1			nd	2.0			
HC/HR-06-10-11-08:15-1			nd	2.0			
HC/HR-06-13-11-08:00-1			nd	2.0			
HC/HR-06-14-11-07:45-1			nd	2.0			
HC/HR-06-15-11-08:10-1			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-06-16-11-08:20-1			nd	2.0			
HC/HR-06-17-11-08:15-1			nd	2.0			
HC/HR-06-20-11-08:25-1			nd	2.0			
HC/HR-06-21-11-08:15-1			nd	2.0			
HC/HR-06-22-11-08:15-1			nd	2.0			
HC/HR-06-23-11-09:05-1			nd	2.0			
HC/HR-06-24-11-08:45-1			nd	2.0			
HC/HR-06-27-11-08:10-1			nd	2.0			
HC/HR-06-28-11-08:25-1			nd	2.0			
HC/HR-06-29-11-08:20-1			nd	2.0			
HC/HR-06-30-11-08:15-1			nd	2.0			
Treatment System							
OUTFALL-06-01-11-1	5	1.0					
OUTFALL-06-01-11-			5	5.0			
OUTFALL-06-02-11-1	5	1.0					
OUTFALL-06-02-11-			5	5.0			
OUTFALL-06-05-11-1	6	1.0					
OUTFALL-06-05-11-			nd	5.0			
OUTFALL-06-06-11-1	5	1.0					
OUTFALL-06-06-11-			nd	5.0			
OUTFALL-06-07-11-1	5	1.0					
OUTFALL-06-07-11-			nd	5.0			
OUTFALL-06-08-11-1	5	1.0					
OUTFALL-06-08-11--			5	5.0			
OUTFALL-06-09-11-1	5	1.0					
OUTFALL-06-09-11--			5	5.0			
OUTFALL-06-12-11-1	5	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-06-12-11--			5	5.0			
OUTFALL-06-13-11-4	5	1.0					
OUTFALL-06-13-11--			5	5.0			
OUTFALL-06-14-11-1	5	1.0					
OUTFALL-06-14-11-			nd	5.0			
OUTFALL-06-15-11-1	5	1.0					
OUTFALL-06-15-11-			nd	5.0			
OUTFALL-06-16-11-1	4	1.0					
OUTFALL-06-16-11			nd	5.0			
OUTFALL-06-19-11-1	4	1.0					
OUTFALL-06-19-11			nd	5.0			
OUTFALL-06-20-11-1	4	1.0					
OUTFALL-06-20-11-			nd	5.0			
OUTFALL-06-21-11-2	7	1.0					
OUTFALL-06-21-11			nd	5.0			
OUTFALL-06-22-11-1	6	1.0					
OUTFALL-06-22-11-			nd	5.0			
OUTFALL-06-23-11-1	7	1.0					
OUTFALL-06-23-11-			nd	5.0			
OUTFALL-06-26-11-1	4	1.0					
OUTFALL-06-26-11-			nd	5.0			
OUTFALL-06-27-11-1	5	1.0					
OUTFALL-06-27-11-			nd	5.0			
OUTFALL-06-28-11-1			nd	5.0			
OUTFALL-06-28-11-3	5	1.0					
OUTFALL-06-29-11-1			nd	5.0			
OUTFALL-06-29-11-3	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-06-30-11-1	8	1.0					
OUTFALL-06-30-11-			nd	5.0			
Red Pond-06-06-11-08:40-1	522	1.0					
Red Pond-06-13-11-08:30-1	536	1.0					
Red Pond-06-20-11-08:00-1	405	1.0					
Red Pond-06-27-11-09:05-1	490	1.0					

Brighton Analytical L.L.C.™
2105 Pless Drive · Brighton, Michigan 48114 · Phone (810) 229-7575 · Fax (810) 229-8650 · E-mail bai-brighton@sbcglobal.net

June 30, 2011

Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

Subject:

Dear Mr. Campbell :

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Enclosed are the results for the samples submitted on 06/28/2011 for the above mentioned project. Duplicate copies can be supplied at your request for a fee of $20.00 per copy.

The invoice for this project will be mailed with copy of report. If you have any questions concerning the invoice or the data, please don't hesitate to contact our office. Please reference Brighton Analytical, L.L.C. project ID 15109 when calling with any questions regarding this project.

Sincerely,
Brighton Analytical, L.L.C.

Brighton Analytical L.L.C.™
Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/27/2011
Submit Date: 6/28/2011
Report Date: 6/30/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15109**
BA Sample ID: **BV04177**

Project Name:
Project Number:
Sample ID: **RP-6-27-11-0945**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**490***	ug/L	50	SW846 8260B	CW	6/29/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 6/30/11

Elevated dl due to sample matrix.

Brighton Analytical L.L.C.™

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/26/2011
Submit Date: 6/28/2011
Report Date: 6/30/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15109**
BA Sample ID: **BV04178**

Project Name:
Project Number:
Sample ID: **Outfall 001-6-26-11**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**4**	ug/L	1	SW846 8260B	CW	6/29/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 6/30/11

Brighton Analytical L.L.C.™
Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/27/2011
Submit Date: 6/28/2011
Report Date: 6/30/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15109**
BA Sample ID: **BV04179**

Project Name:
Project Number:
Sample ID: **Outfall 001-6-27-11**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**5**	ug/L	1	SW846 8260B	CW	6/29/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 6/30/11

Brighton Analytical, L.L.C.™

2105 Pless Drive
Brighton, MI 48114
Phone: 810-229-7575
Fax: 810-229-8650

BA PROJECT #: 15109

ABBREVIATIONS FOR MATRIX
S = Solid
L = Liquid
DW = Drinking H2O
WW = Wastewater
O = Oil
P = Wipe
A = Air (Tedlar Bag)
F = Filter
T = Tube
M = Methanol

COMPANY NAME: Pall Corp

PROJECT NAME:

PROJECT NUMBER:

P. O. NUMBER:

REQUESTED TURNAROUND: (circle one)
Rush: 1 -3 business days (verify with lab & specify date needed)
Expedited: 5 business days
Standard: 10 business days

If RUSH, approved by: _____

Analysis Requested/Method

Brighton ID #	Sample Description	Sampling Time	Sampling Date	Container Type & Quantity: VOA'S (PRES) N	VOA'S (PRES) Y	HDPE UNPRESERVED	HDPE HNO3	HDPE H2SO4	HDPE NAOH	AMBER	GLASS H2SO4	GLASS, NO PRESERVATIVE	MEOH Preserved: (F)ield or (L)ab Preserved	Sample Matrix	FOR DISSOLVED METALS (L) LAB TO FILTER (F) FIELD FILTERED	1-4 DIDXANS
4177	RP-6-27-11-0945			2										L		X
4178	OUTFall001-6-26-11			2												X
4179	OUTFall001-6-27-11			2										↓		X
4)																
5)																
6)																
7)																
8)																
9)																
10)																
11)																

REPORT RESULTS TO:
John Campbell
600 S. Wagner Bldg 4
Ann Arbor MI 48103
Attn:
PHONE:
FAX: 734-368-3090

Sample received within holding time? yes ☐ no ☐
For TCLP ONLY – Federal Limits ☐ Other ☐
Samples intact: yes ☐ no ☐ (if no, see below)
Note samples if not intact:
Headspace/bubbles in VOA'S? yes ☐ no ☐ n/a ☐
Sample containers and COC match? yes ☐ no ☐
Comments:
John_Campbell@Pall.Com
Laurel_Campbell@Pall.Com

Temperature of Samples °C: 4 b

Please fill out the Chain of Custody completely and review. Incorrect or incomplete information will result in a "hold" on all analyses.

Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:
1	John Campbell		6/28/11	1200	3				
2					4				

Brighton Analytical L.L.C.

BRIGHTON ANALYTICAL, LLC

QUALITY ASSURANCE/QUALITY CONTROL

GC/MS
VOLATILE METHOD 8260B-SIM
REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: June 29, 2011 Spike Std. ID: 1769.1 Inst./Detec: VOL 3-GC/MS

Laboratory ID: BV04187 Matrix: Water Analyst: CW

SURROGATES	Matrix Spike - Precision *			Matrix Spike - Accuracy			LCS- percent recovery	
	SPK 1	SPK 2	Relative Percent Difference	Spk Conc	% Recovery	Range (%)	LCS	Method Blank
COMPOUNDS								
1,4 Dioxane	8.4	9.1	8.0	10ug/L	88%	70-130	100%	<1

* Matrix spike precision +/-20 Relative Percent Difference.

(ug/L is equivalent to ppb)

Comments: _____

Brighton Analytical L.L.C.™
2105 Pless Drive · Brighton, Michigan 48114 · Phone (810) 229-7575 · Fax (810) 229-8650 · E-mail bai-brighton@sbcglobal.net

July 11, 2011

Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

Subject:

Dear Mr. Campbell :

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Enclosed are the results for the samples submitted on 07/06/2011 for the above mentioned project. Duplicate copies can be supplied at your request for a fee of $20.00 per copy.

The invoice for this project will be mailed with copy of report. If you have any questions concerning the invoice or the data, please don't hesitate to contact our office. Please reference Brighton Analytical, L.L.C. project ID 15226 when calling with any questions regarding this project.

Sincerely,
Brighton Analytical, L.L.C.

Brighton Analytical L.L.C.™

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/21/2011
Submit Date: 7/6/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15226**
BA Sample ID: **BV04551**

Project Name:
Project Number:
Sample ID: **Outfall 001**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	7	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

1,4-Dioxane result qualified due to received past hold time.

Brighton Analytical L.L.C.™

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/22/2011
Submit Date: 7/6/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15226**
BA Sample ID: **BV04552**

Project Name:
Project Number:
Sample ID: **Outfall 001**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**6**	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

1,4-Dioxane result qualified due to received past hold time.

Brighton Analytical L.L.C.™
Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/23/2011
Submit Date: 7/6/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15226**
BA Sample ID: **BV04553**

Project Name:
Project Number:
Sample ID: **Outfall 001**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	7	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

1,4-Dioxane result qualified due to received past hold time.

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 7/3/2011
Submit Date: 7/6/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15226**
BA Sample ID: **BV04554**

Project Name:
Project Number:
Sample ID: **Outfall 001**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	7	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

Brighton Analytical L.L.C.™

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 7/4/2011
Submit Date: 7/6/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15226**
BA Sample ID: **BV04555**

Project Name:
Project Number:
Sample ID: **Outfall 001**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**5**	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

Sample Date: 7/5/2011
Submit Date: 7/6/2011
Report Date: 7/11/2011

BA Report Number: **15226**
BA Sample ID: **BV04556**

Project Name:
Project Number:
Sample ID: **Outfall 001**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**6**	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

Brighton Analytical L.L.C.™

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 7/5/2011
Submit Date: 7/6/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15226**
BA Sample ID: **BV04557**

Project Name:
Project Number:
Sample ID: **RP**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**500***	ug/L	50	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

*Elevated dl due to sample matrix.

Brighton Analytical, L.L.C.™

email: bai-brighton@sbcglobal.net

2105 Pless Drive, Brighton, MI 48114 — Phone: 810-229-7575, FAX: 810-229-8650

BA PROJECT #: 15226

PROJECT NAME: PALL Corp

PROJECT #:

PO #: (PLEASE NOTE IF DIFFERENT BILLING ADDRESS)

Sample Collected By: J.C.

ABBREVIATIONS FOR MATRIX
S = Solid
L = Liquid
DW = Drinking H_2O
O = Oil
P = Wipes
A = Air (Tedlar Bag)
F = Filter
T = Tube M = Misc.

REQUESTED TURNAROUND: (circle one)
Rush: 1 -3 business days (verify with lab & specify date needed)
1 Day =2.5X Cost 2 Day= 2X Cost 3 Day = 1.5X Cost
Standard: 5 business days

If RUSH, approved by: _____

Analysis Requested/Method

Brighton ID #	Sample Description	Sample Coll. Date	Sample Coll. Time	Container/Quantity: VOA'S (PRES) Y N N/A	HDPE UNPRESERVED	HDPE HNO_3	HDPE H_2SO_4	HDPE NAOH	AMBER Preserved?	GLASS, NO PRESERVATIVE	STERILIZED BACTERIA	MEOH Preserved Y N	Sample Matrix: 1,4, Dioxane
1) 4551	outFall001	6-21-11		1									L 1
2) S2	outFall001	6-22-11		2									2
3) S3	outFall001	6-23-11		2									2
4) S4	outFall001	7-3-11		2									2
5) S5	outFall001	7-4-11		2									2
6) S6	outFall001	7-5-11		2									2
7) S7	RP	7-5-11	0930	2									2
8)													
9)													
10)													

BD

PAGE ___ OF ___

COMPANY/MAILING ADDRESS:
Pall Corp Bldg 4
600 S Wagner
Ann Arbor MI 48103

ATTN: John Campbell

PHONE: 734-368-3090

FAX OR EMAIL:

Samples received within hold time? yes no

Temperature of samples °C:

pHs verified in login ? yes no

Headspace/bubbles in VOA's? yes no n/a

Sample containers and COC match? yes no

BILLING ADDRESS (IF REQUIRED):
John_Campbell@Pall.com
Laurel_Beyer@Pall.Com

Drinking H2O: FAX TO LCHD yes no

Chlorinated Water Supply ? yes no
AMT.: _____

MCL failure: yes no

Client notified (date/time/initials):

Special Instructions:

Please fill out the Chain of Custody completely and review. Incorrect or incomplete information will result in a "hold" on all analyses.

Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:
1	J.C		7-6-11	1:45pm	3				
2					4				

Brighton Analytical L.L.C.

BRIGHTON ANALYTICAL, LLC

QUALITY ASSURANCE/QUALITY CONTROL

GC/MS
VOLATILE METHOD 8260B-SIM

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: July 8, 2011 Spike Std. ID: 1769 Inst./Detec: VOL 5-GC/MS

Laboratory ID: BV04557 Matrix: Water Analyst: CW

SURROGATES	Matrix Spike - Precision *			Matrix Spike - Accuracy			LCS- percent recovery	
	SPK 1	STD	Relative Percent Difference	Spk Conc	% Recovery	Range (%)	LCS	Method Blank
COMPOUNDS								
1,4 Dioxane	25.2	28.6	12.6	25ug/L	108%	70-130	88%	<1

* Matrix spike precision +/-20 Relative Percent Difference.

(ug/L is equivalent to ppb)

Comments: _____

Brighton Analytical L.L.C.™
2105 Pless Drive · Brighton, Michigan 48114 · Phone (810) 229-7575 · Fax (810) 229-8650 · E-mail bai-brighton@sbcglobal.net

July 11, 2011

Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

Subject:

Dear Mr. Campbell :

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Enclosed are the results for the samples submitted on 07/01/2011 for the above mentioned project. Duplicate copies can be supplied at your request for a fee of $20.00 per copy.

The invoice for this project will be mailed with copy of report. If you have any questions concerning the invoice or the data, please don't hesitate to contact our office. Please reference Brighton Analytical, L.L.C. project ID 15168 when calling with any questions regarding this project.

Sincerely,
Brighton Analytical, L.L.C.

Brighton Analytical L.L.C.™

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/28/2011
Submit Date: 7/1/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15168**
BA Sample ID: **BV04384**

Project Name:
Project Number:
Sample ID: **Outfall 001**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**5**	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

Brighton Analytical L.L.C.™

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/29/2011
Submit Date: 7/1/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15168**
BA Sample ID: **BV04385**

Project Name:
Project Number:
Sample ID: **Outfall 001**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	7	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

Brighton Analytical L.L.C.™
Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/30/2011
Submit Date: 7/1/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15168**
BA Sample ID: **BV04386**

Project Name:
Project Number:
Sample ID: **Outfall 001**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**8**	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

Brighton Analytical L.L.C.™

Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 6/30/2011
Submit Date: 7/1/2011
Report Date: 7/11/2011

To: Pall Corp.
600 S. Wagner
Bldg. 4
Ann Arbor, MI 48103

BA Report Number: **15168**
BA Sample ID: **BV04387**

Project Name:
Project Number:
Sample ID: **400 Maynard St.**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	**5**	ug/L	1	SW846 8260B	CW	7/8/2011

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

Released by:

Date: 7/11/11

Brighton Analytical, L.L.C.™
email: bai-brighton@sbcglobal.net
2105 Pless Drive, Brighton, MI 48114
Phone: 810-229-7575
FAX: 810-229-8650

BA PROJECT #: 15168

PROJECT NAME: Pall Corp

PROJECT #:

PO #: (PLEASE NOTE IF DIFFERENT BILLING ADDRESS)

Sample Collected By:

ABBREVIATIONS FOR MATRIX
S = Solid
L = Liquid
DW = Drinking H_2O
O = Oil
P = Wipes
A = Air (Tedlar Bag)
F = Filter
T = Tube M = Misc.

REQUESTED TURNAROUND: (circle one)
Rush: 1 -3 business days (verify with lab & specify date needed)
1 Day =2.5X Cost 2 Day= 2X Cost 3 Day = 1.5X Cost
Standard: 5 business days

If RUSH, approved by: _____

Brighton ID #	Sample Description	Sample Coll. Date	Sample Coll. Time	Container/Quantity: VOA'S (PRES Y N N/A)	HDPE UNPRESERVED	HDPE HNO_3	HDPE H_2SO_4	HDPE NAOH	AMBER Preserved?	GLASS, NO PRESERVATIVE	STERILIZED BACTERIA	MEOH Preserved Y N	Sample Matrix	Analysis Requested/Method: 1,4-Dioxane
4384	OUTFall001	6-28-11	—	2									L	X
2) 85	OUTFall001	6-29-11	—	2									L	X
3) 86	OUTFall001	6-30-11	—	2									L	X
4) 87	400 Maynard St	6-30-11	0940	2									L	X
5)														
6)														
7)														
8)														
9)														
10)														

PAGE 1 OF 1

COMPANY/MAILING ADDRESS:
Pall Corp
600 S. Wagner Bldg 4
Ann Arbor MI 48103
ATTN: John Campbell
PHONE: 734-368-3090
FAX OR EMAIL:

Samples received within hold time? yes no
Temperature of samples °C:
pHs verified in login ? yes no
Headspace/bubbles in VOA's? yes no n/a
Sample containers and COC match? yes no

BILLING ADDRESS (IF REQUIRED):
John_Campbell@Pall.Com
Laurel_Beyer@Pall.Com

Drinking H2O: FAX TO LCHD yes no
Chlorinated Water Supply ? yes no AMT: _____
MCL failure: yes no
Client notified (date/time/initials):

Special Instructions:

Please fill out the Chain of Custody completely and review. Incorrect or incomplete information will result in a "hold" on all analyses.

Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:
1	John C		7-1-11	10:30	3				
2				Am.	4				

Brighton Analytical L.L.C.

BRIGHTON ANALYTICAL, LLC

QUALITY ASSURANCE/QUALITY CONTROL

GC/MS
VOLATILE METHOD 8260B-SIM

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: July 8, 2011 Spike Std. ID: 1769 Inst./Detec: VOL 5-GC/MS

Laboratory ID: BV04557 Matrix: Water Analyst: CW

SURROGATES	Matrix Spike - Precision *			Matrix Spike - Accuracy			LCS- percent recovery	
	SPK 1	STD	Relative Percent Difference	Spk Conc	% Recovery	Range (%)	LCS	Method Blank
COMPOUNDS								
1,4 Dioxane	25.2	28.6	12.6	25ug/L	108%	70-130	88%	<1

* Matrix spike precision +/-20 Relative Percent Difference.

(ug/L is equivalent to ppb)

Comments: _____

LABORATORY REPORT

This report contains 17 pages.
(including the cover page)

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

Underwriters Laboratories Inc.
110 S. Hill Street, South Bend, IN 46617-2702 USA
T: 800.332.4345 / F: 574.233.8207 / W: ul.com

: 000001

Laboratory Report

Client: Pall Life Sciences

Attn: John Campbell
600 South Wagner Road
Ann Arbor, MI 48103

Report: 264391
Priority: Standard Written
Status: Final
PWS ID: Not Supplied

Copies to: Laurel Beyer

Sample Information

UL ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
2473856	Outfall 001	317.0	06/16/11 00:00	Client	07/01/11 10:00
2473857	Outfall 001	317.0	06/19/11 00:00	Client	07/01/11 10:00
2473858	Outfall 001	317.0	06/20/11 00:00	Client	07/01/11 10:00
2473859	Outfall 001	317.0	06/21/11 00:00	Client	07/01/11 10:00
2473860	Outfall 001	317.0	06/22/11 00:00	Client	07/01/11 10:00
2473861	Outfall 001	317.0	06/23/11 00:00	Client	07/01/11 10:00
2473862	Outfall 001	317.0	06/26/11 00:00	Client	07/01/11 10:00
2473863	Outfall 001	317.0	06/27/11 00:00	Client	07/01/11 10:00
2473864	Outfall 001	317.0	06/28/11 00:00	Client	07/01/11 10:00
2473865	Outfall 001	317.0	06/29/11 00:00	Client	07/01/11 10:00
2473866	Outfall 001	317.0	06/30/11 00:00	Client	07/01/11 10:00
2473867	HC/HR	317.0	06/17/11 08:15	Client	07/01/11 10:00
2473868	HC/HR	317.0	06/20/11 08:25	Client	07/01/11 10:00
2473869	HC/HR	317.0	06/21/11 08:15	Client	07/01/11 10:00
2473870	HC/HR	317.0	06/22/11 08:15	Client	07/01/11 10:00
2473871	HC/HR	317.0	06/23/11 09:05	Client	07/01/11 10:00
2473872	HC/HR	317.0	06/24/11 08:45	Client	07/01/11 10:00
2473873	HC/HR	317.0	06/27/11 08:10	Client	07/01/11 10:00
2473874	HC/HR	317.0	06/28/11 08:25	Client	07/01/11 10:00
2473875	HC/HR	317.0	06/29/11 08:20	Client	07/01/11 10:00
2473876	HC/HR	317.0	06/30/11 08:15	Client	07/01/11 10:00

Report Summary

Note: Sample containers were provided by the client.

Note: In the Method 317.0 analysis of UL sample 2473856, the bromate recoveries in the MS and MSD (73% and 70% respectively were outside the acceptance limits of 75-125%.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Traci Chlebowski at (574) 233-4777.

Underwriters Laboratories Inc.
110 S. Hill Street, South Bend, IN 46617-2702 USA
T:: 800.332.4345 / F:: 574.233.8207 / W:: ul.com

Authorized Signature | Project Manager (Title) | 7/19/2011 (Date)

Client Name: Pall Life Sciences
Report #: 264391

Client Name: Pall Life Sciences Report #: 264391

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**3.4**	ug/L	---	07/05/11 18:34	2473856

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**3.3**	ug/L	---	07/05/11 19:29	2473857

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**3.6**	ug/L	---	07/05/11 19:48	2473858

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**3.9**	ug/L	---	07/05/11 20:06	2473859

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**3.5**	ug/L	---	07/05/11 20:25	2473860

Client Name: Pall Life Sciences

Report #: 264391

Sampling Point: Outfall 001

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**3.9**	ug/L	---	07/05/11 20:43	2473861

Sampling Point: Outfall 001

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**4.5**	ug/L	---	07/05/11 21:02	2473862

Sampling Point: Outfall 001

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**4.8**	ug/L	---	07/05/11 21:20	2473863

Sampling Point: Outfall 001

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**4.9**	ug/L	---	07/05/11 21:39	2473864

Sampling Point: Outfall 001

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**4.8**	ug/L	---	07/05/11 21:57	2473865

Client Name: Pall Life Sciences Report #: 264391

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**5.0**	ug/L	---	07/05/11 22:34	2473866

Sampling Point: HC/HR PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/05/11 23:30	2473867

Sampling Point: HC/HR PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/05/11 23:48	2473868

Sampling Point: HC/HR PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/06/11 00:07	2473869

Sampling Point: HC/HR PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/06/11 00:25	2473870

Client Name: Pall Life Sciences

Report #: 264391

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/06/11 00:44	2473871

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/06/11 01:02	2473872

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/06/11 01:21	2473873

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/06/11 01:39	2473874

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/06/11 01:58	2473875

Client Name: Pall Life Sciences

Report #: 264391

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/07/11 14:01	2473876

† UL has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The LTB container follows the collection bottles to and from the collection site, but the LTB is not opened at any time during the trip. LTB is not exposed to site conditions or pumping and collection equipment. The LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Matrix Duplicate (LFD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Matrix (LFM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

210508 264391

PALL Pall Corporation

Environmental Laboratory Services
600 South Wagner Rd. Ann Arbor, MI 48103-9019
Phone: (734)-913-6531 * Fax: (734)-913-6103

Chain of Custody Record

Page 1 of 3

Company PALL Corp
Name John Campbell
Street 600 S. Wagner Bldg 4
City Ann Arbor State MI Zip 48103
Phone 734-368-3090 Fax 734-913-6103
Email John-Campbell@PALL.Com

Requested Turnaround: (Standard) 4 business days * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name: John Campbell
Invoice To: Laurel Beyer 734-913-6536
Laurel_Beyer@PALL.Com

RUSH WRITTEN

	Sample Identification or Location (This will appear on the final report)	Sample Date	Sample Time composites	Water Matrix: Drinking	Ground	Waste	Other	Number of Containers	Requested Testing	Preservation: None	4 °C	HCl	HNO_3	H_2SO_4	Other	Lab ID
1	OUTFALL001	6/6/11	:	X				1	Bromate	X	X					263856
2	OUTFALL001	6/9/11	:					1	317		X					857
3	OUTFALL001	6/20/11	:					1			X					858
4	OUTFALL001	6/21/11	:					1			X					859
5	OUTFALL001	6/22/11	:					1			X					860
6	OUTFALL001	6/23/11	:					1			X					861
7	OUTFALL001	6/26/11	:					1			X					862
8	OUTFALL001	6/27/11	:					1			X					863
9	OUTFALL001	6/28/11	:					1			X					864
10	OUTFALL001	6/29/11	:	X				1			X					865
Released by Sampler: John C		Date: 6/30/11	Time: 12:30	Received by: Amaitis										Date: 7/1/11		Time: 10:00
Released by: John C		Date: / /	Time: :	Received by:										Date: / /		Time: :

Within holding times Y N	Containers are intact Y N	Labels and COC agree Y N	Correct volume and container Y N	Ice remaining Y N	Temperature on receipt 8.8 °C

PINK Copy – Sampler

WHITE copy and YELLOW copy – Forward to laboratory with samples.

Client Provided Sample Container

PALL Pall Corporation

Environmental Laboratory Services
600 South Wagner Rd. Ann Arbor, MI 48103-9019
Phone: (734)-913-6531 * Fax: (734)-913-6103

Chain of Custody Record

Page 2 of 3

Company PALL CORP
Name John Campell
Street 600 S. Wagner Bldg 4
City Ann Arbor State MI Zip 48103
Phone 734-368-3090 Fax 734-913-6103
Email John_Campbell@PALL.Com

Requested Turnaround: (Standard) * 4 business days * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name: John Campbell
Invoice To: Laurel Beyer -734-913-6536
Laurel_Beyer@Pall.Com

RUSH WRITTEN

	Sample Identification or Location (This will appear on the final report)	Sample Date	Sample Time	Water Matrix: Drinking	Ground	Waste	Other	Number of Containers	Requested Testing	Preservation: None	4 °C	HCl	HNO_3	H_2SO_4	Other	Lab ID
1	OUTFALL001	6/30/11	—	X				1	Bromate 317	X	X					2473866
2	HC/HR	6/1/11	08:15					1			X					867
3	HC/HR	6/20/11	08:25					1			X					868
4	HC/HR	6/21/11	08:15					1			X					869
5	HC/HR	6/22/11	08:15					1			X					870
6	HC/HR	6/23/11	09:05					1			X					871
7	HC/HR	6/24/11	08:45					1			X					872
8	HC/HR	6/27/11	08:10					1			X					873
9	HC/HR	6/28/11	08:25					1			X					874
10	HC/HR	6/29/11	08:20	X				1	↓	↓	X					875
Released by Sampler: John C		Date: 6/30/11	Time: 12:30	Received by: Amartis										Date: 7/1/11		Time: 10:00
Released by: John C		Date: / /	Time: :	Received by:										Date: / /		Time: :

Within holding times Y N	Containers are intact Y N	Labels and COC agree Y N	Correct volume and container Y N	Ice remaining Y N	Temperature on receipt 8.8 °C

PINK Copy – Sampler

WHITE copy and YELLOW copy – Forward to laboratory with samples.

Client Provided Sample Container

05911

PALL Pall Corporation

Environmental Laboratory Services
600 South Wagner Rd. Ann Arbor, MI 48103-9019
Phone: (734)-913-6531 * Fax: (734)-913-6103

Chain of Custody Record

Company: Pall Corp
Name: John Campbell
Street: 600 S. Wagner
City: Ann Arbor State: MI Zip: 48103
Phone: 734-368-3090 Fax: 734-913-6103
Email: John_Campbell@Pall.Com

Requested Turnaround: (Standard) * 4 business days * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name: John Campbell
Invoice To: Laurel Boyer 734-913-6536
Laurel_Beyer@Pall.Com

RUSH WRITTEN

	Sample Identification or Location (This will appear on the final report)	Sample Date	Sample Time	Water Matrix: Drinking	Ground	Waste	Other	Number of Containers	Requested Testing	Preservation: None	4 °C	HCl	HNO_3	H_2SO_4	Other	Lab ID
1	HC / HR	6/30/11	08:15	X				1		X	X					2473876
2		/ /	:													
3		/ /	:													
4		/ /	:													
5		/ /	:													
6		/ /	:													
7		/ /	:													
8		/ /	:													
9		/ /	:													
10		/ /	:													

Released by Sampler:	Date: / /	Time: :	Received by: Amartis	Date: 7/1/11	Time: 10:00
Released by:	Date: / /	Time: :	Received by:	Date: / /	Time: :

Mailed COC was not Signed at "Relinquished by" by Client

Within holding times Y N	Containers are intact Y N	Labels and COC agree Y N	Correct volume and container Y N	Ice remaining (Y) N	Temperature on receipt 8.8 °C

Client Provided Sample Container

PINK Copy – Sampler

WHITE copy and YELLOW copy – Forward to laboratory with samples.

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 158010 | Instrument: IC BK | Method(s): 317.0
PC File Name: 070511A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 210508 | Receipt Batch: 264391 | Today's Date: 07/19/2011

Client: Pall Life Sciences / John Campbell | Generated By: R. Polite

Sample ID: 2474902 | Type: Initial Calibration Blank
Extracted: N/A | Analyzed: 07/05/2011 14:34 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2474908 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 07/05/2011 16:25 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2474909 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 07/05/2011 16:43 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.8480	97	85-115	Pass

Sample ID: 2474910 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 07/05/2011 17:02 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	1.0140	101	75-125	Pass

Sample ID: 2474911 | Type: Quality Control Sample
Extracted: N/A | Analyzed: 07/05/2011 18:15 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	5.1070	102	85-115	Pass

Sample ID: 2473856 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 18:34 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	3.3520	3.4	ug/L

Sample ID: 2474912 | Type: Matrix Spike of 2473856 | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 18:52 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	7.0140	3.3520	73	75-125	Fail

Sample ID: 2474913 | Type: Matrix Spike Duplicate of 2473856 | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 19:11 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	6.8570	3.3520	70	75-125	Fail

Sample ID: 2473857 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 19:29 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	3.2510	3.3	ug/L

NOTE: The dilution factor is included
in the percent recovery calculation.

Version 2.7.0.0

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 158010 | Instrument: IC BK | Method(s): 317.0
PC File Name: 070511A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 210508 | Receipt Batch: 264391 | Today's Date: 07/19/2011

Client: Pall Life Sciences / John Campbell | Generated By: R. Polite

Sample ID: 2473858 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 19:48 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	3.6480	3.6	ug/L

Sample ID: 2473859 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 20:06 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	3.8620	3.9	ug/L

Sample ID: 2473860 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 20:25 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	3.4580	3.5	ug/L

Sample ID: 2473861 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 20:43 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	3.8610	3.9	ug/L

Sample ID: 2473862 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 21:02 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	4.4940	4.5	ug/L

Sample ID: 2473863 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 21:20 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	4.8410	4.8	ug/L

Sample ID: 2473864 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 21:39 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	4.8640	4.9	ug/L

Sample ID: 2473865 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 21:57 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	4.8380	4.8	ug/L

Sample ID: 2474914 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 07/05/2011 22:16 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	10.2930	103	85-115	Pass

NOTE: The dilution factor is included
in the percent recovery calculation.

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 158010 | Instrument: IC BK | Method(s): 317.0
PC File Name: 070511A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 210508 | Receipt Batch: 264391 | Today's Date: 07/19/2011

Client: Pall Life Sciences / John Campbell | Generated By: R. Polite

Sample ID: 2473866 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 22:34 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	4.9880	5.0	ug/L

Sample ID: 2474915 | Type: Matrix Spike of 2473866 | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 22:53 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	10.1610	4.9880	103	75-125	Pass

Sample ID: 2474916 | Type: Matrix Spike Duplicate of 2473866 | Site: Outfall 001
Extracted: N/A | Analyzed: 07/05/2011 23:11 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	10.2270	4.9880	105	75-125	Pass

Sample ID: 2473867 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/05/2011 23:30 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.2450	< 1.0	ug/L

Sample ID: 2473868 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/05/2011 23:48 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2473869 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/06/2011 00:07 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0920	< 1.0	ug/L

Sample ID: 2473870 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/06/2011 00:25 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.2600	< 1.0	ug/L

Sample ID: 2473871 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/06/2011 00:44 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.1290	< 1.0	ug/L

Sample ID: 2473872 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/06/2011 01:02 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.2340	< 1.0	ug/L

NOTE: The dilution factor is included
in the percent recovery calculation.

Version 2.7.0.0

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 158010 | Instrument: IC BK | Method(s): 317.0
PC File Name: 070511A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 210508 | Receipt Batch: 264391 | Today's Date: 07/19/2011

Client: Pall Life Sciences / John Campbell | Generated By: R. Polite

Sample ID: 2473873 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/06/2011 01:21 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2473874 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/06/2011 01:39 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.2070	< 1.0	ug/L

Sample ID: 2473875 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/06/2011 01:58 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2474917 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 07/06/2011 02:16 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	15.0	15.4150	103	85-115	Pass

NOTE: The dilution factor is included in the percent recovery calculation.

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 158060 | Instrument: IC BK | Method(s): 317.0
PC File Name: 070711A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 210508 | Receipt Batch: 264391 | Today's Date: 07/19/2011

Client: Pall Life Sciences / John Campbell | Generated By: R. Polite

Sample ID: 2476117 | Type: Initial Calibration Blank
Extracted: N/A | Analyzed: 07/07/2011 10:31 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2476123 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 07/07/2011 12:47 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2476124 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 07/07/2011 13:06 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.7260	95	85-115	Pass

Sample ID: 2476125 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 07/07/2011 13:24 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	1.0310	103	75-125	Pass

Sample ID: 2476126 | Type: Quality Control Sample
Extracted: N/A | Analyzed: 07/07/2011 13:43 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.9140	98	85-115	Pass

Sample ID: 2473876 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/07/2011 14:01 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.1190	< 1.0	ug/L

Sample ID: 2476127 | Type: Matrix Spike of 2473876 | Site: HC/HR
Extracted: N/A | Analyzed: 07/07/2011 14:20 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	3.7440	< MRL	75	75-125	Pass

Sample ID: 2476128 | Type: Matrix Spike Duplicate of 2473876 | Site: HC/HR
Extracted: N/A | Analyzed: 07/07/2011 14:38 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	3.7680	< MRL	75	75-125	Pass

Sample ID: 2476129 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 07/07/2011 14:57 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	10.0780	101	85-115	Pass

NOTE: The dilution factor is included in the percent recovery calculation.

Version 2.7.0.0

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Underwriters Laboratories

LABORATORY REPORT

This report contains 11 pages.
(including the cover page)

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

Underwriters Laboratories Inc.
110 S. Hill Street, South Bend, IN 46617-2702 USA
T: 800 332.4345 / F: 574.233.8207 / W: ul.com

Laboratory Report

Client: Pall Life Sciences

Attn: John Campbell
600 South Wagner Road
Ann Arbor, MI 48103

Report: 264962
Priority: Standard Written
Status: Final
PWS ID: Not Supplied

Copies to: Laurel Beyer

Sample Information

UL ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
2479288	Outfall 001	317.0	07/03/11 00:00	Client	07/13/11 09:15
2479289	Outfall 001	317.0	07/04/11 00:00	Client	07/13/11 09:15
2479290	Outfall 001	317.0	07/05/11 00:00	Client	07/13/11 09:15
2479291	Outfall 001	317.0	07/06/11 00:00	Client	07/13/11 09:15
2479292	Outfall 001	317.0	07/07/11 00:00	Client	07/13/11 09:15
2479293	Outfall 001	317.0	07/10/11 00:00	Client	07/13/11 09:15
2479294	Outfall 001	317.0	07/11/11 00:00	Client	07/13/11 09:15
2479295	HC/HR	317.0	07/01/11 08:25	Client	07/13/11 09:15
2479296	HC/HR	317.0	07/05/11 08:30	Client	07/13/11 09:15
2479297	HC/HR	317.0	07/06/11 09:45	Client	07/13/11 09:15
2479298	HC/HR	317.0	07/07/11 10:00	Client	07/13/11 09:15
2479299	HC/HR	317.0	07/08/11 08:00	Client	07/13/11 09:15
2479300	HC/HR	317.0	07/11/11 09:35	Client	07/13/11 09:15
2479301	HC/HR	317.0	07/12/11 08:25	Client	07/13/11 09:15

Report Summary

Note: Sample containers were provided by the client.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Traci Chlebowski at (574) 233-4777.

Authorized Signature _____ Title _____ 7.21.11 Date

Client Name: Pall Life Sciences
Report #: 264962

Underwriters Laboratories Inc.
110 S. Hill Street, South Bend, IN 46617-2702 USA
T:: 800.332.4345 / F:: 574.233.8207 / W:: ul.com

Client Name: Pall Life Sciences Report #: 264962

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**5.1**	ug/L	---	07/15/11 13:12	2479288

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**5.6**	ug/L	---	07/15/11 14:08	2479289

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**4.1**	ug/L	---	07/15/11 14:26	2479290

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**3.6**	ug/L	---	07/15/11 14:45	2479291

Sampling Point: Outfall 001 PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**2.0**	ug/L	---	07/15/11 15:03	2479292

Client Name: Pall Life Sciences

Report #: 264962

Sampling Point: Outfall 001

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**4.4**	ug/L	---	07/15/11 15:22	2479293

Sampling Point: Outfall 001

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	**4.8**	ug/L	---	07/15/11 15:40	2479294

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/15/11 15:59	2479295

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/15/11 16:17	2479296

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/15/11 16:36	2479297

Client Name: Pall Life Sciences

Report #: 264962

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/18/11 13:35	2479298

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/18/11 13:53	2479299

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/18/11 14:12	2479300

Sampling Point: HC/HR

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	UL ID #
15541-45-4	Bromate	317.0	10 *	1.0	< 1.0	ug/L	---	07/18/11 14:30	2479301

† UL has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The LTB container follows the collection bottles to and from the collection site, but the LTB is not opened at any time during the trip. LTB is not exposed to site conditions or pumping and collection equipment. The LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Matrix Duplicate (LFD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Matrix (LFM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

the standard in safety

Underwriters Laboratories

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 210512

Batch # 2649602

www.ul.com/water

Shaded area for UL use only

CHAIN OF CUSTODY RECORD

Page 1 of 1

7-13-11

REPORT TO:	SAMPLER (Signature)	STATE (of sample origin)	PWS ID#	PROJECT NAME	PO#
John Campbell	JhC	MI			

BILL TO: Pall Corp Attn: Laurel Beyer
600 S. Wagner
Ann Arbor MI 48103

COMPLIANCE MONITORING	Yes	No	POPULATION SERVED	SOURCE WATER
				ground

	LAB Number	COLLECTION DATE	COLLECTION TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	2479 288	7-3-11				outfall001	Bromate 316			X	1		
2	289	7-4-11				"	"			X	1		
3	290	7-5-11				"	"			X	1		
4	291	7-6-11				"	"			X	1		
5	292	7-7-11				"	"			X	1		
6	293	7-10-11				"	"			X	1		
7	294	7-11-11				"	"						
8	295	7-1-11	0825	X		HC/HR	"						
9	296	7-5-11	0830	X		HC/HR	"						
10	297	7-6-11	0945	X		HC/HR	"						
11	298	7-7-11	1000	X		HC/HR	"						
12	299	7-8-11	0800	X		HC/HR	"						
13	300	7-11-11	0935	X		HC/HR	"						
14	301	7-12-11	0825	X		HC/HR	Bromate 316						

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
John Campbell	7/12/11	1400 AM PM			AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
		AM PM			AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY:	DATE	TIME
		AM PM		7/13/11	0915 AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS
Bromate 317 (not 316) TC 7-13-2011

Client Provided Sample Container

CONDITIONS UPON RECEIPT (check one):
X Iced / Wet/Blue ____ Ambient ____ 6 °C Upon Receipt X N/A

MATRIX CODES:

DW-DRINKING WATER
RW-REAGENT WATER
GW-GROUND WATER
EW-EXPOSURE WATER
SW-SURFACE WATER
PW-POOL WATER
WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	**IV*** = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	**IW*** = Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	**SP*** = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges

* Please call, Expedited service not available for all testing

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 158428 | Instrument: IC BK | Method(s): 317.0
PC File Name: 071511A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 210512 | Receipt Batch: 264962 | Today's Date: 07/21/2011

Client: Pall Life Sciences / John Campbell | Generated By: R. Polite

Sample ID: 2481574 | Type: Initial Calibration Blank
Extracted: N/A | Analyzed: 07/07/2011 10:31 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2481580 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 07/15/2011 12:17 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2481581 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 07/15/2011 12:35 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	5.6530	113	85-115	Pass

Sample ID: 2481582 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 07/15/2011 12:54 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	1.1390	114	75-125	Pass

Sample ID: 2479288 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/15/2011 13:12 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	5.0640	5.1	ug/L

Sample ID: 2481583 | Type: Matrix Spike of 2479288 | Site: Outfall 001
Extracted: N/A | Analyzed: 07/15/2011 13:31 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	10.6770	5.0640	112	75-125	Pass

Sample ID: 2481584 | Type: Matrix Spike Duplicate of 2479288 | Site: Outfall 001
Extracted: N/A | Analyzed: 07/15/2011 13:49 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	10.7250	5.0640	113	75-125	Pass

Sample ID: 2479289 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/15/2011 14:08 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	5.6100	5.6	ug/L

Sample ID: 2479290 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/15/2011 14:26 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	4.0760	4.1	ug/L

NOTE: The dilution factor is included
in the percent recovery calculation.

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 158428 | Instrument: IC BK | Method(s): 317.0
PC File Name: 071511A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 210512 | Receipt Batch: 264962 | Today's Date: 07/21/2011

Client: Pall Life Sciences / John Campbell | Generated By: R. Polite

Sample ID: 2479291 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/15/2011 14:45 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	3.6110	3.6	ug/L

Sample ID: 2479292 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/15/2011 15:03 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	2.0120	2.0	ug/L

Sample ID: 2479293 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/15/2011 15:22 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	4.3630	4.4	ug/L

Sample ID: 2479294 | Type: Field Sample | Site: Outfall 001
Extracted: N/A | Analyzed: 07/15/2011 15:40 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	4.8360	4.8	ug/L

Sample ID: 2479295 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/15/2011 15:59 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.1380	< 1.0	ug/L

Sample ID: 2479296 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/15/2011 16:17 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.1280	< 1.0	ug/L

Sample ID: 2479297 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/15/2011 16:36 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.8980	< 1.0	ug/L

Sample ID: 2481585 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 07/15/2011 16:54 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	11.1670	112	85-115	Pass

NOTE: The dilution factor is included
in the percent recovery calculation.

Version 2.7.0.0

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 158468 | Instrument: IC BK | Method(s): 317.0
PC File Name: 071711A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 210512 | Receipt Batch: 264962 | Today's Date: 07/21/2011

Client: Pall Life Sciences / John Campbell | Generated By: R. Polite

Sample ID: 2481902 | Type: Initial Calibration Blank
Extracted: N/A | Analyzed: 07/18/2011 10:30 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2481908 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 07/18/2011 12:21 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2481909 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 07/18/2011 12:39 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.6550	93	85-115	Pass

Sample ID: 2481910 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 07/18/2011 12:58 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	0.8990	90	75-125	Pass

Sample ID: 2481911 | Type: Quality Control Sample
Extracted: N/A | Analyzed: 07/18/2011 13:16 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.5090	90	85-115	Pass

Sample ID: 2479298 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/18/2011 13:35 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0410	< 1.0	ug/L

Sample ID: 2479299 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/18/2011 13:53 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0330	< 1.0	ug/L

Sample ID: 2479300 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/18/2011 14:12 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0000	< 1.0	ug/L

Sample ID: 2479301 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 07/18/2011 14:30 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.0320	< 1.0	ug/L

NOTE: The dilution factor is included
in the percent recovery calculation.

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 158468
PC File Name: 071711A
Order Number: 210512

Instrument: IC BK
Analyst: S. Lovick
Receipt Batch: 264962

Method(s): 317.0
Submitted By: S. Lovick
Today's Date: 07/21/2011

Client: Pall Life Sciences / John Campbell

Generated By: R. Polite

Sample ID: 2481912
Extracted: N/A

Type: Continuing Calibration Check
Analyzed: 07/18/2011 17:17

Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	9.8410	98	85-115	Pass

NOTE: The dilution factor is included in the percent recovery calculation.

Version 2.7.0.0