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: 270470
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
2537353	Outfall	317.0	10/04/11 00:00	Client	10/25/11 09:30
2537354	Outfall	317.0	10/05/11 00:00	Client	10/25/11 09:30
2537355	Outfall	317.0	10/06/11 00:00	Client	10/25/11 09:30
2537356	Outfall	317.0	10/09/11 00:00	Client	10/25/11 09:30
2537357	Outfall	317.0	10/10/11 00:00	Client	10/25/11 09:30
2537358	Outfall	317.0	10/11/11 00:00	Client	10/25/11 09:30
2537359	Outfall	317.0	10/12/11 00:00	Client	10/25/11 09:30
2537360	Outfall	317.0	10/13/11 00:00	Client	10/25/11 09:30
2537361	Outfall	317.0	10/16/11 00:00	Client	10/25/11 09:30
2537362	Outfall	317.0	10/17/11 00:00	Client	10/25/11 09:30
2537363	Outfall	317.0	10/18/11 00:00	Client	10/25/11 09:30
2537364	Outfall	317.0	10/19/11 00:00	Client	10/25/11 09:30
2537365	Outfall	317.0	10/20/11 00:00	Client	10/25/11 09:30
2537366	Outfall	317.0	10/23/11 00:00	Client	10/25/11 09:30

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.

Traci Chlebowski — Project Mgr — 11-7-2011

Authorized Signature — Title — Date

Client Name: Pall Life Sciences
Report #: 270470

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 #: 270470

Sampling Point: Outfall

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	7.2	ug/L	---	11/01/11 12:13	2537353

Sampling Point: Outfall

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	7.6	ug/L	---	11/01/11 12:36	2537354

Sampling Point: Outfall

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	6.6	ug/L	---	11/01/11 11:04	2537355

Sampling Point: Outfall

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	6.8	ug/L	---	11/01/11 12:59	2537356

Sampling Point: Outfall

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	6.4	ug/L	---	11/01/11 13:22	2537357

Client Name: Pall Life Sciences

Report #: 270470

Sampling Point: Outfall

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	6.9	ug/L	---	11/01/11 13:45	2537358

Sampling Point: Outfall

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	7.1	ug/L	---	11/01/11 14:08	2537359

Sampling Point: Outfall

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	7.4	ug/L	---	11/01/11 14:31	2537360

Sampling Point: Outfall

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	7.8	ug/L	---	11/01/11 14:54	2537361

Sampling Point: Outfall

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	8.3	ug/L	---	11/01/11 15:17	2537362

Client Name: Pall Life Sciences

Report #: 270470

Sampling Point: Outfall

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	8.2	ug/L	---	11/01/11 17:58	2537363

Sampling Point: Outfall

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	8.5	ug/L	---	11/01/11 16:03	2537364

Sampling Point: Outfall

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	8.0	ug/L	---	11/01/11 17:12	2537365

Sampling Point: Outfall

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	8.4	ug/L	---	11/01/11 17:35	2537366

† 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.

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162201 | Instrument: IC DP | Method(s): 317.0
PC File Name: 102711B | Analyst: J. Timm | Submitted By: J. Timm
Order Number: 214889 | Receipt Batch: 270470 | Today's Date: 11/04/2011

Client: Pall Life Sciences / John Campbell | Generated By: S. Dungy

Sample ID: 2541723 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 11/01/2011 09:32 | 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: 2541724 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 11/01/2011 09:55 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	1.1805	118	75-125	Pass

Sample ID: 2541725 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 11/01/2011 10:18 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	5.0210	100	85-115	Pass

Sample ID: 2541726 | Type: Quality Control Sample
Extracted: N/A | Analyzed: 11/01/2011 10:41 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	5.0737	101	85-115	Pass

Sample ID: 2537355 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 11:04 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	6.6111	6.6	ug/L

Sample ID: 2541727 | Type: Matrix Spike of 2537355 | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 11:27 | Dil Factor: 3.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	20.2785	6.6111	91	75-125	Pass

Sample ID: 2541728 | Type: Matrix Spike Duplicate of 2537355 | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 11:50 | Dil Factor: 3.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	20.7387	6.6111	94	75-125	Pass

Sample ID: 2537353 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 12:13 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	7.1865	7.2	ug/L

Sample ID: 2537354 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 12:36 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	7.5990	7.6	ug/L

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

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162201 | Instrument: IC DP | Method(s): 317.0
PC File Name: 102711B | Analyst: J. Timm | Submitted By: J. Timm
Order Number: 214889 | Receipt Batch: 270470 | Today's Date: 11/04/2011

Client: Pall Life Sciences / John Campbell | Generated By: S. Dungy

Sample ID: 2537356 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 12:59 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	6.7512	6.8	ug/L

Sample ID: 2537357 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 13:22 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	6.4494	6.4	ug/L

Sample ID: 2537358 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 13:45 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	6.8766	6.9	ug/L

Sample ID: 2537359 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 14:08 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	7.0914	7.1	ug/L

Sample ID: 2537360 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 14:31 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	7.4304	7.4	ug/L

Sample ID: 2537361 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 14:54 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	7.8054	7.8	ug/L

Sample ID: 2537362 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 15:17 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	8.2824	8.3	ug/L

Sample ID: 2541729 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 11/01/2011 15:40 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	10.4363	104	85-115	Pass

Sample ID: 2537364 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 16:03 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	8.4846	8.5	ug/L

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

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162201 | Instrument: IC DP | Method(s): 317.0
PC File Name: 102711B | Analyst: J. Timm | Submitted By: J. Timm
Order Number: 214889 | Receipt Batch: 270470 | Today's Date: 11/04/2011

Client: Pall Life Sciences / John Campbell | Generated By: S. Dungy

Sample ID: 2541730 | Type: Matrix Spike of 2537364 | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 16:26 | Dil Factor: 3.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	23.7171	8.4846	102	75-125	Pass

Sample ID: 2541731 | Type: Matrix Spike Duplicate of 2537364 | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 16:49 | Dil Factor: 3.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	23.9907	8.4846	103	75-125	Pass

Sample ID: 2537365 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 17:12 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	7.9536	8.0	ug/L

Sample ID: 2537366 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 17:35 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	8.4471	8.4	ug/L

Sample ID: 2537363 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/01/2011 17:58 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	8.1750	8.2	ug/L

Sample ID: 2541732 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 11/01/2011 18:21 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	15.0	15.8177	105	85-115	Pass

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

2148881

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

210470

Company Pall Corp
Name Susan E.O. Peters
Street 600 South Wagner Rd. Bldg #4
City Ann Arbor State MI Zip 48103
Phone 734-913-6531 Fax 734-913-6103
Email

Requested Turnaround: Standard * 4 business days * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name:
Invoice To:

	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 separate batch	10/20/11	08:40				✓	1	317 Bromate		✓					
2	HC/HR	10/21/11	08:35				✓	1	317		✓					
3	Outfall	10/04/11	composite				✓	1	317		✓					253353
4	Outfall	10/05/11	composite				✓	1	317		✓					354
5	Outfall	10/06/11	composite				✓	1	317		✓					355
6	Outfall	10/09/11	composite				✓	1	317		✓					356
7	Outfall	10/10/11	composite				✓	1	317		✓					357
8	Outfall	10/11/11	composite				✓	1	317		✓					358
9	Outfall	10/12/11	composite				✓	1	317		✓					359
10	Outfall	10/13/11	composite				✓	1	317		✓					360
Released by Sampler: John Campbell		Date: / /	Time: :	Received by:									Date: / /			Time: :
Released by: Susan E.O. Peters		Date: 10/24/11	Time: :	Received by:									Date: 10/25/11			Time: 0830

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 4.2 °C

Blue

PINK Copy – Sampler

WHITE copy and YELLOW copy – Forward to laboratory with samples

Client Provided Sample Container

214881

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 3 of 3

Company Pall Corp.
Name Susan E. O. Peters
Street 600 South Wagner Rd Bldg #4
City Ann Arbor State MI Zip 48103
Phone 734-913-6531 Fax 734-913-6103
Email

Requested Turnaround: Standard * 4 business days * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name:
Invoice To:

	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
									Bromate							
1	Outfall	10/16/11	composite				✓	1	317		✓					253736
2	Outfall	10/17/11	composite				✓	1	317		✓					362
3	Outfall	10/18/11	composite				✓	1	317		✓					363
4	Outfall	10/19/11	composite				✓	1	317		✓					364
5	Outfall	10/20/11	composite				✓	1	317		✓					365
6	HE/HR Seperate Batch	10/24/11	08:25				✓	1	317		✓					
7	Outfall	10/23/11	composite				✓	1	317		✓					366
8		/ /	:													
9		/ /	:													
10		/ /	:													
Released by Sampler: John Campbell		Date: / /	Time: :	Received by:									Date: / /			Time: :
Released by: Susan E O Peters		Date: 10/24/11	Time: :	Received by:									Date: 10/25/11			Time: 09:30

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 4.2°C

Check Preservation in Blue Containers

PINK Copy – Sampler

WHITE copy and YELLOW copy – Forward to laboratory with samples

Cross Offs on COC by Client

LABORATORY REPORT

This report contains 12 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: 270469
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
2537340	HC/HR	317.0	10/05/11 08:30	Client	10/25/11 09:30
2537341	HC/HR	317.0	10/06/11 09:35	Client	10/25/11 09:30
2537342	HC/HR	317.0	10/07/11 08:10	Client	10/25/11 09:30
2537343	HC/HR	317.0	10/11/11 08:50	Client	10/25/11 09:30
2537344	HC/HR	317.0	10/12/11 08:20	Client	10/25/11 09:30
2537345	HC/HR	317.0	10/13/11 08:10	Client	10/25/11 09:30
2537346	HC/HR	317.0	10/14/11 08:25	Client	10/25/11 09:30
2537347	HC/HR	317.0	10/17/11 09:20	Client	10/25/11 09:30
2537348	HC/HR	317.0	10/18/11 08:35	Client	10/25/11 09:30
2537349	HC/HR	317.0	10/19/11 08:10	Client	10/25/11 09:30
2537350	HC/HR	317.0	10/20/11 08:40	Client	10/25/11 09:30
2537351	HC/HR	317.0	10/21/11 08:35	Client	10/25/11 09:30
2537352	HC/HR	317.0	10/24/11 08:25	Client	10/25/11 09:30

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.

Traci Chlebowski — Authorized Signature

Project Mgr — Title

11-08-2011 — Date

Client Name: Pall Life Sciences
Report #: 270469

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 #: 270469

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	---	10/28/11 18:10	2537340

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	---	10/28/11 18:33	2537341

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	---	10/28/11 18:56	2537342

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	---	10/28/11 19:19	2537343

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	---	10/28/11 19:42	2537344

Client Name: Pall Life Sciences

Report #: 270469

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	---	10/28/11 20:05	2537345

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	---	11/04/11 09:22	2537346

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	---	11/04/11 10:31	2537347

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	---	11/04/11 10:54	2537348

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	---	11/04/11 11:17	2537349

Client Name: Pall Life Sciences

Report #: 270469

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	---	11/04/11 11:40	2537350

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	---	11/04/11 12:03	2537351

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	---	11/04/11 12:26	2537352

† 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.

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162198
PC File Name: 110111B
Order Number: 214889

Instrument: IC DP
Analyst: J. Timm
Receipt Batch: 270469

Method(s): 317.0
Submitted By: J. Timm
Today's Date: 11/08/2011

Client: Pall Life Sciences / John Campbell

Generated By: A. Chlebowski

Sample ID: 2541674
Extracted: N/A

Type: Laboratory Reagent Blank
Analyzed: 10/28/2011 07:50

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: 2541675
Extracted: N/A

Type: Instrument Performance Check
Analyzed: 10/28/2011 08:13

Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	0.9453	95	75-125	Pass

Sample ID: 2541676
Extracted: N/A

Type: Laboratory Fortified Blank
Analyzed: 10/28/2011 08:36

Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.3761	88	85-115	Pass

Sample ID: 2541677
Extracted: N/A

Type: Continuing Calibration Check
Analyzed: 10/28/2011 15:29

Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	9.1884	92	85-115	Pass

Sample ID: 2537340
Extracted: N/A

Type: Field Sample
Analyzed: 10/28/2011 18:10

Site: HC/HR
Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.6730	< 1.0	ug/L

Sample ID: 2537341
Extracted: N/A

Type: Field Sample
Analyzed: 10/28/2011 18:33

Site: HC/HR
Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.5326	< 1.0	ug/L

Sample ID: 2537342
Extracted: N/A

Type: Field Sample
Analyzed: 10/28/2011 18:56

Site: HC/HR
Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.5053	< 1.0	ug/L

Sample ID: 2537343
Extracted: N/A

Type: Field Sample
Analyzed: 10/28/2011 19:19

Site: HC/HR
Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.4353	< 1.0	ug/L

Sample ID: 2537344
Extracted: N/A

Type: Field Sample
Analyzed: 10/28/2011 19:42

Site: HC/HR
Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.4540	< 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: 162198
PC File Name: 110111B
Order Number: 214889

Instrument: IC DP
Analyst: J. Timm
Receipt Batch: 270469

Method(s): 317.0
Submitted By: J. Timm
Today's Date: 11/08/2011

Client: Pall Life Sciences / John Campbell

Generated By: A. Chlebowski

Sample ID: 2537345
Extracted: N/A

Type: Field Sample
Analyzed: 10/28/2011 20:05

Site: HC/HR
Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.4903	< 1.0	ug/L

Sample ID: 2541678
Extracted: N/A

Type: Continuing Calibration Check
Analyzed: 10/28/2011 20:28

Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	15.0	13.5006	90	85-115	Pass

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

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162281 | Instrument: IC DP | Method(s): 317.0
PC File Name: 110411A | Analyst: J. Timm | Submitted By: J. Timm
Order Number: 214889 | Receipt Batch: 270469 | Today's Date: 11/08/2011

Client: Pall Life Sciences / John Campbell | Generated By: A. Chlebowski

Sample ID: 2538328 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 11/04/2011 08:14 | 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: 2538329 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 11/04/2011 08:37 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	1.2004	120	75-125	Pass

Sample ID: 2538330 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 11/04/2011 09:00 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	5.3515	107	85-115	Pass

Sample ID: 2537346 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 11/04/2011 09:22 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.7724	< 1.0	ug/L

Sample ID: 2541687 | Type: Matrix Spike of 2537346 | Site: HC/HR
Extracted: N/A | Analyzed: 11/04/2011 09:45 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	5.2131	< MRL	104	75-125	Pass

Sample ID: 2541688 | Type: Matrix Spike Duplicate of 2537346 | Site: HC/HR
Extracted: N/A | Analyzed: 11/04/2011 10:08 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	5.1293	< MRL	103	75-125	Pass

Sample ID: 2537347 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 11/04/2011 10:31 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.9402	< 1.0	ug/L

Sample ID: 2537348 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 11/04/2011 10:54 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.7344	< 1.0	ug/L

Sample ID: 2537349 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 11/04/2011 11:17 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.9897	< 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: 162281
PC File Name: 110411A
Order Number: 214889

Instrument: IC DP
Analyst: J. Timm
Receipt Batch: 270469

Method(s): 317.0
Submitted By: J. Timm
Today's Date: 11/08/2011

Client: Pall Life Sciences / John Campbell

Generated By: A. Chlebowski

Sample ID: 2537350
Extracted: N/A

Type: Field Sample
Analyzed: 11/04/2011 11:40

Site: HC/HR
Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.5714	< 1.0	ug/L

Sample ID: 2537351
Extracted: N/A

Type: Field Sample
Analyzed: 11/04/2011 12:03

Site: HC/HR
Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.7044	< 1.0	ug/L

Sample ID: 2537352
Extracted: N/A

Type: Field Sample
Analyzed: 11/04/2011 12:26

Site: HC/HR
Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.8624	< 1.0	ug/L

Sample ID: 2535634
Extracted: N/A

Type: Continuing Calibration Check
Analyzed: 11/04/2011 14:44

Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	9.9942	100	85-115	Pass

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

214889

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

276469

Company Pall Corp.
Name Susan E.O. Peters
Street 600 South Wagner Road Building #4
City Ann Arbor State Mi Zip 48103
Phone Ann Arbor Fax 734-913-6103
Email 734-913-6531

Requested Turnaround: Standard * 4 business days * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name:
Invoice To:

	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	10/05/11	08:30				✓	1	Bromate 317		✓					2537340
2	HC/HR	10/06/11	09:35				✓	1	317		✓					341
3	HC/HR	10/07/11	08:10				✓	1	317		✓					342
4	HC/HR	10/11/11	08:50				✓	1	317		✓					343
5	HC/HR	10/12/11	08:20				✓	1	317		✓					344
6	HC/HR	10/13/11	08:10				✓	1	317		✓					345
7	HC/HR	10/14/11	08:25				✓	1	317		✓					346
8	HC/HR	10/17/11	09:20				✓	1	317		✓					347
9	HC/HR	10/18/11	08:35				✓	1	317		✓					348
10	HC/HR	10/19/11	08:10				✓	1	317		✓					349
Released by Sampler: J. Campbell		Date: / /	Time: :	Received by:									Date: / /			Time: :
Released by: Susan E.O. Peters		Date: 10/24/11	Time: :	Received by:									Date: 10/25/11			Time: 09:30

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 4.2 °C

PINK Copy – Sampler

WHITE copy and YELLOW copy – Forward to laboratory with samples

Blue
Chilled Sample Container

214889

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 Susan E.O. Peters
Street 600 South Wagner Rd. Bldg #4
City Ann Arbor State Mi Zip 48103
Phone 734-913-6531 Fax 734-913-6103
Email

Requested Turnaround: Standard * 4 business days * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name:
Invoice To:

	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: Bromate	Preservation: None	4 °C	HCl	HNO_3	H_2SO_4	Other	Lab ID
1	HC|HR	10/20/11	08:40				✓	1	317		✓					253/350
2	HC|HR	10/21/11	08:35				✓	1	317		✓					↓ 351
3	Outfall	10/04/11	composite				✓	1	317		✓					
4	Outfall	10/05/11	composite				✓	1	317		✓					
5	Outfall	10/06/11	composite				✓	1	317		✓					
6	Outfall	10/09/11	composite				✓	1	317		✓					
7	Outfall	10/10/11	composite				✓	1	317		✓					
8	Outfall	10/11/11	composite				✓	1	317		✓					
9	Outfall	10/12/11	composite				✓	1	317		✓					
10	Outfall	10/13/11	composite				✓	1	317		✓					
Released by Sampler: John Campbell		Date: / /	Time: :	Received by:											Date: / /	Time: :
Released by: Susan E O Peters		Date: 10/24/11	Time: :	Received by:											Date: 10/25/11	Time: 0930

Per Batch

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 4.2 °C

Blue Client Provided Sample Container

PINK Copy – Sampler

WHITE copy and YELLOW copy – Forward to laboratory with samples

214889

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 3 of 3

Company Pall Corp.
Name Susan E.O. Peters
Street 600 South Wagner Rd Bldg #4
City Ann Arbor State MI Zip 48103
Phone 734-913-6531 Fax 734-913-6103
Email

Requested Turnaround: Standard * 4 business days * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name:
Invoice To:

	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
									Bromate							
1	Outfall	10/16/11	composite				✓	1	317		✓					
2	Outfall	10/17/11	composite				✓	1	317		✓					
3	Outfall	10/18/11	composite				✓	1	317		✓					
4	Outfall	10/19/11	composite				✓	1	317		✓					
5	Outfall	10/20/11	composite				✓	1	317		✓					
6	HC/HR	10/24/11	08:25				✓	1	317		✓					2537 352
7	Outfall	10/23/11	composite				✓	1	317		✓					
8		/ /	:													
9		/ /	:													
10		/ /	:													

Released by Sampler: John Campbell — Date: / / — Time: : — Received by: — Date: / / — Time: :

Released by: Susan E.O. Peters — Date: 10/24/11 — Time: : — Received by: [signature] — Date: 10/26/11 — Time: 09:30

Separate Bottles

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 4.2°C

Blue

PINK Copy – Sampler

WHITE copy and YELLOW copy – Forward to laboratory with samples

Cross Offs on COC by Client

the standard in safety

Underwriters Laboratories

LABORATORY REPORT

This report contains 2 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: 270809
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
2541278	HC/HR	317.0	10/25/11 08:30	Client	11/02/11 09:00
2541279	HC/HR	317.0	10/26/11 08:25	Client	11/02/11 09:00
2541280	HC/HR	317.0	10/27/11 08:55	Client	11/02/11 09:00
2541281	HC/HR	317.0	10/28/11 08:35	Client	11/02/11 09:00
2541282	HC/HR	317.0	10/31/11 08:55	Client	11/02/11 09:00

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.

Traci Chlebowski — Authorized Signature

Project Mgr — Title

11-08-2011 — Date

Client Name: Pall Life Sciences
Report #: 270809

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 #: 270809

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	---	11/05/11 00:42	2541278

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	---	11/05/11 01:05	2541279

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	---	11/05/11 01:28	2541280

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	---	11/05/11 01:51	2541281

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	---	11/05/11 02:14	2541282

† 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.

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162283 | Instrument: IC DP | Method(s): 317.0
PC File Name: 110411B | Analyst: J. Timm | Submitted By: J. Timm
Order Number: 215106 | Receipt Batch: 270809 | Today's Date: 11/07/2011

Client: Pall Life Sciences / John Campbell | Generated By: A. Chlebowski

Sample ID: 2541662 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 11/04/2011 20:29 | 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: 2541663 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 11/04/2011 20:52 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	1.0195	102	75-125	Pass

Sample ID: 2541664 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 11/04/2011 21:15 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.5029	90	85-115	Pass

Sample ID: 2541278 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 11/05/2011 00:42 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.7824	< 1.0	ug/L

Sample ID: 2541279 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 11/05/2011 01:05 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.6597	< 1.0	ug/L

Sample ID: 2541280 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 11/05/2011 01:28 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.6596	< 1.0	ug/L

Sample ID: 2541281 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 11/05/2011 01:51 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.7546	< 1.0	ug/L

Sample ID: 2541282 | Type: Field Sample | Site: HC/HR
Extracted: N/A | Analyzed: 11/05/2011 02:14 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	0.7401	< 1.0	ug/L

Sample ID: 2541666 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 11/05/2011 02:37 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	9.3180	93	85-115	Pass

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

Version 2.7.0.0

215106

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

276809

Page 1 of 1

Company Pall Corporation
Name Susan E.O. Peters
Street 600 South Wagner Road
City Ann Arbor State Mi Zip 48103
Phone ~~734-475-6331~~ 727 * Fax 734-913-6103
Email Sue_Peters@pall.com
Phone: 734-913-6531

Requested Turnaround: Standard * (4 business days) * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name:
Invoice To: CLIENT PROVIDED SAMPLE CONTAINER

	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 Bromate 317	Preservation: None	4 °C	HCl	HNO_3	H_2SO_4	Other	Lab ID
1	HC/HR	10/25/11	08:30				✓	1	317		✓					254/278
2	HC/HR	10/26/11	08:25				✓	1	317		✓					279
3	HC/HR	10/27/11	08:55				✓	1	317		✓					280
4	HC/HR	10/28/11	08:35				✓	1	317		✓					281
5	HC/HR	10/31/11	08:55				✓	1	~~3~~ 317 ~~15~~ *		✓					282
6	Outfall	10/24/11	composite				✓	1	~~3~~ 317 ~~15~~ *		✓					
7	Outfall	10/25/11	composite				✓	1	~~3~~ 317 ~~15~~ *		✓					
8	Outfall	10/26/11	composite				✓	1	~~3~~ 317 ~~15~~ *		✓					
9	Outfall separate Bakers	10/27/11	composite				✓	1	317		✓					
10	Outfall	10/30/11	composite				✓	1	317		✓					
Released by Sampler: Rl and JC		Date: / /	Time: :	Received by: Susan E O Peters									Date: 11/01/11		Time: :	
Released by: Susan E O Peters		Date: 11/01/11	Time: :	Received by: Kellie Depree									Date: 11/1/11		Time: 9:00	

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 5 °C

PINK Copy – Sampler

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

*Entry errors corrected 11/01/11 KEO

215106

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 Corporation
Name Susan E.O. Peters
Street 600 South Wagner Road
City Ann Arbor State Mi Zip 48103
Phone 734-913-6531 Fax 734-913-6603
Email Sue_Peters@Pall.com

Requested Turnaround: Standard * (4 business days) * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name: JohnC. and BobU
Invoice To:

	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	Outfall	10/31/11	composite				✓	1	317		✓					
2		/ /	:													
3		/ /	:													
4		/ /	:													
5		/ /	:													
6		/ /	:													
7		/ /	:													
8		/ /	:													
9		/ /	:													
10		/ /	:													

Defense Base

CLIENT PROVIDED SAMPLE CONTAINER

Released by Sampler: J.C. and B.U.	Date: / /	Time: :	Received by: Susan E.O. Peters	Date: 11/01/11	Time: :
Released by: Susan E.O. Peters	Date: 11/01/11	Time: :	Received by: Kellie Reporter	Date: 11/2/11	Time: 09:00

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 5 °C

PINK Copy – Sampler

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

LABORATORY REPORT

This report contains 13 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

the standard in safety

Underwriters Laboratories

Laboratory Report

Client: Pall Life Sciences

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

Report: 270810
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
2541283	Outfall	300.1	10/24/11 00:00	Client	11/02/11 09:00
2541283	Outfall	317.0	10/24/11 00:00	Client	11/02/11 09:00
2541284	Outfall	300.1	10/25/11 00:00	Client	11/02/11 09:00
2541284	Outfall	317.0	10/25/11 00:00	Client	11/02/11 09:00
2541285	Outfall	300.1	10/26/11 00:00	Client	11/02/11 09:00
2541285	Outfall	317.0	10/26/11 00:00	Client	11/02/11 09:00
2541286	Outfall	300.1	10/27/11 00:00	Client	11/02/11 09:00
2541286	Outfall	317.0	10/27/11 00:00	Client	11/02/11 09:00
2541287	Outfall	300.1	10/30/11 00:00	Client	11/02/11 09:00
2541287	Outfall	317.0	10/30/11 00:00	Client	11/02/11 09:00
2541288	Outfall	300.1	10/31/11 00:00	Client	11/02/11 09:00
2541288	Outfall	317.0	10/31/11 00:00	Client	11/02/11 09:00

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.

Traci Chlebowski — Authorized Signature

Project Mgr — Title

11-16-11 — Date

Client Name: Pall Life Sciences
Report #: 270810

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 #: 270810

Sampling Point: Outfall

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	300.1	10 *	5.0	8.2	ug/L	---	11/14/11 12:50	2541283
15541-45-4	Bromate	317.0	10 *	1.0	8.0	ug/L	---	11/04/11 19:20	2541283

Sampling Point: Outfall

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	300.1	10 *	5.0	9.3	ug/L	---	11/10/11 12:57	2541284
15541-45-4	Bromate	317.0	10 *	1.0	8.4	ug/L	---	11/04/11 22:01	2541284

Sampling Point: Outfall

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	300.1	10 *	5.0	7.2	ug/L	---	11/10/11 13:21	2541285
15541-45-4	Bromate	317.0	10 *	1.0	6.2	ug/L	---	11/04/11 23:10	2541285

Sampling Point: Outfall

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	300.1	10 *	5.0	6.6	ug/L	---	11/10/11 13:46	2541286
15541-45-4	Bromate	317.0	10 *	1.0	6.5	ug/L	---	11/04/11 23:33	2541286

Sampling Point: Outfall

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	300.1	10 *	5.0	6.9	ug/L	---	11/10/11 14:10	2541287
15541-45-4	Bromate	317.0	10 *	1.0	7.5	ug/L	---	11/04/11 23:56	2541287

Client Name: Pall Life Sciences

Report #: 270810

Sampling Point: Outfall

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	300.1	10 *	5.0	8.4	ug/L	---	11/10/11 14:35	2541288
15541-45-4	Bromate	317.0	10 *	1.0	7.7	ug/L	---	11/05/11 00:19	2541288

† 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.

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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.

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162464 | Instrument: IC BK | Method(s): 300.1
PC File Name: 111011A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 215106 | Receipt Batch: 270810 | Today's Date: 11/16/2011

Client: Pall Life Sciences / John Campbell | Generated By: A. Chlebowski

Sample ID: 2546248 | Type: Initial Calibration Blank
Extracted: N/A | Analyzed: 10/28/2011 21:30 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	0.0100	< 5.0	ug/L
19559-59-2	Dichloroacetate	N/A	0.0000		% Recovery

Sample ID: 2546253 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 11/10/2011 11:43 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	0.3500	< 5.0	ug/L
19559-59-2	Dichloroacetate	N/A	1.0600	106	% Recovery

Sample ID: 2546254 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 11/10/2011 12:08 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	20.0	19.7200	99	75-125	Pass
19559-59-2	Dichloroacetate	1.0	1.0400	104	90-115	Pass

Sample ID: 2546255 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 11/10/2011 12:32 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.9100	98	75-125	Pass
19559-59-2	Dichloroacetate	1.0	1.0300	103	90-115	Pass

Sample ID: 2541284 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/10/2011 12:57 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	9.3000	9.3	ug/L
19559-59-2	Dichloroacetate	N/A	1.0100	101	% Recovery

Sample ID: 2541285 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/10/2011 13:21 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	7.2400	7.2	ug/L
19559-59-2	Dichloroacetate	N/A	1.0700	107	% Recovery

Sample ID: 2541286 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/10/2011 13:46 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	6.5700	6.6	ug/L
19559-59-2	Dichloroacetate	N/A	1.0300	103	% Recovery

Sample ID: 2541287 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/10/2011 14:10 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	6.8900	6.9	ug/L
19559-59-2	Dichloroacetate	N/A	1.0500	105	% Recovery

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

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162464 | Instrument: IC BK | Method(s): 300.1
PC File Name: 111011A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 215106 | Receipt Batch: 270810 | Today's Date: 11/16/2011

Client: Pall Life Sciences / John Campbell | Generated By: A. Chlebowski

Sample ID: 2541288 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/10/2011 14:35 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	8.4200	8.4	ug/L
19559-59-2	Dichloroacetate	N/A	1.0100	101	% Recovery

Sample ID: 2540405 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 11/10/2011 14:59 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	25.0	25.6700	103	75-125	Pass
19559-59-2	Dichloroacetate	1.0	1.0100	101	90-115	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: 162576 | Instrument: IC BK | Method(s): 300.1
PC File Name: 111411A | Analyst: S. Lovick | Submitted By: S. Lovick
Order Number: 215106 | Receipt Batch: 270810 | Today's Date: 11/16/2011

Client: Pall Life Sciences / John Campbell | Generated By: A. Chlebowski

Sample ID: 2547695 | Type: Initial Calibration Blank
Extracted: N/A | Analyzed: 10/28/2011 21:30 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	0.0000	< 5.0	ug/L
19559-59-2	Dichloroacetate	N/A	0.0000		% Recovery

Sample ID: 2547701 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 11/14/2011 11:36 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	0.0000	< 5.0	ug/L
19559-59-2	Dichloroacetate	N/A	1.0700	107	% Recovery

Sample ID: 2547702 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 11/14/2011 12:01 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	20.0	21.3200	107	75-125	Pass
19559-59-2	Dichloroacetate	1.0	1.0100	101	90-115	Pass

Sample ID: 2547703 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 11/14/2011 12:25 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.5000	90	75-125	Pass
19559-59-2	Dichloroacetate	1.0	1.0200	102	90-115	Pass

Sample ID: 2541283 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/14/2011 12:50 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	5.0	8.2500	8.2	ug/L
19559-59-2	Dichloroacetate	N/A	1.0400	104	% Recovery

Sample ID: 2547704 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 11/14/2011 14:28 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	25.0	24.4300	98	75-125	Pass
19559-59-2	Dichloroacetate	1.0	1.0100	101	90-115	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: 162281 | Instrument: IC DP | Method(s): 317.0
PC File Name: 110411A | Analyst: J. Timm | Submitted By: J. Timm
Order Number: 215106 | Receipt Batch: 270810 | Today's Date: 11/07/2011

Client: Pall Life Sciences / John Campbell | Generated By: A. Chlebowski

Sample ID: 2538328 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 11/04/2011 08:14 | 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: 2538329 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 11/04/2011 08:37 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	1.2004	120	75-125	Pass

Sample ID: 2538330 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 11/04/2011 09:00 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	5.3515	107	85-115	Pass

Sample ID: 2535634 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 11/04/2011 14:44 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	9.9942	100	85-115	Pass

Sample ID: 2541283 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/04/2011 19:20 | Dil Factor: 1.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	7.9993	8.0	ug/L

Sample ID: 2541615 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 11/04/2011 20:06 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	15.0	14.4841	97	85-115	Pass

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

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162283 | Instrument: IC DP | Method(s): 317.0
PC File Name: 110411B | Analyst: J. Timm | Submitted By: J. Timm
Order Number: 215106 | Receipt Batch: 270810 | Today's Date: 11/07/2011

Client: Pall Life Sciences / John Campbell | Generated By: A. Chlebowski

Sample ID: 2541662 | Type: Laboratory Reagent Blank
Extracted: N/A | Analyzed: 11/04/2011 20:29 | 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: 2541663 | Type: Instrument Performance Check
Extracted: N/A | Analyzed: 11/04/2011 20:52 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	1.0	1.0195	102	75-125	Pass

Sample ID: 2541664 | Type: Laboratory Fortified Blank
Extracted: N/A | Analyzed: 11/04/2011 21:15 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	5.0	4.5029	90	85-115	Pass

Sample ID: 2541284 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/04/2011 22:01 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	8.3616	8.4	ug/L

Sample ID: 2543427 | Type: Matrix Spike of 2541284 | Site: Outfall
Extracted: N/A | Analyzed: 11/04/2011 22:24 | Dil Factor: 3.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	23.1441	8.3616	99	75-125	Pass

Sample ID: 2543428 | Type: Matrix Spike Duplicate of 2541284 | Site: Outfall
Extracted: N/A | Analyzed: 11/04/2011 22:47 | Dil Factor: 3.000

CAS Number	Parameter	Target	Amount	Parent Amt	%Rec	Limits	P/F
15541-45-4	Bromate	5.0	22.7700	8.3616	96	75-125	Pass

Sample ID: 2541285 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/04/2011 23:10 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	6.1797	6.2	ug/L

Sample ID: 2541286 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/04/2011 23:33 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	6.4980	6.5	ug/L

Sample ID: 2541287 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/04/2011 23:56 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	7.4661	7.5	ug/L

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

UL Drinking Water Laboratory
Extended Result Record Sheet

Run Number: 162283 | Instrument: IC DP | Method(s): 317.0
PC File Name: 110411B | Analyst: J. Timm | Submitted By: J. Timm
Order Number: 215106 | Receipt Batch: 270810 | Today's Date: 11/07/2011

Client: Pall Life Sciences / John Campbell | Generated By: A. Chlebowski

Sample ID: 2541288 | Type: Field Sample | Site: Outfall
Extracted: N/A | Analyzed: 11/05/2011 00:19 | Dil Factor: 3.000

CAS Number	Parameter	MRL	Amount	Report	Units
15541-45-4	Bromate	1.0	7.6536	7.7	ug/L

Sample ID: 2541666 | Type: Continuing Calibration Check
Extracted: N/A | Analyzed: 11/05/2011 02:37 | Dil Factor: 1.000

CAS Number	Parameter	Target	Amount	% Rec	Limits	P/F
15541-45-4	Bromate	10.0	9.3180	93	85-115	Pass

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

215106

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

216810

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Company Pall Corporation
Name Susan E. O. Peters
Street 600 South Wagner Road
City Ann Arbor State MI Zip 48103
Phone ~~734-487-6633 14~~ Fax 734-913-6103
Email Sue_Peters@pall.com
Phone: 734-913-6531

Requested Turnaround: Standard (4 business days) 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name:
Invoice To: ~~CLIENT PROVIDED~~
~~SAMPLE CONTAINER~~

	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 Bromate 317	Preservation: None	4 °C	HCl	HNO_3	H_2SO_4	Other	Lab ID
1	HC/HR	10/25/11	08:30				✓	1	317		✓					
2	HC/HR	10/26/11	08:25				✓	1	317		✓					
3	HC/HR	10/27/11	08:55				✓	1	317		✓					
4	HC/HR	10/28/11	08:35				✓	1	317		✓					
5	HC/HR	10/31/11	08:55				✓	1	~~317~~		✓					
6	Outfall	10/24/11	composite				✓	1	~~317~~		✓					254283
7	Outfall	10/25/11	composite				✓	1	~~317~~		✓					284
8	Outfall	10/26/11	composite				✓	1	~~317~~		✓					285
9	Outfall	10/27/11	composite				✓	1	317		✓					286
10	Outfall	10/30/11	composite				✓	1	317		✓					287

Separate order

Released by Sampler: R. Lund JC.	Date: / /	Time: :	Received by: Susan E O Peters
Released by: Susan E O Peters	Date: 11/01/11	Time: :	Received by: Kellie Depree

Date: 11/01/11 Time:
Date: 11/2/11 Time: 9:00

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 5 °C

PINK Copy – Sampler

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

*Entry errors corrected 11/21/11 SEOP

215106

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 2

Company Pall Corporation
Name Susan E.O. Peters
Street 600 South Wagner Road
City Ann Arbor State Mi Zip 48103
Phone 734-913-6531 Fax 734-913-6603
Email Sue_Peters@Pall.com

Requested Turnaround: Standard * (4 business days) * 3 business days
48 hours * 24 hours * ASAP / Same day
Project Name / Number:
Print Sampler Name: JohnC. and BobU
Invoice To:

	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	Outfall	10/31/11	composite				✓	1	Bromate 317		✓					241288
2		/ /	:													
3		/ /	:													
4		/ /	:													
5		/ /	:													
6		/ /	:													
7		/ /	:													
8		/ /	:													
9		/ /	:													
10		/ /	:													

CLIENT PROVIDED SAMPLE CONTAINER

Released by Sampler: J.C. and B.U.	Date: / /	Time: :	Received by: Susan E.O. Peters	Date: 11/01/11	Time: :
Released by: Susan E.O. Peters	Date: 11/01/11	Time: :	Received by: Keelie Depuit	Date: 11/2/11	Time: 09:00

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 5 °C

PINK Copy – Sampler

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