Pall Corporation

Environmental Laboratory Services
600 South Wagner Road
Ann Arbor, MI 48103-9019 USA

734.913.6598 phone
734.913.6103 fax
www.pall.com

Sample Analysis Report August, 2014

CASE NARRATIVE

Monthly Data Pall Corporation
Project: 1,4-Dioxane Remediation
Date: August 2014

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition, all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Pall Corporation attests to the validity of the laboratory data generated by Pall Corporation's Ann Arbor, Michigan Environmental Laboratory facilities reported herein. All analyses performed by Pall Corporation's Environmental Laboratory facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Pall's Environmental group has reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Drinking water samples were analyzed by Brighton Analytical, L.L.C., a NELAP, TNI, and MDEQ Drinking Water Accredited Laboratory. Those samples analyzed by Brighton Analytical, L.L.C. are noted in the comment section of the data table.

The drinking water samples analyzed by Brighton Analytical, L.L.C included: Saginaw Forest Cabin #4, 5005 Jackson Road, 5115 Jackson Road, 697 South Wagner Road, 723 South Wagner Road, 745 South Wagner Road, and 777 South Wagner Road. The balance of the samples were analyzed by Pall Corporation's Environmental Laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results. The odd even rule is used for rounding.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT/ STORAGE

The samples were received on the days noted in the report for the Month; the samples arrived in good condition, properly preserved and on ice.

Samples that require 1,4-dioxane analysis are collected in HCl acid-preserved vials to a pH of ≤2, with the exception of the Pall ozone treatment samples. These samples have chemicals that, when mixed with the HCl acid, cause interferences and trap damage. Every attempt is made to analyze these samples within 24 hours of receipt.

Samples that require Bromate analysis are collected and preserved in the laboratory with ethylene di-amine and refrigerated.

Samples that are delivered to the laboratory the same day as they are collected are likely not to have reached a fully chilled temperature. This is acceptable as long as there is evidence that chilling has begun. All samples are iced or refrigerated at 4°C (±2°C) from the time of collection until sample preparation or analysis.

1,4-Dioxane (GC-MS)

All ground water and treated water samples were analyzed for 1,4-Dioxane (GC-MS) in accordance with EPA 1624C, which has been modified to enhance detection limits. Matrix effects requiring additional dilutions were seen in the following samples: MW-23, MW-37, NMW-1s, NMW-2d, NMW-2s, and PMW-3. Reporting limits were adjusted for the dilutions and Qualifier Codes were used to indicate the dilution and matrix effects.

No other difficulties were encountered during the 1,4-dioxane analyses. Reporting limit for undiluted samples is 1ppb (part per billion, micrograms per liter, µg/L). All quality control parameters were within the acceptance limits.

Bromate (Ion Chromatography)

All surface water and treated samples were analyzed for Bromate (Ion Chromatography) in accordance with EPA 300.1. Surrogates are added to all samples and standards and analyzed by Ion Chromatography utilizing background ion suppression and a conductivity detector. No difficulties were encountered during the Bromate analyses. All other quality control parameters were within the acceptance limits.

The reporting limit for treated samples is 5.0ppb and for surface samples is 2.0ppb.

Qualifiers

1,4-Dioxane Qualifier Codes:

Qualifier Code	*Description*
nd:	The compound was analyzed for, but was not detected at or above the detection limit indicated.
D:	Analyte value quantified from a dilution, reporting limit is raised to reflect dilution
E:	The compound result is greater than the upper quantitation limit in the associated calibration curve.
H:	The sample vials contained air bubbles larger than 5mm, which may affect compound results.
J:	The compound was positively identified; the associated numerical value is the approximate concentration.
M:	Matrix effects, sample required dilution.
R:	The reported value is unusable and rejected due to variance from quality control criteria.
V:	The reported value is considered estimated due to variance from quality control criteria.
H:	Sample was analyzed past 14 day hold time, but within 28 days.

Bromate Qualifier Codes:

Qualifier Code	*Description*
nd:	The compound was analyzed for, but was not detected at or above the detection limit indicated.
D:	Analyte value quantified from a dilution, reporting limit is raised to reflect dilution
E:	The compound result is greater than the upper quantitation limit in the associated calibration curve.
J:	The compound was positively identified; the associated numerical value is the approximate concentration.
M:	Matrix effects, sample required dilution.
R:	The reported value is unusable and rejected due to variance from quality control criteria.
V:	The reported value is considered estimated due to variance from quality control criteria.
H:	Sample was analyzed past 28 day hold time

Analyst: Susan E.O. Peters **Signature:** Susan E.O. Peters **Date:** 09-11-14

Report Reviewed By: Cristian Duma **Signature:** [signature] **Date:** 9-11-14

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

Sample Analysis Report

August, 2014

Analyst Initials: SEOP
Date: 09-11-14

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
Residential Wells								
C3								
Saginaw Forest Cabin #4-08-27-14-09:03-1	nd	1.0					Brighton Analytical	O
D0								
110 Parkland Plaza-08-01-14-14:16-1	2	1.0						
4141 Jackson Rd-08-18-14-11:52-1	5	1.0						
4401 Park West-08-15-14-10:44-1	5	1.0						
4742 Park Rd-08-15-14-11:49-1	8	1.0						
5005 Jackson Rd-08-08-14-13:38-1	20	1.0					Brighton Analytical	O
5115 Jackson Rd-08-08-14-13:17-1	nd	1.0					Brighton Analytical	O
Miscellaneous Wells								
ARTESIAN #3-08-08-14-13:51-1	14	1.0						
Residential Wells								
D2								
170 Aprill-08-13-14-14:20-1	10	1.0						
E								
371 Parkland Plaza #1-08-15-14-09:36-1	nd	1.0						
Not Determined								
2575 Valley-08-25-14-11:21-1	71	1.0						
697 South Wagner Rd-08-08-14-11:34-1	nd	1.0					Brighton Analytical	O

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
723 S. Wagner Road-08-08-14-11:21-1	1	1.0					Brighton Analytical	O
745 S. Wagner Road-08-08-14-11:12-1	nd	1.0					Brighton Analytical	O
777 S. Wagner Road-08-08-14-11:01-1	nd	1.0					Brighton Analytical	O
Extraction Wells								
C3								
DOLPH-08-04-14-07:52-1	74	1.0						
TW-20-08-04-14-08:20-1	870	10.0						D
D2								
LB-4-08-04-14-07:30-1	470	10.0						D
TW-21-08-04-14-08:13-1	110	1.0						
E								
TW-18-08-04-14-07:50-1	280	10.0						D
TW-19-08-04-14-07:29-1	670	10.0						D
Marshy								
PW-1-08-04-14-07:45-1	590	10.0						D
SW								
TW-22-08-04-14-08:42-1	530	10.0						D
TW-8-08-04-14-08:43-1	600	10.0						D
Monitoring Wells								
C3								
MW-1 Replacement-08-19-14-14:24-1	2200	25.0						D
MW-125-08-27-14-10:35-1	230	5.0						D
MW-127s-08-27-14-10:08-1	nd	1.0						
MW-128s-08-27-14-14:12-1	nd	1.0						
MW-16-08-22-14-10:47-1	7	1.0						

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
MW-20-08-13-14-11:28-1	nd	1.0						
MW-23-08-28-14-09:39-1	300	20.0						D, M
MW-24-08-28-14-11:32-1	170	10.0						D
MW-32-08-29-14-11:02-1	9	1.0						
MW-35-08-29-14-10:40-1	4	1.0						
MW-37-08-27-14-11:32-1	370	25.0						D, M
MW-39s-08-13-14-11:46-1	4	1.0						
D0								
A2 Cleaning Supply-08-08-14-10:12-1	60	1.0						
MW-31-08-15-14-13:36-1	15	1.0						
MW-40d-08-13-14-10:32-1	nd	1.0						
MW-40s-08-13-14-10:52-1	nd	1.0						
MW-42d-08-13-14-09:31-1	nd	1.0						
MW-42s-08-13-14-09:44-1	nd	1.0						
MW-51-08-18-14-10:51-1	nd	1.0						
MW-53d-08-11-14-10:04-1	nd	1.0						
MW-53i-08-11-14-11:09-1	81	1.0						
MW-53s-08-11-14-10:22-1	nd	1.0						
MW-60-08-15-14-10:01-1	4	1.0						
MW-93-08-13-14-13:22-1	7	1.0						
D2								
373 Pinewood Shallow-08-25-14-14:32-1	370	10.0						D
465 Dupont-08-26-14-10:51-1	1500	25.0						D
MW-113-08-20-14-10:26-1	51	1.0						
MW-120s-08-05-14-10:12-1	nd	1.0						
MW-122s-08-04-14-14:31-1	80	1.0						
MW-123s-08-04-14-10:32-1	nd	1.0						

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
MW-124s-08-06-14-10:39-1	nd	1.0					Split with State	S
MW-126s-08-05-14-11:03-1	nd	1.0						
MW-131s-08-05-14-13:30-1	nd	1.0						
MW-30i-08-12-14-11:31-1	16	1.0						
MW-39d-08-13-14-12:09-1	91	1.0						
MW-4d-08-26-14-14:06-1	1600	25.0						D
MW-54d-08-25-14-09:36-1	85	1.0						
MW-54s-08-25-14-09:53-1	nd	1.0						
MW-77-08-26-14-11:39-1	1800	25.0						D
MW-94s-08-22-14-11:26-1	180	5.0						D
MW-BE-1d-08-20-14-13:35-1	560	10.0						D
MW-BE-1s-08-20-14-13:53-1	360	10.0						D
MW-KD-1d-08-06-14-13:51-1	180	1.0						
MW-KD-1s-08-06-14-13:19-1	43	1.0						
E								
373 Pinewood Deep-08-25-14-14:04-1	nd	1.0						
MW-100-08-19-14-13:47-1	2100	100.0						D
MW-103s-08-06-14-11:14-1	62	1.0					Split with State	S
MW-104-08-14-14-13:34-1	5	1.0						
MW-110-08-14-14-14:12-1	43	1.0						
MW-112i-08-07-14-11:16-1	7	1.0						
MW-112s-08-07-14-11:32-1	nd	1.0						
MW-119-08-20-14-11:12-1	55	1.0						
MW-120d-08-05-14-09:51-1	nd	1.0						
MW-122d-08-18-14-14:17-1	nd	1.0						
MW-123d-08-04-14-11:41-1	nd	1.0						
MW-124d-08-06-14-10:04-1	nd	1.0					Split with State	S

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
MW-126d-08-05-14-12:01-1	nd	1.0						
MW-127d-08-27-14-09:56-1	nd	1.0						
MW-128d-08-27-14-13:53-1	nd	1.0						
MW-131d-08-05-14-14:16-1	nd	1.0						
MW-135-08-14-14-10:52-1	nd	1.0						
MW-64-08-29-14-11:56-1	43	1.0						
MW-66-08-29-14-10:14-1	2	1.0						
MW-70-08-22-14-10:16-1	nd	1.0						
MW-72d-08-19-14-10:12-1	1700	25.0						D
MW-76i-08-07-14-13:51-1	91	1.0						
MW-76s-08-07-14-14:13-1	270	5.0						D
MW-82d-08-22-14-13:59-1	2	1.0						
MW-82s-08-22-14-14:21-1	190	5.0						D
MW-84s-08-06-14-14:40-1	78	10.0						D
MW-85-08-20-14-14:39-1	1000	25.0						D
MW-88-08-20-14-11:55-1	95	10.0						D
MW-90-08-07-14-12:03-1	20	1.0						
MW-97d-08-14-14-09:51-1	nd	1.0						
MW-97s-08-14-14-10:04-1	nd	1.0						
MW-98s-08-14-14-11:51-1	nd	1.0						
MW-99d-08-12-14-14:02-1	nd	1.0						
MW-99s-08-12-14-13:23-1	nd	1.0						
Marshy								
AMW-1-08-28-14-10:16-1	310	5.0						D
AMW-2-08-28-14-09:25-1	21	5.0						D
MOW-1-08-28-14-09:46-1	630	25.0						D
NMW-1d-08-28-14-10:16-1	780	10.0						D

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
NMW-1s-08-28-14-10:31-1	2000	100.0						D, M
NMW-2d-08-28-14-10:49-1	850	100.0						D, M
NMW-2s-08-28-14-10:42-1	2100	100.0						D, M
NMW-3d-08-28-14-11:10-1	710	10.0						D
NMW-3s-08-28-14-11:15-1	530	10.0						D
PMW-1-08-28-14-12:29-1	100	5.0						D
PMW-2-08-28-14-12:16-1	3100	100.0						D
PMW-3-08-28-14-09:58-1	5800	200.0						D. M
PMW-4-08-28-14-12:01-1	980	25.0						D
Surface Water								
Not Applicable								
HC/HR-08-01-14-06:49-01			nd	2.0				
HC/HR-08-04-14-07:45-1			nd	2.0				
HC/HR-08-05-14-07:05-1			nd	2.0				
HC/HR-08-06-14-07:41-1			nd	2.0				
HC/HR-08-07-14-07:51-1			nd	2.0				
HC/HR-08-08-14-08:02-1			nd	2.0				
HC/HR-08-11-14-07:51-1			nd	2.0				
HC/HR-08-12-14-08:17-1			nd	2.0				
HC/HR-08-13-14-07:34-1			nd	2.0				
HC/HR-08-14-14-1			nd	2.0				
HC/HR-08-15-14-07:50-1			nd	2.0				
HC/HR-08-18-14-07:55-1			nd	2.0				
HC/HR-08-19-14-08:10-1			nd	2.0				
HC/HR-08-20-14-08:14-1			nd	2.0				
HC/HR-08-21-14-07:53-1			nd	2.0				
HC/HR-08-22-14-07:55-1			nd	2.0				

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
HC/HR-08-25-14-08:00-1			nd	2.0				
HC/HR-08-26-14-07:46-1			nd	2.0				
HC/HR-08-27-14-07:55-1			nd	2.0				
HC/HR-08-28-14-07:45-1			nd	2.0				
HC/HR-08-29-14-08:10-1			nd	2.0				
Treatment System								
OUTFALL-08-03-14-1	6	1.0						
OUTFALL-08-03-14-2			7	5.0				
OUTFALL-08-04-14-2			7	5.0				
OUTFALL-08-04-14-1	6	1.0						
OUTFALL-08-05-14-1	5	1.0						
OUTFALL-08-05-14-2			7	5.0				
OUTFALL-08-06-14-2			6	5.0				
OUTFALL-08-06-14-1	5	1.0						
OUTFALL-08-07-14-1	6	1.0						
OUTFALL-08-07-14-2			6	5.0				
OUTFALL-08-10-14-1	6	1.0						
OUTFALL-08-10-14-2			6	5.0				
OUTFALL-08-11-14-1	5	1.0						
OUTFALL-08-11-14-2			5	5.0				
OUTFALL-08-12-14-1	5	1.0						
OUTFALL-08-12-14-2			7	5.0				
OUTFALL-08-13-14-1	6	1.0						
OUTFALL-08-13-14-2			7	5.0				
OUTFALL-08-14-14-1	5	1.0						
OUTFALL-08-14-14-2			6	5.0				
OUTFALL-08-17-14-2			8	5.0				

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
OUTFALL-08-17-14-1	6	1.0						
OUTFALL-08-18-14-1	5	1.0						
OUTFALL-08-18-14-2			8	5.0				
OUTFALL-08-19-14-1	5	1.0						
OUTFALL-08-19-14-2			6	5.0				
OUTFALL-08-20-14-2			6	5.0				
OUTFALL-08-20-14-1	5	1.0						
OUTFALL-08-21-14-2			7	5.0				
OUTFALL-08-21-14-1	5	1.0						
OUTFALL-08-24-14-2			7	5.0				
OUTFALL-08-24-14-1	6	1.0						
OUTFALL-08-25-14-2			6	5.0				
OUTFALL-08-25-14-1	6	1.0						
OUTFALL-08-26-14-2			6	5.0				
OUTFALL-08-26-14-1	6	1.0						
OUTFALL-08-27-14-2			7	5.0				
OUTFALL-08-27-14-1	5	1.0						
OUTFALL-08-28-14-1	5	1.0						
OUTFALL-08-28-14-2			7	5.0				
OUTFALL-08-31-14-2			6	5.0				
OUTFALL-08-31-14-1	6	1.0						
Red Pond-08-04-14-07:45-1	430	10.0						D
Red Pond-08-11-14-07:50-1	430	10.0						D
Red Pond-08-18-14-07:15-1	430	10.0						D
Red Pond-08-25-14-07:30-1	440	10.0						D

Qualifier Codes:

nd: The compound was analyzed for, but was not detected at or above the detection limit indicated.

D: Analyte value quantified from a dilution, reporting limit is raised to reflect dilution

M: Matrix effects, sample required dilution.

O: Sample analyzed by and outside laboratory specified in the comment section

S: Samples split with DEQ

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

August 15, 2014

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

Subject: Drinking Water Samples

Dear Ms. Peters :

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Attached are the results for the samples submitted on 08/11/2014 for the above mentioned project. NELAP/TNI Accredited Analysis and MDEQ Drinking Water Certified Analysis will be identified in their respective reporting formats. Hard copies can be supplied at your request for a fee of $20.00 per copy.

The invoice for this project will be emailed separately. If you have any questions concerning the data or invoice, please don't hesitate to contact our office. Please reference Brighton Analytical, L.L.C. Project ID 30074 when calling or emailing. We thank you for this opportunity to partner with you on this project and hope to work with you again in the future.

Sincerely,
Brighton Analytical, L.L.C.

Brighton Analytical LLC
2105 Pless Drive
Brighton, Michigan 48114
Phone: (810)229-7575 (810)229-8650
e-mail:bai-brighton@sbcglobal.net
MDNRE Certified #9404
NELAC Accredited #176507

Sample Date/Time: 8/8/2014 11:12
Submit Date/Time: 8/11/2014 15:00
Report Date: 8/15/2014

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

BA Project # **30074**
BA Sample ID **CA02470**

Project Name: **Drinking Water Samples**
Project Number:
Sample ID: **745 S. Wagner Rd.**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
1,4-Dioxane(SIM)							
1,4-Dioxane (SIM)	Not detected	ug/L	1		EPA 1624(SIM)	19:05	08/14/2014

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

MCL = Maximum contaminant Levels.
Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by _____
Date 8/15/14

Brighton Analytical LLC
2105 Pless Drive
Brighton, Michigan 48114
Phone: (810)229-7575 (810)229-8650
e-mail:bai-brighton@sbcglobal.net
MDNRE Certified #9404
NELAC Accredited #176507

Sample Date/Time:	8/8/2014	13:38
Submit Date/Time:	8/11/2014	15:00
Report Date:	8/15/2014	

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

BA Project # **30074**
BA Sample ID **CA02473**

Project Name: **Drinking Water Samples**
Project Number:
Sample ID: **5005 Jackson Rd.**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
1,4-Dioxane(SIM)							
1,4-Dioxane (SIM)	20	ug/L	1		EPA 1624(SIM)	20:53	08/14/2014

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

MCL = Maximum contaminant Levels.
Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by _____
Date 8/15/14

GC/MS
VOLATILE METHOD 1624 SIM
REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: August 14, 2014 Spike Sid. ID: 2204.0 Inst./Detec: Vol 5 GC/MS

Laboratory ID: LCS Matrix: Water Analyst: CW

	Matrix Spike - Precision				Matrix spike - Accuracy					
	Spike 1	Spike 2	Relative Percent Difference	Spk Conc ug/L	% Recovery	% Recovery	Range (%)	Sample background	Method Blank	LCS
1,4 Dioxane	10.0	9.8	1.2	10	100	98	70-130	<1	<1	93%

ug/L is equivalent to ppb

Comments:

GC/MS
VOLATILE METHOD 1624 SIM
REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: August 14, 2014 Spike Std. ID: 2229.16 Inst./Detec: Vol 5 GC/MS

Laboratory ID: CA002850 Matrix: Water Analyst: CW

	Matrix Spike - Precision				Matrix spike - Accuracy					
	Spike 1	Spike 2	Relative Percent Difference	Spk Conc ug/L	% Recovery	% Recovery	Range (%)	Sample background	Method Blank	LCS
1,4 Dioxane	10.5	11.4	8.4	10	105	114	70-130	<1	<1	109%

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

August 25, 2014

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

Subject: Drinking Water Samples

Dear Ms. Peters :

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Attached are the results for the samples submitted on 08/11/2014 for the above mentioned project. NELAP/TNI Accredited Analysis and MDEQ Drinking Water Certified Analysis will be identified in their respective reporting formats. Hard copies can be supplied at your request for a fee of $20.00 per copy.

The invoice for this project will be emailed separately. If you have any questions concerning the data or invoice, please don't hesitate to contact our office. Please reference Brighton Analytical, L.L.C. Project ID 30074 when calling or emailing. We thank you for this opportunity to partner with you on this project and hope to work with you again in the future.

Sincerely,
Brighton Analytical, L.L.C.

Brighton Analytical LLC
2105 Pless Drive
Brighton, Michigan 48114
Phone: (810)229-7575 (810)229-8650
e-mail:bai-brighton@sbcglobal.net
MDNRE Certified #9404
NELAC Accredited #176507

Sample Date/Time:	8/8/2014	11:34
Submit Date/Time:	8/11/2014	15:00
Report Date:	8/25/2014	

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

BA Project # **30074**
BA Sample ID **CA02471**

Project Name: **Drinking Water Samples**
Project Number:
Sample ID: **697 S. Wagner Rd.**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
1,4-Dioxane(SIM)							
1,4-Dioxane (SIM)	Not detected	ug/L	1		EPA 1624(SIM)	19:27	08/22/2014

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

MCL = Maximum contaminant Levels.
Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by _____

Date 8-25-14

Brighton Analytical LLC
2105 Pless Drive
Brighton, Michigan 48114
Phone: (810)229-7575 (810)229-8650
e-mail:bai-brighton@sbcglobal.net
MDNRE Certified #9404
NELAC Accredited #176507

Sample Date/Time: 8/8/2014 11:01
Submit Date/Time: 8/11/2014 15:00
Report Date: 8/25/2014

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

BA Project # **30074**
BA Sample ID **CA02472**

Project Name: **Drinking Water Samples**
Project Number:
Sample ID: **777 S. Wagner Rd.**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
1,4-Dioxane(SIM)							
1,4-Dioxane (SIM)	Not detected	ug/L	1		EPA 1624(SIM)	19:48	08/22/2014

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

MCL = Maximum contaminant Levels.
Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by _____
Date 8 25 14

Brighton Analytical LLC
2105 Pless Drive
Brighton, Michigan 48114
Phone: (810)229-7575 (810)229-8650
e-mail:bai-brighton@sbcglobal.net
MDNRE Certified #9404
NELAC Accredited #176507

Sample Date/Time: 8/8/2014 13:17
Submit Date/Time: 8/11/2014 15:00
Report Date: 8/25/2014

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

BA Project # **30074**
BA Sample ID **CA02474**

Project Name: **Drinking Water Samples**
Project Number:
Sample ID: **5115 Jackson Rd.**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
1,4-Dioxane(SIM)							
1,4-Dioxane (SIM)	Not detected	ug/L	1		EPA 1624(SIM)	20:10	08/22/2014

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

MCL = Maximum contaminant Levels.
Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by _____

Date 8.25.14

Brighton Analytical LLC
2105 Pless Drive
Brighton, Michigan 48114
Phone: (810)229-7575 (810)229-8650
e-mail:bai-brighton@sbcglobal.net
MDNRE Certified #9404
NELAC Accredited #176507

Sample Date/Time:	8/8/2014	11:21
Submit Date/Time:	8/11/2014	15:00
Report Date:	8/25/2014	

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

BA Project # **30074**
BA Sample ID **CA02469**

Project Name: **Drinking Water Samples**
Project Number:
Sample ID: **723 S. Wagner Rd.**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
1,4-Dioxane(SIM)							
1,4-Dioxane (SIM)	1	ug/L	1		EPA 1624(SIM)	20:31	08/22/2014

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

MCL = Maximum contaminant Levels.
Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by _____

Date 8.25.14

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

September 09, 2014

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

Subject: Drinking Water

Dear Ms. Peters :

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Attached are the results for the samples submitted on 08/28/2014 for the above mentioned project. NELAP/TNI Accredited Analysis and MDEQ Drinking Water Certified Analysis will be identified in their respective reporting formats. Hard copies can be supplied at your request for a fee of $20.00 per copy.

The invoice for this project will be emailed separately. If you have any questions concerning the data or invoice, please don't hesitate to contact our office. Please reference Brighton Analytical, L.L.C. Project ID 31222 when calling or emailing. We thank you for this opportunity to partner with you on this project and hope to work with you again in the future.

Sincerely,
Brighton Analytical, L.L.C.

Brighton Analytical LLC
2105 Pless Drive
Brighton, Michigan 48114
Phone: (810)229-7575 (810)229-8650
e-mail:bai-brighton@sbcglobal.net
MDNRE Certified #9404
NELAC Accredited #176507

Sample Date/Time: 8/27/2014 09:03
Submit Date/Time: 8/28/2014 15:00
Report Date: 9/9/2014

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

BA Project # **31222**
BA Sample ID **CA03501**

Project Name: **Drinking Water**
Project Number:
Sample ID: **Saginaw Forest Cabin #4**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
1,4-Dioxane(SIM)							
1,4-Dioxane (SIM)	Not detected	ug/L	1		EPA 1624(SIM)	12:08	09/08/2014

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

MCL = Maximum contaminant Levels.
Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by _____
Date 9/9/14

GC/MS
VOLATILE METHOD 1624 SIM
REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: September 8, 2014 Spike Std. ID: 2229.21 Inst./Detec: Vol 5 GC/MS

Laboratory ID: LCS Matrix: Water Analyst: CW

	Matrix Spike - Precision				Matrix spike - Accuracy					
	Spike 1	Spike 2	Relative Percent Difference	Spk Conc ug/L	% Recovery	% Recovery	Range (%)	Sample background	Method Blank	LCS
1,4 Dioxane	7.7	7.5	2.2	10	77	75	70-130	<1	<1	95%

ug/L is equivalent to ppb

Comments: _____