

CASE NARRATIVE

Monthly Data Pall Life Sciences

Project: 1,4-Dioxane Remediation

Date: May 2015

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.

Gelman Sciences, Inc. d/b/a Pall Life Sciences (PLS) attests to the validity of the laboratory data generated by PLS's Ann Arbor, Michigan Environmental Laboratory facilities reported herein. All analyses performed by PLS's Environmental Laboratory facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. PLS'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.

Due to analyst's vacation and illness as well as an instrument breakdown, some samples were sent to Brighton Analytical, L.L.C a NELAP/TNI Accredited and MDEQ Drinking Water Certified laboratory. These samples included: 4601 Park 4 inch; 4601 Park 6 inch; Bethlehem Cemetery; MW-61d; MW-61s; MW-113; MW-121s; MW-54s; MW-KD-1d; MW-KD-1s; MW-103s; MW-104; MW-110; MW-112i; MW-112s; MW-119; MW-129d; MW-65d; MW-65i; MW-65s; MW-83s; MW-90; Outfall 05/10/15; Outfall 05/11/15; Outfall 05/12/15; Outfall 05/13/15; Outfall 05/14/15; Outfall 05/17/15; Outfall 05/18/15; Outfall 05/19/15; Red Pond 05/18/15; and Red Pond 05/26/15. Two drinking water samples were sent to Brighton Analytical: 5005 Jackson Rd; and 697 South Wagner Road.

The following samples were split with the DEQ: MW-103s (05-20-15-11:10), MW-112i (05-20-15-10:44), MW-112s (05-20-15-09:57), and MW-129d (05-20-15-09:17). The data generated by the State of Michigan laboratory are not included in this report. The samples that were analyzed by two laboratories are noted in Qualifier section of the data table.

The balance of the samples were analyzed by PLS's Environmental Laboratory. The test results in this report meet all NELAP requirements for parameters for which accreditation are required or available. Any exceptions to NELAP requirements are noted in this report. All exceptions are noted per laboratory standard operating procedure based on EPA Method 1624c. 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.

Holding times were met for all but one sample that expired during time off due to illness. 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 hydrochloric 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. Samples that were diluted to bring them within the calibrated range of the instrument are noted with a "D" under the Qualifier Code section of the data report. Reporting limits were adjusted based on each dilution.

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 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:

<i>Qualifier Code</i>	<i>Description</i>
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, reported as estimate.
B:	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.
O:	Samples analyzed in outside laboratory.
S:	Samples split with DEQ.

Bromate Qualifier Codes:

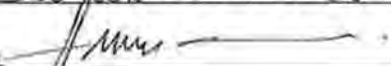
<i>Qualifier Code</i>	<i>Description</i>
nd:	The compound was analyzed for, but was not detected at or above the detection limit indicated.
E:	The compound result is greater than the upper quantitation limit in the associated calibration curve.
J:	The compound was positively identified; the associated numerical value is the approximate concentration.
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



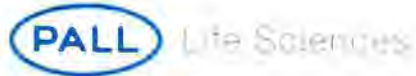
Date: 06-12-15

Report Checked by: Cristian Duma



Date:

6-12-15



Sample Analysis Report

May, 2015

642 South Wagner Road
Ann Arbor, MI 48103-9019 US
734.436.4025 phone

Analyst Initials: SEOP
Date: 06-12-15

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								
D0								
4601 Park 4 inch-05-07-15-09:38-1	1	1.0					Brighton Analytical Labs	O
4601 Park 6 inch-05-07-15-10:14-1	1	1.0					Brighton Analytical Labs	O
5005 Jackson Rd-05-19-15-11:39-1	19	1.0					Brighton Analytical Labs	O
Not Determined								
697 South Wagner Rd-05-19-15-11:59-1	nd	1.0					Brighton Analytical Labs	O
Miscellaneous Wells								
Bethlehem Cemetery-05-19-15-13:08-1	nd	1.0					Brighton Analytical Labs	O
Extraction Wells								
C3								
DOLPH-05-01-15-08:12-1	89	1.0						
TW-20-05-01-15-11:14-1	890	50.0						D
D2								
LB-4-05-01-15-11:01-1	440	10.0						D
TW-21-05-01-15-11:21-1	120	1.0						
E								

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)
TW-16-05-01-15-10:49-1	920	100.0						D
TW-18-05-01-15-08:08-1	280	10.0						D
TW-19-05-01-15-10:50-1	710	50.0						D
Marshy								
PW-1-05-01-15-08:10-1	520	100.0						D
SW								
TW-22-05-01-15-11:36-1	480	50.0						D
TW-8-05-01-15-11:35-1	650	10.0						D
Monitoring Wells								
C2								
MW-25s-05-27-15-13:59-1	290	1.0						E
C3								
MW-105s-05-15-15-11:04-1	480	1.0						D
MW-18d-05-13-15-11:20-1	230	10.0						D
MW-20-05-12-15-13:31-1	nd	1.0						
MW-22-05-27-15-14:23-1	260	50.0						D
MW-2d-05-12-15-09:16-1	31	1.0						
MW-2s-05-12-15-09:21-1	4	1.0						
MW-32-05-13-15-10:27-1	17	1.0						
MW-35-05-13-15-10:01-1	5	1.0						
MW-37-05-13-15-11:52-1	310	10.0						D
MW-39s-05-06-15-13:19-1	2	1.0						
D0								
A2 Cleaning Supply-05-04-15-10:01-1	58	1.0						
MW-53d-05-04-15-13:38-1	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-53i-05-04-15-14:39-1	61	1.0						
MW-53s-05-04-15-13:54-1	nd	1.0						
MW-61d-05-07-15-10:53-1	2	1.0					Brighton Analytical Labs	O
MW-61s-05-07-15-11:09-1	15	1.0					Brighton Analytical Labs	O
D2								
2819 Dexter Rd-05-28-15-11:19-1	360	10.0						D
3161 Dexter Rd-05-27-15-09:59-1	nd	1.0						
373 Pinewood Shallow-05-28-15-10:17-1	300	10.0						D
MW-113-05-20-15-13:42-1	57	1.0					Brighton Analytical Labs	O
MW-118-05-22-15-11:08-1	53	1.0						O
MW-11d-05-13-15-10:56-1	140	5.0						D
MW-120s-05-26-15-10:30-1	nd	1.0						
MW-121s-05-07-15-13:18-1	nd	1.0					Brighton Analytical Labs	O
MW-122s-05-26-15-12:07-1	96	1.0						
MW-126s-05-06-15-12:07-1	nd	1.0						
MW-131s-05-06-15-10:39-1	nd	1.0						
MW-17-05-14-15-14:34-1	390	10.0						D
MW-39d-05-06-15-13:45-1	60	5.0						D
MW-54s-05-19-15-13:33-1	nd	1.0					Brighton Analytical Labs	O
MW-55-05-27-15-10:36-1	28	1.0						
MW-77-05-27-15-11:43-1	1700	50.0						D
MW-KD-1d-05-07-15-14:21-1	200	5.0					Brighton Analytical Labs	D, O
MW-KD-1s-05-07-15-13:45-1	40	4.0					Brighton Analytical Labs	D, 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)
E								
373 Pinewood Deep-05-28-15-09:50-1	nd	1.0						
MW-103s-05-05-15-10:28-1	73	1.0						
MW-103s-05-20-15-11:10-1	72	5.0					Brighton Analytical Labs	O, D, S
MW-104-05-18-15-13:26-1	4	1.0					Brighton Analytical Labs	O
MW-105d-05-15-15-10:50-1	230	1.0						D
MW-106s-05-22-15-11:48-1	260	10.0						O, D
MW-110-05-18-15-13:57-1	48	1.0					Brighton Analytical Labs	O
MW-112i-05-05-15-10:04-1	8	1.0						
MW-112i-05-20-15-10:44-1	9	1.0					Brighton Analytical Labs	O, S
MW-112s-05-05-15-09:23-1	1	1.0						
MW-112s-05-20-15-09:57-1	nd	1.0					Brighton Analytical Labs	O, S
MW-119-05-18-15-09:59-1	69	1.0					Brighton Analytical Labs	O
MW-122d-05-26-15-11:31-1	nd	1.0						
MW-126d-05-06-15-11:42-1	nd	1.0						
MW-129d-05-20-15-09:17-1	nd	1.0					Brighton Analytical Labs	O, S
MW-131d-05-06-15-10:15-1	nd	1.0						
MW-30d-05-22-15-10:31-1	410	10.0						O, D
MW-64-05-13-15-13:48-1	59	1.0						
MW-65d-05-19-15-09:34-1	29	1.0					Brighton Analytical Labs	O
MW-65i-05-19-15-10:57-1	1	1.0					Brighton Analytical Labs	O
MW-65s-05-19-15-10:06-1	13	1.0					Brighton Analytical Labs	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)
MW-66-05-13-15-09:48-1	2	1.0						
MW-68-05-26-15-09:50-1	nd	1.0						
MW-72d-05-21-15-14:13-1	1500	50.0						O, D
MW-72s-05-21-15-13:27-1	5	1.0						O
MW-76i-05-05-15-13:51-1	86	5.0						D
MW-76s-05-05-15-14:11-1	280	10.0						D
MW-83s-05-18-15-10:34-1	270	10.0					Brighton Analytical Labs	O, D
MW-84s-05-05-15-11:18-1	180	10.0						D
MW-87d-05-15-15-14:16-1	580	1.0						D
MW-87s-05-15-15-14:28-1	970	1.0						D
MW-88-05-15-15-13:41-1	57	1.0						D
MW-90-05-18-15-11:14-1	20	1.0					Brighton Analytical Labs	O
MW-91-05-12-15-11:09-1	220	5.0						D
MW-98d-05-12-15-10:21-1	16	1.0						
SW								
MW-10d-05-27-15-13:42-1	1000	50.0						D
MW-45d-05-26-15-14:29-1	230	10.0						D
MW-45s-05-26-15-14:12-1	10	1.0						
MW-49-05-21-15-11:13-1	nd	1.0						O
MW-52s-05-27-15-13:18-1	620	25.0						D
MW-58d-05-21-15-11:40-1	18	1.0						O
MW-58s-05-21-15-12:02-1	190	10.0						O, D
TW-4-05-26-15-13:48-1	65	5.0						D
Surface Water								
Not Applicable								

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-05-01-15-07:51-1			nd	2.0				
HC/HR-05-04-15-08:24-1			nd	2.0				
HC/HR-05-05-15-08:17-1			nd	2.0				
HC/HR-05-06-15-08:19-1			nd	2.0				
HC/HR-05-07-15-08:03-1			nd	2.0				
HC/HR-05-08-15-08:27-1			nd	2.0				
HC/HR-05-11-15-08:26-1			nd	2.0				
HC/HR-05-12-15-06:45-1			nd	2.0				
HC/HR-05-13-15-06:58-1			nd	2.0				
HC/HR-05-14-15-08:27-1			nd	2.0				
HC/HR-05-15-15-08:17-1			nd	2.0				
HC/HR-05-18-15-07:30-1			nd	2.0				
HC/HR-05-19-15-07:59-1			nd	2.0				
HC/HR-05-20-15-07:32-1			nd	2.0				
HC/HR-05-21-15-07:40-1			nd	2.0				
HC/HR-05-22-15-08:02-1			nd	2.0				
HC/HR-05-26-15-08:17-1			nd	2.0				
HC/HR-05-27-15-08:31-1			nd	2.0				
HC/HR-05-28-15-07:32-1			nd	2.0				
HC/HR-05-29-15-07:34-1			nd	2.0				
Treatment System								
OUTFALL-05-03-15-1	5	1.0						
OUTFALL-05-03-15-2			nd	5.0				
OUTFALL-05-04-15-1	6	1.0						
OUTFALL-05-04-15-2			nd	5.0				
OUTFALL-05-05-15-1	4	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)
OUTFALL-05-05-15-2			5	5.0				
OUTFALL-05-06-15-1	4	1.0						
OUTFALL-05-06-15-2			5	5.0				
OUTFALL-05-07-15-1	4	1.0						
OUTFALL-05-07-15-2			nd	5.0				
OUTFALL-05-10-15-1	6	1.0					Brighton Analytical Labs	O
OUTFALL-05-10-15-2			5	5.0				
OUTFALL-05-11-15-1	6	1.0					Brighton Analytical Labs	O
OUTFALL-05-11-15-2			5	5.0				
OUTFALL-05-12-15-1	4	1.0					Brighton Analytical Labs	O
OUTFALL-05-12-15-2			5	5.0				
OUTFALL-05-13-15-1	4	1.0					Brighton Analytical Labs	O
OUTFALL-05-13-15-2			5	5.0				
OUTFALL-05-14-15-1	5	1.0					Brighton Analytical Labs	O
OUTFALL-05-14-15-2			5	5.0				
OUTFALL-05-17-15-1	5	1.0					Brighton Analytical Labs	O
OUTFALL-05-17-15-2			nd	5.0				
OUTFALL-05-18-15-1	6	1.0					Brighton Analytical Labs	O
OUTFALL-05-18-15-2			nd	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-05-19-15-1	4	1.0					Brighton Analytical Labs	O
OUTFALL-05-19-15-2			nd	5.0				
OUTFALL-05-20-15-1	4	1.0						
OUTFALL-05-20-15-2			nd	5.0				
OUTFALL-05-21-15-1	5	1.0						
OUTFALL-05-21-15-2			5	5.0				
OUTFALL-05-24-15-1	6	1.0						
OUTFALL-05-24-15-2			nd	5.0				
OUTFALL-05-25-15-1	7	1.0						
OUTFALL-05-25-15-2			nd	5.0				
OUTFALL-05-26-15-1	5	1.0						
OUTFALL-05-26-15-2			7	5.0				
OUTFALL-05-27-15-1	5	1.0						
OUTFALL-05-27-15-2			nd	5.0				
OUTFALL-05-28-15-1	6	1.0						O
OUTFALL-05-28-15-2			5	5.0				
OUTFALL-05-31-15-1	6	1.0						O
OUTFALL-05-31-15-2			5	5.0				
Red Pond-05-04-15-07:50-1	400	10.0						D
Red Pond-05-11-15-08:00-1	570	10.0					Analyst III	D, H
Red Pond-05-18-15-06:45-1	390	10.0					Brighton Analytical Labs	O, D
Red Pond-05-26-15-07:30-1	470	10.0					Brighton Analytical Labs	O, 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

E: The compound result is greater than the upper quantitation limit in the associated calibration curve, results considered an estimate.

H: Sample was analyzed past 14 day hold time, but within 28 days.

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 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
 e-mail: bai-brighton@sbcglobal.net

Sample Date: 5/10/2015
 Submit Date: 5/11/2015
 Report Date: 5/12/2015

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

BA Report Number: **34439**
 BA Sample ID: **CB04794**

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

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	6	ug/L	1	EPA 1624(SIM)	CW	5/12/2015

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

Released by:
 Date:

[Handwritten Signature]
 5/12/15



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

Sample Date: 5/11/2015
 Submit Date: 5/12/2015
 Report Date: 5/12/2015

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

BA Report Number: **34451**
 BA Sample ID: **CB04827**

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

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	6	ug/L	l	EPA 1624(SIM)	CW	5/12/2015

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

Released by:
 Date:

[Signature]
 5/12/15



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

Sample Date: 5/12/2015
 Submit Date: 5/13/2015
 Report Date: 5/14/2015

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

BA Report Number: **34467**
 BA Sample ID: **CB04869**

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

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	4	ug/L	1	EPA 1624(SIM)	CW	5/13/2015

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

Released by:
 Date:

[Signature]
 5/14/15



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

Sample Date: 5/13/2015
 Submit Date: 5/14/2015
 Report Date: 5/15/2015

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

BA Report Number: **34490**
 BA Sample ID: **CB04916**

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

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM) 1,4-Dioxane (SIM)	4	ug/L	1	EPA 1624(SIM)	CW	5/15/2015

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

Released by:
 Date:

[Signature]
 5/15/15



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

Sample Date: 5/14/2015
 Submit Date: 5/15/2015
 Report Date: 5/15/2015

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

BA Report Number: **34504**
 BA Sample ID: **CB04969**

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

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	5	ug/L	1	EPA 1624(SIM)	CW	5/15/2015

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

Released by:
 Date:

[Signature]
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 e-mail: bai-brighton@sbeglobal.net

Sample Date: 5/17/2015
 Submit Date: 5/20/2015
 Report Date: 6/9/2015

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

BA Report Number: 34551
 BA Sample ID: CB05084

Project Name: **RUSH Samples**
 Project Number:
 Sample ID: **Outfall**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	5	ug/L	1	EPA 1624(SIM)	CW	5/20/2015

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

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U. Wood
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Phone: (810) 229-7575 FAX: (810) 229-8650
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Sample Date: 5/18/2015
 Submit Date: 5/20/2015
 Report Date: 6/9/2015

To: Pall Corp.
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 Ann Arbor, MI 48103

BA Report Number: 34551
 BA Sample ID: CB05085

Project Name: RUSH Samples
 Project Number:
 Sample ID: Outfall

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	6	ug/L	1	EPA 1624(SIM)	CW	5/20/2015

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

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Sample Date: 5/19/2015
 Submit Date: 5/20/2015
 Report Date: 5/21/2015

To: Pall Corp.
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BA Report Number: **34551**
 BA Sample ID: **CB05086**

Project Name: **RUSH Samples**
 Project Number:
 Sample ID: **Outfall**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	4	ug/L	1	EPA 1624(SIM)	CW	5/20/2015

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

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 Date: *5/21/15*



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 e-mail: bai-brighton@sbcglobal.net
 MDNRE Certified #9404
 NELAC Accredited #176507

Sample Date/Time: 5/19/2015 11:59
 Submit Date/Time: 5/20/2015 09:45
 Report Date: 5/21/2015

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

BA Project # **34551**
 BA Sample ID **CB05087**

Project Name: **RUSH Samples**
 Project Number:
 Sample ID: **697 S. Wagner Rd. (DW)**

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)	03:38	05/20/2015

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 [Signature]
 Date 5.21.15



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 e-mail: bai-brighton@sbcglobal.net
 MDNRE Certified #9404
 NELAC Accredited #176507

Sample Date/Time: 5/19/2015 11:39
 Submit Date/Time: 5/20/2015 09:45
 Report Date: 5/21/2015

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

BA Project # **34551**
 BA Sample ID **CB05088**

Project Name: **RUSH Samples**
 Project Number:
 Sample ID: **5005 Jackson Rd. (DW)**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
1,4-Dioxane(SIM)							
1,4-Dioxane (SIM)	19	ug/L	1		EPA 1624(SIM)	04:59	05/20/2015

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.

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 Date 5.21.15



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 e-mail: bai-brighton@sbcglobal.net

Sample Date: 5/7/2015
 Submit Date: 5/20/2015
 Report Date: 5/21/2015

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

BA Report Number: 34551
 BA Sample ID: CB05089

Project Name: RUSH Samples
 Project Number:
 Sample ID: MW-121S

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	Not detected	ug/L	1	EPA 1624(SIM)	CW	5/20/2015

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

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 Date: 5/21/15



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Sample Date: 5/7/2015
 Submit Date: 5/20/2015
 Report Date: 5/21/2015

To: Pall Corp.
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 Ann Arbor, MI 48103

BA Report Number: **34551**
 BA Sample ID: **CB05090**

Project Name: **RUSH Samples**
 Project Number:
 Sample ID: **MW-61S**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	15	ug/L		EPA 1624(SIM)	CW	5/20/2015

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

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 Date: *5-21-15*



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Sample Date: 5/7/2015
 Submit Date: 5/20/2015
 Report Date: 5/21/2015

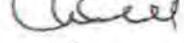
To: Pall Corp.
 600 S. Wagner
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 Ann Arbor, MI 48103

BA Report Number: **34551**
 BA Sample ID: **CB05091**

Project Name: **RUSH Samples**
 Project Number:
 Sample ID: **MW-61d**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	2	ug/L	1	EPA 1624(SIM)	CW	5/20/2015

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

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 Date: 5/21/15



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Sample Date: 5/7/2015
 Submit Date: 5/20/2015
 Report Date: 5/21/2015



To: Pall Corp.
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BA Report Number: **34551**
 BA Sample ID: **CB05092**

Project Name: **RUSH Samples**
 Project Number:
 Sample ID: **4601 Park 6"**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)		ug/L		EPA 1624(SIM)	CW	5/20/2015

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

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Sample Date: 5/7/2015
 Submit Date: 5/20/2015
 Report Date: 5/21/2015

To: Pall Corp.
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 Ann Arbor, MI 48103

BA Report Number: 34551
 BA Sample ID: CB05093

Project Name: RUSH Samples
 Project Number:
 Sample ID: 4601 Park 4''

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	1	ug/L	1	EPA 1624(SIM)	CW	5/20/2015

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

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Sample Date: 5/7/2015
 Submit Date: 5/20/2015
 Report Date: 5/21/2015

To: Pall Corp.
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BA Report Number: 34551
 BA Sample ID: CB05094

Project Name: RUSH Samples
 Project Number:
 Sample ID: MW-KD-1d

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	200	ug/L	5	EPA 1624(SIM)	CW	5/20/2015

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

Elevated dl due to sample matrix.

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 Date: 5/20/15



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Sample Date: 5/7/2015
 Submit Date: 5/20/2015
 Report Date: 5/21/2015

To: Pall Corp.
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BA Report Number: **34551**
 BA Sample ID: **CB05095**

Project Name: **RUSH Samples**
 Project Number:
 Sample ID: **MW-KD-1s (GW)**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	40	ug/L	4	EPA 1624(SIM)	CW	5/20/2015

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

Elevated dl due to sample matrix.

Released by: 
 Date: 5/21/15



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Sample Date: 5/18/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

To: Pall Corp.
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BA Report Number: 34681
 BA Sample ID: CB05534

Project Name:
 Project Number:
 Sample ID: MW-110

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	48	ug/L		EPA 1624(SIM)	CW	6/1/2015

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

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 Date:

Alfred
 6/2/15



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 Phone: (810) 229-7575 FAX: (810) 229-8650
 e-mail: bai-brighton@sbcglobal.net

Sample Date: 5/18/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

To: Pall Corp.
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 Ann Arbor, MI 48103

BA Report Number: **34681**
 BA Sample ID: **CB05535**

Project Name:
 Project Number:
 Sample ID: **MW-104**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	4	ug/L		EPA 1624(SIM)	CW	6/1/2015

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

Released by:
 Date:

W. J. Rosol
 6/2/15



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Phone: (810) 229-7575 FAX: (810) 229-8650
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Sample Date: 5/18/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

To: Pall Corp.
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 Ann Arbor, MI 48103

BA Report Number: **34681**
 BA Sample ID: **CB05536**

Project Name:
 Project Number:
 Sample ID: **MW-90**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	20	ug/L		EPA 1624(SIM)	CW	6/1/2015

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

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Wood
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Sample Date: 5/18/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

To: Pall Corp.
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BA Report Number: **34681**
 BA Sample ID: **CB05537**

Project Name:
 Project Number:
 Sample ID: **MW-83S**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	270	ug/l	10	EPA 1624(SIM)	CW	6/1/2015

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

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W. Ford
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Sample Date: 5/18/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

To: Pall Corp.
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BA Report Number: **34681**
 BA Sample ID: **CB05538**

Project Name:
 Project Number:
 Sample ID: **MW-119**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	69	ug/L		EPA 1624(SIM)	CW	6/1/2015

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

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Sample Date: 5/19/2015
 Submit Date: 6/1/2015
 Report Date: 6/3/2015

To: Pall Corp.
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BA Report Number: **34681**
 BA Sample ID: **CB05539**

Project Name:
 Project Number:
 Sample ID: **MW-54S**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	Not detected	ug/L		EPA 1624(SIM)	CW	6/2/2015

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

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Sample Date: 5/19/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

To: Pall Corp.
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BA Report Number: 34681
 BA Sample ID: CB05540

Project Name:
 Project Number:
 Sample ID: Bethlehem Cemetary

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM) 1,4-Dioxane (SIM)	Not detected	ug/L	1	EPA 1624(SIM)	CW	6/1/2015

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

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Sample Date: 5/19/2015
 Submit Date: 6/1/2015
 Report Date: 6/3/2015

To: Pall Corp.
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BA Report Number: 34681
 BA Sample ID: CB05541

Project Name:
 Project Number:
 Sample ID: MW-65i

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	1	ug/L	1	EPA 1624(SIM)	CW	6/2/2015

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

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W. J. Fossil
 6/3/15



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Sample Date: 5/20/2015
 Submit Date: 6/1/2015
 Report Date: 6/3/2015

To: Pall Corp.
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 Ann Arbor, MI 48103

BA Report Number: **34681**
 BA Sample ID: **CB05542**

Project Name:
 Project Number:
 Sample ID: **MW-113**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	57	ug/L		EPA 1624(SIM)	CW	6/2/2015

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

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Sample Date: 5/20/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

To: Pall Corp.
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BA Report Number: 34681
 BA Sample ID: CB05543

Project Name:
 Project Number:
 Sample ID: MW-103S

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	72	ug/L	S	EPA 1624(SIM)	CW	6/1/2015

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

Elevated dl due to sample matrix.

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 Date:

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Sample Date: 5/20/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

To: Pall Corp.
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BA Report Number: 34681
 BA Sample ID: CB05544

Project Name:
 Project Number:
 Sample ID: MW-112i

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM) 1,4-Dioxane (SIM)	9	ug/L		EPA 1624(SIM)	CW	6/1/2015

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

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 Date:

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Sample Date: 5/20/2015
 Submit Date: 6/1/2015
 Report Date: 6/3/2015

To: Pali Corp.
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BA Report Number: **34681**
 BA Sample ID: **CB05545**

Project Name:
 Project Number:
 Sample ID: **MW-112S**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	Not detected	ug/L	1	EPA 1624(SIM)	CW	6/2/2015

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

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Sample Date: 5/20/2015
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To: Pall Corp.
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BA Report Number: 34681
 BA Sample ID: CB05546

Project Name:
 Project Number:
 Sample ID: MW-129d

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM) 1,4-Dioxane (SIM)	Not detected	ug/L	1	EPA 1624(SIM)	CW	6/1/2015

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

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Sample Date: 5/21/2015
 Submit Date: 6/1/2015
 Report Date: 6/3/2015

To: Pall Corp.
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BA Report Number: 34681
 BA Sample ID: CB05547

Project Name:
 Project Number:
 Sample ID: MW-72d

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	1500	ug/L	50	EPA 1624(SIM)	CVW	6/1/2015

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

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Sample Date: 5/21/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

To: Pall Corp.
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BA Report Number: **34681**
 BA Sample ID: **CB05548**

Project Name:
 Project Number:
 Sample ID: **MW-72S**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	5	ug/L		EPA 1624(SIM)	CW	6/1/2015

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

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 2105 Pless Drive
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 Phone: (810) 229-7575 FAX: (810) 229-8650
 e-mail: bai-brighton@sbcglobal.net

Sample Date: 5/21/2015
 Submit Date: 6/1/2015
 Report Date: 6/3/2015

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

BA Report Number: 34681
 BA Sample ID: CB05549

Project Name:
 Project Number:
 Sample ID: MW-58S

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	190	ug/L	10	EPA 1624(SIM)	CW	6/1/2015

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

Released by:
 Date:

[Signature]
 6/3/15

Elevated dl due to sample matrix.



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

Sample Date: 5/21/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

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

BA Report Number: **34681**
 BA Sample ID: **CB05550**

Project Name:
 Project Number:
 Sample ID: **MW-58d**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM) 1,4-Dioxane (SIM)	18	ug/L		EPA 1624(SIM)	CW	6/1/2015

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

Released by:
 Date:

W. Wood
 6/2/15



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Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
 e-mail: bai-brighton@sbcglobal.net

Sample Date: 5/21/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

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

BA Report Number: 34681
 BA Sample ID: CB05551

Project Name:
 Project Number:
 Sample ID: MW-49

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	Not detected	ug/L	1	EPA 1624(SIM)	CW	6/1/2015

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

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Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
 e-mail: bai-brighton@sbcglobal.net

Sample Date: 5/22/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

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

BA Report Number: **34681**
 BA Sample ID: **CB05552**

Project Name:
 Project Number:
 Sample ID: **MW-106S**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM) 1,4-Dioxane (SIM)	260	ug/L	10	EPA 1624(SIM)	CW	6/1/2015

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

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 6/2/15

Elevated dl due to sample matrix.



Brighton Analytical, L.L.C.
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Phone: (810) 229-7575 FAX: (810) 229-8650
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Sample Date: 5/22/2015
 Submit Date: 6/1/2015
 Report Date: 6/3/2015

To: Pall Corp.
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 Ann Arbor, MI 48103

BA Report Number: **34681**
 BA Sample ID: **CB05553**

Project Name:
 Project Number:
 Sample ID: **MW-118**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	53	ug/L	1	EPA 1624(SIM)	CW	6/2/2015

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

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 6/3/15



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 e-mail: bai-brighton@sbcglobal.net

Sample Date: 5/22/2015
 Submit Date: 6/1/2015
 Report Date: 6/3/2015

To: Pall Corp.
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 Ann Arbor, MI 48103

BA Report Number: **34681**
 BA Sample ID: **CB05554**

Project Name:
 Project Number:
 Sample ID: **MW-30d**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM) 1,4-Dioxane (SIM)	410	ug/L	10	EPA 1624(SIM)	CW	6/2/2015

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

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 Phone: (810) 229-7575 FAX: (810) 229-8650
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Sample Date: 5/26/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

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

BA Report Number: **34681**
 BA Sample ID: **CB05555**

Project Name:
 Project Number:
 Sample ID: **Red Pond**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	470	ug/L	10	EPA 1624(SIM)	CW	6/1/2015

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

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 Date:

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Elevated dl due to sample matrix.



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

Sample Date: 5/19/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

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

BA Report Number: **34681**
 BA Sample ID: **CB05556**

Project Name:
 Project Number:
 Sample ID: **MW-65d**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)	29	ug/L	†	EPA 1624(SIM)	CW	6/1/2015

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

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2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
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Sample Date: 5/19/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

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

BA Report Number: **34681**
 BA Sample ID: **CB05557**

Project Name:
 Project Number:
 Sample ID: **MW-65S**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	13	ug/L		EPA 1624(SIM)	CW	6/1/2015

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

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 Date:

W. J. ...
 6/2/15



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2105 Pless Drive
Brighton, Michigan 48116
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 e-mail: bai-brighton@sbcglobal.net

Sample Date: 5/18/2015
 Submit Date: 6/1/2015
 Report Date: 6/2/2015

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

BA Report Number: **34681**
 BA Sample ID: **CB05558**

Project Name:
 Project Number:
 Sample ID: **Red Pond**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	390	ug/L	10	EPA 1624(SIM)	CW	6/1/2015

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

Elevated dl due to sample matrix.

Released by:
 Date:

[Signature]
 6/2/15



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Phone: (810) 229-7575 FAX: (810) 229-8650
 e-mail: bai-brighton@sbeglobal.net

Sample Date: 5/28/2015
 Submit Date: 6/2/2015
 Report Date: 6/3/2015

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

BA Report Number: **34694**
 BA Sample ID: **CB05616**

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

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	6	ug/l		EPA 1624(SIM)	CW	6/2/2015

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

Released by: *[Signature]*
 Date: *6/3/15*



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 e-mail: bai-brighton@sbeglobal.net

Sample Date: 5/31/2015
 Submit Date: 6/2/2015
 Report Date: 6/3/2015

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

BA Report Number: 34694
 BA Sample ID: CB05617

Project Name:
 Project Number:
 Sample ID: Q00000

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,4-Dioxane(SIM)						
1,4-Dioxane (SIM)	6	ug/L	1	EPA 1624(SIM)	CW	6/2/2015

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

Released by:
 Date:

[Signature]
 6/6/15

**GC/MS
VOLATILE METHOD 1624 SIM**

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: May 12, 2015 Spike Std. ID: 2449 Inst./Detec: Vol 5 GC/MS
 Laboratory ID: CB04784 Matrix: Water Analyst: CW

	Matrix Spike - Precision				Matrix spike - Accuracy					LCS
	Spike 1	Spike 2	Relative Percent Difference	Spk Conc ug/L	% Recovery	% Recovery	Range (%)	Sample background	Method Blank	
1,4 Dioxane	9.4	7.8	18.8	10	94	78	70-130	6.4	<1	103%

ug/L is equivalent to ppb

Comments: _____

**GC/MS
VOLATILE METHOD 1624 SIM**

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: May 13, 2015 Spike Std. ID: 2449 Inst./Detec: Vol 5 GC/MS
 Laboratory ID: CB04869 Matrix: Water Analyst: CW

	Matrix Spike - Precision				Matrix spike - Accuracy					LCS
	Spike 1	Spike 2	Relative Percent Difference	Spk Conc ug/L	% Recovery	% Recovery	Range (%)	Sample background	Method Blank	
1,4 Dioxane	12.7	13.8	7.8	10	85	94	70-130	4.2	<1	107%

ug/L is equivalent to ppb

Comments: _____

**GC/MS
VOLATILE METHOD 1624 SIM**

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: May 20, 2015 Spike Std. ID: 2449 Inst./Detec: Vol 5 GC/MS
 Laboratory ID: CB05095 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	22.1	21.3	3.7	10	121	113	70-130	10	<1	83%

ug/L is equivalent to ppb

Comments: _____

**GC/MS
VOLATILE METHOD 1624 SIM**

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: June 1, 2015 Spike Std. ID: 2449 Inst./Detec: Vol 5 GC/MS
 Laboratory ID: CB06537 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	36.6	38.4	7.2	10	98	126	70-130	26.8	<1	83%

ug/L is equivalent to ppb

Comments: _____

**GC/MS
VOLATILE METHOD 1624 SIM**

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: June 2, 2015 Spike Std. ID: 2449.1 Inst./Detec: Vol 5 GC/MS
 Laboratory ID: CB06554 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	46.8	50.9	2.2	10	88	99	70-130	41	<1	88%

ug/L is equivalent to ppb

Comments: _____