Gelman Sciences, Inc. d/b/a
Pall Life Sciences
642 South Wagner Road
Ann Arbor, MI 48103
734.436.4025 phone
734.436.4040 fax

CASE NARRATIVE

Monthly Data Pall Life Sciences
Project: 1,4-Dioxane Remediation
Date: January 2017

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 instrumentation. 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.

A drinking water sample 697 South Jackson Road and 5 additional samples (MW-54d, MW-39d, MW-133d, 5005 Jackson Road and Red Pond 01/30/17) were sent to Ann Arbor Technical Services (ATS) for analysis. The 5 samples were sent out for analysis after a filament failure in the MS shut down the system. Some samples were reported without a bracketing standard at the end of the analytical sequence due to the failure of the instrument. The second source standard was run at the beginning of the sequence but did not run at the end due to filament failure. Per the SOP these sample can be reported if they cannot be re-analyzed. The samples are as follows: Outfall 01/26/17, Outfall 01/29/17; Outfall 01/30/17; MW-131d, NW-131s, MW-126s, MW-126d, MW-133s, MW-133i and MW-39s. All sample data for these samples were similar to historical data.

The quarterly barium sample was sent to ATS for analysis. An Outfall composite sample was analyzed by EPA6010C for total Barium by ATS. The result was 24ppb with a reporting limit of 1ppb.

All other samples were analyzed by Pall Corporation'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 at PLS 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 samples analyzed. Proper preservation was observed on all 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 when necessary. 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 PLS 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 then 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.

PLS 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.

Reporting limit for undiluted samples is 1ppb (part per billion, micrograms per liter, µg/L). All quality control parameters were within the acceptance limits.

PLS 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. All quality control parameters were within the acceptance limits with the balance of sample analyzed.

The PLS 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, 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:

Qualifier Code	*Description*
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
O:	Samples analyzed in outside laboratory.

Analyst: *Susan E.O. Peters* Susan EO Peters Date: 02-09-17

Report Checked by: *Laurel Beyer* Date: 2/9/17

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

Sample Analysis Report

January, 2017

Analyst Initials: _____
Date: _____

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								
5005 Jackson Rd-01-31-17-19:13-1	15	1.0					ATS	O
Not Determined								
697 South Wagner Rd-01-13-17-13:39-1	nd	1.0					ATS	O
Extraction Wells								
C3								
DOLPH-01-03-17-08:10-1	99	1.0						
TW-20-01-03-17-08:00-1	920	25.0						D
D2								
LB-4-01-03-17-09:01-1	500	10.0						D
TW-21-01-03-17-08:08-1	180	5.0						D
E								
TW-16-01-03-17-09:15-1	780	25.0						D
TW-18-01-03-17-07:51-1	300	5.0						D
TW-19-01-03-17-09:17-1	650	10.0						D
Marshy								
PW-1-01-03-17-07:46-1	940	25.0						D
SW								
TW-22-01-03-17-08:06-1	490	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)
TW-8-01-03-17-08:19-1	750	10.0						D
Monitoring Wells								
C3								
MW-105s-01-26-17-15:58-1	620	10.0						D
MW-39s-01-31-17-15:50-1	1.7	1.0						
D0								
A2 Cleaning Supply-01-03-17-13:55-1	84	1.0						
MW-53d-01-03-17-11:07-1	nd	1.0						
MW-53i-01-03-17-11:50-1	58	1.0						
MW-53s-01-03-17-10:12-1	nd	1.0						
D2								
373 Pinewood Shallow-01-26-17-11:48-1	310	10.0						D
MW-120s-01-25-17-15:52-1	nd	1.0						
MW-121s-01-24-17-14:00-1	nd	1.0						
MW-122s-01-11-17-15:52-1	150	1.0						
MW-123s-01-12-17-15:34-1	nd	1.0						
MW-124s-01-25-17-18:15-1	nd	1.0						
MW-126s-01-27-17-09:15-1	nd	1.0						
MW-129i-01-25-17-09:20-1	nd	1.0						
MW-129s-01-24-17-17:43-1	nd	1.0						
MW-130i-01-25-17-14:08-1	3.9	1.0						
MW-130s-01-25-17-12:40-1	nd	1.0						
MW-131s-01-27-17-12:10-1	nd	1.0						
MW-133i-01-31-17-12:12-1	1.8	1.0						
MW-133s-01-31-17-10:50-1	1.7	1.0						
MW-134i-01-26-17-16:45-1	11	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-134s-01-26-17-18:08-1	10	1.0						
MW-39d-01-31-17-17:17-1	42	1.0					ATS	O
MW-54d-01-26-17-10:42-1	2	1.0					ATS	O
MW-54s-01-26-17-09:20-1	nd	1.0						
MW-92-01-26-17-12:30-1	32	2.5						D
E								
373 Pinewood Deep-01-26-17-11:13-1	nd	1.0						
MW-103d-01-04-17-15:17-1	9.4	1.0						
MW-103s-01-04-17-15:40-1	72	1.0						
MW-105d-01-26-17-15:26-1	250	10.0						D
MW-112d-01-04-17-11:12-1	nd	1.0						
MW-112i-01-04-17-12:13-1	9.4	1.0						
MW-112s-01-04-17-09:56-1	nd	1.0						
MW-120d-01-25-17-15:13-1	nd	1.0						
MW-121d-01-24-17-15:37-1	1.5	1.0						
MW-122d-01-11-17-14:47-1	nd	1.0						
MW-123d-01-12-17-14:50-1	nd	1.0						
MW-124d-01-25-17-19:36-1	nd	1.0						
MW-126d-01-27-17-10:35-1	nd	1.0						
MW-129d-01-25-17-10:42-1	1.2	1.0						
MW-130d-01-13-17-12:09-1	nd	1.0						
MW-131d-01-27-17-13:30-1	nd	1.0						
MW-133d-01-31-17-13:27-1	4	1.0					ATS	O
MW-134d-01-26-17-15:08-1	5.7	1.0						
MW-135-01-25-17-16:28-1	nd	1.0						
MW-76i-01-05-17-11:54-1	120	1.0						
MW-76s-01-11-17-10:48-1	290	5.0						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)
MW-84s-01-11-17-12:02-1	700	10.0						D
Marshy								
NMW-1s-01-24-17-11:39-1	2200	25.0						D
NMW-2s-01-24-17-11:51-1	2400	25.0						D
SH								
MW-25s-01-13-17-13:58-1	63	1.0						
MW-5d-01-13-17-14:12-1	4600	100						D
Surface Water								
Not Applicable								
HC/HR-01-03-17-08:45-1			nd	2.0				
HC/HR-01-04-17-08:10-1			nd	2.0				
HC/HR-01-05-17-08:45-1			nd	2.0				
HC/HR-01-06-17-08:25-1			nd	2.0				
HC/HR-01-09-17-08:20-1			nd	2.0				
HC/HR-01-10-17-09:15-1			nd	2.0				
HC/HR-01-11-17-08:20-1			nd	2.0				
HC/HR-01-12-17-08:58-1			nd	2.0				
HC/HR-01-13-17-09:30-1			nd	2.0				
HC/HR-01-17-17-06:40-1			nd	2.0				
HC/HR-01-18-17-07:30-1			nd	2.0				
HC/HR-01-19-17-08:05-1			nd	2.0				
HC/HR-01-20-17-08:22-1			nd	2.0				
HC/HR-01-23-17-08:50-1			nd	2.0				
HC/HR-01-24-17-08:30-1			nd	2.0				
HC/HR-01-25-17-08:40-1			nd	2.0				
HC/HR-01-26-17-08:30-1			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-01-27-17-09:30-1			nd	2.0				
HC/HR-01-30-17-08:40-1			nd	2.0				
HC/HR-01-31-17-09:00-1			nd	2.0				
Treatment System								
OUTFALL-01-01-17-1	4.4	1.0						
OUTFALL-01-01-17-2			5.4	5.0				
OUTFALL-01-02-17-1	5.4	1.0						
OUTFALL-01-02-17-2			nd	5.0				
OUTFALL-01-03-17-1	4.7	1.0						
OUTFALL-01-03-17-2			5.4	5.0				
OUTFALL-01-04-17-1	4.5	1.0						
OUTFALL-01-04-17-2			nd	5.0				
OUTFALL-01-05-17-1	4.5	1.0						
OUTFALL-01-05-17-2			6.4	5.0				
OUTFALL-01-08-17-1	4.3	1.0						
OUTFALL-01-08-17-2			6.9	5.0				
OUTFALL-01-09-17-1	4.8	1.0						
OUTFALL-01-09-17-2			6.6	5.0				
OUTFALL-01-10-17-1	5.6	1.0						
OUTFALL-01-10-17-2			5.2	5.0				
OUTFALL-01-11-17-1	5.5	1.0						
OUTFALL-01-11-17-2			5.3	5.0				
OUTFALL-01-12-17-1	4.9	1.0						
OUTFALL-01-12-17-2			5.7	5.0				
OUTFALL-01-15-17-1	4.8	1.0						
OUTFALL-01-15-17-2			nd	5.0				
OUTFALL-01-16-17-1	5.2	1.0						

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
OUTFALL-01-16-17-2			nd	5.0				
OUTFALL-01-17-17-1	4.9	1.0						
OUTFALL-01-17-17-2			5.0	5.0				
OUTFALL-01-18-17-1	5.1	1.0						
OUTFALL-01-18-17-2			5.5	5.0				
OUTFALL-01-19-17-1	5.2	1.0						
OUTFALL-01-19-17-2			nd	5.0				
OUTFALL-01-22-17-1	5.3	1.0						
OUTFALL-01-22-17-2			nd	5.0				
OUTFALL-01-23-17-1	4.9	1.0						
OUTFALL-01-23-17-2			nd	5.0				
OUTFALL-01-24-17-1	5.2	1.0						
OUTFALL-01-24-17-2			nd	5.0				
OUTFALL-01-25-17-1	5.3	1.0						
OUTFALL-01-25-17-2			nd	5.0				
OUTFALL-01-26-17-1	5.0	1.0						
OUTFALL-01-26-17-2			5.5	5.0				
OUTFALL-01-29-17-1	5.4	1.0						
OUTFALL-01-29-17-2			5.3	5.0				
OUTFALL-01-30-17-1	5.2	1.0						
OUTFALL-01-30-17-2			5.2	5.0				
OUTFALL-01-31-17-1	5.4	1.0						
OUTFALL-01-31-17-2			6.6	5.0				
Red Pond-01-03-17-07:40-1	440	10.0						D
Red Pond-01-09-17-07:00-1	470	10.0						D
Red Pond-01-17-17-05:35-1	450	10.0						D
Red Pond-01-23-17-05:55-1	460	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)
Red Pond-01-30-17-06:45-1	400	1.0					ATS	O

PLS 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
O: Sample analyzed by and outside laboratory specified in the comment section
ATS: Ann Arbor Technical Services hold time for 1,4-dioxane per EPA validation and approval is 28 days

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Data Transmittal Cover Page

Project Name: Pall Corporation
ATS Project Number: G001-002
ATS Report Number(s): ORG_SRF_0208171 (Urgent)

Project Description: This data report contains the results of 1 water samples, received by ATS on 2/8/17, to be analyzed for 1,4-Dioxane.

We certify that the sample analyses for this report have been conducted in accordance with guidelines provided in the referenced standard test method, and are consistent with detailed procedures described in a written Standard Operating Procedure specific to the ATS Laboratories, as required by USEPA. Laboratory data sheets, SOPs, and QA/QC information are available for inspection and audit at the laboratory upon request. Unless specifically noted on the data report, all applicable sample preservation and holding time requirements have been met.

Recipient: Ms. Sue Peters **Email:** Sue_Peters@Pall.com
FAX Number:

No. of Pages (including cover pg.): 3

From: Sarah Stubblefield, Senior Chemist / Lab Manager **Email:** Sarah.Stubblefield@AnnArborTechnicalServices.com
FAX Number: 734-995-3731

Additional Message: Email Copy: Ms. Laurel Beyer (Laurel_Beyer@Pall.com)

Date: 2/8/17 **Signed:**

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, PLEASE CALL 734-995-0995.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Road
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 2/8/17
ATS SRF: 0208171 (Urgent)

Sample Identification: Red Pond

Sample Date: 1/30/17
Sample Time: 6:45 AM
Sampled By: Client
Laboratory Receipt Date: 2/8/17
Sample Matrix: Groundwater

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.40	0.001	2/8/17	11:27	JEB

Comments

All methods reference USEPA methods unless otherwise noted.
Sample time taken from sample vial.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9004
Wisconsin Laboratory ID: 998321720

CHAIN OF CUSTODY RECORD

PROJECT ID / NUMBER	LABORATORY INFORMATION	SHIPPING INFORMATION: SHIPPER (Check one) / TRACKING NUMBER(S) (If a
End of Month Rush Sample	Pall Corporation	Date / Fed Ex / UPS / DHL / C

SAMPLE CUSTODIAN (Print & Signature)

Sue Peters/ Susan E Peters

RELINQUISHED BY (Print & Signature)	DATE / TIME	RECEIVED BY (Print & Signature)	DATE / TIME	RELINQUISHED BY (Print & Signature)	DATE / T
~~Robert Ursing/~~ Susan Peters Susan E Peters	02-08-17 09:20				
RELINQUISHED BY (Print & Signature)	DATE / TIME	RECEIVED BY (Print & Signature)	DATE / TIME	RELINQUISHED BY (Print & Signature)	DATE / T

COMMENTS (Preservation, etc.)

LINE NO.	BAR CODE	DATE	TIME	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PRIORITY NUMBER	ANALYSIS: 1,4-dioxane
1.		01/30/2017	06:45		X	Red Pond	1		X
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Data Transmittal Cover Page

Project Name: Pall Corporation
ATS Project Number: G001-002
ATS Report Number(s): ORG_SRF_0207171 (Urgent)

Project Description: This data report contains the results of 4 water samples, received by ATS on 2/77/17, to be analyzed for 1,4-Dioxane.

We certify that the sample analyses for this report have been conducted in accordance with guidelines provided in the referenced standard test method, and are consistent with detailed procedures described in a written Standard Operating Procedure specific to the ATS Laboratories, as required by USEPA. Laboratory data sheets, SOPs, and QA/QC information are available for inspection and audit at the laboratory upon request. Unless specifically noted on the data report, all applicable sample preservation and holding time requirements have been met.

Recipient: Ms. Sue Peters **Email:** Sue_Peters@Pall.com
FAX Number:

No. of Pages (including cover pg.): 6

From: Sarah Stubblefield, Senior Chemist / Lab Manager **Email:** Sarah.Stubblefield@AnnArborTechnicalServices.com
FAX Number: 734-995-3731

Additional Message: Email Copy: Ms. Laurel Beyer (Laurel_Beyer@Pall.com)

Date: 2/7/17 **Signed:**

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, PLEASE CALL 734-995-0995.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Road
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 2/7/17
ATS SRF: 0207171 (Urgent)

Sample Identification: MW-54d

Sample Date: 1/28/17
Sample Time: 10:42 AM
Sampled By: Client
Laboratory Receipt Date: 2/7/17
Sample Matrix: Groundwater

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.002	0.001	2/7/17	15:00	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
Sample time taken from sample vial.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Road
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 2/7/17
ATS SRF: 0207171 (Urgent)

Sample Identification: MW-39d

Sample Date: 1/31/17
Sample Time: 5:17 PM
Sampled By: Client
Laboratory Receipt Date: 2/7/17
Sample Matrix: Groundwater

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.042	0.001	2/7/17	14:18	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
Sample time taken from sample vial.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Road
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 2/7/17
ATS SRF: 0207171 (Urgent)

Sample Identification: MW-133d

Sample Date: 1/31/17
Sample Time: 1:27 PM
Sampled By: Client
Laboratory Receipt Date: 2/7/17
Sample Matrix: Groundwater

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.004	0.001	2/7/17	12:53	SLS

Comments

All methods reference USEPA methods unless otherwise noted.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Road
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 2/7/17
ATS SRF: 0207171 (Urgent)

Sample Identification: 5005 Jackson Road

Sample Date: 1/31/17
Sample Time: 7:13 PM
Sampled By: Client
Laboratory Receipt Date: 2/7/17
Sample Matrix: Groundwater

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.015	0.001	2/7/17	13:35	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
Sample time taken from sample vial.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

CHAIN OF CUSTODY RECORD

PROJECT ID / NUMBER	LABORATORY INFORMATION	SHIPPING INFORMATION: SHIPPER (Check one) / TRACKING NUMBER(S) (If ap
Rush Samples	Pall Corporation	Date / Fed Ex / UPS / DHL / Co

SAMPLE CUSTODIAN (Print & Signature)

Susan Peters Susan E.O. Peters

RELINQUISHED BY (Print & Signature)	DATE / TIME	RECEIVED BY (Print & Signature)	DATE / TIME	RELINQUISHED BY (Print & Signature)	DATE / TI
Susan E.O. Peters Susan E.O. Peters	2-7-17	E. Brown	2/7/17 10:00 AM		
RELINQUISHED BY (Print & Signature)	DATE / TIME	RECEIVED BY (Print & Signature)	DATE / TIME	RELINQUISHED BY (Print & Signature)	DATE / TI

COMMENTS (Preservation, etc.)

all groundwater samples less than 50ppb

LINE NO.	BAR CODE	DATE	TIME	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PRIORITY NUMBER	ANALYSIS: 1,4-dioxane					
1.		01/28/2017	15:58		X	MW-54d	1		X					
2.		01/31/2017	15:50		X	MW-39d	1		X					
3.		01/31/2017	13:27		X	MW-133d	1		X					
4.		01/31/2017	19:30		X	5005 Jackson Road	1		X					
5.														
6.														
7.														
8.														
9.														
10.														
11.														
12.														
13.														
14.														
15.														
16.														
17.														
18.														
19.														
20.														

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Data Transmittal Cover Page

Project Name: Pall Corporation
ATS Project Number: G001-002
ATS Report Number(s): ORG_SRF_0127171

Project Description: This data report contains the results of 2 water samples, received by ATS on 1/27/17, to be analyzed for 1,4-Dioxane and barium.

We certify that the sample analyses for this report have been conducted in accordance with guidelines provided in the referenced standard test method, and are consistent with detailed procedures described in a written Standard Operating Procedure specific to the ATS Laboratories, as required by USEPA. Laboratory data sheets, SOPs, and QA/QC information are available for inspection and audit at the laboratory upon request. Unless specifically noted on the data report, all applicable sample preservation and holding time requirements have been met.

Recipient: Ms. Sue Peters **Email:** Sue_Peters@Pall.com
FAX Number:

No. of Pages (including cover pg.): 4

From: Sarah Stubblefield, Senior Chemist / Lab Manager **Email:** Sarah.Stubblefield@AnnArborTechnicalServices.com
FAX Number: 734-995-3731

Additional Message: Email Copy: Ms. Laurel Beyer (Laurel_Beyer@Pall.com)

Date: 2/2/17 **Signed:**

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, PLEASE CALL 734-995-0995.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Road
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 2/2/17
ATS SRF: 0127171

Sample Identification: 697 South Wagner Road

Sample Date: 1/13/17
Sample Time: 1:39 PM
Sampled By: Client
Laboratory Receipt Date: 1/27/17
Sample Matrix: Drinking Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	<0.001	0.001	1/27/17	16:06	JEB

Comments

All methods reference USEPA methods unless otherwise noted.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Inorganic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Road
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 2/2/17
ATS SRF: 0127171

Sample Identification: Outfall 01/07/17

Sample Date: 1/7/17
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 1/27/17
Sample Matrix: Treated Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Metals Analysis							
Total Barium	EPA 6010C	mg/L	0.024	0.001	2/1/17	1:20	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available.

ANN ARBOR TECHNICAL SERVICES, INC.
290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

CHAIN OF CUSTODY RECORD

PROJECT ID / NUMBER	LABORATORY INFORMATION
Drinking water Sample and Barium	Pall Corporation

SAMPLE CUSTODIAN (Print & Signature): Susan E.O. Peters Susan E.O. Peters 01-27-17

RELINQUISHED BY (Print & Signature): ROBERT A URSINO — DATE / TIME: 1.27.17 13:11 — RECEIVED BY (Print & Signature):

RELINQUISHED BY (Print & Signature): — DATE / TIME: — RECEIVED BY (Print & Signature):

SHIPPING INFORMATION: SHIPPER (Check one) / TRACKING NUMBER(S) (If ap

Date		Fed Ex		UPS		DHL		C
Date		Fed Ex		UPS		DHL		C
Date		Fed Ex		UPS		DHL		C
Date		Fed Ex		UPS		DHL		C

DATE / TIME — RELINQUISHED BY (Print & Signature) — DATE / TI

DATE / TIME — RELINQUISHED BY (Print & Signature) — DATE / TI

COMMENTS (Preservation, etc.)

Please Send results to Sue_Peters@Pall.com

LINE NO.	BAR CODE	DATE	TIME	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PRIORITY NUMBER	ANALYSIS: Barium	ANALYSIS: 1,4-dioxane
1.		01/07/2017		X		Outfall 01/07/17	1		X	
2.		01/13/2017	13:39		X	697 South Wagner Rd.	2			X
3.							Blue			
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										
15.										
16.										
17.										
18.										
19.										
20.										