

## **CASE NARRATIVE**

**Monthly Data Pall Life Sciences**  
**Project: 1,4-Dioxane Remediation**  
**Date: September, 2018**

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.

Four drinking water samples were sent to Ann Arbor Technical Services (ATS) for analysis and are noted on the data package. ATS is a certified drinking water laboratory. 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 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.

Due to instrument issues one sample was analyzed beyond the suggested hold time of 14 days. A stability study was done using our Outfall samples by ATS and it was found that samples are stable for 1,4-dioxane analysis well beyond the 14 days suggested by the EPA method. These data have been made available to the DEQ. These hold times from the EPA are written to include all analytes in the method and are thus conservative for some analytes. Samples have been reported beyond the 14 days but less than 28 days. This hold time is within the stability time of 90+ days shown by ATS.

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 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  $\leq 2$ , 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.

The barium sample was taken as a composite sample, preserved with nitric acid, and refrigerated before and after being sent to ATS for analysis. This sample is preserved with nitric acid and refrigeration.

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 ( $\pm 2^\circ\text{C}$ ) 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.

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

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

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## Qualifiers

### 1,4-Dioxane Qualifier Codes:

<u>Qualifier Code</u>	<u>Description</u>
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:

<u>Qualifier Code</u>	<u>Description</u>
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 Susan E.O. Peters Date: 10-8-18

Report Checked by: Laurel Beyer Laurel Beyer Date: 10-8-18

# Sample Analysis Report

September, 2018

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

Analyst Initials: SEOP  
Date: 10-8-18

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)
<b>Miscellaneous Wells</b>								
<b>D0</b>								
ARTESIAN #3-09-24-18-12:34-1	9.8	1.0						
<b>Residential Wells</b>								
<b>Not Determined</b>								
697 South Wagner Rd-09-18-18-12:10-1	nd	1.0					ATS	O
723 S. Wagner Road-09-18-18-12:30-1	2	1.0					ATS	O
745 S. Wagner Road-09-18-18-12:40-1	nd	1.0					ATS	O
777 S. Wagner Road-09-18-18-12:50-1	nd	1.0					ATS	O
<b>Extraction Wells</b>								
<b>C3</b>								
DOLPH-09-12-18-09:02-1	120	1.0						
TW-20-09-12-18-09:00-1	970	10.0						D
<b>D2</b>								
LB-4-09-12-18-13:41-1	500	10.0						D
TW-21-09-12-18-09:30-1	230	10.0						D
<b>E</b>								
TW-18-09-12-18-09:45-1	250	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-19-09-12-18-14:00-1	470	10.0						D
TW-23-09-12-18-13:38-1	560	10.0						D
<b>Marshy</b>								
PW-1-09-12-18-09:01-1	1100	10.0						D
<b>SW</b>								
TW-22-09-12-18-09:24-1	470	10.0						D
TW-8-09-12-18-09:20-1	730	10.0						D
<b>Monitoring Wells</b>								
<b>C3</b>								
MW-1 Replacement-09-24-18-12:01-1	2800	100.0						D
MW-125-09-14-18-16:38-1	220	10.0						D
MW-127s-09-14-18-11:17-1	nd	1.0						
MW-128s-09-14-18-15:14-1	nd	1.0						
MW-23-09-12-18-11:18-1	140	10.0						D
MW-24-09-12-18-12:07-1	640	10.0						D
MW-25d-09-21-18-08:46-1	120	1.0						
MW-28-09-13-18-10:16-1	nd	1.0						
<b>D0</b>								
A2 Cleaning Supply-09-07-18-14:00-1	84	1.0					estimated time as none was given on label	
MW-51-09-24-18-11:40-1	nd	1.0						
MW-53d-09-05-18-10:12-1	nd	1.0						
MW-53i-09-05-18-13:31-1	78	1.0						
MW-53s-09-05-18-12:06-1	nd	1.0						
<b>D2</b>								

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)
3365 Jackson Rd-09-21-18-12:08-1	170	10.0						D
373 Pinewood Shallow-09-25-18-15:37-1	250	10.0						D
465 Dupont-09-21-18-15:06-1	1100	25.0						D
MW-56s-09-13-18-13:02-1	89	1.0						
MW-77-09-24-18-10:01-1	1500	100.0						D
<b>E</b>								
373 Pinewood Deep-09-25-18-11:38-1	nd	1.0						
MW-100-09-25-18-13:26-1	2600	100.0						D
MW-103s-09-06-18-13:02-1	76	1.0						
MW-105d-09-24-18-14:34-1	210	10.0						D
MW-106d-09-19-18-11:17-1	nd	1.0						
MW-112i-09-05-18-16:41-1	9.7	1.0						
MW-112s-09-05-18-15:23-1	nd	1.0						
MW-122d-09-20-18-12:23-1	nd	1.0						
MW-123d-09-20-18-14:10-1	nd	1.0						
MW-127d-09-14-18-09:54-1	nd	1.0						
MW-128d-09-14-18-12:41-1	nd	1.0						
MW-130d-09-20-18-15:49-1	nd	1.0						
MW-56d-09-13-18-11:43-1	nd	1.0						
MW-69-09-20-18-10:10-1	nd	1.0						
MW-70-09-19-18-13:19-1	nd	1.0						
MW-76i-09-06-18-14:03-1	100	1.0						
MW-76s-09-06-18-16:30-1	270	10.0						D
MW-82s-09-21-18-13:51-1	320	10.0						D
MW-84s-09-06-18-11:31-1	29	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-89-09-25-18-10:00-1	nd	1.0						
MW-97d-09-10-18-09:41-1	nd	1.0						
MW-97s-09-10-18-10:59-1	nd	1.0						
MW-98s-09-10-18-14:59-1	3.3	1.0						
MW-99d-09-10-18-12:22-1	nd	1.0						
MW-99s-09-10-18-13:37-1	nd	1.0						
<b>Marshy</b>								
AMW-1-09-12-18-11:49-1	320	10.0						D
AMW-2-09-12-18-11:16-1	95	10.0						D
MOW-1-09-12-18-11:33-1	560	10.0						D
NMW-1d-09-12-18-12:30-1	690	10.0						D
NMW-1s-09-12-18-12:44-1	2500	100.0						D
NMW-2d-09-12-18-12:34-1	840	10.0						D
NMW-2s-09-12-18-12:58-1	2200	100.0						D
NMW-3d-09-12-18-12:03-1	540	10.0						D
NMW-3s-09-12-18-11:53-1	420	10.0						D
PMW-1-09-12-18-11:30-1	150	10.0						D
PMW-2-09-12-18-13:02-1	5700	100.0						D
PMW-3-09-12-18-13:13-1	5400	100.0						D
PMW-4-09-12-18-12:49-1	540	100.0						D
<b>SH</b>								
MW-5d-09-24-18-12:45-1	8200	100.0						D
<b>Surface Water</b>								
<b>Not Applicable</b>								
HC/HR-09-04-18-10:50-1			nd	2.0				
HC/HR-09-05-18-14:45-1			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-09-06-18-08:03-1			nd	2.0				
HC/HR-09-07-18-08:15-1			nd	2.0				
HC/HR-09-10-18-08:40-1			nd	2.0				
HC/HR-09-11-18-08:50-1			nd	2.0				
HC/HR-09-12-18-09:21-1			nd	2.0				
HC/HR-09-13-18-09:30-1			nd	2.0				
HC/HR-09-14-18-10:00-1			nd	2.0				
HC/HR-09-17-18-08:30-1			nd	2.0				
HC/HR-09-18-18-15:30-1			nd	2.0				
HC/HR-09-19-18-08:10-1			nd	2.0				
HC/HR-09-20-18-11:20-1			nd	2.0				
HC/HR-09-21-18-08:10-1			nd	2.0				
HC/HR-09-24-18-09:50-1			nd	2.0				
HC/HR-09-25-18-07:05-1			nd	2.0				
HC/HR-09-26-18-08:15-1			nd	2.0				
HC/HR-09-27-18-09:00-1			nd	2.0				
HC/HR-09-28-18-10:40-1			nd	2.0				
<b>Treatment System</b>								
OUTFALL-09-02-18-1	5.5	1.0						
OUTFALL-09-02-18-2			5.4	5.0				
OUTFALL-09-03-18-1	5.2	1.0						
OUTFALL-09-03-18-2			5.5	5.0				
OUTFALL-09-04-18-1	4.8	1.0						
OUTFALL-09-04-18-2			8.0	5.0				
OUTFALL-09-05-18-1	5.8	1.0						
OUTFALL-09-05-18-2			5.0	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-09-06-18-1	5.6	1.0						
OUTFALL-09-06-18-2			6.2	5.0				
OUTFALL-09-09-18-1	5.6	1.0						H
OUTFALL-09-09-18-2			nd	5.0				
OUTFALL-09-10-18-1	5.4	1.0						
OUTFALL-09-10-18-2			5.3	5.0				
OUTFALL-09-11-18-1	5.0	1.0						
OUTFALL-09-11-18-2			nd	5.0				
OUTFALL-09-12-18-1	5.2	1.0						
OUTFALL-09-12-18-2			7.4	5.0				
OUTFALL-09-13-18-1	5.1	1.0						
OUTFALL-09-13-18-2			5.7	5.0				
OUTFALL-09-16-18-1	5.4	1.0						
OUTFALL-09-16-18-2			7.0	5.0				
OUTFALL-09-17-18-1	5.1	1.0						
OUTFALL-09-17-18-2			7.7	5.0				
OUTFALL-09-18-18-1	5.3	1.0						
OUTFALL-09-18-18-2			6.4	5.0				
OUTFALL-09-19-18-1	5.4	1.0						
OUTFALL-09-19-18-2			5.5	5.0				
OUTFALL-09-20-18-1	5.0	1.0						
OUTFALL-09-20-18-2			nd	5.0				
OUTFALL-09-23-18-1	5.4	1.0						
OUTFALL-09-23-18-2			nd	5.0				
OUTFALL-09-24-18-1	5.9	1.0						
OUTFALL-09-24-18-2			8.1	5.0				
OUTFALL-09-25-18-1	5.5	1.0						



Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
OUTFALL-09-25-18-2			7.1	5.0				
OUTFALL-09-26-18-1	5.1	1.0						
OUTFALL-09-26-18-2			6.6	5.0				
OUTFALL-09-27-18-1	5.8	1.0						
OUTFALL-09-27-18-2			7.9	5.0				
OUTFALL-09-30-18-1	5.4	1.0						
OUTFALL-09-30-18-2			7.3	5.0				
Red Pond-09-04-18-08:10-1	360	10.0						D
Red Pond-09-10-18-07:30-1	380	10.0						D
Red Pond-09-17-18-09:38-1	420	10.0						D
Red Pond-09-24-18-10:04-1	390	10.0						D

**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.
- H: Sample was analyzed past 14 day hold time, but within 28 days used by ATS for same method with EPA approval.
- O: Samples analyzed in outside laboratory.



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 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):** SRF\_0926181

**Project Description:** This data report contains the results of four water samples, received by ATS on 9/26/18, 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](mailto:Sue.Peters@Pall.com)

**FAX Number:** \_\_\_\_\_

**No. of Pages (including cover pg.):** 9

**From:** Sarah Stubblefield  
 Senior Chemist / Lab Manager

**Email:** [Sarah.Stubblefield@AnnArborTechnicalServices.com](mailto:Sarah.Stubblefield@AnnArborTechnicalServices.com)

**FAX Number:** 734-995-3731

**Additional Message:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Date:** 10/1/18

**Signed:** \_\_\_\_\_

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## LABORATORY OPERATIONS SAMPLE DELIVERY GROUP (SDG) CASE NARRATIVE

**ATS Project Number: G001-002**

**Report Date: 10/1/18**

**SDG Number: 0926181**

### SDG Summary

This case narrative applies to the following samples that were received by Ann Arbor Technical Services, Inc. (ATS) on 9/26/18, and associated matrix-specific QA/QC:

#### *Samples*

Client Sample Identification	Sample Date	Analysis	Matrix
723 South Wagner Road	9/18/18	1,4-Dioxane	Drinking Water
745 South Wagner Road	9/18/18	1,4-Dioxane	Drinking Water
697 South Wagner Road	9/18/18	1,4-Dioxane	Drinking Water
777 South Wagner Road	9/18/18	1,4-Dioxane	Drinking Water

Upon receipt, samples were scheduled for the following analyses:

- 1,4-Dioxane by EPA method 1624 (select samples)

### Sample Receipt and Chain of Custody Records

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper chain of custody records included. Sample condition and anomalies are presented in the "Chain of Custody and Sample Receipt Documentation" section of this report.

### Data Review and Approval

All data contained in this report have been generated in accordance with guidelines provided in the referenced standard test method, and are consistent with detailed procedures described in a written standard operating procedure (SOP) specific to the ATS Laboratory, as required by USEPA. All data are peer and management reviewed to ensure compliance with the above referenced SOP's and project specifications. In addition, all data conform to the laboratory's Quality Assurance / Quality Control Manuals.

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB, LRB), fortified blanks (BS, LFB, LCS), matrix spikes (MS, SPK), and duplicates whether spiked or native (MSD, SPK DUP, DUP, LR).

### Data Deliverables

This data package constitutes a Level II package, other data report packages (Level I, Level IV DVP, EPA R5 EDD) are available upon request. There were no hardcopy data summary sheets generated for this project.

G001-002.18\SRF\_0926181.doc

*Consultants in Chemistry & Environmental Science*  
290 South Wagner Road, Ann Arbor, Michigan 48103 Tel 734/995-0995 Fax 734/995-3731

### Sample Analysis

1,4-Dioxane Analysis (GC/MS): Samples were analyzed in accordance with EPA method 1624 (Volatile Organic Compounds by Isotope Dilution Gas Chromatography – Mass Spectrometry). An initial calibration with at least five levels was used to quantitate 1,4-Dioxane. Samples were reported to project specific reporting limits.

#### *Anomalies Noted:*

- None

### Analytical QA/QC Summary

#### Calibration Verification

Method calibration was verified through the running of a mid-level initial calibration verification (CV) standard at a frequency of every 12 hours (GC/MS) or every ten samples (ICP/AES). All verification standards met the acceptance criteria with the following exceptions:

- None

#### Instrument Blanks

Instrument blanks were analyzed at a frequency of every 12 hours (GC/MS) or every ten samples (ICP/AES). All blanks met the acceptance criteria with the following exceptions:

- None

### QA/QC Batch Summary

#### Laboratory Reagent Blanks

A laboratory reagent blank (LRB) was analyzed with each QA/QC batch. The LRB's met the acceptance criteria with the following exceptions:

- None

#### Laboratory Fortified Blanks and Matrix Spikes

A laboratory fortified blank (LFB) / laboratory control sample (LCS) was analyzed with each QA/QC batch. The LCS/LFB's met the acceptance criteria with the following exceptions:

- None

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch. The MS/MSD met the acceptance criteria with the following exceptions:

- None

Matrix Duplicates

A replicate analysis was analyzed with each QA/QC batch. All replicates met the acceptance criteria with the following exceptions:

- None

Sample Dilutions

Samples containing compounds at concentrations above the initial calibration curve were diluted and reanalyzed for those compounds. The following samples were diluted:

- None



\_\_\_\_\_/ October 1, 2018

Mark T. DeLong (Quality Assurance Coordinator)



\_\_\_\_\_/ October 1, 2018

Philip B. Simon (Laboratory Director)



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## 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: 10/1/18  
 ATS SRF: 0926181

**Sample Identification:** 723 South Wagner Road

Sample Date: 9/18/18  
 Sample Time: 12:30 PM  
 Sampled By: Client  
 Laboratory Receipt Date: 9/26/18  
 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	0.002	0.001	9/26/18	16:57	JEB

**Comments**

All methods reference USEPA methods unless otherwise noted.



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## 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: 10/1/18  
 ATS SRF: 0926181

**Sample Identification:** 745 South Wagner Road

Sample Date: 9/18/18  
 Sample Time: 12:40 PM  
 Sampled By: Client  
 Laboratory Receipt Date: 9/26/18  
 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	9/26/18	17:41	JEB

Comments

All methods reference USEPA methods unless otherwise noted.





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## 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: 10/1/18  
ATS SRF: 0926181

**Sample Identification:** 697 South Wagner Road

Sample Date: 9/18/18  
Sample Time: 12:10 PM  
Sampled By: Client  
Laboratory Receipt Date: 9/26/18  
Sample Matrix: Drinking Water

<u>Parameter</u>	<u>Method</u>	<u>Units</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Analysis Date</u>	<u>Analysis Time</u>	<u>Analyzed By</u>
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	<0.001	0.001	9/26/18	18:25	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

## 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: 10/1/18  
ATS SRF: 0926181

**Sample Identification:** 777 South Wagner Road

Sample Date: 9/18/18  
Sample Time: 12:50 PM  
Sampled By: Client  
Laboratory Receipt Date: 9/26/18  
Sample Matrix: Drinking Water

<u>Parameter</u>	<u>Method</u>	<u>Units</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Analysis Date</u>	<u>Analysis Time</u>	<u>Analyzed By</u>
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	<0.001	0.001	9/26/18	19:10	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: 9684  
Wisconsin Laboratory ID: 298321720

CHAIN OF CUSTODY RECORD

PROJECT ID / NUMBER		LABORATORY INFORMATION				SHIPPING INFORMATION: SHIPPER (Check one) / TRACKING NUMBER(S) (if applicable)								
Drinking water samples, 1,4-dioxane <3ppb						Date	Fed Ex	UPS	DHL	Courier	Tracking Number			
SAMPLE CUSTODIAN (Print & Signature)		DATE / TIME RECEIVED BY (Print & Signature)				Date	Fed Ex	UPS	DHL	Courier	Tracking Number			
Susan Peters, Pall Corp., 642 S. Wagner Road, Ann Arbor Michigan		09-26-18 [Signature]				Date	Fed Ex	UPS	DHL	Courier	Tracking Number			
RELINQUISHED BY (Print & Signature)		DATE / TIME		RECEIVED BY (Print & Signature)		DATE / TIME	RELINQUISHED BY (Print & Signature)			DATE / TIME	RECEIVED BY (Print & Signature)		DATE / TIME	
RELINQUISHED BY (Print & Signature)		DATE / TIME		RECEIVED BY (Print & Signature)		DATE / TIME	RELINQUISHED BY (Print & Signature)			DATE / TIME	RECEIVED BY (Print & Signature)		DATE / TIME	
COMMENTS (Preservation, etc.)														
<b>ANALYSIS</b>														
NO. OF CONTAINERS	PRIORITY NUMBER	1,4-Dioxane											MATRIX Indicate Soil/Water/Air Sediment/Silage Extract	
1.		723 S. Wagner rd	2	X									drinking water	
2.		745 S. Wagner Rd.	2	X									drinking water	
3.		697 S. Wagner Rd.	2	X									drinking water	
4.		777 S. Wagner Rd.	2	X									drinking water	
5.														
6.														
7.														
8.														
9.														
10.														
11.														
12.														
13.														
14.														
15.														
16.														
17.														
18.														
19.														
20.														