

CASE NARRATIVE

Monthly Data Pall Life Sciences

Project: 1,4-Dioxane Remediation

Date: June 2021

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.

At the end of the month some of the 1,4-dioxane samples were sent to Ann Arbor Technical Services for analysis due to a reproducibility problem. The balance of the samples were analyzed for 1,4-dioxane at Pall Corporation's Environmental Laboratory. All bromate 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 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 , except for 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 ($\pm 2^\circ\text{C}$) 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, $\mu\text{g/L}$). All quality control parameters were within the acceptance limits for reported samples unless indicated.

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.

Qualifiers

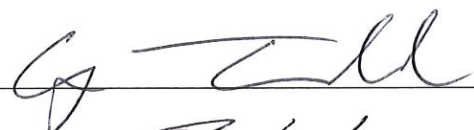
1,4-Dioxane Qualifier Codes:

<u>Qualifier Code</u>	<u>Description</u>
nd:	The compound was analyzed for, but 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 45 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

Manager: Susan E.O. Peters  Date: 07-09-21

Analyst: Gage M. Trendel  Date: 7/9/21

Report Checked by: Ray Woods  Date: 7/9/21



Sample Analysis Report

June, 2021

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

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								
Not Determined								
697 South Wagner Rd-06-10-21-11:35-1	nd	1.0						O
Miscellaneous Wells								
Bethlehem Cemetery-06-10-21-11:45-1	nd	1.0						O
Extraction Wells								
C3								
DOLPH-06-04-21-10:00-1	150	10.0						D
TW-20-06-04-21-10:05-1	850	10.0						D
TW-20-06-14-21-11:30-1	820	20.0						O, D
D2								
LB-4-06-04-21-08:50-1	570	10.0						D
TW-21-06-04-21-09:45-1	320	10.0						D
E								
TW-18-06-04-21-09:50-1	230	10.0						D
TW-23-06-04-21-08:55-1	420	10.0						D
Marshy								
PW-1-06-04-21-09:55-1	780	10.0						D
SW								
TW-22-06-04-21-10:10-1	560	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-28-06-04-21-10:15-1	790	10.0						D
Monitoring Wells								
C3								
MW-125-06-16-21-14:31-1	220	10.0						O, D
MW-127s-06-16-21-09:49-1	nd	1.0						O
MW-128s-06-17-21-10:27-1	1.4	1.0						
MW-28-06-04-21-12:30-1	nd	1.0						
MW-37-06-17-21-11:43-1	240	10.0						O, D
D0								
A2 Cleaning Supply-06-01-21-12:05-1	43	1.0						
A2 Cleaning Supply-06-30-21-13:30-1	48	1.0						O
MW-136i-06-07-21-12:40-1	nd	1.0						
MW-136s-06-07-21-13:50-1	nd	1.0						
MW-141s-06-22-21-13:12-1	4	1.0						O
MW-41d-06-10-21-11:55-1	18	1.0						O
MW-41s-06-10-21-12:00-1	14	1.0						O
MW-51-06-21-21-08:10-1	nd	1.0						
MW-53d-06-01-21-09:21-1	nd	1.0						
MW-53i-06-01-21-11:47-1	46	1.0						
MW-53s-06-01-21-10:35-1	nd	1.0						
MW-61d-06-22-21-11:26-1	11	1.0						O
MW-61s-06-22-21-10:15-1	3	1.0						O
D2								
373 Pinewood Shallow-06-23-21-13:10-1	210	10.0						O, D
465 Dupont-06-23-21-11:22-1	800	100.0						O, D
MW-131s-06-21-21-09:22-1	nd	1.0						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-56s-06-04-21-13:53-1	49	1.0						
MW-62i-06-04-21-10:15-1	nd	1.0						
MW-62s-06-04-21-11:25-1	nd	1.0						
E								
373 Pinewood Deep-06-23-21-12:40-1	nd	1.0						O
IW-2-06-30-21-09:01-1	1900	100.0					3000	O, D
IW-2-06-30-21-09:34-1	1900	100.0					6000	O, D
MW-103s-06-03-21-11:13-1	100	1.0						
MW-112i-06-03-21-09:55-1	11	1.0						
MW-112s-06-03-21-08:48-1	2.0	1.0						
MW-127d-06-16-21-08:40-1	nd	1.0						O
MW-128d-06-17-21-09:18-1	nd	1.0						O
MW-131d-06-21-21-10:40-1	nd	1.0						O
MW-136d-06-07-21-11:31-1	nd	1.0						
MW-141d-06-22-21-12:52-1	nd	1.0						
MW-56d-06-04-21-12:43-1	nd	1.0						
MW-62d-06-04-21-09:06-1	nd	1.0						
MW-65d-06-24-21-12:47-1	15	1.0						O
MW-65i-06-24-21-10:25-1	4	1.0						O
MW-65s-06-24-21-11:38-1	7	1.0						O
MW-76i-06-03-21-12:28-1	110	1.0						
MW-76s-06-03-21-13:36-1	350	10.0						D
MW-84s-06-01-21-13:45-1	550	10.0						D
Saginaw Forest Cabin #1-06-16-21-12:13-1	4	1.0						O
Saginaw Forest Cabin #2-06-16-21-11:04-1	nd	1.0						O
Marshy								
NMW-1s-06-25-21-12:00-1	1800	100.0						O, D

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
NMW-2s-06-25-21-12:20-1	2000	100.0						O, D
SW								
MW-58d-06-17-21-13:02-1	17	1.0						O
MW-58s-06-17-21-14:36-1	170	10.0						O, D
MW-78-06-16-21-13:22-1	28	1.0						O
Surface Water								
Not Applicable								
HC/HR-06-01-21-10:28-1			nd	2.0				
HC/HR-06-02-21-09:40-1			nd	2.0				
HC/HR-06-03-21-09:10-1			nd	2.0				
HC/HR-06-04-21-09:10-1			nd	2.0				
HC/HR-06-07-21-14:00-1			nd	2.0				
HC/HR-06-08-21-10:30-1			nd	2.0				
HC/HR-06-09-21-13:00-1			nd	2.0				
HC/HR-06-10-21-11:00-1			nd	2.0				
HC/HR-06-11-21-10:10-1			nd	2.0				
HC/HR-06-14-21-09:25-1			nd	2.0				
HC/HR-06-15-21-08:00-1			nd	2.0				
HC/HR-06-16-21-10:45-1			nd	2.0				
HC/HR-06-17-21-10:00-1			nd	2.0				
HC/HR-06-18-21-09:55-1			nd	2.0				
HC/HR-06-21-21-10:20-1			nd	2.0				
HC/HR-06-22-21-09:55-1			nd	2.0				
HC/HR-06-23-21-09:25-1			nd	2.0				
HC/HR-06-24-21-09:15-1			nd	2.0				
HC/HR-06-25-21-10:50-1			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-06-28-21-12:55-1			nd	2.0				
HC/HR-06-29-21-13:00-1			nd	2.0				
HC/HR-06-30-21-09:45-1			nd	2.0				
Treatment System								
OUTFALL-06-01-21-1	7.6	1.0						
OUTFALL-06-01-21-2			11	5.0				
OUTFALL-06-02-21-1	7.1	1.0						
OUTFALL-06-02-21-2			9.4	5.0				
OUTFALL-06-03-21-1	6.8	1.0						
OUTFALL-06-03-21-2			11	5.0				
OUTFALL-06-06-21-1	6.0	1.0						
OUTFALL-06-06-21-2			9.4	5.0				
OUTFALL-06-07-21-1	6.4	1.0						
OUTFALL-06-07-21-2			9.6	5.0				
OUTFALL-06-08-21-1	6.7	1.0						
OUTFALL-06-08-21-2			10	5.0				
OUTFALL-06-09-21-1	5.2	2.0						D
OUTFALL-06-09-21-2			10	5.0				
OUTFALL-06-10-21-1	4.8	1.0						
OUTFALL-06-10-21-2			8.2	5.0				
OUTFALL-06-13-21-1	5.1	1.0						
OUTFALL-06-13-21-2			9.5	5.0				
OUTFALL-06-14-21-1	6.4	1.0						
OUTFALL-06-14-21-2			9.6	5.0				
OUTFALL-06-15-21-1	6	1.0						O
OUTFALL-06-15-21-2			12	5.0				
OUTFALL-06-16-21-1	6	1.0						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)
OUTFALL-06-16-21-2			10	5.0				
OUTFALL-06-17-21-1	6	1.0						O
OUTFALL-06-17-21-2			8.2	5.0				
OUTFALL-06-20-21-1	6	1.0						O
OUTFALL-06-20-21-2			9.4	5.0				
OUTFALL-06-21-21-1	5.7	1.0						
OUTFALL-06-21-21-2			8.9	5.0				
OUTFALL-06-22-21-1	7	1.0						O
OUTFALL-06-22-21-2			9.1	5.0				
OUTFALL-06-23-21-1	6.3	1.0						
OUTFALL-06-23-21-2			9.0	5.0				
OUTFALL-06-24-21-1	8	1.0						O
OUTFALL-06-24-21-2			7.6	5.0				
OUTFALL-06-27-21-1	6	1.0						O
OUTFALL-06-27-21-2			8.4	5.0				
OUTFALL-06-28-21-1	7	1.0						O
OUTFALL-06-28-21-2			9.0	5.0				
OUTFALL-06-29-21-1	6	1.0						O
OUTFALL-06-29-21-2			8.5	5.0				
OUTFALL-06-30-21-1	6	1.0						O
OUTFALL-06-30-21-2			9.6	5.0				
Red Pond-06-01-21-07:50-1	400	10.0						D
Red Pond-06-07-21-07:25-1	370	10.0						D
Red Pond-06-14-21-07:30-1	350	20.0						O, D
Red Pond-06-21-21-08:00-1	350	20.0						O, D
Red Pond-06-28-21-07:55-1	360	10.0						O, D

Data Transmittal Cover Page

LABORATORY OPERATIONS CASE NARRATIVE

Project Name: Pall Corporation
ATS Project Number: G001-002
ATS Report Number(s): Org_SRF_0630211
Client PO Number: 4504293919

Project Description: This data report contains the results of thirty nine water samples, received by
ATS on 6/30/21, 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.): 48

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

Additional Message:

Date: 7/7/21 Signed:

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

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Client Sample Identification	Sample Date	Requested Turn Around Time	Analysis	Matrix
MW-141s	6/22/21	Rush	1,4-Dioxane	Water
Outfall 001	6/22/21	Rush	1,4-Dioxane	Water
465 DuPont	6/23/21	Rush	1,4-Dioxane	Water
373 Pinewood Deep	6/23/21	Rush	1,4-Dioxane	Water
373 Pinewood Shallow	6/23/21	Rush	1,4-Dioxane	Water
MW-65j	6/24/21	Rush	1,4-Dioxane	Water
MW-65s	6/24/21	Rush	1,4-Dioxane	Water
MW-65d	6/24/21	Rush	1,4-Dioxane	Water
Outfall 001	6/24/21	Rush	1,4-Dioxane	Water
NMW-1s	6/25/21	Rush	1,4-Dioxane	Water
NMW-2s	6/25/21	Rush	1,4-Dioxane	Water
Outfall 001	6/27/21	Rush	1,4-Dioxane	Water
Red Pond	6/28/21	Rush	1,4-Dioxane	Water
Outfall 001	6/28/21	Rush	1,4-Dioxane	Water
Outfall 001	6/29/21	Rush	1,4-Dioxane	Water

Upon receipt, samples were scheduled for the following analyses:

Analysis: 1,4-Dioxane (USEPA 1624) Number of Samples: 39 + 2 Matrix Spike + 2 Matrix Spike Duplicate

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper chain of custody records included. Sample condition and anomalies, if any, are either presented in the "Sample Receipt" section of this report or in the comments on individual data sheets. All samples were prepared and analyzed within 45 days with the following exceptions:

- None

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 procedures (SOPs) 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.

G001-002.21/CN_0630211.doc



ATS Project Number: G001-002
Report Date: 7/7/21
SRF / SDG Number(s): 0630211
Client PO Number: 4504293919

Case Narrative Summary

This case narrative applies to the following 39 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 6/30/21, and associated matrix-specific QA/QC:

Client Sample Identification	Sample Date	Requested Turn Around Time	Analysis	Matrix
Received 6/30/21				
Bethlehem Cemetery	6/10/21	Rush	1,4-Dioxane	Water
MW-41d	6/10/21	Rush	1,4-Dioxane	Water
MW-41s	6/10/21	Rush	1,4-Dioxane	Water
Red Pond	6/14/21	Rush	1,4-Dioxane	Water
TW-20	6/14/21	Rush	1,4-Dioxane	Water
Outfall 001	6/15/21	Rush	1,4-Dioxane	Water
MW-127d	6/16/21	Rush	1,4-Dioxane	Water
MW-127S	6/16/21	Rush	1,4-Dioxane	Water
Saginaw Forest Cabin #2	6/16/21	Rush	1,4-Dioxane	Water
Saginaw Forest Cabin #1	6/16/21	Rush	1,4-Dioxane	Water
MW-78	6/16/21	Rush	1,4-Dioxane	Water
MW-125	6/16/21	Rush	1,4-Dioxane	Water
Outfall 001	6/16/21	Rush	1,4-Dioxane	Water
MW-128d	6/17/21	Rush	1,4-Dioxane	Water
MW-37	6/17/21	Rush	1,4-Dioxane	Water
MW-58d	6/17/21	Rush	1,4-Dioxane	Water
MW-58s	6/17/21	Rush	1,4-Dioxane	Water
Outfall 001	6/17/21	Rush	1,4-Dioxane	Water
Outfall 001	6/20/21	Rush	1,4-Dioxane	Water
Red Pond	6/21/21	Rush	1,4-Dioxane	Water
MW-131s	6/21/21	Rush	1,4-Dioxane	Water
MW-131-d	6/21/21	Rush	1,4-Dioxane	Water
MW-61s	6/22/21	Rush	1,4-Dioxane	Water
MW-61d	6/22/21	Rush	1,4-Dioxane	Water

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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 by purge and trap GC/MS in accordance with USEPA 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. Samples were reported as mg/L.

Anomalies Noted:

- None

Analytical QA/QC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial calibration verification (CV) standard at a frequency of every 12 hours. All verification standards met the acceptance criteria with the following exceptions:

- None

Instrument Blanks

Low system background was demonstrated through the analysis of instrument blanks at a minimum of every 12 hours. All instrument blanks met the acceptance criteria with the following exceptions:

- None

QA/QC Batch Summary

Internal Standards

Internal standards areas and retention times met the acceptance criteria with the following exceptions:

- None

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 / Laboratory Control Samples

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

- None

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Matrix Spikes and Spike Duplicates

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

- None

Matrix Replicates

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch. The 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 for 1,4-Dioxane:

- Red Pond 6/14/21
- TW-20 6/14/21
- MW-125 6/16/21
- MW-37 6/17/21
- MW-58s 6/17/21
- Red Pond 6/21/21
- 465 DuPont 6/23/21
- 373 Pinewood Shallow 6/23/21
- NMW-1s 6/25/21
- NMW-2s 6/25/21
- Red Pond 6/28/21

Mark T. DeLong

/ July 7, 2021

Mark T. DeLong (Quality Assurance Coordinator)

Philip B. Simon

/ July 7, 2021

Philip B. Simon (Laboratory Director)

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rev. 7/7/21

**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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-41d

Sample Date: 6/10/21
Sample Time: 11:55 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis 1,4-Dioxane	EPA 1624	mg/L	0.018	0.001	7/1/21	19:47	SLS

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

**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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-41s

Sample Date: 6/10/21
Sample Time: 12:00 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis 1,4-Dioxane	EPA 1624	mg/L	0.014	0.001	7/1/21	20:31	SLS

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

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: 7/7/21
ATS SRF: 630211

Sample Identification: Red Pond

Sample Date: 6/14/21
Sample Time: 7:30 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis 1,4-Dioxane	EPA 1624	mg/L	0.35	0.02	7/1/21	21:15	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Outfall 001

Sample Date: 6/15/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis 1,4-Dioxane	EPA 1624	mg/L	0.006	0.001	7/2/21	1:40	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: TW-20

Sample Date: 6/14/21
Sample Time: 11:30 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis 1,4-Dioxane	EPA 1624	mg/L	0.82	0.02	7/2/21	0:12	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-127d

Sample Date: 6/16/21
Sample Time: 8:40 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: 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	7/2/21	2:24	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-127S

Sample Date: 6/16/21
Sample Time: 9:49 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: 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	7/2/21	3:08	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Saginaw Forest Cabin #1

Sample Date: 6/16/21
Sample Time: 12:13 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

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	7/2/21	4:36	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Saginaw Forest Cabin #2

Sample Date: 6/16/21
Sample Time: 11:04 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: 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	7/2/21	3:52	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-78

Sample Date: 6/16/21
Sample Time: 1:22 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.028	0.001	7/2/21	7:32	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-125

Sample Date: 6/16/21
Sample Time: 2:31 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analized By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.22	0.01	7/2/21	8:16	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-128d

Sample Date: 6/17/21
Sample Time: 9:18 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analized By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	<0.001	0.001	7/2/21	10:27	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Outfall 001

Sample Date: 6/16/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analized By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.006	0.001	7/2/21	9:43	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-37

Sample Date: 6/17/21
Sample Time: 11:43 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analized By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.24	0.01	7/2/21	11:11	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-58d

Sample Date: 6/17/21
Sample Time: 1:02 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.017	0.001	7/2/21	11:55	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Outfall 001

Sample Date: 6/17/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.006	0.001	7/2/21	13:23	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-58s

Sample Date: 6/17/21
Sample Time: 2:36 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.17	0.01	7/2/21	12:39	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Outfall 001

Sample Date: 6/20/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.006	0.001	7/2/21	14:07	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Red Pond

Sample Date: 6/21/21
Sample Time: 8:00 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.35	0.02	7/2/21	18:47	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-131-d

Sample Date: 6/21/21
Sample Time: 10:40 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: 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	7/2/21	20:59	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-131s

Sample Date: 6/21/21
Sample Time: 9:22 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: 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	7/2/21	20:15	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-61s

Sample Date: 6/22/21
Sample Time: 10:15 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.003	0.001	7/2/21	21:43	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-61d

Sample Date: 6/22/21
Sample Time: 11:26 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.011	0.001	7/2/21	22:27	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Outfall 001

Sample Date: 6/22/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.007	0.001	7/2/21	23:55	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-141s

Sample Date: 6/22/21
Sample Time: 1:12 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

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	7/2/21	23:11	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: 465 DuPont

Sample Date: 6/23/21
Sample Time: 11:22 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.8	0.1	7/3/21	0:38	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: 373 Pinewood Deep

Sample Date: 6/23/21
Sample Time: 12:40 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: 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	7/3/21	3:35	SLS

Comments

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

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REV: 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-65i

Sample Date: 6/24/21
Sample Time: 10:25 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

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	7/3/21	7:59	SLS

Comments

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

REV: 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: 373 Pinewood Shallow

Sample Date: 6/23/21
Sample Time: 1:10 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.21	0.01	7/3/21	6:31	SLS

Comments

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

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REV: 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-65s

Sample Date: 6/24/21
Sample Time: 11:38 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.007	0.001	7/3/21	8:43	SLS

Comments

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

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: 7/7/21
ATS SRF: 630211

Sample Identification: MW-65d

Sample Date: 6/24/21
Sample Time: 12:47 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analized By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.015	0.001	7/3/21	9:27	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: NMW-1s

Sample Date: 6/25/21
Sample Time: 12:00 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analized By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	1.8	0.1	7/3/21	10:54	SLS

Comments

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

rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Outfall 001

Sample Date: 6/24/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analized By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.008	0.001	7/3/21	10:11	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: NMW-2s

Sample Date: 6/25/21
Sample Time: 12:20 PM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analized By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	2.0	0.1	7/3/21	11:38	SLS

Comments

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

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rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Outfall 001

Sample Date: 6/27/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis 1,4-Dioxane	EPA 1624	mg/L	0.006	0.001	7/3/21	13:06	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

X:\G001-002.21\SRF 063021\IQRG_SRF_0630211

rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Outfall 001

Sample Date: 6/28/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis 1,4-Dioxane	EPA 1624	mg/L	0.007	0.001	7/3/21	15:18	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

X:\G001-002.21\SRF 063021\IQRG_SRF_0630211

rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Red Pond

Sample Date: 6/28/21
Sample Time: 7:55 AM
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis 1,4-Dioxane	EPA 1624	mg/L	0.36	0.01	7/3/21	13:50	SLS

Comments

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

X:\G001-002.21\SRF 063021\IQRG_SRF_0630211

rev. 7/7/21

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: 7/7/21
ATS SRF: 630211

Sample Identification: Outfall 001

Sample Date: 6/29/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 6/30/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis 1,4-Dioxane	EPA 1624	mg/L	0.006	0.001	7/3/21	16:02	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

X:\G001-002.21\SRF 063021\IQRG_SRF_0630211

rev. 7/7/21

ATS Project: Pall Corporation #G001-002
Report Date: 7/7/21

Results of QA Samples run concurrently with project samples

REPLICATE ANALYSIS				
Sample	Replicate #1	Replicate #2	Mean	Relative Range (percent)
#G001-002 465 DuPont 6/23/21 Matrix Spike	3.6 mg/L	3.1 mg/L	3.4 mg/L	14.9

SPIKES and/or QC CHECK SAMPLES

Sample/Analyte	Known Concentration	Spike Concentration	Analyzed Concentration	Recovery (percent)
#G001-002				
Laboratory Fortified Blank	<0.001 mg/L	0.020 mg/L	0.021 mg/L	105.8
465 DuPont 6/23/21 Matrix Spike	0.87 mg/L	2.5 mg/L	3.6 mg/L	111.0
465 DuPont 6/23/21 Matrix Spike Duplicate	0.87 mg/L	2.5 mg/L	3.1 mg/L	90.9

BLANK ANALYSIS

Sample	Analyzed Concentration	QC Decision
#G001-002 Laboratory Reagent Blank	<0.001 mg/L	Acceptable

Control Limits:

Recoveries

Laboratory Control Sample Recovery (85 - 115%)

Matrix Spike Recovery (80 - 120%)

Relative Range

Replicates (<20%)

CHAIN OF CUSTODY RECORD

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CHAIN OF CUSTODY RECORD

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Data Transmittal Cover Page

Project Name: Pall Corporation
ATS Project Number: G001-002
ATS Report Number(s): Org_SRF_0707211
Client PO Number: 4504293919
Project Description: This data report contains the results of four water samples, received by ATS on 7/7/21, 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 Laboratory, 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.): 10

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

Additional Message:

Date: 7/9/21 Signed: 

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

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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.

Sample Analysis

1,4-Dioxane Analysis (GC/MS): Samples were analyzed by purge and trap GC/MS in accordance with USEPA 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. Samples were reported as mg/L.

Anomalies Noted:

- None

Analytical QA/QC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial calibration verification (CV) standard at a frequency of every 12 hours. All verification standards met the acceptance criteria with the following exceptions:

- None

Instrument Blanks

Low system background was demonstrated through the analysis of instrument blanks at a minimum of every 12 hours. All instrument blanks met the acceptance criteria with the following exceptions:

- None

QA/QC Batch Summary

Internal Standards

Internal standards areas and retention times met the acceptance criteria with the following exceptions:

- None

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 OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002
Report Date: 7/9/21
SRF / SDG Number(s): 0707211
Client PO Number: 4504293919

Case Narrative Summary

This case narrative applies to the following 4 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 7/7/21, and associated matrix-specific QA/QC:

Client Sample Identification	Sample Date	Requested Turn Around Time	Analysis	Matrix
Received 7/7/21				
IW-2 09:01	6/30/21	Rush	1,4-Dioxane	Water
IW-2 09:34	6/30/21	Rush	1,4-Dioxane	Water
A2 Cleaning Supply	6/29/21	Rush	1,4-Dioxane	Water
Outfall 001	6/30/21	Rush	1,4-Dioxane	Water

Upon receipt, samples were scheduled for the following analyses:

- | | |
|----------------------------|---|
| Analysis | Number of Samples |
| • 1,4-Dioxane (USEPA 1624) | • 4 + 1 Matrix Spike + 1 Matrix Spike Duplicate |

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper chain of custody records included. Sample condition and anomalies, if any, are either presented in the "Sample Receipt" section of this report or in the comments on individual data sheets. All samples were prepared and analyzed within 45 days with the following exceptions:

- None

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 procedures (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.

G001-002.21CN_0707211.doc

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

Laboratory Fortified Blanks / Laboratory Control Samples

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

- None

Matrix Spikes and Spike Duplicates

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

- None

Matrix Replicates

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

- None

Sample Dilutions

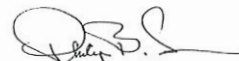
Samples containing compounds at concentrations above the initial calibration curve were diluted and reanalyzed for those compounds. The following samples were diluted for 1,4-Dioxane:

- IW-2 6/30/21 09:01
- IW-2 6/30/21 09:34



/ July 9, 2021

Mark T. DeLong (Quality Assurance Coordinator)



/ July 9, 2021

Philip B. Simon (Laboratory Director)

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: 7/9/21
ATS SRF: 0707211

Sample Identification: IW-2

Sample Date: 6/30/21
Sample Time: 9:01 AM
Sampled By: Client
Laboratory Receipt Date: 7/7/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	1.9	0.1	7/7/21	18:30	SLS

Comments

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

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rev. 7/9/21

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: 7/9/21
ATS SRF: 0707211

Sample Identification: IW-2

Sample Date: 6/30/21
Sample Time: 9:34 AM
Sampled By: Client
Laboratory Receipt Date: 7/7/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	1.9	0.1	7/7/21	20:42	SLS

Comments

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

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rev. 7/9/21

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: 7/9/21
ATS SRF: 0707211

Sample Identification: A2 Cleaning Supply

Sample Date: 6/29/21
Sample Time: 1:30 PM
Sampled By: Client
Laboratory Receipt Date: 7/7/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.048	0.001	7/7/21	21:10	SLS

Comments

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

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rev. 7/9/21

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: 7/9/21
ATS SRF: 0707211

Sample Identification: Outfall 001

Sample Date: 6/30/21
Sample Time: na
Sampled By: Client
Laboratory Receipt Date: 7/7/21
Sample Matrix: Water

Parameter	Method	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Organic Analysis							
1,4-Dioxane	EPA 1624	mg/L	0.006	0.001	7/7/21	23:38	SLS

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not available / applicable.
Sample analyzed at native pH.

X:\G001-002\2105RF 070721\HORG_SRF_0707211

rev. 7/9/21

Batch Number: QCORG0707211
Parameter: 1,4-Dioxane (EPA 1624)

ATS Project: Pall Corporation #G001-002
Report Date: 7/9/21

Results of QA Samples run concurrently with project samples

REPLICATE ANALYSIS

REPLICATE ANALYSIS				
Sample	Replicate #1	Replicate #2	Mean	Relative Range (percent)
#G001-002 RW-2 @30/21 (8:01 AM) Matrix Spike	4.2 mg/L	4.6 mg/L	4.4 mg/L	8.8

SPIKES and/or QC CHECK SAMPLES

SPIKES and/or QC CHECK SAMPLES				
Sample/Analyte	Known Concentration	Spike Concentration	Analyzed Concentration	Recovery (percent)
#G001-002				
Laboratory Fortified Blank	<0.001 mg/L	0.020 mg/L	0.020 mg/L	97.9
W-2 6/30/21 (0.01 AM) Matrix Spike	1.9 mg/L	2.5 mg/L	4.2 mg/L	94.5
W-2 6/30/21 (0.01 AM) Matrix Spike Duplicate	1.9 mg/L	2.5 mg/L	4.6 mg/L	110.1

BLANK ANALYSIS

BLANK ANALYSIS			
Sample		Analyzed Concentration	QC Decision
#G001-002	Laboratory Reagent Blank	<0.001 mg/L	Acceptable

Comments:

Calculations performed prior to rounding.

Control Limits:

Recoveries

Recoveries

Laboratory Control Sample Recovery (85 - 115%)

Matrix Spike Recovery (80 - 120%)

Relative Range

Replicates (<20%)

Page 1

CHAIN OF CUSTODY RECORD

ATS
A Division of AT&T

230 South Wiegner Road
Ann Arbor, Michigan 48103
Tel. 734/965-0995 Fax. 734/965-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 96027129

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