

Appendix A

Groundwater Analytical Data

ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-102494-1

Client Project/Site: Northwest Pipe Company GW 2021
Revision: 1

For:

Jacobs Engineering Group, Inc.
1501 W Fountainhead Parkway
Suite 401
Tempe, Arizona 85282

Attn: Bernice Kidd



Authorized for release by:
5/20/2021 9:08:48 AM

Pauline Matlock, Project Manager
(253)922-2310
pauline.matlock@eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Job ID: 580-102494-1

Laboratory: Eurofins FGS, Seattle

Narrative

**Job Narrative
580-102494-1**

Comments

No additional comments.

Receipt

The samples were received on 4/16/2021 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.5° C.

Air Toxics

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method SM 5310C: The continuing calibration blank (CCB) for analytical batch 440-644524 contained Total Organic Carbon above the method detection limits limit (MDL). All reported samples associated with this CCB contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-355193 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract non-Sister

See attached subcontract report.

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Client Sample ID: MW01-041521-0

Lab Sample ID: 580-102494-1

Date Collected: 04/15/21 08:35

Matrix: Water

Date Received: 04/16/21 09:50

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	11		1.0	0.078	ug/L			04/22/21 16:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5	F1	1.5	0.43	mg/L			04/23/21 20:19	1
NO3 as N	0.63		0.20	0.030	mg/L			04/16/21 13:46	1
Sulfate	13	F1	1.5	0.80	mg/L			04/23/21 20:19	1
Total Organic Carbon	1.2		0.10	0.050	mg/L			04/20/21 12:51	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Client Sample ID: MW03-041521-0

Lab Sample ID: 580-102494-2

Date Collected: 04/15/21 09:45

Matrix: Water

Date Received: 04/16/21 09:50

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	490		1.0	0.078	ug/L			04/22/21 16:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.5		1.5	0.43	mg/L			04/23/21 20:43	1
NO3 as N	0.13	J	0.20	0.030	mg/L			04/16/21 13:58	1
Sulfate	9.1		1.5	0.80	mg/L			04/23/21 20:43	1
Total Organic Carbon	1.4		0.10	0.050	mg/L			04/20/21 13:06	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Client Sample ID: MW06-041521-0

Lab Sample ID: 580-102494-3

Date Collected: 04/15/21 11:20

Matrix: Water

Date Received: 04/16/21 09:50

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	280		1.0	0.078	ug/L			04/22/21 17:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.2		1.5	0.43	mg/L			04/27/21 11:06	1
NO3 as N	0.096	J	0.20	0.030	mg/L			04/16/21 14:10	1
Sulfate	15		1.5	0.80	mg/L			04/27/21 11:06	1
Total Organic Carbon	1.5		0.10	0.050	mg/L			04/20/21 13:20	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Client Sample ID: MW05-041521-0

Lab Sample ID: 580-102494-4

Date Collected: 04/15/21 13:15

Matrix: Water

Date Received: 04/16/21 09:50

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	280		1.0	0.078	ug/L			04/22/21 18:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.5		1.5	0.43	mg/L			04/27/21 10:31	1
NO3 as N	0.26		0.20	0.030	mg/L			04/16/21 14:22	1
Sulfate	22		1.5	0.80	mg/L			04/27/21 10:31	1
Total Organic Carbon	1.7		0.10	0.050	mg/L			04/20/21 13:35	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Client Sample ID: MW100-041521-0

Lab Sample ID: 580-102494-6

Date Collected: 04/15/21 12:00

Matrix: Water

Date Received: 04/16/21 09:50

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	230		1.0	0.078	ug/L			04/22/21 19:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.3		1.5	0.43	mg/L			04/27/21 10:43	1
NO3 as N	0.093	J	0.20	0.030	mg/L			04/16/21 14:33	1
Sulfate	15		1.5	0.80	mg/L			04/27/21 10:43	1
Total Organic Carbon	1.6		0.10	0.050	mg/L			04/20/21 13:49	1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 570-145152/4
 Matrix: Water
 Analysis Batch: 145152

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.078	ug/L			04/22/21 10:40	1

Lab Sample ID: LCS 570-145152/2
 Matrix: Water
 Analysis Batch: 145152

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	12.9	12.3		ug/L		95	80 - 120

Lab Sample ID: LCSD 570-145152/3
 Matrix: Water
 Analysis Batch: 145152

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	12.9	12.2		ug/L		94	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-354528/15
 Matrix: Water
 Analysis Batch: 354528

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NO3 as N	ND		0.20	0.030	mg/L			04/16/21 12:36	1

Lab Sample ID: LCS 580-354528/16
 Matrix: Water
 Analysis Batch: 354528

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
NO3 as N	5.00	4.77		mg/L		95	90 - 110

Lab Sample ID: LCSD 580-354528/17
 Matrix: Water
 Analysis Batch: 354528

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NO3 as N	5.00	5.07		mg/L		101	90 - 110	6	15

Lab Sample ID: MB 580-355193/32
 Matrix: Water
 Analysis Batch: 355193

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	0.43	mg/L			04/23/21 23:30	1
Sulfate	ND		1.5	0.80	mg/L			04/23/21 23:30	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 580-355193/33
Matrix: Water
Analysis Batch: 355193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.6		mg/L		101	90 - 110
Sulfate	50.0	51.9		mg/L		104	90 - 110

Lab Sample ID: LCSD 580-355193/34
Matrix: Water
Analysis Batch: 355193

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	48.8		mg/L		98	90 - 110	4	15
Sulfate	50.0	45.7		mg/L		91	90 - 110	13	15

Lab Sample ID: 580-102494-1 MS
Matrix: Water
Analysis Batch: 355193

Client Sample ID: MW01-041521-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.5	F1	50.0	56.8		mg/L		109	90 - 110
Sulfate	13	F1	50.0	66.9		mg/L		108	90 - 110

Lab Sample ID: 580-102494-1 MSD
Matrix: Water
Analysis Batch: 355193

Client Sample ID: MW01-041521-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2.5	F1	50.0	61.9	F1	mg/L		119	90 - 110	9	15
Sulfate	13	F1	50.0	73.2	F1	mg/L		120	90 - 110	9	15

Method: SM 5310C - TOC

Lab Sample ID: MB 440-644524/9
Matrix: Water
Analysis Batch: 644524

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			04/20/21 08:34	1

Lab Sample ID: LCS 440-644524/8
Matrix: Water
Analysis Batch: 644524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	5.00	5.20		mg/L		104	85 - 115

Lab Sample ID: MRL 440-644524/7
Matrix: Water
Analysis Batch: 644524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.0735	J	mg/L		74	50 - 150

Eurofins FGS, Seattle

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Client Sample ID: MW01-041521-0

Lab Sample ID: 580-102494-1

Date Collected: 04/15/21 08:35

Matrix: Water

Date Received: 04/16/21 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145152	04/22/21 16:07	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354528	04/16/21 13:46	AAC	FGS SEA
Total/NA	Analysis	300.0		1	355193	04/23/21 20:19	AAC	FGS SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 12:51	YO8L	TAL IRV

Client Sample ID: MW03-041521-0

Lab Sample ID: 580-102494-2

Date Collected: 04/15/21 09:45

Matrix: Water

Date Received: 04/16/21 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145152	04/22/21 16:41	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354528	04/16/21 13:58	AAC	FGS SEA
Total/NA	Analysis	300.0		1	355193	04/23/21 20:43	AAC	FGS SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 13:06	YO8L	TAL IRV

Client Sample ID: MW06-041521-0

Lab Sample ID: 580-102494-3

Date Collected: 04/15/21 11:20

Matrix: Water

Date Received: 04/16/21 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145152	04/22/21 17:13	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354528	04/16/21 14:10	AAC	FGS SEA
Total/NA	Analysis	300.0		1	355193	04/27/21 11:06	AAC	FGS SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 13:20	YO8L	TAL IRV

Client Sample ID: MW05-041521-0

Lab Sample ID: 580-102494-4

Date Collected: 04/15/21 13:15

Matrix: Water

Date Received: 04/16/21 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145152	04/22/21 18:29	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354528	04/16/21 14:22	AAC	FGS SEA
Total/NA	Analysis	300.0		1	355193	04/27/21 10:31	AAC	FGS SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 13:35	YO8L	TAL IRV

Client Sample ID: MW100-041521-0

Lab Sample ID: 580-102494-6

Date Collected: 04/15/21 12:00

Matrix: Water

Date Received: 04/16/21 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145152	04/22/21 19:03	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354528	04/16/21 14:33	AAC	FGS SEA
Total/NA	Analysis	300.0		1	355193	04/27/21 10:43	AAC	FGS SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 13:49	YO8L	TAL IRV

Eurofins FGS, Seattle

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

EMAX Lab. = EMAX Laboratories Inc, 1835 W. 205th Street, Torrance, CA 90501

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Laboratory: Eurofins FGS, Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	WA100007	11-05-21

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4028 - 010	04-27-21

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	CA300001	01-30-22



Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102494-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-102494-1	MW01-041521-0	Water	04/15/21 08:35	04/16/21 09:50	
580-102494-2	MW03-041521-0	Water	04/15/21 09:45	04/16/21 09:50	
580-102494-3	MW06-041521-0	Water	04/15/21 11:20	04/16/21 09:50	
580-102494-4	MW05-041521-0	Water	04/15/21 13:15	04/16/21 09:50	
580-102494-5	TB-041521-0	Water	04/15/21 08:00	04/16/21 09:50	
580-102494-6	MW100-041521-0	Water	04/15/21 12:00	04/16/21 09:50	

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EMAX
LABORATORIES, INC.
 1500 W. 205th Street
 Torrance, CA 90501
 (310) 618-8889

13-2021
 Report No.: 210233

Line Matlock

ca, Inc.
 Street East
 98424

Laboratory Report
 Project: NW PIPE COMPANY GW MONITORING

is the Laboratory report for samples received on 04/20/21.
 reported relate only to samples listed below :

ID	Control #	Col	Date	Matrix	Analysis
521-0	D233-01	04/15/21	04/15/21	WATER	VOC SIM
521-0	D233-02	04/15/21	04/15/21	WATER	VOC SIM
521-0	D233-03	04/15/21	04/15/21	WATER	VOC SIM
521-0	D233-04	04/15/21	04/15/21	WATER	VOC SIM
1-0	D233-05	04/15/21	04/15/21	WATER	VOC SIM
1521-0	D233-06	04/15/21	04/15/21	WATER	VOC SIM

is summarized on the following pages.

free to call if you have any questions concerning
 its.

yours,



Pang
 Director

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 whom it is addressed. This report shall not be reproduced except in full
 the written approval of EMAX.

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

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LABORATORY REPORT FOR

TESTAMERICA, INC.

NW PIPE COMPANY GW MONITORING

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

SDG#: 21D233

CASE NARRATIVE

Client : TESTAMERICA, INC.

Project: NW PIPE COMPANY GW MONITORING

SDG : 21D233

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

A total of six(6) water samples were received on 04/20/21 to be analyzed for Volatile Organics by GC/MS SIM in accordance with Method SW5030B/8260B SIM and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration

Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2) CCVs (Data file IDs: RDY396 and RDY422) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. VOF5D20B and VOF5D21B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. VOF5D20X/VOF5D20C and VOF5D21L/VOF5D21C were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC. SDG NO. : 21D233
 Project : NW PIPE COMPANY GW MONITORING Instrument ID : F5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LGD1W	VOF5D20C	1	NA	04/26/2109:27	04/26/2109:27	RDY398	RDY191	VOF5D20	LCS Duplicate
MBLK1W	VOF5D20B	1	NA	04/26/2110:15	04/26/2110:15	RDY400	RDY191	VOF5D20	Method Blank
LCS1W	VOF5D20X	1	NA	04/26/2110:40	04/26/2110:40	RDY401	RDY191	VOF5D20	Lab Control Sample (LCS)
TB-041521-0	21D233-05	1	NA	04/26/2111:04	04/26/2111:04	RDY402	RDY191	VOF5D20	Field Sample
MW03-041521-0	21D233-021	250	NA	04/26/2113:06	04/26/2113:06	RDY407	RDY191	VOF5D20	Diluted Sample
MW06-041521-0	21D233-03	500	NA	04/26/2113:30	04/26/2113:30	RDY408	RDY191	VOF5D20	Field Sample
MW05-041521-0	21D233-04J	1000	NA	04/26/2117:08	04/26/2117:08	RDY417	RDY191	VOF5D20	Diluted Sample
MW100-041521-0	21D233-06	500	NA	04/26/2117:32	04/26/2117:32	RDY418	RDY191	VOF5D20	Field Sample
MW03-041521-0	21D233-02	500	NA	04/26/2117:56	04/26/2117:56	RDY419	RDY191	VOF5D20	Field Sample
MW01-041521-0	21D233-01	100	NA	04/26/2118:20	04/26/2118:20	RDY420	RDY191	VOF5D20	Field Sample
LCS2W	VOF5D21L	1	NA	04/27/2109:01	04/27/2109:01	RDY423	RDY191	VOF5D21	Lab Control Sample (LCS)
LGD2W	VOF5D21C	1	NA	04/27/2109:25	04/27/2109:25	RDY424	RDY191	VOF5D21	LCS Duplicate
MBLK2W	VOF5D21B	1	NA	04/27/2110:13	04/27/2110:13	RDY426	RDY191	VOF5D21	Method Blank
MW05-041521-0	21D233-04	100	NA	04/27/2111:01	04/27/2111:01	RDY428	RDY191	VOF5D21	Field Sample
MW01-041521-0	21D233-01J	50	NA	04/27/2111:26	04/27/2111:26	RDY429	RDY191	VOF5D21	Diluted Sample

FN - Filename
 % Moist - Percent Moisture



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SAMPLE RESULTS

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.      Date Collected: 04/15/21 08:35
Project    : NW PIPE COMPANY GW MONITORING  Date Received: 04/20/21
Batch No.  : 21D233                  Date Extracted: 04/26/21 18:20
Sample ID  : MW01-041521-0          Date Analyzed: 04/26/21 18:20
Lab Samp ID: 21D233-01              Dilution Factor: 1
Lab File ID: RDY420                  Matrix: WATER
Ext Btch ID: VOF5D20                 % Moisture: NA
Calib. Ref.: RDY191                  Instrument ID: F5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)	
cis-1,2-Dichloroethylene	58E	0.20	0.10	
Vinyl Chloride	0.47	0.10	0.020	
Tetrachloroethene	280E	0.20	0.10	
TCE	24E	0.20	0.10	

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	0.586	0.500	117	70-130
4-Bromofluorobenzene	0.498	0.500	100	70-130
Toluene-d8	0.448	0.500	90	70-130

Notes:

```

Sample Amount   : 25ml                Final Volume : 25ml
Prepared by    : ODinh                 Analyzed by  : ODinh
Detection limits are reported relative to sample result significant figures.
  
```


METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.      Date Collected: 04/15/21 13:15
Project     : NW PIPE COMPANY GW MONITORING Date Received: 04/20/21
Batch No.   : 21D233                Date Extracted: 04/26/21 17:08
Sample ID   : MW05-041521-0        Date Analyzed: 04/26/21 17:08
Lab Samp ID: 21D233-04J            Dilution Factor: 1000
Lab File ID: RDY417                Matrix: WATER
Ext Btch ID: VOF5D20               % Moisture: NA
Calib. Ref.: RDY191                Instrument ID: F5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
cis-1,2-Dichloroethylene	1500	200	100
Vinyl Chloride	36J	100	20
Tetrachloroethene	3200	200	100
TCE	160J	200	100

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	0.589	0.500	118	70-130
4-Bromofluorobenzene	0.484	0.500	97	70-130
Toluene-d8	0.446	0.500	89	70-130

Notes:

```

Sample Amount   : 25ml                Final Volume : 25ml
Prepared by     : ODinh                Analyzed by  : ODinh
Detection limits are reported relative to sample result significant figures.
  
```


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QC SUMMARIES

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : TESTAMERICA, INC.
PROJECT : NW PIPE COMPANY GW MONITORING
BATCH NO. : 21D233
METHOD : SW5030B/8260B SIM

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : VOF5D20B VOF5D20X
LAB FILE ID : RDY400 RDY401
DATE PREPARED : 04/26/21 10:15 04/26/21 10:40 04/26/21 09:27
DATE ANALYZED : 04/26/21 10:15 04/26/21 10:40 04/26/21 09:27
PREP BATCH : VOF5D20 VOF5D20 VOF5D20
CALIBRATION REF: RDY191 RDY191 RDY191

ACCESSION:

PARAMETERS	MBResult (ug/L)	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.496	99	0.500	0.556	111	11	70-130	20
Vinyl Chloride	ND	0.500	0.502	100	0.500	0.540	108	7	60-140	20
Tetrachloroethene	ND	0.500	0.470	94	0.500	0.505	101	7	70-130	20
TCE	ND	0.500	0.455	91	0.500	0.502	100	10	70-130	20

SURROGATE PARAMETERS	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	QCLimit (%)
1,2-Dichloroethane-d4	0.500	0.454	91	0.500	0.463	93	70-130
4-Bromofluorobenzene	0.500	0.531	106	0.500	0.543	109	70-130
Toluene-d8	0.500	0.490	98	0.500	0.498	100	70-130

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : TESTAMERICA, INC.
PROJECT : NW PIPE COMPANY GW MONITORING
BATCH NO. : 21D233
METHOD : SW5030B/8260B SIM

```
=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : MBLK2W                             LCS2W
LAB SAMPLE ID : VOF5D21B                         VOF5D21L
LAB FILE ID  : RDY426                             RDY423
DATE PREPARED : 04/27/21 10:13                   04/27/21 09:01
DATE ANALYZED : 04/27/21 10:13                   04/27/21 09:01
PREP BATCH   : VOF5D21                           VOF5D21
CALIBRATION REF: RDY191                          RDY191
=====
```

ACCESSION:

PARAMETERS	MBResult (ug/L)	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	RPD (%)	QLLimit (%)	MaxRPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.478	96	0.500	0.492	98	3	70-130	20
Vinyl Chloride	ND	0.500	0.486	97	0.500	0.514	103	6	60-140	20
Tetrachloroethene	ND	0.500	0.482	96	0.500	0.499	100	3	70-130	20
TCE	ND	0.500	0.462	92	0.500	0.476	95	3	70-130	20

```
=====
```

SURROGATE PARAMETERS	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	QLLimit (%)
1,2-Dichloroethane-d4	0.500	0.543	109	0.500	0.517	103	70-130
4-Bromofluorobenzene	0.500	0.466	93	0.500	0.478	96	70-130
Toluene-d8	0.500	0.467	93	0.500	0.463	93	70-130

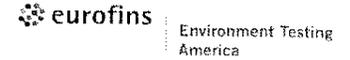
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MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

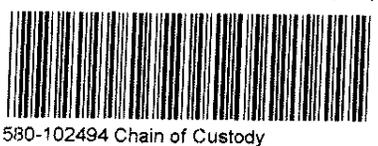
Eurofins TestAmerica, Seattle

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record



Client Information		Sampler: <u>LAURA TOLAKU</u>		Lab PM: <u>Matlock, Pauline M</u>		Carrier Tracking No(s):		COC No: <u>580-42614-13620.3</u>					
Client Contact: <u>Shannon Fitzsimmons BERNICE KIDD</u>		Phone: <u>425-891-2855</u>		E-Mail: <u>pauline.matlock@eurofinset.com</u>		State of Origin:		Page: <u>3 of 3</u> <u>1 of 1</u>					
Company: <u>Jacobs Engineering Group, Inc.</u>				PWSID:		Analysis Requested							
Address: <u>2020 SW Fourth Ave, 3rd Floor</u>		Due Date Requested:		Field Filtered Sample (Yes or No) Per Cont. MS/MSD (Yes or No) 5310C - TOC RSK_175 - Methane 300.0_28D - Chloride, Sulfate 300_48HR - Nitrate, NO3 as N SUBTRACT (EMAX) - TCE, cis 1,2-DCE, PCE, Vinyl Chloride (8260B_Sim)		Total Number of Containers		Job #: <u>102494</u>					
City: <u>Portland</u>		TAT Requested (days): <u>STD</u>						Preservation Codes:					
State, Zip: <u>OR, 97201</u>		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No						A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
Phone: <u>503-872-4666(Tel)</u>		PO #: <u>3600021519</u>						Other:		Special Instructions/Note:			
Email: <u>BERNICE.KIDD@JACOBS.COM</u> <u>Shannon.Fitzsimmons@jacobs.com</u>		WO #:											
Project Name: <u>Northwest Pipe Company GW 2021</u>		Project #: <u>58016285</u>											
Site: <u>NNY</u>		SSOW#:											
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=TISSUE, A=Air)	Field Filtered Sample (Yes or No)				Total Number of Containers	Special Instructions/Note:		
						Preservation Code:							
-1	MW01-041521-0	04/15/21	0835	GRAB	Water	N	N	1	3	1	3	8	
	MW03-041521-0		0945		Water			1	3	1	3	8	
-3	MW06-041521-0		1120		Water			1	3	1	3	8	
	MW05-041521-0		1315		Water			1	3	1	3	8	
-5	TB-041521-0		0800		WATER						6	6	
	MW100-041521-0	4/15/21	1200	G	WATER			1	3	1	3	8	



580-102494 Chain of Custody

Therm. ID: A1 Cor: 0.5 ° Unc: 1.0 °
 Cooler Dsc: LG
 Packing: bulk FedEx: PO
 Cust. Seal: Yes No UPS:
 Blue Ice: Wet, Dry, None Other:

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: <u>LAURA TOLAKU</u>	Date/Time: <u>4/15/21 1530</u>	Company: <u>JACOBS</u>	Received by: <u>Tom [Signature]</u>	Date/Time: <u>4/16/21 0950</u>	Company: <u>ETA</u>
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Yes No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: _____

Eurofins FGS, Seattle

5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 425-420-9210

Chain of Custody Record



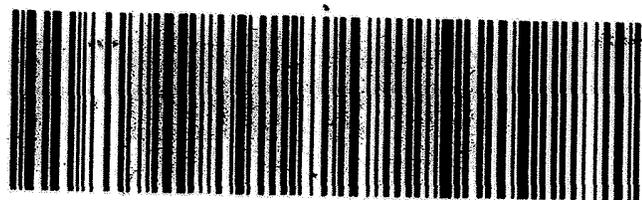
Environment Testing America

Client Information (Sub Contract Lab)		Sampler: Matlock, Pauline M		Lab PM: Matlock, Pauline M		Carrier Tracking No(s):		COC No: 580-89206.1																																																	
Client Contact: Shipping/Receiving		Phone:		E-Mail: pauline.matlock@eurofinset.com		State of Origin: Oregon		Page: Page 1 of 1																																																	
Company: Eurofins Calscience LLC		Address: 17461 Derian Ave, Suite 100, Irvine CA, 92614-5817		Accreditations Required (See note): NELAP - Oregon		Job #: 580-102494-1		Preservation Codes:																																																	
Due Date Requested: 5/16/2021		TAT Requested (days):		<table border="1"> <tr> <th colspan="12">Analysis Requested</th> </tr> <tr> <td>Field Filtered Sample (Yes or No)</td> <td>Perform MS/MSD (Yes or No)</td> <td>5310C/TOC</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>		Analysis Requested												Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C/TOC																																		Job #:		Other:	
Analysis Requested																																																									
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C/TOC																																																							
Project Name: Northwest Pipe Company GW 2021		Project #: 58016285		Total Number of containers		A - HCL		M - Hexane																																																	
Site:		SSOW#:				B - NaOH		N - None																																																	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)																																																	
						Preservation Code:																																																			
MW01-041521-0 (580-102494-1)		4/15/21		08:35 Pacific		Water		X																																																	
MW03-041521-0 (580-102494-2)		4/15/21		09:45 Pacific		Water		X																																																	
MW06-041521-0 (580-102494-3)		4/15/21		11:20 Pacific		Water		X																																																	
MW05-041521-0 (580-102494-4)		4/15/21		13:15 Pacific		Water		X																																																	
MW100-041521-0 (580-102494-6)		4/15/21		12:00 Pacific		Water		X																																																	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Frontier Global Sciences LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Frontier Global Sciences LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Frontier Global Sciences LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Frontier Global Sciences LLC.</p>																																																									
Possible Hazard Identification Unconfirmed					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																																																				
Deliverable Requested: I, II, III, IV, Other (specify)					Primary Deliverable Rank: 2																																																				
Empty Kit Relinquished by:					Special Instructions/QC Requirements:																																																				
Relinquished by: <i>Tom Blum</i>		Date/Time: <i>4/19/21</i>		Company: <i>EFGS</i>		Received by: <i>[Signature]</i>		Date/Time: <i>4/20/21 1060</i>																																																	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:																																																	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:																																																	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>IRSC 40/37</i>																																																					



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Pat # 159471-434 RIT2 EXP 03/22

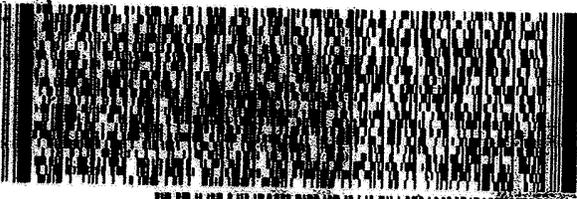


92 APVA

TRK# 5008 1328 3475
TUE - 20 APR 10:30A
PRIORITY OVERNIGHT

92841 SNA CA-US

J2011201218011W

FedEx Express

(714) 896-6494 REF 5580-43044
GARDEN GROVE CA 92841

SHIPPING/RECEIVING
EUROFINS CALSCIENCE LLC
7440 LINCOLN WAY

EUROFINS TESTING
5755 8TH ST E
FJFE, WA 98424
UNITED STATES US

BILL SENDER
CAD: 989746/CFEE3409

55073/P96C/NS2P

SIGNATURE _____
DATE _____

Tom Stant

Custody Seal 4/1/21

1526179

Environment Testing

eurofins | Environment Testing TestAmerica

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102494-1

Login Number: 102494

List Source: Eurofins FGS, Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102494-1

Login Number: 102494

List Number: 2

Creator: Lagunas, Jorge L

List Source: Eurofins Calscience Irvine

List Creation: 04/20/21 11:44 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102494-1

Login Number: 102494

List Number: 3

Creator: Stratford, Jordan

List Source: Eurofins Calscience LLC

List Creation: 04/20/21 04:39 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1526179
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

EMAX
LABORATORIES, INC.®
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889

Date: 05-13-2021
EMAX Batch No.: 21D233

Attn: Pauline Matlock

TestAmerica, Inc.
5755 8th Street East
Tacoma WA 98424

Subject: Laboratory Report
Project: NW PIPE COMPANY GW MONITORING

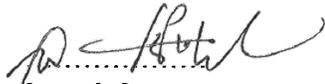
Enclosed is the Laboratory report for samples received on 04/20/21.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW01-041521-0	D233-01	04/15/21	WATER	VOC SIM
MW03-041521-0	D233-02	04/15/21	WATER	VOC SIM
MW06-041521-0	D233-03	04/15/21	WATER	VOC SIM
MW05-041521-0	D233-04	04/15/21	WATER	VOC SIM
TB-041521-0	D233-05	04/15/21	WATER	VOC SIM
MW100-041521-0	D233-06	04/15/21	WATER	VOC SIM

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,



Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912020-17
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

TESTAMERICA, INC.

NW PIPE COMPANY GW MONITORING

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

SDG#: 21D233

CASE NARRATIVE

Client : TESTAMERICA, INC.

Project: NW PIPE COMPANY GW MONITORING

SDG : 21D233

METHOD SW5030B/8260B SIM VOLATILE ORGANICS BY GC/MS SIM

A total of six(6) water samples were received on 04/20/21 to be analyzed for Volatile Organics by GC/MS SIM in accordance with Method SW5030B/8260B SIM and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration

Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2) CCVs (Data file IDs: RDY396 and RDY422) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. VOF5D20B and VOF5D21B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. VOF5D20X/VOF5D20C and VOF5D21L/VOF5D21C were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.
Project : NW PIPE COMPANY GW MONITORING

SDG NO. : 21D233
Instrument ID : F5

WATER									
Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCD1W	VOF5D20C	1	NA	04/26/2109:27	04/26/2109:27	RDY398	RDY191	VOF5D20	LCS Duplicate
MBLK1W	VOF5D20B	1	NA	04/26/2110:15	04/26/2110:15	RDY400	RDY191	VOF5D20	Method Blank
LCS1W	VOF5D20X	1	NA	04/26/2110:40	04/26/2110:40	RDY401	RDY191	VOF5D20	Lab Control Sample (LCS)
TB-041521-0	21D233-05	1	NA	04/26/2111:04	04/26/2111:04	RDY402	RDY191	VOF5D20	Field Sample
MW03-041521-0	21D233-02I	250	NA	04/26/2113:06	04/26/2113:06	RDY407	RDY191	VOF5D20	Diluted Sample
MW06-041521-0	21D233-03	500	NA	04/26/2113:30	04/26/2113:30	RDY408	RDY191	VOF5D20	Field Sample
MW05-041521-0	21D233-04J	1000	NA	04/26/2117:08	04/26/2117:08	RDY417	RDY191	VOF5D20	Diluted Sample
MW100-041521-0	21D233-06	500	NA	04/26/2117:32	04/26/2117:32	RDY418	RDY191	VOF5D20	Field Sample
MW03-041521-0	21D233-02	100	NA	04/26/2117:56	04/26/2117:56	RDY419	RDY191	VOF5D20	Field Sample
MW01-041521-0	21D233-01	1	NA	04/26/2118:20	04/26/2118:20	RDY420	RDY191	VOF5D20	Field Sample
LCS2W	VOF5D21L	1	NA	04/27/2109:01	04/27/2109:01	RDY423	RDY191	VOF5D21	Lab Control Sample (LCS)
LCD2W	VOF5D21C	1	NA	04/27/2109:25	04/27/2109:25	RDY424	RDY191	VOF5D21	LCS Duplicate
MBLK2W	VOF5D21B	1	NA	04/27/2110:13	04/27/2110:13	RDY426	RDY191	VOF5D21	Method Blank
MW05-041521-0	21D233-04	100	NA	04/27/2111:01	04/27/2111:01	RDY428	RDY191	VOF5D21	Field Sample
MW01-041521-0	21D233-01J	50	NA	04/27/2111:26	04/27/2111:26	RDY429	RDY191	VOF5D21	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 04/15/21 08:35
Project     : NW PIPE COMPANY GW MONITORING Date Received: 04/20/21
Batch No.   : 21D233                     Date Extracted: 04/27/21 11:26
Sample ID   : MW01-041521-0             Date Analyzed: 04/27/21 11:26
Lab Samp ID: 21D233-01J                 Dilution Factor: 50
Lab File ID: RDY429                      Matrix: WATER
Ext Btch ID: VOF5D21                     % Moisture: NA
Calib. Ref.: RDY191                     Instrument ID: F5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)		
cis-1,2-Dichloroethylene	56	10	5.0		
Vinyl Chloride	ND	5.0	1.0		
Tetrachloroethene	220	10	5.0		
TCE	24	10	5.0		
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT	
1,2-Dichloroethane-d4	0.563	0.500	113	70-130	
4-Bromofluorobenzene	0.483	0.500	97	70-130	
Toluene-d8	0.418	0.500	84	70-130	

Notes:

```

Sample Amount   : 25ml                      Final Volume : 25ml
Prepared by     : ODinh                     Analyzed by  : ODinh
Detection limits are reported relative to sample result significant figures.
  
```


QC SUMMARIES

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : TESTAMERICA, INC.
PROJECT : NW PIPE COMPANY GW MONITORING
BATCH NO. : 21D233
METHOD : SW5030B/8260B SIM

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : MBLK1W                             LCS1W
LAB SAMPLE ID : VOF5D20B                         VOF5D20X
LAB FILE ID  : RDY400                             RDY401
DATE PREPARED : 04/26/21 10:15                   04/26/21 10:40
DATE ANALYZED : 04/26/21 10:15                   04/26/21 10:40
PREP BATCH   : VOF5D20                           VOF5D20
CALIBRATION REF: RDY191                          RDY191
=====
  
```

ACCESSION:

PARAMETERS	MBResult (ug/L)	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.496	99	0.500	0.556	111	11	70-130	20
Vinyl Chloride	ND	0.500	0.502	100	0.500	0.540	108	7	60-140	20
Tetrachloroethene	ND	0.500	0.470	94	0.500	0.505	101	7	70-130	20
TCE	ND	0.500	0.455	91	0.500	0.502	100	10	70-130	20

SURROGATE PARAMETERS	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	QCLimit (%)
1,2-Dichloroethane-d4	0.500	0.454	91	0.500	0.463	93	70-130
4-Bromofluorobenzene	0.500	0.531	106	0.500	0.543	109	70-130
Toluene-d8	0.500	0.490	98	0.500	0.498	100	70-130

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

```

=====
Client       : TESTAMERICA, INC.           Date Collected: 04/27/21 10:13
Project      : NW PIPE COMPANY GW MONITORING Date Received: 04/27/21
Batch No.    : 21D233                     Date Extracted: 04/27/21 10:13
Sample ID    : MBLK2W                     Date Analyzed: 04/27/21 10:13
Lab Samp ID  : VOF5D21B                   Dilution Factor: 1
Lab File ID  : RDY426                     Matrix: WATER
Ext Btch ID  : VOF5D21                     % Moisture: NA
Calib. Ref.: RDY191                       Instrument ID: F5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)	
cis-1,2-Dichloroethylene	ND	0.20	0.10	
Vinyl Chloride	ND	0.10	0.020	
Tetrachloroethene	ND	0.20	0.10	
TCE	ND	0.20	0.10	

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	0.550	0.500	110	70-130
4-Bromofluorobenzene	0.478	0.500	96	70-130
Toluene-d8	0.462	0.500	92	70-130

Notes:

```

Sample Amount   : 25ml                      Final Volume : 25ml
Prepared by    : ODinh                      Analyzed by  : ODinh
Detection limits are reported relative to sample result significant figures.
  
```

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : TESTAMERICA, INC.
PROJECT : NW PIPE COMPANY GW MONITORING
BATCH NO. : 21D233
METHOD : SW5030B/8260B SIM

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : MBLK2W                             LCS2W       LCD2W
LAB SAMPLE ID : VOF5D21B                         VOF5D21L   VOF5D21C
LAB FILE ID  : RDY426                             RDY423     RDY424
DATE PREPARED : 04/27/21 10:13                   04/27/21 09:01 04/27/21 09:25
DATE ANALYZED : 04/27/21 10:13                   04/27/21 09:01 04/27/21 09:25
PREP BATCH   : VOF5D21                           VOF5D21    VOF5D21
CALIBRATION REF: RDY191                          RDY191     RDY191
=====

```

ACCESSION:

PARAMETERS	MBResult (ug/L)	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.478	96	0.500	0.492	98	3	70-130	20
Vinyl Chloride	ND	0.500	0.486	97	0.500	0.514	103	6	60-140	20
Tetrachloroethene	ND	0.500	0.482	96	0.500	0.499	100	3	70-130	20
TCE	ND	0.500	0.462	92	0.500	0.476	95	3	70-130	20

SURROGATE PARAMETERS	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	QCLimit (%)
1,2-Dichloroethane-d4	0.500	0.543	109	0.500	0.517	103	70-130
4-Bromofluorobenzene	0.500	0.466	93	0.500	0.478	96	70-130
Toluene-d8	0.500	0.467	93	0.500	0.463	93	70-130

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-102459-1

Client Project/Site: Northwest Pipe Company GW 2021

For:

Jacobs Engineering Group, Inc.
1501 W Fountainhead Parkway
Suite 401
Tempe, Arizona 85282

Attn: Bernice Kidd



*Authorized for release by:
5/14/2021 2:19:39 PM*

Pauline Matlock, Project Manager
(253)922-2310
pauline.matlock@eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Job ID: 580-102459-1

Laboratory: Eurofins FGS, Seattle

Narrative

**Job Narrative
580-102459-1**

Comments

No additional comments.

Receipt

The samples were received on 4/15/2021 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.3° C.

Air Toxics

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method SM 5310C: The continuing calibration blank (CCB) for analytical batch 440-644524 contained Total Organic Carbon above the method detection limits limit (MDL). All reported samples associated with this CCB contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-354512 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-354528 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract non-Sister

See attached subcontract report.

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFI	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Client Sample ID: MW02-041421-0

Lab Sample ID: 580-102459-1

Date Collected: 04/14/21 09:30

Matrix: Water

Date Received: 04/15/21 09:40

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	5300		40	3.1	ug/L			04/22/21 18:37	40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.3		1.5	0.43	mg/L			04/16/21 15:09	1
NO3 as N	0.13	J	0.20	0.030	mg/L			04/16/21 09:29	1
Sulfate	1.6		1.5	0.80	mg/L			04/16/21 15:09	1
Total Organic Carbon	1.5		0.10	0.050	mg/L			04/20/21 10:05	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.8	HF	0.01	0.01	SU			04/19/21 12:30	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Client Sample ID: MW04-041421-0

Lab Sample ID: 580-102459-2

Date Collected: 04/14/21 11:10

Matrix: Water

Date Received: 04/15/21 09:40

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	100		1.0	0.078	ug/L			04/22/21 20:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.0		1.5	0.43	mg/L			04/16/21 15:20	1
NO3 as N	0.031	J	0.20	0.030	mg/L			04/16/21 09:40	1
Sulfate	3.5		1.5	0.80	mg/L			04/16/21 15:20	1
Total Organic Carbon	1.2		0.10	0.050	mg/L			04/20/21 10:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.6	HF	0.01	0.01	SU			04/19/21 12:31	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Client Sample ID: T4SIMW22-041421-0

Lab Sample ID: 580-102459-3

Date Collected: 04/14/21 13:00

Matrix: Water

Date Received: 04/15/21 09:40

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	18		1.0	0.078	ug/L			04/22/21 20:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.4		1.5	0.43	mg/L			04/16/21 10:16	1
NO3 as N	0.20		0.20	0.030	mg/L			04/16/21 10:16	1
Sulfate	9.7		1.5	0.80	mg/L			04/16/21 10:16	1
Total Organic Carbon	1.3		0.10	0.050	mg/L			04/20/21 10:44	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Client Sample ID: T4SIMW23-041421-0

Lab Sample ID: 580-102459-4

Date Collected: 04/14/21 14:10

Matrix: Water

Date Received: 04/15/21 09:40

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	3.1		1.0	0.078	ug/L			04/22/21 21:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14	F1	1.5	0.43	mg/L			04/16/21 10:27	1
NO3 as N	0.50	F1	0.20	0.030	mg/L			04/16/21 10:27	1
Sulfate	9.3	F2 F1	1.5	0.80	mg/L			04/16/21 10:27	1
Total Organic Carbon	0.81		0.10	0.050	mg/L			04/20/21 10:58	1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 570-145151/4
Matrix: Water
Analysis Batch: 145151

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.078	ug/L			04/22/21 10:40	1

Lab Sample ID: LCS 570-145151/2
Matrix: Water
Analysis Batch: 145151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	13.7	13.8		ug/L		101	80 - 120

Lab Sample ID: LCSD 570-145151/3
Matrix: Water
Analysis Batch: 145151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	13.7	13.9		ug/L		101	80 - 120	0	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-354512/15
Matrix: Water
Analysis Batch: 354512

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	0.43	mg/L			04/16/21 12:36	1
Sulfate	ND		1.5	0.80	mg/L			04/16/21 12:36	1

Lab Sample ID: LCS 580-354512/16
Matrix: Water
Analysis Batch: 354512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	49.0		mg/L		98	90 - 110
Sulfate	50.0	52.1		mg/L		104	90 - 110

Lab Sample ID: LCSD 580-354512/17
Matrix: Water
Analysis Batch: 354512

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	47.2		mg/L		94	90 - 110	4	15
Sulfate	50.0	50.6		mg/L		101	90 - 110	3	15

Lab Sample ID: 580-102459-4 MS
Matrix: Water
Analysis Batch: 354512

Client Sample ID: T4SIMW23-041421-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	14	F1	50.0	68.8		mg/L		110	90 - 110
Sulfate	9.3	F2 F1	50.0	72.5	F1	mg/L		126	90 - 110

Eurofins FGS, Seattle

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-102459-4 MSD
Matrix: Water
Analysis Batch: 354512

Client Sample ID: T4SIMW23-041421-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	14	F1	50.0	70.1	F1	mg/L		113	90 - 110	2	15
Sulfate	9.3	F2 F1	50.0	62.0	F2	mg/L		105	90 - 110	16	15

Lab Sample ID: MB 580-354528/15
Matrix: Water
Analysis Batch: 354528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NO3 as N	ND		0.20	0.030	mg/L			04/16/21 12:36	1

Lab Sample ID: LCS 580-354528/16
Matrix: Water
Analysis Batch: 354528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
NO3 as N	5.00	4.77		mg/L		95	90 - 110

Lab Sample ID: LCSD 580-354528/17
Matrix: Water
Analysis Batch: 354528

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NO3 as N	5.00	5.07		mg/L		101	90 - 110	6	15

Lab Sample ID: 580-102459-4 MS
Matrix: Water
Analysis Batch: 354528

Client Sample ID: T4SIMW23-041421-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
NO3 as N	0.50	F1	5.00	6.31	F1	mg/L		116	90 - 110

Lab Sample ID: 580-102459-4 MSD
Matrix: Water
Analysis Batch: 354528

Client Sample ID: T4SIMW23-041421-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NO3 as N	0.50	F1	5.00	5.58		mg/L		102	90 - 110	12	15

Method: SM 5310C - TOC

Lab Sample ID: MB 440-644524/9
Matrix: Water
Analysis Batch: 644524

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			04/20/21 08:34	1

Eurofins FGS, Seattle

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: LCS 440-644524/8
Matrix: Water
Analysis Batch: 644524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	5.00	5.20		mg/L		104	85 - 115

Lab Sample ID: MRL 440-644524/7
Matrix: Water
Analysis Batch: 644524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.0735	J	mg/L		74	50 - 150

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Client Sample ID: MW02-041421-0

Lab Sample ID: 580-102459-1

Date Collected: 04/14/21 09:30

Matrix: Water

Date Received: 04/15/21 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		40	145151	04/22/21 18:37	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354528	04/16/21 09:29	AAC	TAL SEA
Total/NA	Analysis	300.0		1	354512	04/16/21 15:09	AAC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	354585	04/19/21 12:30	HCC	TAL SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 10:05	YO8L	TAL IRV

Client Sample ID: MW04-041421-0

Lab Sample ID: 580-102459-2

Date Collected: 04/14/21 11:10

Matrix: Water

Date Received: 04/15/21 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145151	04/22/21 20:56	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354528	04/16/21 09:40	AAC	TAL SEA
Total/NA	Analysis	300.0		1	354512	04/16/21 15:20	AAC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	354585	04/19/21 12:31	HCC	TAL SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 10:30	YO8L	TAL IRV

Client Sample ID: T4SIMW22-041421-0

Lab Sample ID: 580-102459-3

Date Collected: 04/14/21 13:00

Matrix: Water

Date Received: 04/15/21 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145151	04/22/21 20:26	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354512	04/16/21 10:16	AAC	TAL SEA
Total/NA	Analysis	300.0		1	354528	04/16/21 10:16	AAC	TAL SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 10:44	YO8L	TAL IRV

Client Sample ID: T4SIMW23-041421-0

Lab Sample ID: 580-102459-4

Date Collected: 04/14/21 14:10

Matrix: Water

Date Received: 04/15/21 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145151	04/22/21 21:24	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354512	04/16/21 10:27	AAC	TAL SEA
Total/NA	Analysis	300.0		1	354528	04/16/21 10:27	AAC	TAL SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 10:58	YO8L	TAL IRV

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

EMAX Lab. = EMAX Laboratories Inc, 1835 W. 205th Street, Torrance, CA 90501

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Eurofins FGS, Seattle

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Laboratory: Eurofins FGS, Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	WA100007	11-05-21

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4028 - 010	04-27-21

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	CA300001	01-30-22

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102459-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-102459-1	MW02-041421-0	Water	04/14/21 09:30	04/15/21 09:40	
580-102459-2	MW04-041421-0	Water	04/14/21 11:10	04/15/21 09:40	
580-102459-3	T4SIMW22-041421-0	Water	04/14/21 13:00	04/15/21 09:40	
580-102459-4	T4SIMW23-041421-0	Water	04/14/21 14:10	04/15/21 09:40	
580-102459-5	TB-041421-0	Water	04/14/21 08:00	04/15/21 09:40	

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EMAX
LABORATORIES, INC.
 15 W. 205th Street
 Torrance, CA 90501
 (310) 618-8889

12-2021
 Job No.: 210235

Line Matlock

ca, Inc.
 Street East
 98424

Laboratory Report
 Project: NW PIPE COMPANY GW MONITORING

.....
 This is the Laboratory report for samples received on 04/20/21.
 Reported relate only to samples listed below :

ID	Control #	Col Date	Matrix	Analysis
421-0	D235-01	04/14/21	WATER	VOC SIM
421-0	D235-02	04/14/21	WATER	VOC SIM
-041421-0	D235-03	04/14/21	WATER	VOC SIM
-041421-0	D235-04	04/14/21	WATER	VOC SIM
1-0	D235-05	04/14/21	WATER	VOC SIM

.....
 These are summarized on the following pages.

.....
 Please feel free to call if you have any questions concerning
 these results.

Yours,



Pang
 Director

.....
 This report is confidential and intended solely for the use of the individual or
 entity to whom it is addressed. This report shall not be reproduced except in full
 without the written approval of EMAX.

.....
 This report certifies that results included in this report meets all TNI & DOD requirements
 as stated in the Case Narrative.

21D235

Chain of Custody Record



Environment Testing
 America



Client Information (Sub Contract Lab)		Lab PM:	Mattlock, Pauline M		Carrier Tracking No(s):	580-89144.1	
Client Contact:		Phone:	pauline.mattlock@eurofinset.com		State of Origin:	Oregon	
Company:		EMAX Laboratories Inc		Accreditations Required (See note):	NELAP - Oregon		
Address:		1835 W. 205th Street,		Due Date Requested:	5/14/2021		
City:		Torrance		TAT Requested (days):			
State, Zip:		CA, 90501		PO #:			
Phone:				WO #:			
Project Name:		Northwest Pipe Company GW 2021		Project #:	58016285		
Site:				SSOW#:			

Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=AP)	Preservation Codes:		Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (TCE, cis 1,2-DCE, PCE, Vinyl Chloride - low level)	Total Number of Containers	Special Instructions/Note:
					BT	AP					
MW02-041421-0	4/14/21	09:30 Pacific		Water			X	X		3	Please provide CH2 Lab Spec EDD if possible.//
MW04-041421-0	4/14/21	11:10 Pacific		Water			X	X		3	Please provide CH2 Lab Spec EDD if possible.//
T4SIMW22-041421-0	4/14/21	13:00 Pacific		Water			X	X		3	Please provide CH2 Lab Spec EDD if possible.//
T4SIMW23-041421-0	4/14/21	14:10 Pacific		Water			X	X		3	Please provide CH2 Lab Spec EDD if possible.//
TB-041421-0	4/14/21	08:00 Pacific		Water			X	X		3	Please provide CH2 Lab Spec EDD if possible.//

Note: Since laboratory accreditations are subject to change, Eurofins Frontier Global Sciences LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Frontier Global Sciences LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Frontier Global Sciences LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Frontier Global Sciences LLC.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <i>Tom Blankenship</i>	4/19/21		Company: EFGS
Relinquished by:	Date/Time:	Received by: <i>Pauline M</i>	Company: EMAX
Relinquished by:	Date/Time:	Received by:	Company:

Custody Seals Intact: Yes No No
 Custody Seal No.: _____
 Cooler Temperature(s) °C and Other Remarks: _____



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Temperature Controlled



**IF THIS SHIPMENT IS DELAYED IN TRANSIT,
STORE REFRIGERATED (2° TO 8° C / 36° TO 47° F)**

TAL-0090(1016)

ORIGIN ID:TCMA (253) 922-2310
SAMPLE RECEIVING
EUROFINS TESTAMERICA- SEATTLE
5755 8TH ST E

SHIP DATE: 19APR21
ACTWGT: 17.80 LB
CAD: 989746/CAFE3409

FIFE, WA 98424
UNITED STATES US

BILL SENDER

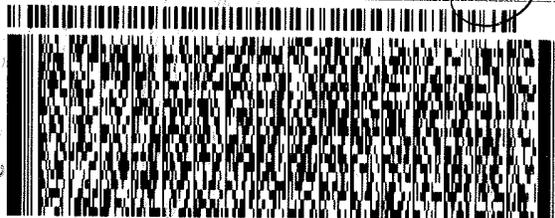
TO **SHIPPING/RECEIVING
EMAX LABORATORIES INC
1835 W. 205TH STREET**

TORRANCE CA 90501

(253) 922-2310
PO: NO

REF: S580-43042

3.0 °C
(C) Sealed



**FedEx
Express**



J201120121801 0V

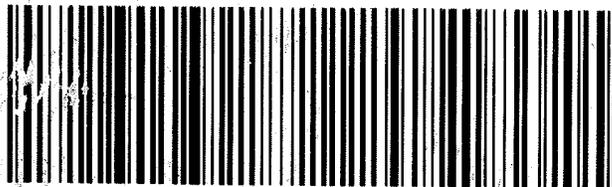
TRK# 5008 1328 3578
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**TUE - 20 APR 10:30A
PRIORITY OVERNIGHT**

92 HHRA

**90501
CA-US LAX**

Part # 159471-434 RT12 EXP 03/22



REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

TESTAMERICA, INC.

NW PIPE COMPANY GW MONITORING

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM



SDG#: 21D235

CASE NARRATIVE

Client : TESTAMERICA, INC.

Project: NW PIPE COMPANY GW MONITORING

SDG : 21D235

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

A total of five (5) water samples were received on 04/20/21 to be analyzed for Volatile Organics by GC/MS SIM in accordance with Method SW5030B/8260B SIM and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration

Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. VOF5D20B and VOF5D21B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two (2) sets of LCS/LCD were analyzed. VOF5D20X/VOF5D20C and VOF5D21L/VOF5D21C were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample 21D235-02 was analyzed at dilution due to high concentration.



LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC. SDG NO. : 21D235
Project : NW PIPE COMPANY GW MONITORING Instrument ID : F5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
				WATER					
MBLK1W	V0F5D20B	1	NA	04/26/2110:15	04/26/2110:15	RDY400	RDY191	V0F5D20	Method Blank
LCS1W	V0F5D20X	1	NA	04/26/2110:40	04/26/2110:40	RDY401	RDY191	V0F5D20	Lab Control Sample (LCS)
LGD1W	V0F5D20C	1	NA	04/26/2109:27	04/26/2109:27	RDY398	RDY191	V0F5D20	LCS Duplicate
TB-041421-0	D235-05	1	NA	04/26/2111:53	04/26/2111:53	RDY404	RDY191	V0F5D20	Field Sample
MH04-041421-0DL	D235-021	500	NA	04/26/2114:18	04/26/2114:18	RDY410	RDY191	V0F5D20	Diluted Sample
MH02-041421-0	D235-01	1	NA	04/26/2115:55	04/26/2115:55	RDY414	RDY191	V0F5D20	Field Sample
T4S1M23-041421-0	D235-04	1	NA	04/26/2116:19	04/26/2116:19	RDY415	RDY191	V0F5D20	Field Sample
T4S1M22-041421-0	D235-03	1	NA	04/26/2116:44	04/26/2116:44	RDY416	RDY191	V0F5D20	Field Sample
MBLK2W	V0F5D21B	1	NA	04/27/2110:13	04/27/2110:13	RDY426	RDY191	V0F5D21	Method Blank
LCS2W	V0F5D21L	1	NA	04/27/2109:01	04/27/2109:01	RDY423	RDY191	V0F5D21	Lab Control Sample (LCS)
LGD2W	V0F5D21C	1	NA	04/27/2109:25	04/27/2109:25	RDY424	RDY191	V0F5D21	LCS Duplicate
MH04-041421-0	D235-02	10	NA	04/27/2110:37	04/27/2110:37	RDY427	RDY191	V0F5D21	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/26/21 15:55
Sample ID: MW02-041421-0	Date Analyzed: 04/26/21 15:55
Lab Samp ID: D235-01	Dilution Factor: 1
Lab File ID: RDY414	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	0.26	0.20	0.10
VINYL CHLORIDE	0.60	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.591	0.5000	118	70-130
4-BROMOFLUOROBENZENE	0.494	0.5000	98.9	70-130
TOLUENE-D8	0.462	0.5000	92.3	70-130



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/27/21 10:37 # 04/26/21 14:18
Sample ID: MW04-041421-0	Date Analyzed: 04/27/21 10:37 # 04/26/21 14:18
Lab Samp ID: D235-02 #D235-02I	Dilution Factor: 10 # 500
Lab File ID: RDY427 #RDY410	Matrix : WATER
Ext Btch ID: VOF5D21 #VOF5D20	% Moisture : NA
Calib. Ref.: RDY191 #RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
# CIS-1,2-DICHLOROETHYLENE	110	100	50
VINYL CHLORIDE	1.7	1.0	0.20
TETRACHLOROETHENE	5.0	2.0	1.0
TCE	10	2.0	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	5.51	5.000	110	70-130
4-BROMOFLUOROBENZENE	4.69	5.000	93.7	70-130
TOLUENE-DB	4.65	5.000	92.9	70-130

# 1,2-DICHLOROETHANE-D4	285	250.0	114	70-130
# 4-BROMOFLUOROBENZENE	247	250.0	98.7	70-130
# TOLUENE-DB	228	250.0	91.4	70-130

Members of the Associated File



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/27/21 10:37
Sample ID: MW04-041421-0	Date Analyzed: 04/27/21 10:37
Lab Samp ID: D235-02	Dilution Factor: 10
Lab File ID: RDY427	Matrix : WATER
Ext Btch ID: VOF5D21	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	120E	2.0	1.0
VINYL CHLORIDE	1.7	1.0	0.20
TETRACHLOROETHENE	5.0	2.0	1.0
TCE	10	2.0	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	5.51	5.000	110	70-130
4-BROMOFLUOROBENZENE	4.69	5.000	93.7	70-130
TOLUENE-D8	4.65	5.000	92.9	70-130



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/26/21 14:18
Sample ID: MW04-041421-ODL	Date Analyzed: 04/26/21 14:18
Lab Samp ID: D235-02I	Dilution Factor: 500
Lab File ID: RDY410	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	110	100	50
VINYL CHLORIDE	ND	50	10
TETRACHLOROETHENE	ND	100	50
TCE	ND	100	50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	285	250.0	114	70-130
4-BROMOFLUOROBENZENE	247	250.0	98.7	70-130
TOLUENE-D8	228	250.0	91.4	70-130



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/26/21 16:44
Sample ID: T4SIMW22-041421-0	Date Analyzed: 04/26/21 16:44
Lab Samp ID: D235-03	Dilution Factor: 1
Lab File ID: RDY416	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	5.0	0.20	0.10
VINYL CHLORIDE	0.14	0.10	0.020
TETRACHLOROETHENE	1.7	0.20	0.10
TCE	2.7	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.580	0.5000	116	70-130
4-BROMOFLUOROBENZENE	0.491	0.5000	98.1	70-130
TOLUENE-D8	0.465	0.5000	93.1	70-130



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/26/21 16:19
Sample ID: T4SIMW23-041421-0	Date Analyzed: 04/26/21 16:19
Lab Samp ID: D235-04	Dilution Factor: 1
Lab File ID: RDY415	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	0.23	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	1.3	0.20	0.10
TCE	0.37	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.588	0.5000	118	70-130
4-BROMOFLUOROBENZENE	0.481	0.5000	96.1	70-130
TOLUENE-D8	0.456	0.5000	91.2	70-130



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/26/21 11:53
Sample ID: T8-041421-0	Date Analyzed: 04/26/21 11:53
Lab Samp ID: D235-05	Dilution Factor: 1
Lab File ID: RDY404	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.519	0.5000	104	70-130
4-BROMOFLUOROBENZENE	0.518	0.5000	104	70-130
TOLUENE-D8	0.475	0.5000	95.0	70-130



QC SUMMARIES

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METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: NA
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/26/21
Batch No. : 21D235	Date Extracted: 04/26/21 10:15
Sample ID: MBLK1W	Date Analyzed: 04/26/21 10:15
Lab Samp ID: VOF5D20B	Dilution Factor: 1
Lab File ID: RDY400	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS	RL	MDL
	(ug/L)	(ug/L)	(ug/L)
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.464	0.5000	92.8	70-130
4-BROMOFLUOROBENZENE	0.534	0.5000	107	70-130
TOLUENE-D8	0.491	0.5000	98.2	70-130



EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: TESTAMERICA, INC.
PROJECT: NW PIPE COMPANY GW MONITORING
BATCH NO.: 21D235
METHOD: SW5030B/8260B SIM

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: VOF5D20B VOF5D20X VOF5D20C
LAB FILE ID: RDY400 RDY401 RDY398
DATE EXTRACTED: 04/26/2110:15 04/26/2110:40 04/26/2109:27 DATE COLLECTED: NA
DATE ANALYZED: 04/26/2110:15 04/26/2110:40 04/26/2109:27 DATE RECEIVED: 04/26/21
PREP. BATCH: VOF5D20 VOF5D20 VOF5D20
CALIB. REF: RDY191 RDY191 RDY191

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.496	99	0.500	0.556	111	12	70-130	20
Vinyl Chloride	ND	0.500	0.502	100	0.500	0.540	108	7	60-140	20
Tetrachloroethene	ND	0.500	0.470	94	0.500	0.505	101	7	70-130	20
TCE	ND	0.500	0.455	91	0.500	0.502	100	10	70-130	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	0.500	0.454	91	0.500	0.463	93	70-130
4-Bromofluorobenzene	0.500	0.531	106	0.500	0.543	109	70-130
Toluene-d8	0.500	0.490	98	0.500	0.498	100	70-130



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: NA
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/27/21
Batch No. : 21D235	Date Extracted: 04/27/21 10:13
Sample ID: MBLK2W	Date Analyzed: 04/27/21 10:13
Lab Samp ID: VOF5D21B	Dilution Factor: 1
Lab File ID: RDY426	Matrix : WATER
Ext Btch ID: VOF5D21	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.550	0.5000	110	70-130
4-BROMOFLUOROBENZENE	0.478	0.5000	95.6	70-130
TOLUENE-D8	0.462	0.5000	92.4	70-130



EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: TESTAMERICA, INC.
PROJECT: NW PIPE COMPANY GW MONITORING
BATCH NO.: 21D235
METHOD: SW5030B/8260B SIM

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK2W
LAB SAMP ID: VOF5D21B VOF5D21L VOF5D21C
LAB FILE ID: RDY426 RDY423 RDY424
DATE EXTRACTED: 04/27/2110:13 04/27/2109:01 04/27/2109:25 DATE COLLECTED: NA
DATE ANALYZED: 04/27/2110:13 04/27/2109:01 04/27/2109:25 DATE RECEIVED: 04/27/21
PREP. BATCH: VOF5D21 VOF5D21 VOF5D21
CALIB. REF: RDY191 RDY191 RDY191

ACCESSION:

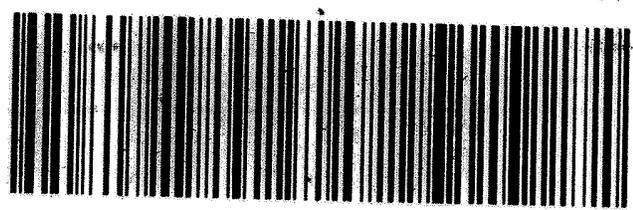
PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.478	96	0.500	0.492	98	3	70-130	20
Vinyl Chloride	ND	0.500	0.486	97	0.500	0.514	103	6	60-140	20
Tetrachloroethene	ND	0.500	0.482	96	0.500	0.499	100	3	70-130	20
TCE	ND	0.500	0.462	92	0.500	0.476	95	3	70-130	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	0.500	0.543	109	0.500	0.517	103	70-130
4-Bromofluorobenzene	0.500	0.466	93	0.500	0.478	96	70-130
Toluene-d8	0.500	0.467	93	0.500	0.463	93	70-130



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Part # 159471-434 R1T2 EXP 03/23

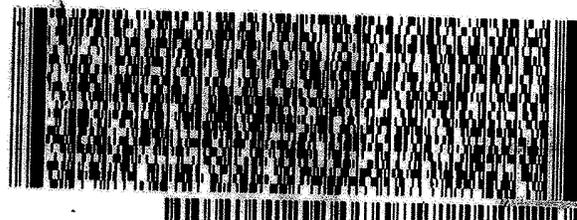


92 APVA

92841 SNA CA-US

TRK# 5008 1328 3475
 TUE - 20 APR 10:30A
 PRIORITY OVERNIGHT

J201120121801



GARDEN GROVE CA 92841
 (714) 896-6494
 REF. 5580-43044
 PO-YES

10 SHIPPING/RECEIVING
 EUROFINS CALSCIENCE LLC
 7440 LINCOLN WAY

EUROFINS TESTING
 5755 8TH ST E
 FIFE, WA 98424
 UNITED STATES US
 BILL SENDER
 CAD: 989746/CAFE3409

SDR 3/PRAC/MSAP

SIGNATURE

DATE

Tom Stanton

4/10/21

Custody Seal

1526179

Environment Testing TestAmerica

Environment Testing

eurofins

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102459-1

Login Number: 102459

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102459-1

Login Number: 102459

List Number: 3

Creator: Stratford, Jordan

List Source: Eurofins Calscience

List Creation: 04/20/21 04:42 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1526179
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102459-1

Login Number: 102459

List Number: 2

Creator: Lagunas, Jorge L

List Source: Eurofins Irvine

List Creation: 04/17/21 11:27 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Date: 05-12-2021
EMAX Batch No.: 21D235

Attn: Pauline Matlock

TestAmerica, Inc.
5755 8th Street East
Tacoma WA 98424

Subject: Laboratory Report
Project: NW PIPE COMPANY GW MONITORING

Enclosed is the Laboratory report for samples received on 04/20/21.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW02-041421-0	D235-01	04/14/21	WATER	VOC SIM
MW04-041421-0	D235-02	04/14/21	WATER	VOC SIM
T4SIMW22-041421-0	D235-03	04/14/21	WATER	VOC SIM
T4SIMW23-041421-0	D235-04	04/14/21	WATER	VOC SIM
TB-041421-0	D235-05	04/14/21	WATER	VOC SIM

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912020-17
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

Type of Delivery <input checked="" type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others	Airbill / Tracking Number 5008 1328 3578	ECN 21D235
<input type="checkbox"/> EMAX Courier <input type="checkbox"/> Client Delivery		Recipient Maria Rivera Date 04/20/21 Time 09:15

COC INSPECTION

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input checked="" type="checkbox"/> TAT
Safety Issues (if any) Note:	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input checked="" type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 3.0 °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
Thermometer:	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
	A - S/N 200291758	B - S/N 200291755	C - S/N 200535195
			D - S/N _____

Comments: Temperature is out of range. PM was informed IMMEDIATELY.
Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
4	12	D10		R1
/				

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

- | | | |
|--|--|--|
| <p>Code Description- Sample Management</p> <ul style="list-style-type: none"> D1 Analysis is not indicated in _____ D2 Analysis mismatch COC vs label D3 Sample ID mismatch COC vs label D4 Sample ID is not indicated in _____ D5 Container -[improper] [leaking] [broken] D6 Date/Time is not indicated in _____ D7 Date/Time mismatch COC vs label D8 Sample listed in COC is not received D9 Sample received is not listed in COC D10 No initial/date on corrections in COC/label D11 Container count mismatch COC vs received D12 Container size mismatch COC vs received | <p>Code Description-Sample Management</p> <ul style="list-style-type: none"> D13 Out of Holding Time D14 Bubble is >6mm D15 No trip blank in cooler D16 Preservation not indicated in _____ D17 Preservation mismatch COC vs label D18 Insufficient chemical preservative D19 Insufficient Sample D20 No filtration info for dissolved analysis D21 No sample for moisture determination D22 _____ D23 _____ D24 _____ | <p><input type="checkbox"/> Continue to next page.</p> <p>Code Description-Sample Management</p> <ul style="list-style-type: none"> R1 Proceed as indicated in <input checked="" type="checkbox"/> COC <input type="checkbox"/> Label R2 Refer to attached instruction R3 Cancel the analysis R4 Use vial with smallest bubble first R5 Log-in with latest sampling date and time+1 min R6 Adjust pH as necessary R7 Filter and preserved as necessary R8 _____ R9 _____ R10 _____ R11 _____ R12 _____ |
|--|--|--|

REVIEWS:

Sample Labeling <u>Maria Rivera</u>	SRF <u>[Signature]</u>	PM <u>[Signature]</u>
Date <u>04/20/21</u>	Date <u>4/21/21</u>	Date <u>4/21/21</u>

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Temperature Controlled



IF THIS SHIPMENT IS DELAYED IN TRANSIT,
STORE REFRIGERATED (2° TO 8° C / 36° TO 47° F)

TAL-0090(1016)

ORIGIN ID: TCMA (253) 922-2310
SAMPLE RECEIVING
EUROFINS TESTAMERICA - SEATTLE
5755 8TH ST E

SHIP DATE: 19APR21
ACTWGT: 17.80 LB
CAD: 989746/CAFE3409

FIFE, WA 98424
UNITED STATES US

BILL SENDER

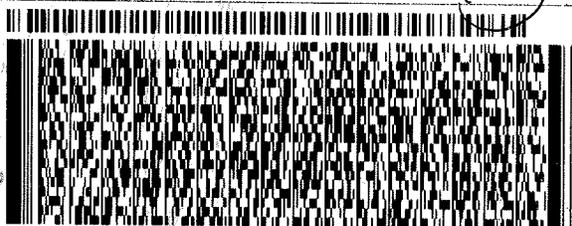
TO SHIPPING/RECEIVING
EMAX LABORATORIES INC
1835 W. 205TH STREET

TORRANCE CA 90501

(253) 922-2310
PO: NO

REF: 8580-43042

3.0 °C
(C) Sealed



FedEx
Express



J201120121801

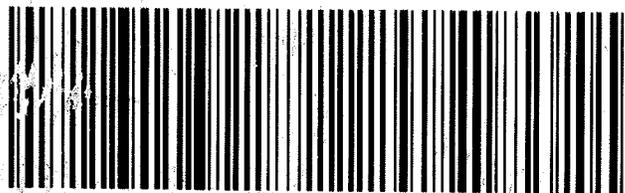
TRK# 5008 1328 3578
0201

TUE - 20 APR 10:30A
PRIORITY OVERNIGHT

92 HHRA

90501
CA-US LAX

Part # 159471-034 BIT2 EXP 03/22



REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

TESTAMERICA, INC.

NW PIPE COMPANY GW MONITORING

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

SDG#: 21D235

CASE NARRATIVE

Client : TESTAMERICA, INC.

Project: NW PIPE COMPANY GW MONITORING

SDG : 21D235

METHOD SW5030B/8260B SIM VOLATILE ORGANICS BY GC/MS SIM

A total of five(5) water samples were received on 04/20/21 to be analyzed for Volatile Organics by GC/MS SIM in accordance with Method SW5030B/8260B SIM and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration

Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. VOF5D20B and VOF5D21B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. VOF5D20X/VOF5D20C and VOF5D21L/VOF5D21C were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample 21D235-02 was analyzed at dilution due to high concentration.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.
Project : NW PIPE COMPANY GW MONITORING

SDG NO. : 21D235
Instrument ID : F5

WATER									
Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VOF5D20B	1	NA	04/26/2110:15	04/26/2110:15	RDY400	RDY191	VOF5D20	Method Blank
LCS1W	VOF5D20X	1	NA	04/26/2110:40	04/26/2110:40	RDY401	RDY191	VOF5D20	Lab Control Sample (LCS)
LCD1W	VOF5D20C	1	NA	04/26/2109:27	04/26/2109:27	RDY398	RDY191	VOF5D20	LCS Duplicate
TB-041421-0	D235-05	1	NA	04/26/2111:53	04/26/2111:53	RDY404	RDY191	VOF5D20	Field Sample
MW04-041421-0DL	D235-02I	500	NA	04/26/2114:18	04/26/2114:18	RDY410	RDY191	VOF5D20	Diluted Sample
MW02-041421-0	D235-01	1	NA	04/26/2115:55	04/26/2115:55	RDY414	RDY191	VOF5D20	Field Sample
T4SIMW23-041421-0	D235-04	1	NA	04/26/2116:19	04/26/2116:19	RDY415	RDY191	VOF5D20	Field Sample
T4SIMW22-041421-0	D235-03	1	NA	04/26/2116:44	04/26/2116:44	RDY416	RDY191	VOF5D20	Field Sample
MBLK2W	VOF5D21B	1	NA	04/27/2110:13	04/27/2110:13	RDY426	RDY191	VOF5D21	Method Blank
LCS2W	VOF5D21L	1	NA	04/27/2109:01	04/27/2109:01	RDY423	RDY191	VOF5D21	Lab Control Sample (LCS)
LCD2W	VOF5D21C	1	NA	04/27/2109:25	04/27/2109:25	RDY424	RDY191	VOF5D21	LCS Duplicate
MW04-041421-0	D235-02	10	NA	04/27/2110:37	04/27/2110:37	RDY427	RDY191	VOF5D21	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client	: TESTAMERICA, INC.	Date Collected:	04/14/21
Project	: NW PIPE COMPANY GW MONITORING	Date Received:	04/20/21
Batch No.	: 21D235	Date Extracted:	04/26/21 15:55
Sample ID:	MW02-041421-0	Date Analyzed:	04/26/21 15:55
Lab Samp ID:	D235-01	Dilution Factor:	1
Lab File ID:	RDY414	Matrix	: WATER
Ext Btch ID:	VOF5D20	% Moisture	: NA
Calib. Ref.:	RDY191	Instrument ID	: TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	0.26	0.20	0.10
VINYL CHLORIDE	0.60	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.591	0.5000	118	70-130
4-BROMOFLUOROBENZENE	0.494	0.5000	98.9	70-130
TOLUENE-D8	0.462	0.5000	92.3	70-130

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client	: TESTAMERICA, INC.	Date Collected:	04/14/21
Project	: NW PIPE COMPANY GW MONITORING	Date Received:	04/20/21
Batch No.	: 21D235	Date Extracted:	04/27/21 10:37 # 04/26/21 14:18
Sample ID:	MW04-041421-0	Date Analyzed:	04/27/21 10:37 # 04/26/21 14:18
Lab Samp ID:	D235-02 #D235-02I	Dilution Factor:	10 # 500
Lab File ID:	RDY427 #RDY410	Matrix	: WATER
Ext Btch ID:	VOF5D21 #VOF5D20	% Moisture	: NA
Calib. Ref.:	RDY191 #RDY191	Instrument ID	: TOF5

PARAMETERS	RESULTS	RL	MDL
-----	(ug/L)	(ug/L)	(ug/L)
-----	-----	-----	-----
# CIS-1,2-DICHLOROETHYLENE	110	100	50
VINYL CHLORIDE	1.7	1.0	0.20
TETRACHLOROETHENE	5.0	2.0	1.0
TCE	10	2.0	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	5.51	5.000	110	70-130
4-BROMOFLUOROBENZENE	4.69	5.000	93.7	70-130
TOLUENE-DB	4.65	5.000	92.9	70-130

# 1,2-DICHLOROETHANE-D4	285	250.0	114	70-130
# 4-BROMOFLUOROBENZENE	247	250.0	98.7	70-130
# TOLUENE-DB	228	250.0	91.4	70-130

Members of the Associated File

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/27/21 10:37
Sample ID: MW04-041421-0	Date Analyzed: 04/27/21 10:37
Lab Samp ID: D235-02	Dilution Factor: 10
Lab File ID: RDY427	Matrix : WATER
Ext Btch ID: VOF5D21	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	120E	2.0	1.0
VINYL CHLORIDE	1.7	1.0	0.20
TETRACHLOROETHENE	5.0	2.0	1.0
TCE	10	2.0	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	5.51	5.000	110	70-130
4-BROMOFLUOROBENZENE	4.69	5.000	93.7	70-130
TOLUENE-D8	4.65	5.000	92.9	70-130

METHOD SW5030B/B260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/26/21 14:18
Sample ID: MW04-041421-ODL	Date Analyzed: 04/26/21 14:18
Lab Samp ID: D235-02I	Dilution Factor: 500
Lab File ID: RDY410	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	110	100	50
VINYL CHLORIDE	ND	50	10
TETRACHLOROETHENE	ND	100	50
TCE	ND	100	50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	285	250.0	114	70-130
4-BROMOFLUOROBENZENE	247	250.0	98.7	70-130
TOLUENE-DB	228	250.0	91.4	70-130

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/26/21 16:44
Sample ID: T4SIMW22-041421-0	Date Analyzed: 04/26/21 16:44
Lab Samp ID: D235-03	Dilution Factor: 1
Lab File ID: RDY416	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	5.0	0.20	0.10
VINYL CHLORIDE	0.14	0.10	0.020
TETRACHLOROETHENE	1.7	0.20	0.10
TCE	2.7	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.580	0.5000	116	70-130
4-BROMOFLUOROBENZENE	0.491	0.5000	98.1	70-130
TOLUENE-D8	0.465	0.5000	93.1	70-130

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/26/21 16:19
Sample ID: T4SIMW23-041421-0	Date Analyzed: 04/26/21 16:19
Lab Samp ID: D235-04	Dilution Factor: 1
Lab File ID: RDY415	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	0.23	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	1.3	0.20	0.10
TCE	0.37	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.588	0.5000	118	70-130
4-BROMOFLUOROBENZENE	0.481	0.5000	96.1	70-130
TOLUENE-D8	0.456	0.5000	91.2	70-130

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/14/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D235	Date Extracted: 04/26/21 11:53
Sample ID: T8-041421-0	Date Analyzed: 04/26/21 11:53
Lab Samp ID: D235-05	Dilution Factor: 1
Lab File ID: RDY404	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
.....
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
.....
1,2-DICHLOROETHANE-D4	0.519	0.5000	104	70-130
4-BROMOFLUOROBENZENE	0.518	0.5000	104	70-130
TOLUENE-D8	0.475	0.5000	95.0	70-130

QC SUMMARIES

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: NA
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/26/21
Batch No. : 21D235	Date Extracted: 04/26/21 10:15
Sample ID: MBLK1W	Date Analyzed: 04/26/21 10:15
Lab Samp ID: VOF5D20B	Dilution Factor: 1
Lab File ID: RDY400	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
-----	-----	-----	-----
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	0.464	0.5000	92.8	70-130
4-BROMOFLUOROBENZENE	0.534	0.5000	107	70-130
TOLUENE-D8	0.491	0.5000	98.2	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: TESTAMERICA, INC.
PROJECT: NW PIPE COMPANY GW MONITORING
BATCH NO.: 21D235
METHOD: SW5030B/8260B SIM

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: VOF5D20B VOF5D20X VOF5D20C
LAB FILE ID: RDY400 RDY401 RDY398
DATE EXTRACTED: 04/26/2110:15 04/26/2110:40 04/26/2109:27 DATE COLLECTED: NA
DATE ANALYZED: 04/26/2110:15 04/26/2110:40 04/26/2109:27 DATE RECEIVED: 04/26/21
PREP. BATCH: VOF5D20 VOF5D20 VOF5D20
CALIB. REF: RDY191 RDY191 RDY191

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.496	99	0.500	0.556	111	12	70-130	20
Vinyl Chloride	ND	0.500	0.502	100	0.500	0.540	108	7	60-140	20
Tetrachloroethene	ND	0.500	0.470	94	0.500	0.505	101	7	70-130	20
TCE	ND	0.500	0.455	91	0.500	0.502	100	10	70-130	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	0.500	0.454	91	0.500	0.463	93	70-130
4-Bromofluorobenzene	0.500	0.531	106	0.500	0.543	109	70-130
Toluene-d8	0.500	0.490	98	0.500	0.498	100	70-130

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: NA
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/27/21
Batch No. : 21D235	Date Extracted: 04/27/21 10:13
Sample ID: MBLK2W	Date Analyzed: 04/27/21 10:13
Lab Samp ID: VOF5D21B	Dilution Factor: 1
Lab File ID: RDY426	Matrix : WATER
Ext Btch ID: VOF5D21	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.550	0.5000	110	70-130
4-BROMOFLUOROBENZENE	0.478	0.5000	95.6	70-130
TOLUENE-D8	0.462	0.5000	92.4	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: TESTAMERICA, INC.
PROJECT: NW PIPE COMPANY GW MONITORING
BATCH NO.: 21D235
METHOD: SW5030B/8260B SIM

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK2W
LAB SAMP ID: VOF5D21B VOF5D21L VOF5D21C
LAB FILE ID: RDY426 RDY423 RDY424
DATE EXTRACTED: 04/27/2110:13 04/27/2109:01 04/27/2109:25 DATE COLLECTED: NA
DATE ANALYZED: 04/27/2110:13 04/27/2109:01 04/27/2109:25 DATE RECEIVED: 04/27/21
PREP. BATCH: VOF5D21 VOF5D21 VOF5D21
CALIB. REF: RDY191 RDY191 RDY191

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.478	96	0.500	0.492	98	3	70-130	20
Vinyl Chloride	ND	0.500	0.486	97	0.500	0.514	103	6	60-140	20
Tetrachloroethene	ND	0.500	0.482	96	0.500	0.499	100	3	70-130	20
TCE	ND	0.500	0.462	92	0.500	0.476	95	3	70-130	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	0.500	0.543	109	0.500	0.517	103	70-130
4-Bromofluorobenzene	0.500	0.466	93	0.500	0.478	96	70-130
Toluene-d8	0.500	0.467	93	0.500	0.463	93	70-130

ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-102448-1

Client Project/Site: Northwest Pipe Company GW 2021

For:

Jacobs Engineering Group, Inc.
1501 W Fountainhead Parkway
Suite 401
Tempe, Arizona 85282

Attn: Bernice Kidd



*Authorized for release by:
5/13/2021 7:14:19 PM*

Pauline Matlock, Project Manager
(253)922-2310
pauline.matlock@eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Job ID: 580-102448-1

Laboratory: Eurofins FGS, Seattle

Narrative

**Job Narrative
580-102448-1**

Comments

No additional comments.

Receipt

The samples were received on 4/14/2021 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6° C.

Air Toxics

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

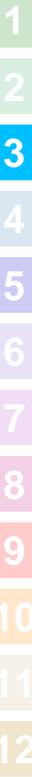
Method SM 5310C: The continuing calibration blank (CCB) for analytical batch 440-644524 contained Total Organic Carbon above the method detection limits limit (MDL). All reported samples associated with this CCB contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 580-354479 was outside control limits. Sample non-homogeneity is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract non-Sister

See attached subcontract report.



Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Client Sample ID: T451MW09-041321-0

Lab Sample ID: 580-102448-1

Date Collected: 04/13/21 15:00

Matrix: Water

Date Received: 04/14/21 09:30

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	46		1.0	0.078	ug/L			04/22/21 12:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9		1.5	0.43	mg/L			04/24/21 01:50	1
NO3 as N	2.4		0.20	0.030	mg/L			04/14/21 14:27	1
Sulfate	11		1.5	0.80	mg/L			04/24/21 01:50	1
Total Organic Carbon	0.90		0.10	0.050	mg/L			04/20/21 09:14	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.5	HF	0.01	0.01	SU			04/19/21 12:24	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Client Sample ID: T451MW03S-041321-0

Lab Sample ID: 580-102448-2

Date Collected: 04/13/21 16:30

Matrix: Water

Date Received: 04/14/21 09:30

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.70	J	1.0	0.078	ug/L			04/22/21 12:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3	J	1.5	0.43	mg/L			04/24/21 02:13	1
NO3 as N	4.6	F1 F2	0.20	0.030	mg/L			04/14/21 14:39	1
Sulfate	6.9		1.5	0.80	mg/L			04/24/21 02:13	1
Total Organic Carbon	0.77		0.10	0.050	mg/L			04/20/21 09:27	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.6	HF	0.01	0.01	SU			04/19/21 12:28	1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 570-145152/4
 Matrix: Water
 Analysis Batch: 145152

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.078	ug/L			04/22/21 10:40	1

Lab Sample ID: LCS 570-145152/2
 Matrix: Water
 Analysis Batch: 145152

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	12.9	12.3		ug/L		95	80 - 120

Lab Sample ID: LCSD 570-145152/3
 Matrix: Water
 Analysis Batch: 145152

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	12.9	12.2		ug/L		94	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-354479/7
 Matrix: Water
 Analysis Batch: 354479

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NO3 as N	ND		0.20	0.030	mg/L			04/14/21 15:14	1

Lab Sample ID: LCS 580-354479/8
 Matrix: Water
 Analysis Batch: 354479

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
NO3 as N	5.00	5.22		mg/L		104	90 - 110

Lab Sample ID: LCSD 580-354479/9
 Matrix: Water
 Analysis Batch: 354479

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NO3 as N	5.00	4.67		mg/L		93	90 - 110	11	15

Lab Sample ID: 580-102448-2 MS
 Matrix: Water
 Analysis Batch: 354479

Client Sample ID: T451MW03S-041321-0
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
NO3 as N	4.6	F1 F2	5.00	7.73	F1	mg/L		62	90 - 110

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-102448-2 MSD
Matrix: Water
Analysis Batch: 354479

Client Sample ID: T451MW03S-041321-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NO3 as N	4.6	F1 F2	5.00	9.30	F2	mg/L		94	90 - 110	18	15

Lab Sample ID: MB 580-355223/36
Matrix: Water
Analysis Batch: 355223

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	0.43	mg/L			04/23/21 23:30	1
Sulfate	ND		1.5	0.80	mg/L			04/23/21 23:30	1

Lab Sample ID: LCS 580-355223/37
Matrix: Water
Analysis Batch: 355223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.6		mg/L		101	90 - 110
Sulfate	50.0	51.9		mg/L		104	90 - 110

Lab Sample ID: LCSD 580-355223/38
Matrix: Water
Analysis Batch: 355223

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	48.8		mg/L		98	90 - 110	4	15
Sulfate	50.0	45.7		mg/L		91	90 - 110	13	15

Method: SM 4500 H+ B - pH

Lab Sample ID: 580-102448-1 DU
Matrix: Water
Analysis Batch: 354585

Client Sample ID: T451MW09-041321-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.5	HF	6.5		SU		0.3	1

Method: SM 5310C - TOC

Lab Sample ID: MB 440-644524/9
Matrix: Water
Analysis Batch: 644524

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			04/20/21 08:34	1

Lab Sample ID: LCS 440-644524/8
Matrix: Water
Analysis Batch: 644524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	5.00	5.20		mg/L		104	85 - 115

Eurofins FGS, Seattle

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: MRL 440-644524/7
Matrix: Water
Analysis Batch: 644524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.0735	J	mg/L		74	50 - 150

Lab Sample ID: 580-102448-1 MS
Matrix: Water
Analysis Batch: 644524

Client Sample ID: T451MW09-041321-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.90		6.00	6.78		mg/L		98	85 - 115

Lab Sample ID: 580-102448-1 MSD
Matrix: Water
Analysis Batch: 644524

Client Sample ID: T451MW09-041321-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	0.90		6.00	6.81		mg/L		98	85 - 115	0	20

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Client Sample ID: T451MW09-041321-0

Lab Sample ID: 580-102448-1

Date Collected: 04/13/21 15:00

Matrix: Water

Date Received: 04/14/21 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145152	04/22/21 12:11	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354479	04/14/21 14:27	AAC	TAL SEA
Total/NA	Analysis	300.0		1	355223	04/24/21 01:50	AAC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	354585	04/19/21 12:24	HCC	TAL SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 09:14	YO8L	TAL IRV

Client Sample ID: T451MW03S-041321-0

Lab Sample ID: 580-102448-2

Date Collected: 04/13/21 16:30

Matrix: Water

Date Received: 04/14/21 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	145152	04/22/21 12:37	I9H5	ECL 2
Total/NA	Analysis	300.0		1	354479	04/14/21 14:39	AAC	TAL SEA
Total/NA	Analysis	300.0		1	355223	04/24/21 02:13	AAC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	354585	04/19/21 12:28	HCC	TAL SEA
Total/NA	Analysis	SM 5310C		1	644524	04/20/21 09:27	YO8L	TAL IRV

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

EMAX Lab. = EMAX Laboratories Inc, 1835 W. 205th Street, Torrance, CA 90501

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Laboratory: Eurofins FGS, Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	WA100007	11-05-21

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4028 - 010	04-27-21

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	CA300001	01-30-22

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102448-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-102448-1	T451MW09-041321-0	Water	04/13/21 15:00	04/14/21 09:30	
580-102448-2	T451MW03S-041321-0	Water	04/13/21 16:30	04/14/21 09:30	
580-102448-3	TB-041321-0	Water	04/13/21 08:00	04/14/21 09:30	

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EMAX
LABORATORIES, INC.
 15 W. 205th Street
 Torrance, CA 90501
 (310) 618-8889

12-2021
 Report No.: 21D234

Line Matlock
 Lab, Inc.
 Street East
 98424

Laboratory Report
 Project: NW PIPE COMPANY GW MONITORING

is the Laboratory report for samples received on 04/20/21.
 reported relate only to samples listed below :

ID	Control #	Col	Date	Matrix	Analysis
-041321-0	D234-01	04/13/21	04/13/21	WATER	VOC SIM
S-041321-0	D234-02	04/13/21	04/13/21	WATER	VOC SIM
1-0	D234-03	04/13/21	04/13/21	WATER	VOC SIM

is summarized on the following pages.

free to call if you have any questions concerning
 results.

Yours,


Pang
 Director

is confidential and intended solely for the use of the individual or
 whom it is addressed. This report shall not be reproduced except in full
 the written approval of EMAX.

ifies that results included in this report meets all TNI & DOD requirements
 and in the Case Narrative.

dated Certificate Number 0100010000 17

Type of Delivery <input checked="" type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input type="checkbox"/> EMAX Courier <input type="checkbox"/> Client Delivery	Airbill / Tracking Number 5008 1328 3578	ECN 21D234 Recipient Maria Rivera Date 04/20/21 Time 9:15
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COC INSPECTION

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input checked="" type="checkbox"/> TAT
Safety Issues (if any)	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

Note: _____

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input checked="" type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 3.0 °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	A - S/N 200291758	B - S/N 200291755	C - S/N 266535145

Comments: Temperature is out of range. PM was informed IMMEDIATELY.

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
/				

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

<p>Code Description- Sample Management</p> <p>D1 Analysis is not indicated in _____</p> <p>D2 Analysis mismatch COC vs label</p> <p>D3 Sample ID mismatch COC vs label</p> <p>D4 Sample ID is not indicated in _____</p> <p>D5 Container -[improper] [leaking] [broken]</p> <p>D6 Date/Time is not indicated in _____</p> <p>D7 Date/Time mismatch COC vs label</p> <p>D8 Sample listed in COC is not received</p> <p>D9 Sample received is not listed in COC</p> <p>D10 No initial/date on corrections in COC/label</p> <p>D11 Container count mismatch COC vs received</p> <p>D12 Container size mismatch COC vs received</p>	<p>Code Description-Sample Management</p> <p>D13 Out of Holding Time</p> <p>D14 Bubble is >6mm</p> <p>D15 No trip blank in cooler</p> <p>D16 Preservation not indicated in _____</p> <p>D17 Preservation mismatch COC vs label</p> <p>D18 Insufficient chemical preservative</p> <p>D19 Insufficient Sample</p> <p>D20 No filtration info for dissolved analysis</p> <p>D21 No sample for moisture determination</p> <p>D22 _____</p> <p>D23 _____</p> <p>D24 _____</p>	<p><input type="checkbox"/> Continue to next page.</p> <p>Code Description-Sample Management</p> <p>R1 Proceed as indicated in <input type="checkbox"/> COC <input type="checkbox"/> Label</p> <p>R2 Refer to attached instruction</p> <p>R3 Cancel the analysis</p> <p>R4 Use vial with smallest bubble first</p> <p>R5 Log-in with latest sampling date and time+1 min</p> <p>R6 Adjust pH as necessary</p> <p>R7 Filter and preserved as necessary</p> <p>R8 _____</p> <p>R9 _____</p> <p>R10 _____</p> <p>R11 _____</p> <p>R12 _____</p>
--	---	---

REVIEWS:

Sample Labeling <u>Maria Rivera</u>	SRF <u>[Signature]</u>	PM <u>[Signature]</u>
Date <u>04/20/21</u>	Date <u>4/20/21</u>	Date <u>4/21/21</u>

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

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LABORATORY REPORT FOR

TESTAMERICA, INC.

NW PIPE COMPANY GW MONITORING

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

SDG#: 21D234

CASE NARRATIVE

Client : TESTAMERICA, INC.

Project: NW PIPE COMPANY GW MONITORING

SDG : 21D234

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

A total of three(3) water samples were received on 04/20/21 to be analyzed for Volatile Organics by GC/MS SIM in accordance with Method SW5030B/8260B SIM and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration

Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VOF5D20B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VOF5D20X/VOF5D20C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

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SAMPLE RESULTS

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/13/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D234	Date Extracted: 04/26/21 15:06
Sample ID: T451MW09-041321-0	Date Analyzed: 04/26/21 15:06
Lab Samp ID: D234-01	Dilution Factor: 1
Lab File ID: RDY412	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS	RL	MDL
.....	(ug/L)	(ug/L)	(ug/L)
.....
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
.....
1,2-DICHLOROETHANE-D4	0.593	0.5000	119	70-130
4-BROMOFLUOROBENZENE	0.496	0.5000	99.3	70-130
TOLUENE-D8	0.478	0.5000	95.6	70-130



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/13/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D234	Date Extracted: 04/26/21 15:31
Sample ID: T451MW03S-041321-0	Date Analyzed: 04/26/21 15:31
Lab Samp ID: D234-02	Dilution Factor: 1
Lab File ID: RDY413	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS	RL	MDL
-----	(ug/L)	(ug/L)	(ug/L)
-----	-----	-----	-----
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	0.581	0.5000	116	70-130
4-BROMOFLUOROBENZENE	0.491	0.5000	98.3	70-130
TOLUENE-DB	0.467	0.5000	93.4	70-130



METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/13/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D234	Date Extracted: 04/26/21 11:28
Sample ID: TB-041321-0	Date Analyzed: 04/26/21 11:28
Lab Samp ID: D234-03	Dilution Factor: 1
Lab File ID: RDY403	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
-----	-----	-----	-----
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	0.513	0.5000	103	70-130
4-BROMOFLUOROBENZENE	0.519	0.5000	104	70-130
TOLUENE-D8	0.483	0.5000	96.6	70-130



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QC SUMMARIES

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: NA
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/26/21
Batch No. : 21D234	Date Extracted: 04/26/21 10:15
Sample ID: MBLK1W	Date Analyzed: 04/26/21 10:15
Lab Samp ID: VOF5D20B	Dilution Factor: 1
Lab File ID: RDY400	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
-----	-----	-----	-----
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	0.464	0.5000	92.8	70-130
4-BROMOFLUOROBENZENE	0.534	0.5000	107	70-130
TOLUENE-DB	0.491	0.5000	98.2	70-130



EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: TESTAMERICA, INC.
PROJECT: NW PIPE COMPANY GW MONITORING
BATCH NO.: 21D234
METHOD: SW5030B/8260B SIM

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: VOF5D20B VOF5D20X VOF5D20C
LAB FILE ID: RDY400 RDY401 RDY398
DATE EXTRACTED: 04/26/2110:15 04/26/2110:40 04/26/2109:27 DATE COLLECTED: NA
DATE ANALYZED: 04/26/2110:15 04/26/2110:40 04/26/2109:27 DATE RECEIVED: 04/26/21
PREP. BATCH: VOF5D20 VOF5D20 VOF5D20
CALIB. REF: RDY191 RDY191 RDY191

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.496	99	0.500	0.556	111	12	70-130	20
Vinyl Chloride	ND	0.500	0.502	100	0.500	0.540	108	7	60-140	20
Tetrachloroethene	ND	0.500	0.470	94	0.500	0.505	101	7	70-130	20
TCE	ND	0.500	0.455	91	0.500	0.502	100	10	70-130	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	0.500	0.454	91	0.500	0.463	93	70-130
4-Bromofluorobenzene	0.500	0.531	106	0.500	0.543	109	70-130
Toluene-d8	0.500	0.490	98	0.500	0.498	100	70-130

Chain of Custody Record

Client Information		Sampler: LAURA TOLIKO		Lab PM: Matlock, Pauline M		Carrier Tracking No(s):		COC No: 580-42614-13620.3			
Client Contact: Shannon Fitzsimmons		Phone: 425-891-2855		E-Mail: pauline.matlock@eurofinset.com		State of Origin:		Page: 3 of 3 OF 1			
Company: Jacobs Engineering Group, Inc.		PWSID:		Analysis Requested						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
Address: 2020 SW Fourth Ave, 3rd Floor		Due Date Requested:									
City: Portland		TAT Requested (days): STD		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No)		Total Number of Containers		Special Instructions/Note:			
State, Zip: OR, 97201		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
Phone: 503-872-4666(Tel)		PO #: 3600021519		5310C - TOC RSK_175 - Methane 300.0_280 - Chloride, Sulfate 300_48HR - Nitrate, NO3 as N SUBCONTRACT (EMAX)- TCE, cis 1,2-DCE, PCE, Vinyl Chloride (B260B_SIM)		PH					
Email: Shannon.Fitzsimmons@jacobs.com		WO #: BERNICE.KIDD@JACOBS.WM									
Project Name: Northwest Pipe Company GW 2021		Project #: 58016285		BT-Traue, A-Air		SSOW#:					
Site: NWP											
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)			
						5310C - TOC		RSK_175 - Methane			
						300.0_280 - Chloride, Sulfate		300_48HR - Nitrate, NO3 as N			
						SUBCONTRACT (EMAX)- TCE, cis 1,2-DCE, PCE, Vinyl Chloride (B260B_SIM)		PH			
						BT-Traue, A-Air		SSOW#:			
						BT-Traue, A-Air		SSOW#:			
						BT-Traue, A-Air		SSOW#:			
						BT-Traue, A-Air		SSOW#:			
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						BT-Traue, A-Air		SSOW#:			
						BT-Traue, A-Air					

realEX

estAmerica Temperature Control
THE LEADER IN ENVIRONMENTAL TESTING

Custody Seal

5 10:30 C
3269
04.16

DATE

4-15-21

eurofins

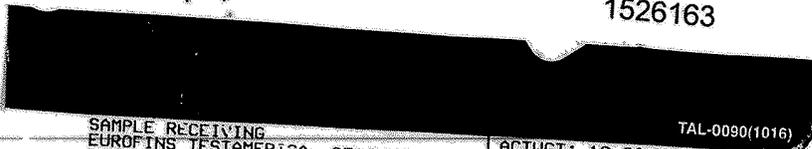
SIGNATURE

[Handwritten Signature]

Quack

1526163

Environment Test'n
TestAmerica



SAMPLE RECEIVING
EUROFINS TESTAMERICA- SEATTLE
5755 8TH ST E

ACTWGT: 16.60 LB
CAD: 989746/CAFE3409

TAL-0090(1016)

FIFE, WA 98424
UNITED STATES US

BILL SENDER

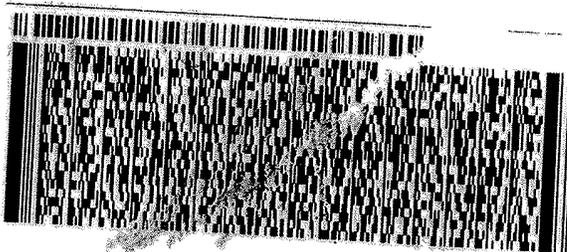
TO SHIPPING/RECEIVING
EUROFINS CALSCIENCE LLC
7440 LINCOLN WAY

GARDEN GROVE CA 92841

(714) 896-6494
PO YES

REF 8580-43015

580-102448 Waybill



FedEx
Express



TRK#
627

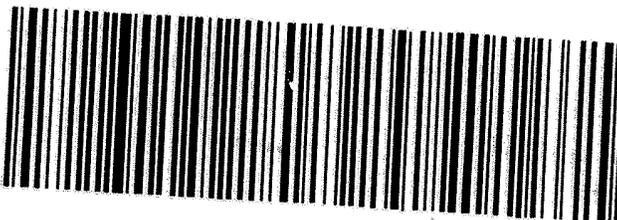
5008 1328 3269

FRI - 16 APR 10:30A
PRIORITY OVERNIGHT

92 APVA

92841
CA-US SNA

Part # 159471-434 RI(2 EXP 03/22



5755 8th Street East
Tacoma WA 98424
Phone 253-922-2310 Fax 425-420-9210

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler	Lab PM:	Carrier/Tracking No(s):	COOC No:
Client Contact:	Phone	Matlock, Pauline M	State of Origin:	Oregon	580-89113.1
Shipping/Receiving	E-Mail:	Pauline.matlock@eurofins.com	Accreditations Required (See note):	NELAP - Oregon	Page 1 of 1
Company:	Eurofins CalScience LLC	Due Date Requested:	5/12/2021	Job #:	580-102448-1
Address:	7440 Lincoln Way,	TAT Requested (days)		Preservation Codes:	A - HCl B - NaOH M - Hexane N - None O - AsnO2 P - AsnO4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)
City:	Garden Grove	PO #:		Other:	
State Zip:	CA, 92841	Project #:	58016285		
Phone:	714-895-5494(Tel) 714-894-7501(Fax)	SSOV#:			
Email:					
Project Name:	Northwest Pipe Company GW 2021				
Site:					
Sample Identification - Client ID (Lab ID)					
T451MW09-041321-0 (580-102448-1)	4/13/21	15:00 Pacific	Water	X	3
T451MW03S-041321-0 (580-102448-2)	4/13/21	16:30 Pacific	Water	X	3
Special Instructions/Note:					
RSK_175/ Methane					
Analysis Requested					
Field Filtered Sample (Yes or No)					
Perform MS/MSD (Yes or No)					
Total Number of containers					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Special Instructions/QC Requirements:					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Return To Client					
Disposal By Lab					
Archive For					
Months					
Empty Kit Relinquished by:					
Relinquished by:	Date/Time:	4/15/21	1340	Company:	EFGS
Relinquished by:	Date/Time:			Company:	
Relinquished by:	Date/Time:			Company:	
Relinquished by:	Date/Time:			Company:	
Custody Seals Intact:	Custody Seal No	1526167		Cooler Temperature(s) °C and Other Remarks:	3.3/3.7 SC5
Yes	No				

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102448-1

Login Number: 102448

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Vallelunga, Diana L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.6/2.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102448-1

Login Number: 102448

List Number: 3

Creator: Ortiz-Luis, Michael

List Source: Eurofins Calscience

List Creation: 04/16/21 03:30 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1526163
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102448-1

Login Number: 102448

List Number: 2

Creator: Ornelas, Olga

List Source: Eurofins Irvine

List Creation: 04/16/21 11:44 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

EMAX
LABORATORIES, INC.[®]
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889

Date: 05-12-2021
EMAX Batch No.: 21D234

Attn: Pauline Matlock

TestAmerica, Inc.
5755 8th Street East
Tacoma WA 98424

Subject: Laboratory Report
Project: NW PIPE COMPANY GW MONITORING

Enclosed is the Laboratory report for samples received on 04/20/21.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
T451MW09-041321-0	D234-01	04/13/21	WATER	VOC SIM
T451MW03S-041321-0	D234-02	04/13/21	WATER	VOC SIM
TB-041321-0	D234-03	04/13/21	WATER	VOC SIM

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,



Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912020-17
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

Type of Delivery <input checked="" type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input type="checkbox"/> EMAX Courier <input type="checkbox"/> Client Delivery	Airbill / Tracking Number 5008 1328 3578	ECN 21D234 Recipient Maria Rivera Date 04/20/21 Time 9:15
---	---	---

COC INSPECTION

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input checked="" type="checkbox"/> TAT
Safety Issues (if any) Note: _____					

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input checked="" type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 3.0 °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	A - S/N 200291758	B - S/N 200291755	C - S/N 206535195

Comments: Temperature is out of range. PM was informed IMMEDIATELY.
Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
/				

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

- | | | |
|---|--|--|
| <p>Code Description- Sample Management</p> <ul style="list-style-type: none"> D1 Analysis is not indicated in _____ D2 Analysis mismatch COC vs label D3 Sample ID mismatch COC vs label D4 Sample ID is not indicated in _____ D5 Container -[improper] [leaking] [broken] D6 Date/Time is not indicated in _____ D7 Date/Time mismatch COC vs label D8 Sample listed in COC is not received D9 Sample received is not listed in COC D10 No initial/date on corrections in COC/label D11 Container count mismatch COC vs received D12 Container size mismatch COC vs received | <p>Code Description-Sample Management</p> <ul style="list-style-type: none"> D13 Out of Holding Time D14 Bubble is >6mm D15 No trip blank in cooler D16 Preservation not indicated in _____ D17 Preservation mismatch COC vs label D18 Insufficient chemical preservative D19 Insufficient Sample D20 No filtration info for dissolved analysis D21 No sample for moisture determination D22 _____ D23 _____ D24 _____ | <p><input type="checkbox"/> Continue to next page.</p> <p>Code Description-Sample Management</p> <ul style="list-style-type: none"> R1 Proceed as indicated in <input type="checkbox"/> COC <input type="checkbox"/> Label R2 Refer to attached instruction R3 Cancel the analysis R4 Use vial with smallest bubble first R5 Log-in with latest sampling date and time+1 min R6 Adjust pH as necessary R7 Filter and preserved as necessary R8 _____ R9 _____ R10 _____ R11 _____ R12 _____ |
|---|--|--|

REVIEWS:

Sample Labeling <u>Maria Rivera</u>	SRF <u>[Signature]</u>	PM <u>[Signature]</u>
Date <u>04/20/21</u>	Date <u>4/20/21</u>	Date <u>4/21/21</u>

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

TESTAMERICA, INC.

NW PIPE COMPANY GW MONITORING

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

SDG#: 21D234

CASE NARRATIVE

Client : TESTAMERICA, INC.

Project: NW PIPE COMPANY GW MONITORING

SDG : 21D234

METHOD SW5030B/8260B SIM VOLATILE ORGANICS BY GC/MS SIM

A total of three(3) water samples were received on 04/20/21 to be analyzed for Volatile Organics by GC/MS SIM in accordance with Method SW5030B/8260B SIM and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration

Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VOF5D20B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VOF5D20X/VOF5D20C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.
Project : NW PIPE COMPANY GW MONITORING

SDG NO. : 21D234
Instrument ID : F5

WATER									
Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VOF5D20B	1	NA	04/26/2110:15	04/26/2110:15	RDY400	RDY191	VOF5D20	Method Blank
LCS1W	VOF5D20X	1	NA	04/26/2110:40	04/26/2110:40	RDY401	RDY191	VOF5D20	Lab Control Sample (LCS)
LCD1W	VOF5D20C	1	NA	04/26/2109:27	04/26/2109:27	RDY398	RDY191	VOF5D20	LCS Duplicate
TB-041321-0	D234-03	1	NA	04/26/2111:28	04/26/2111:28	RDY403	RDY191	VOF5D20	Field Sample
T451MW09-041321-0	D234-01	1	NA	04/26/2115:06	04/26/2115:06	RDY412	RDY191	VOF5D20	Field Sample
T451MW03S-041321-0	D234-02	1	NA	04/26/2115:31	04/26/2115:31	RDY413	RDY191	VOF5D20	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/13/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D234	Date Extracted: 04/26/21 15:06
Sample ID: T451MW09-041321-0	Date Analyzed: 04/26/21 15:06
Lab Samp ID: D234-01	Dilution Factor: 1
Lab File ID: RDY412	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS	RL	MDL
	(ug/L)	(ug/L)	(ug/L)
-----	-----	-----	-----
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	0.593	0.5000	119	70-130
4-BROMOFLUOROBENZENE	0.496	0.5000	99.3	70-130
TOLUENE-D8	0.478	0.5000	95.6	70-130

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: 04/13/21
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/20/21
Batch No. : 21D234	Date Extracted: 04/26/21 15:31
Sample ID: T451MW03S-041321-0	Date Analyzed: 04/26/21 15:31
Lab Samp ID: D234-02	Dilution Factor: 1
Lab File ID: RDY413	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS	RL	MDL
	(ug/L)	(ug/L)	(ug/L)
-----	-----	-----	-----
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	0.581	0.5000	116	70-130
4-BROMOFLUOROBENZENE	0.491	0.5000	98.3	70-130
TOLUENE-D8	0.467	0.5000	93.4	70-130

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client	: TESTAMERICA, INC.	Date Collected:	04/13/21
Project	: NW PIPE COMPANY GW MONITORING	Date Received:	04/20/21
Batch No.	: 21D234	Date Extracted:	04/26/21 11:28
Sample ID:	TB-041321-0	Date Analyzed:	04/26/21 11:28
Lab Samp ID:	D234-03	Dilution Factor:	1
Lab File ID:	RDY403	Matrix	: WATER
Ext Btch ID:	VOF5D20	% Moisture	: NA
Calib. Ref.:	RDY191	Instrument ID	: TOF5

PARAMETERS	RESULTS	RL	MDL
	(ug/L)	(ug/L)	(ug/L)
-----	-----	-----	-----
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
	-----	-----	-----	-----
-----	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	0.513	0.5000	103	70-130
4-BROMOFLUOROBENZENE	0.519	0.5000	104	70-130
TOLUENE-D8	0.483	0.5000	96.6	70-130

QC SUMMARIES

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: NA
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/26/21
Batch No. : 21D234	Date Extracted: 04/26/21 10:15
Sample ID: MBLK1W	Date Analyzed: 04/26/21 10:15
Lab Samp ID: VOF5D20B	Dilution Factor: 1
Lab File ID: RDY400	Matrix : WATER
Ext Btch ID: VOF5D20	% Moisture : NA
Calib. Ref.: RDY191	Instrument ID : TOF5

PARAMETERS	RESULTS	RL	MDL
-----	(ug/L)	(ug/L)	(ug/L)
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	0.464	0.5000	92.8	70-130
4-BROMOFLUOROBENZENE	0.534	0.5000	107	70-130
TOLUENE-D8	0.491	0.5000	98.2	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: TESTAMERICA, INC.
PROJECT: NW PIPE COMPANY GW MONITORING
BATCH NO.: 21D234
METHOD: SW5030B/8260B SIM

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: VOF5D20B VOF5D20X VOF5D20C
LAB FILE ID: RDY400 RDY401 RDY398
DATE EXTRACTED: 04/26/2110:15 04/26/2110:40 04/26/2109:27 DATE COLLECTED: NA
DATE ANALYZED: 04/26/2110:15 04/26/2110:40 04/26/2109:27 DATE RECEIVED: 04/26/21
PREP. BATCH: VOF5D20 VOF5D20 VOF5D20
CALIB. REF: RDY191 RDY191 RDY191

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.496	99	0.500	0.556	111	12	70-130	20
Vinyl Chloride	ND	0.500	0.502	100	0.500	0.540	108	7	60-140	20
Tetrachloroethene	ND	0.500	0.470	94	0.500	0.505	101	7	70-130	20
TCE	ND	0.500	0.455	91	0.500	0.502	100	10	70-130	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	0.500	0.454	91	0.500	0.463	93	70-130
4-Bromofluorobenzene	0.500	0.531	106	0.500	0.543	109	70-130
Toluene-d8	0.500	0.490	98	0.500	0.498	100	70-130

ANALYTICAL REPORT

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-102028-1

Client Project/Site: Northwest Pipe Company GW 2021

For:

Jacobs Engineering Group, Inc.
1501 W Fountainhead Parkway
Suite 401
Tempe, Arizona 85282

Attn: Bernice Kidd



Authorized for release by:
4/21/2021 5:05:20 PM

Pauline Matlock, Project Manager
(253)922-2310
pauline.matlock@eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102028-1

Job ID: 580-102028-1

Laboratory: Eurofins FGS, Seattle

Narrative

**Job Narrative
580-102028-1**

Comments

No additional comments.

Receipt

The sample was received on 3/26/2021 9:40 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.6° C.

Air Toxics

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

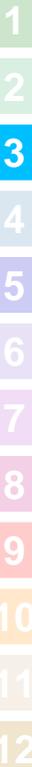
General Chemistry

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-353010 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract non-Sister

See attached subcontract report.



Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102028-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102028-1

Client Sample ID: NWP-PSG-EB

Lab Sample ID: 580-102028-1

Date Collected: 03/25/21 15:40

Matrix: Water

Date Received: 03/26/21 09:40

Method: RSK-175 - Dissolved Gases (GC) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.13	J	1.0	0.078	ug/L			04/06/21 16:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.71	J F1	1.5	0.43	mg/L			03/26/21 17:07	1
NO3 as N	0.054	J	0.20	0.030	mg/L			03/26/21 17:07	1
Sulfate	ND		1.5	0.80	mg/L			03/26/21 17:07	1
Total Organic Carbon	0.22		0.10	0.050	mg/L			04/07/21 10:44	1



QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102028-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 570-141249/4
Matrix: Water
Analysis Batch: 141249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.078	ug/L			04/06/21 11:00	1

Lab Sample ID: LCS 570-141249/2
Matrix: Water
Analysis Batch: 141249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	12.9	12.2		ug/L		94	80 - 120

Lab Sample ID: LCSD 570-141249/3
Matrix: Water
Analysis Batch: 141249

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	12.9	12.3		ug/L		95	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-353009/6
Matrix: Water
Analysis Batch: 353009

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NO3 as N	ND		0.20	0.030	mg/L			03/26/21 17:42	1

Lab Sample ID: LCS 580-353009/7
Matrix: Water
Analysis Batch: 353009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
NO3 as N	5.00	4.54		mg/L		91	90 - 110

Lab Sample ID: LCSD 580-353009/8
Matrix: Water
Analysis Batch: 353009

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NO3 as N	5.00	4.80		mg/L		96	90 - 110	6	15

Lab Sample ID: 580-102028-1 MS
Matrix: Water
Analysis Batch: 353009

Client Sample ID: NWP-PSG-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
NO3 as N	0.054	J	5.00	4.86		mg/L		96	90 - 110

Eurofins FGS, Seattle

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102028-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-102028-1 MSD
Matrix: Water
Analysis Batch: 353009

Client Sample ID: NWP-PSG-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NO3 as N	0.054	J	5.00	5.17		mg/L		102	90 - 110	6	15

Lab Sample ID: MB 580-353010/6
Matrix: Water
Analysis Batch: 353010

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	0.43	mg/L			03/26/21 17:42	1
Sulfate	ND		1.5	0.80	mg/L			03/26/21 17:42	1

Lab Sample ID: LCS 580-353010/7
Matrix: Water
Analysis Batch: 353010

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.6		mg/L		101	90 - 110
Sulfate	50.0	48.0		mg/L		96	90 - 110

Lab Sample ID: LCSD 580-353010/8
Matrix: Water
Analysis Batch: 353010

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	54.9		mg/L		110	90 - 110	8	15
Sulfate	50.0	53.9		mg/L		108	90 - 110	12	15

Lab Sample ID: 580-102028-1 MS
Matrix: Water
Analysis Batch: 353010

Client Sample ID: NWP-PSG-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	0.71	J F1	50.0	56.8	F1	mg/L		112	90 - 110
Sulfate	ND		50.0	54.3		mg/L		109	90 - 110

Lab Sample ID: 580-102028-1 MSD
Matrix: Water
Analysis Batch: 353010

Client Sample ID: NWP-PSG-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	0.71	J F1	50.0	53.6		mg/L		106	90 - 110	6	15
Sulfate	ND		50.0	46.9		mg/L		94	90 - 110	14	15

Method: SM 5310C - TOC

Lab Sample ID: MB 440-643448/9
Matrix: Water
Analysis Batch: 643448

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			04/07/21 10:33	1

Eurofins FGS, Seattle

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102028-1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: LCS 440-643448/8
Matrix: Water
Analysis Batch: 643448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	5.00	5.32		mg/L		106	85 - 115

Lab Sample ID: MRL 440-643448/7
Matrix: Water
Analysis Batch: 643448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.138		mg/L		138	50 - 150

Lab Sample ID: 580-102028-1 MS
Matrix: Water
Analysis Batch: 643448

Client Sample ID: NWP-PSG-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.20		5.00	5.71		mg/L		110	85 - 115

Lab Sample ID: 580-102028-1 MSD
Matrix: Water
Analysis Batch: 643448

Client Sample ID: NWP-PSG-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	0.20		5.00	5.43		mg/L		104	85 - 115	5	20

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102028-1

Client Sample ID: NWP-PSG-EB

Lab Sample ID: 580-102028-1

Date Collected: 03/25/21 15:40

Matrix: Water

Date Received: 03/26/21 09:40

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Analysis	RSK-175	RA	1	141249	04/06/21 16:27	I9H5	ECL 2
Total/NA	Analysis	300.0		1	353009	03/26/21 17:07	AAC	TAL SEA
Total/NA	Analysis	300.0		1	353010	03/26/21 17:07	AAC	TAL SEA
Total/NA	Analysis	SM 5310C		1	643448	04/07/21 10:44	YO8L	TAL IRV

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

EMAX Lab. = EMAX Laboratories Inc, 1835 W. 205th Street, Torrance, CA 90501

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102028-1

Laboratory: Eurofins FGS, Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	WA100007	11-05-21

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4028 - 009	01-29-22

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	CA300001	01-30-22

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Northwest Pipe Company GW 2021

Job ID: 580-102028-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-102028-1	NWP-PSG-EB	Water	03/25/21 15:40	03/26/21 09:40	

1

2

3

4

5

6

7

8

9

10

11

12



Date: 04-21-2021
EMAX Batch No.: 21C353

Attn: Kris Allen

TestAmerica, Inc.
5755 8th Street East
Tacoma WA 98424

Subject: Laboratory Report
Project: NW PIPE COMPANY GW MONITORING

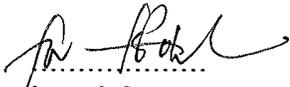
Enclosed is the Laboratory report for samples received on 03/31/21.
The data reported relate only to samples listed below :

Sample ID	Control #	Co1 Date	Matrix	Analysis
NWP-PSG-EB (580-102028-1)	C353-01	03/25/21	WATER	VOC SIM

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,


Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912020-17
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672



Type of Delivery <input checked="" type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others	Airbill / Tracking Number 5008 1328 0719	ECN 21C353
<input type="checkbox"/> EMAX Courier <input type="checkbox"/> Client Delivery		Recipient <u>Maria Rivera</u> Date <u>03/31/21</u> Time <u>9:30</u>

COC INSPECTION

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input type="checkbox"/> TAT
Safety Issues (if any)	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

Note: _____

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input checked="" type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input type="checkbox"/> Bubble Pack	<input checked="" type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>3.8</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	<u>A-S/N 200291758</u>	<u>B-S/N 200291755</u>	<u>C-S/N _____</u>
			<u>D-S/N _____</u>

Comments: Temperature is out of range. PM was informed IMMEDIATELY.

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1	1-3	D7	one label reads 13:40, 2nd label is correct with 15:40	RI

03/31/21

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

Code Description- Sample Management

- D1 Analysis is not indicated in _____
- D2 Analysis mismatch COC vs label
- D3 Sample ID mismatch COC vs label
- D4 Sample ID is not indicated in _____
- D5 Container -[improper] [leaking] [broken]
- D6 Date/Time is not indicated in _____
- D7 Date/Time mismatch COC vs label
- D8 Sample listed in COC is not received
- D9 Sample received is not listed in COC
- D10 No initial/date on corrections in COC/label
- D11 Container count mismatch COC vs received
- D12 Container size mismatch COC vs received

Code Description-Sample Management

- D13 Out of Holding Time
- D14 Bubble is >6mm
- D15 No trip blank in cooler
- D16 Preservation not indicated in _____
- D17 Preservation mismatch COC vs label
- D18 Insufficient chemical preservative
- D19 Insufficient Sample
- D20 No filtration info for dissolved analysis
- D21 No sample for moisture determination
- D22 _____
- D23 _____
- D24 _____

Continue to next page.

Code Description-Sample Management

- R1 Proceed as indicated in COC Label
- R2 Refer to attached instruction
- R3 Cancel the analysis
- R4 Use vial with smallest bubble first
- R5 Log-in with latest sampling date and time+1 min
- R6 Adjust pH as necessary
- R7 Filter and preserved as necessary
- R8 _____
- R9 _____
- R10 _____
- R11 _____
- R12 _____

REVIEWS:

Sample Labeling Maria Rivera
Date 03/31/21

SRF [Signature]
Date 3/31/21

PM [Signature]
Date 3/31/21

ORIGIN ID:TCMA (253) 922-2310
SAMPLE RECEIVING
EUROFINS TESTAMERICA- SEATTLE
5755 8TH ST E

SHIP DATE: 30MAR21
ACTWGT: 14.40 LB
CAD: 989746/CAFE3409

FIFE, WA 98424
UNITED STATES US

BILL SENDER

TO SHIPPING/RECEIVING
EMAX LABORATORIES INC
1835 W. 205TH STREET

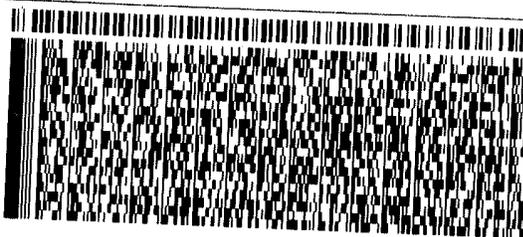
TORRANCE CA 90501

(253) 922-2310
PO: NO

REF: 8580-42795

3.8 Sealed

58002/55F2/0542



FedEx
Express



J201120121801 W

TRK# 5008 1328 0719
0201

WED - 31 MAR 10:30A
PRIORITY OVERNIGHT

92 HHRA

90501
CA-US LAX

Part # 15327-431 RT2 EXP 03/21



REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

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LABORATORY REPORT FOR

TESTAMERICA, INC.

NW PIPE COMPANY GW MONITORING

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

SDG#: 21C353

CASE NARRATIVE

Client : TESTAMERICA, INC.

Project: NW PIPE COMPANY GW MONITORING

SDG : 21C353

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

One(1) water sample was received on 03/31/21 to be analyzed for Volatile Organics by GC/MS SIM in accordance with Method SW5030B/8260B SIM and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration

Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VO05D03B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VO05D03L/VO05D03C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

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SAMPLE RESULTS

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client	: TESTAMERICA, INC.	Date Collected:	03/25/21
Project	: NW PIPE COMPANY GW MONITORING	Date Received:	03/31/21
Batch No.	: 21C353	Date Extracted:	04/05/21 12:18
Sample ID:	NWP-PSG-EB (580-102028-1)	Date Analyzed:	04/05/21 12:18
Lab Samp ID:	C353-01	Dilution Factor:	1
Lab File ID:	RDQ032	Matrix	: WATER
Ext Btch ID:	V005D03	% Moisture	: NA
Calib. Ref.:	RDQ020	Instrument ID	: T-005

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.464	0.5000	92.8	70-130
4-BROMOFLUOROBENZENE	0.484	0.5000	96.8	70-130
TOLUENE-D8	0.472	0.5000	94.5	70-130

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QC SUMMARIES

METHOD SW5030B/8260B SIM
VOLATILE ORGANICS BY GC/MS SIM

Client : TESTAMERICA, INC.	Date Collected: NA
Project : NW PIPE COMPANY GW MONITORING	Date Received: 04/05/21
Batch No. : 21C353	Date Extracted: 04/05/21 11:54
Sample ID: MBLK1W	Date Analyzed: 04/05/21 11:54
Lab Samp ID: V005D03B	Dilution Factor: 1
Lab File ID: RDQ031	Matrix : WATER
Ext Btch ID: V005D03	% Moisture : NA
Calib. Ref.: RDQ020	Instrument ID : T-005

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
-----	-----	-----	-----
CIS-1,2-DICHLOROETHYLENE	ND	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	ND	0.20	0.10
TCE	ND	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
1,2-DICHLOROETHANE-D4	0.459	0.5000	91.7	70-130
4-BROMOFLUOROBENZENE	0.478	0.5000	95.6	70-130
TOLUENE-D8	0.463	0.5000	92.6	70-130



EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: TESTAMERICA, INC.
PROJECT: NW PIPE COMPANY GW MONITORING
BATCH NO.: 21C353
METHOD: SW5030B/8260B SIM

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: V005D03B V005D03L V005D03C
LAB FILE ID: RDQ031 RDQ028 RDQ029
DATE EXTRACTED: 04/05/2111:54 04/05/2110:39 04/05/2111:04 DATE COLLECTED: NA
DATE ANALYZED: 04/05/2111:54 04/05/2110:39 04/05/2111:04 DATE RECEIVED: 04/05/21
PREP. BATCH: V005D03 V005D03 V005D03
CALIB. REF: RDQ020 RDQ020 RDQ020

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
cis-1,2-Dichloroethylene	ND	0.500	0.457	91	0.500	0.456	91	0	70-130	20
Vinyl Chloride	ND	0.500	0.464	93	0.500	0.437	87	6	60-140	20
Tetrachloroethene	ND	0.500	0.489	98	0.500	0.453	91	7	70-130	20
TCE	ND	0.500	0.463	93	0.500	0.448	90	3	70-130	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	0.500	0.459	92	0.500	0.451	90	70-130
4-Bromofluorobenzene	0.500	0.474	95	0.500	0.475	95	70-130
Toluene-d8	0.500	0.476	95	0.500	0.465	93	70-130

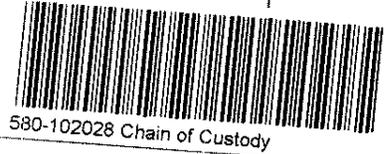
Eurofins TestAmerica, Seattle

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record



Client Information		Sampler: <i>Shannon Fitzsimmons</i>		Lab PM: Matlock, Pauline M		Carrier Tracking No(s):		COC No: 580-42614-13620.3	
Client Contact: Shannon Fitzsimmons		Phone: 541-760-7130		E-Mail: pauline.matlock@eurofinset.com		State of Origin: OK		Page: Page 3 of 3	
Company: Jacobs Engineering Group, Inc.		PWSID:		Analysis Requested		Loc: 580 10202E		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
Address: 2020 SW Fourth Ave, 3rd Floor		Due Date Requested: STP							
City: Portland		TAT Requested (days):							
State, Zip: OR, 97201		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No							
Phone: 503-872-4666(Tel)		PO #: 3600021519		5310C - TOC RSK_175 - Methane 300.0_28D - Chloride, Sulfate 300_48HR - Nitrate, NO3 as N SUBTRACT (EMAX)-TCE, cis 1,2-DCE, PCE, Vinyl Chloride (S200B, SIM)		Special Instructions/Note:			
Email: Shannon.Fitzsimmons@jacobs.com		WO #:							
Project Name: Northwest Pipe Company GW 2021		Project #: 58016285							
Site:		SSOW#:							
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Gas, A=Air)				
NWP-BSG-EB		3/25/21	1540	G	Water	Preservation Codes: A N S A X X X X X			
					Water				
					Water				
					Water				



Therm ID: 92 Cor: 3.6 ° Unc: 4.0 °
Cooler Desc: *Sm Blue*
Packing: *Ice* FedEx: *PO*
Cust. Seal: Yes No UPS:
Blue Ice: Wet, Dry, None Lab Cour:
Other:

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: <i>[Signature]</i>	Date/Time: 3/25/21 1640	Company: <i>Jacobs</i>	Received by: <i>[Signature]</i>	Date/Time: 3/26/21 0940	Company: <i>ETASec</i>
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Yes No Custody Seal No.: _____

Cooler Temperature(s) °C and Other Remarks: _____

- 1
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- 12



Environment Testing
TestAmerica

ORIGIN ID:TCM9 (253) 922-2310
 SAMPLE RECEIVING
 EUROFINS TESTING
 5755 8TH ST E
 SEATTLE
 WA 98148
 UNITED STATES US

SHIP DATE: 29MAR21
 ACTING: 8.05 LB
 CRD: 989746/CAFE340
 BILL SENDER

TO SHIPPING/RECEIVING
 EUROFINS CALSCIENCE LLC
 7440 LINCOLN WAY



TRK# 5008 1328 0579
 0201

TUE - 30 MAR
 PRIORITY OVER

92 APVA

CA-US

920
 Seal
 SNA

3/29/21

SIGNATURE

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 4847



580-102028 Waybill



Client Information (Sub Contract Lab)		Lab Pkt: Matlock, Pauline M	Carrier Tracking No(s): 50081328 0557	COC No: 580-88395-1
Shipping/Receiving		E-Mail: pauline.matlock@eurofinset.com	State of Origin: Oregon	Page: Page 1 of 1
Eurofins Calscience LLC		Accreditations Required (See note): NELAP Oregon	Job #: 580-102028-1	Preservation Codes:
Address: 17461 Derian Ave, Suite 100, Irvine		Due Date Requested: 4/8/2021	A HCL M Hexane B NaOH N None C Zn Acetate O AsH ₂ O ₂ D Nitric Acid P Na ₂ O ₄ S E NaHSO ₄ Q Na ₂ SO ₃ F MeOH R Na ₂ SO ₃ G Amchlor S H ₂ SO ₄ H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Z other (specify) Other:	
City: Irvine	PO #: 949-261 1022(Tel) 949-260-3297(Fax)	TAT Requested (days):	Analysis Requested	
State, Zip: CA, 92614-5817	WO #:		Total Number of Containers	
Phone: 949-261 1022(Tel) 949-260-3297(Fax)	Project #: 58016285		Perform M/NED (Yes or No)	
Email:	SSOW#:		Field Filled Sample (Yes or No)	
Project Name: Northwest Pipe Company GW 2021			Matrix (Weaver, Swobd, Overstoll, ST-1, 2, 3, 4, 5)	
Site:			Preservation Code:	
Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Special Instructions/Note:
NWP-PSG-EB (580-102028-1)	3/25/21	15:40 Pacific	Water	1 TB 3/25/21
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>				
Possible Hazard Identification				
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input type="checkbox"/> Unconfirmed Special Instructions/QC Requirements:				
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2				
Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____				
Relinquished by: _____ Date/Time: 3/29/21		Received by: _____ Date/Time: 3/30/21 0915		
Relinquished by: _____ Date/Time: _____		Received by: _____ Date/Time: _____		
Relinquished by: _____ Date/Time: _____		Received by: _____ Date/Time: _____		
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: 08/10 1K-93		



Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102028-1

Login Number: 102028

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Hobbs, Kenneth F

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102028-1

Login Number: 102028

List Number: 3

Creator: Cortez Diaz, Antonio

List Source: Eurofins Calscience

List Creation: 03/30/21 12:41 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	484778
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 580-102028-1

Login Number: 102028

List Number: 2

Creator: Skinner, Alma D

List Source: Eurofins Irvine

List Creation: 03/30/21 09:20 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	