

## ANALYTICAL REPORT

Eurofins TestAmerica, Seattle  
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Tel: (253)922-2310

Laboratory Job ID: 580-86076-1

Client Project/Site: Northwest Pipe Company GW Monitoring

**For:**

CH2M Hill, Inc.  
2020 SW 4th Ave  
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Attn: Bernice Kidd

*Kristine D. Allen*

Authorized for release by:  
5/30/2019 2:28:02 PM

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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: CH2M Hill, Inc.  
Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

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**Laboratory: Eurofins TestAmerica, Seattle**

## Narrative

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### Job Narrative 580-86076-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/10/2019 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was -1.6° C.

#### Subcontract Work

Method TCE, cis 1,2-DCE, PCE, Vinyl Chloride - low level: This method was subcontracted to EMAX Laboratories Inc. The subcontract laboratory certification is different from that of the facility issuing the final report.

#### GC/MS VOA

Method(s) 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch analytical batch 580-300469 recovered outside control limits for the following analytes: cis-1,2-Dichloroethene, Tetrachloroethene, Trichloroethene. The individual recoveries of the LCS and LCSD met the acceptance criteria.

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

#### GC VOA

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

#### General Chemistry

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

# Definitions/Glossary

Client: CH2M Hill, Inc.  
Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits

### General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance 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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

# Client Sample Results

Client: CH2M Hill, Inc.  
 Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

**Client Sample ID: T4SIMW23-050919-0**

**Lab Sample ID: 580-86076-1**

Date Collected: 05/09/19 09:00

Matrix: Water

Date Received: 05/10/19 09:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane (FID)	16		0.99	0.25	ug/L			05/14/19 16:26	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		0.90	0.14	mg/L			05/15/19 02:41	1
NO3 as N	0.48	F1 B	0.20	0.020	mg/L			05/11/19 01:42	1
Sulfate	8.3	B	1.2	0.26	mg/L			05/15/19 02:41	1
Total Organic Carbon	0.67		0.10	0.050	mg/L			05/15/19 10:17	1



# Client Sample Results

Client: CH2M Hill, Inc.  
 Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

**Client Sample ID: MW01-050919-0**

**Lab Sample ID: 580-86076-2**

Date Collected: 05/09/19 10:20

Matrix: Water

Date Received: 05/10/19 09:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane (FID)	310		0.99	0.25	ug/L			05/14/19 16:48	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		0.90	0.14	mg/L			05/15/19 03:40	1
NO3 as N	0.50	B	0.20	0.020	mg/L			05/11/19 02:18	1
Sulfate	12	B	1.2	0.26	mg/L			05/15/19 03:40	1
Total Organic Carbon	1.2		0.10	0.050	mg/L			05/15/19 11:20	1



# Client Sample Results

Client: CH2M Hill, Inc.  
 Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

**Client Sample ID: MW03-050919-0**

**Lab Sample ID: 580-86076-4**

Date Collected: 05/09/19 11:45

Matrix: Water

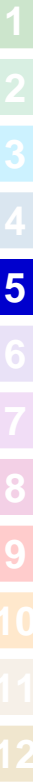
Date Received: 05/10/19 09:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane (TCD)	2300		1000	500	ug/L			05/14/19 17:01	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.3		0.90	0.14	mg/L			05/15/19 03:51	1
NO3 as N	0.20	B	0.20	0.020	mg/L			05/11/19 02:29	1
Sulfate	9.4	B	1.2	0.26	mg/L			05/15/19 03:51	1
Total Organic Carbon	1.3		0.10	0.050	mg/L			05/15/19 10:29	1



# Client Sample Results

Client: CH2M Hill, Inc.  
 Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

**Client Sample ID: MW06-050919-0**

**Lab Sample ID: 580-86076-5**

Date Collected: 05/09/19 13:10

Matrix: Water

Date Received: 05/10/19 09:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane (FID)	370		0.99	0.25	ug/L			05/14/19 17:14	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.8		0.90	0.14	mg/L			05/15/19 04:03	1
NO3 as N	0.13	J B	0.20	0.020	mg/L			05/11/19 02:41	1
Sulfate	17	B	1.2	0.26	mg/L			05/15/19 04:03	1
Total Organic Carbon	1.5		0.10	0.050	mg/L			05/15/19 11:32	1

# Client Sample Results

Client: CH2M Hill, Inc.  
 Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

**Client Sample ID: MW100-050919-0**

**Lab Sample ID: 580-86076-6**

Date Collected: 05/09/19 12:00

Matrix: Water

Date Received: 05/10/19 09:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane (FID)	350		0.99	0.25	ug/L			05/14/19 17:27	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.7		0.90	0.14	mg/L			05/15/19 04:15	1
NO3 as N	0.14	J B	0.20	0.020	mg/L			05/11/19 02:53	1
Sulfate	17	B	1.2	0.26	mg/L			05/15/19 04:15	1
Total Organic Carbon	1.6		0.10	0.050	mg/L			05/15/19 11:45	1

# Client Sample Results

Client: CH2M Hill, Inc.  
Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

**Client Sample ID: MW05-050919-0**

**Lab Sample ID: 580-86076-7**

Date Collected: 05/09/19 14:20

Matrix: Water

Date Received: 05/10/19 09:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane (FID)	170		0.99	0.25	ug/L			05/14/19 17:40	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.8		0.90	0.14	mg/L			05/15/19 04:27	1
NO3 as N	1.0	B	0.20	0.020	mg/L			05/11/19 03:04	1
Sulfate	17	B	1.2	0.26	mg/L			05/15/19 04:27	1
Total Organic Carbon	1.5		0.10	0.050	mg/L			05/15/19 11:57	1

# Client Sample Results

Client: CH2M Hill, Inc.  
 Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

**Client Sample ID: IDW DRUM 2-050919**

**Lab Sample ID: 580-86076-8**

Date Collected: 05/09/19 15:00

Matrix: Water

Date Received: 05/10/19 09:35

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.6		1.0	0.22	ug/L			05/10/19 19:55	1
cis-1,2-Dichloroethene	49	*	3.0	0.69	ug/L			05/10/19 19:55	1
TCE	4.8	*	3.0	0.85	ug/L			05/10/19 19:55	1
PCE	21	*	3.0	0.41	ug/L			05/10/19 19:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 122		05/10/19 19:55	1
Trifluorotoluene (Surr)	103		80 - 120		05/10/19 19:55	1
Dibromofluoromethane (Surr)	98		77 - 120		05/10/19 19:55	1
4-Bromofluorobenzene (Surr)	97		80 - 125		05/10/19 19:55	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 126		05/10/19 19:55	1

# QC Sample Results

Client: CH2M Hill, Inc.  
 Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 580-300469/7**  
**Matrix: Water**  
**Analysis Batch: 300469**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.22	ug/L			05/10/19 17:54	1
cis-1,2-Dichloroethene	ND		3.0	0.69	ug/L			05/10/19 17:54	1
TCE	ND		3.0	0.85	ug/L			05/10/19 17:54	1
PCE	ND		3.0	0.41	ug/L			05/10/19 17:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 122		05/10/19 17:54	1
Trifluorotoluene (Surr)	102		80 - 120		05/10/19 17:54	1
Dibromofluoromethane (Surr)	103		77 - 120		05/10/19 17:54	1
4-Bromofluorobenzene (Surr)	100		80 - 125		05/10/19 17:54	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 126		05/10/19 17:54	1

**Lab Sample ID: LCS 580-300469/4**  
**Matrix: Water**  
**Analysis Batch: 300469**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	10.0	9.07		ug/L		91	65 - 130
cis-1,2-Dichloroethene	10.0	10.0		ug/L		100	76 - 129
TCE	10.0	10.4		ug/L		104	70 - 131
PCE	10.0	11.6		ug/L		116	76 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 122
Trifluorotoluene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	95		77 - 120
4-Bromofluorobenzene (Surr)	100		80 - 125
1,2-Dichloroethane-d4 (Surr)	100		80 - 126

**Lab Sample ID: LCSD 580-300469/5**  
**Matrix: Water**  
**Analysis Batch: 300469**

**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
Vinyl chloride	10.0	6.78		ug/L		68	65 - 130	29	35
cis-1,2-Dichloroethene	10.0	7.65	*	ug/L		77	76 - 129	27	15
TCE	10.0	8.11	*	ug/L		81	70 - 131	25	15
PCE	10.0	9.38	*	ug/L		94	76 - 120	21	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 122
Trifluorotoluene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	96		77 - 120
4-Bromofluorobenzene (Surr)	99		80 - 125
1,2-Dichloroethane-d4 (Surr)	101		80 - 126

# QC Sample Results

Client: CH2M Hill, Inc.  
Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

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

**Lab Sample ID: MB 440-546352/8**  
**Matrix: Water**  
**Analysis Batch: 546352**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane (FID)	ND		0.99	0.25	ug/L			05/14/19 13:17	1
Methane (TCD)	ND		1000	500	ug/L			05/14/19 13:17	1

**Lab Sample ID: LCS 440-546352/4**  
**Matrix: Water**  
**Analysis Batch: 546352**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (TCD)	4190	4460		ug/L		106	80 - 120

**Lab Sample ID: LCS 440-546352/6**  
**Matrix: Water**  
**Analysis Batch: 546352**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (FID)	83.9	80.4		ug/L		96	80 - 120

**Lab Sample ID: LCSD 440-546352/5**  
**Matrix: Water**  
**Analysis Batch: 546352**

**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 (TCD)	4190	4570		ug/L		109	80 - 120	2	20

**Lab Sample ID: LCSD 440-546352/7**  
**Matrix: Water**  
**Analysis Batch: 546352**

**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 (FID)	83.9	78.5		ug/L		94	80 - 120	2	20

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 580-300517/3**  
**Matrix: Water**  
**Analysis Batch: 300517**

**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	0.122	J	0.20	0.020	mg/L			05/10/19 16:21	1

**Lab Sample ID: LCS 580-300517/4**  
**Matrix: Water**  
**Analysis Batch: 300517**

**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	5.24		mg/L		105	90 - 110

# QC Sample Results

Client: CH2M Hill, Inc.  
Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 580-300517/5**  
**Matrix: Water**  
**Analysis Batch: 300517**

**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	5.25		mg/L		105	90 - 110	0	15

**Lab Sample ID: 580-86076-1 MS**  
**Matrix: Water**  
**Analysis Batch: 300517**

**Client Sample ID: T4SIMW23-050919-0**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
NO3 as N	0.48	F1 B	5.00	6.05	F1	mg/L		111	90 - 110

**Lab Sample ID: 580-86076-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 300517**

**Client Sample ID: T4SIMW23-050919-0**  
**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	0.48	F1 B	5.00	6.04	F1	mg/L		111	90 - 110	0	15

**Lab Sample ID: MB 580-300714/3**  
**Matrix: Water**  
**Analysis Batch: 300714**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.90	0.14	mg/L			05/14/19 20:27	1
Sulfate	0.344	J	1.2	0.26	mg/L			05/14/19 20:27	1

**Lab Sample ID: LCS 580-300714/4**  
**Matrix: Water**  
**Analysis Batch: 300714**

**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	51.3		mg/L		103	90 - 110
Sulfate	50.0	51.1		mg/L		102	90 - 110

**Lab Sample ID: LCSD 580-300714/5**  
**Matrix: Water**  
**Analysis Batch: 300714**

**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	51.3		mg/L		103	90 - 110	0	15
Sulfate	50.0	51.1		mg/L		102	90 - 110	0	15

**Lab Sample ID: 580-86076-1 MS**  
**Matrix: Water**  
**Analysis Batch: 300714**

**Client Sample ID: T4SIMW23-050919-0**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	13		50.0	65.0		mg/L		105	90 - 110
Sulfate	8.3	B	50.0	60.5		mg/L		104	90 - 110

# QC Sample Results

Client: CH2M Hill, Inc.  
 Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-86076-1 MSD  
 Matrix: Water  
 Analysis Batch: 300714

Client Sample ID: T4SIMW23-050919-0  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	13		50.0	65.0		mg/L		105	90 - 110	0	15
Sulfate	8.3	B	50.0	60.5		mg/L		104	90 - 110	0	15

## Method: SM 5310C - TOC

Lab Sample ID: MB 440-546810/6  
 Matrix: Water  
 Analysis Batch: 546810

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			05/15/19 06:18	1

Lab Sample ID: LCS 440-546810/5  
 Matrix: Water  
 Analysis Batch: 546810

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	10.0	9.97		mg/L		100	85 - 115

Lab Sample ID: MRL 440-546810/4  
 Matrix: Water  
 Analysis Batch: 546810

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	0.0749	J	mg/L		75	50 - 150

# Lab Chronicle

Client: CH2M Hill, Inc.  
Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

**Client Sample ID: T4SIMW23-050919-0**

**Lab Sample ID: 580-86076-1**

**Date Collected: 05/09/19 09:00**

**Matrix: Water**

**Date Received: 05/10/19 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	546352	05/14/19 16:26	EI	TAL IRV
Total/NA	Analysis	300.0		1	300517	05/11/19 01:42	EMM	TAL SEA
Total/NA	Analysis	300.0		1	300714	05/15/19 02:41	EMM	TAL SEA
Total/NA	Analysis	SM 5310C		1	546810	05/15/19 10:17	YZ	TAL IRV

**Client Sample ID: MW01-050919-0**

**Lab Sample ID: 580-86076-2**

**Date Collected: 05/09/19 10:20**

**Matrix: Water**

**Date Received: 05/10/19 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	546352	05/14/19 16:48	EI	TAL IRV
Total/NA	Analysis	300.0		1	300517	05/11/19 02:18	EMM	TAL SEA
Total/NA	Analysis	300.0		1	300714	05/15/19 03:40	EMM	TAL SEA
Total/NA	Analysis	SM 5310C		1	546810	05/15/19 11:20	YZ	TAL IRV

**Client Sample ID: MW03-050919-0**

**Lab Sample ID: 580-86076-4**

**Date Collected: 05/09/19 11:45**

**Matrix: Water**

**Date Received: 05/10/19 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	546352	05/14/19 17:01	EI	TAL IRV
Total/NA	Analysis	300.0		1	300517	05/11/19 02:29	EMM	TAL SEA
Total/NA	Analysis	300.0		1	300714	05/15/19 03:51	EMM	TAL SEA
Total/NA	Analysis	SM 5310C		1	546810	05/15/19 10:29	YZ	TAL IRV

**Client Sample ID: MW06-050919-0**

**Lab Sample ID: 580-86076-5**

**Date Collected: 05/09/19 13:10**

**Matrix: Water**

**Date Received: 05/10/19 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	546352	05/14/19 17:14	EI	TAL IRV
Total/NA	Analysis	300.0		1	300517	05/11/19 02:41	EMM	TAL SEA
Total/NA	Analysis	300.0		1	300714	05/15/19 04:03	EMM	TAL SEA
Total/NA	Analysis	SM 5310C		1	546810	05/15/19 11:32	YZ	TAL IRV

**Client Sample ID: MW100-050919-0**

**Lab Sample ID: 580-86076-6**

**Date Collected: 05/09/19 12:00**

**Matrix: Water**

**Date Received: 05/10/19 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	546352	05/14/19 17:27	EI	TAL IRV
Total/NA	Analysis	300.0		1	300517	05/11/19 02:53	EMM	TAL SEA
Total/NA	Analysis	300.0		1	300714	05/15/19 04:15	EMM	TAL SEA
Total/NA	Analysis	SM 5310C		1	546810	05/15/19 11:45	YZ	TAL IRV

Eurofins TestAmerica, Seattle

# Lab Chronicle

Client: CH2M Hill, Inc.  
Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

**Client Sample ID: MW05-050919-0**

**Lab Sample ID: 580-86076-7**

**Date Collected: 05/09/19 14:20**

**Matrix: Water**

**Date Received: 05/10/19 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	546352	05/14/19 17:40	EI	TAL IRV
Total/NA	Analysis	300.0		1	300517	05/11/19 03:04	EMM	TAL SEA
Total/NA	Analysis	300.0		1	300714	05/15/19 04:27	EMM	TAL SEA
Total/NA	Analysis	SM 5310C		1	546810	05/15/19 11:57	YZ	TAL IRV

**Client Sample ID: IDW DRUM 2-050919**

**Lab Sample ID: 580-86076-8**

**Date Collected: 05/09/19 15:00**

**Matrix: Water**

**Date Received: 05/10/19 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	300469	05/10/19 19:55	W1T	TAL SEA

#### Laboratory References:

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

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

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

# Accreditation/Certification Summary

Client: CH2M Hill, Inc.  
Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

## Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-20
ANAB	DoD		L2236	01-19-22
ANAB	ISO/IEC 17025		L2236	01-19-22
California	State Program	9	2901	11-05-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-20

## Laboratory: Eurofins TestAmerica, Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-19
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 19-005R	01-23-20
Hawaii	State Program	9	N/A	01-29-20
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-20
Oregon	NELAP	10	4028	01-29-20
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-18-00214	07-09-21
Washington	State Program	10	C900	09-03-19

# Sample Summary

Client: CH2M Hill, Inc.  
Project/Site: Northwest Pipe Company GW Monitoring

Job ID: 580-86076-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-86076-1	T4SIMW23-050919-0	Water	05/09/19 09:00	05/10/19 09:35	
580-86076-2	MW01-050919-0	Water	05/09/19 10:20	05/10/19 09:35	
580-86076-3	TRIPBLANK-050919	Water	05/09/19 08:00	05/10/19 09:35	
580-86076-4	MW03-050919-0	Water	05/09/19 11:45	05/10/19 09:35	
580-86076-5	MW06-050919-0	Water	05/09/19 13:10	05/10/19 09:35	
580-86076-6	MW100-050919-0	Water	05/09/19 12:00	05/10/19 09:35	
580-86076-7	MW05-050919-0	Water	05/09/19 14:20	05/10/19 09:35	
580-86076-8	IDW DRUM 2-050919	Water	05/09/19 15:00	05/10/19 09:35	



Date: 05-29-2019  
EMAX Batch No.: 19E100

Attn: Kris Allen

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

Subject: Laboratory Report  
Project: NW PIPE COMPANY GW MONITORING

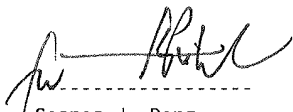
Enclosed is the Laboratory report for samples received on 05/14/19.  
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
T4SIMW23-050919-0 (580-86076-1)	E100-01	05/09/19	WATER	VOC SIM
MW01-050919-0 (580-86076-2)	E100-02	05/09/19	WATER	VOC SIM
TRIPBLANK-050919 (580-86076-3)	E100-03	05/09/19	WATER	VOC SIM
MW03-050919-0 (580-86076-4)	E100-04	05/09/19	WATER	VOC SIM
MW06-050919-0 (580-86076-5)	E100-05	05/09/19	WATER	VOC SIM
MW100-050919-0 (580-86076-6)	E100-06	05/09/19	WATER	VOC SIM
MW05-050919-0 (580-86076-7)	E100-07	05/09/19	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

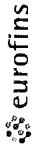
This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

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

NELAP Accredited Certificate Number CA002912018-14  
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing  
California ELAP Accredited Certificate Number 2672

19E100

**Chain of Custody Record**



Environment Testing  
 TestAmerica



<b>Client Information (Sub Contract Lab)</b>		Lab PM:	Allen, Kristine D	Carrier Tracking No(s):	COC No: 580-65998-1	
Client Contact Shipping/Receiving		Phone:		State of Origin:	Oregon	
Company: EMAX Laboratories Inc		E-Mail:	kristine.allen@testamericainc.com	Accreditations Required (See note):		
Address: 1835 W. 205th Street, Torrance		Due Date Requested:	5/22/2019	Preservation Codes: 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 Z - other (specify) Other:		
City: Torrance		TAT Requested (days):		Analysis Requested		
State, Zip: CA, 90501		PO #:		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 X - EDTA Z - other (specify)		
Phone:		WO #:		Total Number of Containers		
Email:		Project #:	58013218	Field Filtered Sample (Yes or No)		
Project Name: Northwest Pipe Company GW Monitoring		SSOW#:		SUB (TCE, cis 1,2-DCE, PCE, Vinyl Chloride - level)/TCE, cis 1,2-DCE, PCE, Vinyl Chloride -		
Site:				Perform MS/MSD (Yes or No)		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=water, BT=Tissue, A=Air)	Preservation Code:	Special Instructions/Note:
T4SIMW23-050919-0 (580-86076-1)	5/9/19	09:00 Pacific	Water	Water		Please provide CH2 Lab Spec EDD if possible.
MW01-050919-0 (580-86076-2)	5/9/19	10:20 Pacific	Water	Water		Please provide CH2 Lab Spec EDD if possible.
TRIPBLANK-050919 (580-86076-3)	5/9/19	08:00 Pacific	Water	Water		Please provide CH2 Lab Spec EDD if possible.
MW03-050919-0 (580-86076-4)	5/9/19	11:45 Pacific	Water	Water		Please provide CH2 Lab Spec EDD if possible.
MW06-050919-0 (580-86076-5)	5/9/19	13:10 Pacific	Water	Water		Please provide CH2 Lab Spec EDD if possible.
MW100-050919-0 (580-86076-6)	5/9/19	12:00 Pacific	Water	Water		Please provide CH2 Lab Spec EDD if possible.
MW05-050919-0 (580-86076-7)	5/9/19	14:20 Pacific	Water	Water		Please provide CH2 Lab Spec EDD if possible.
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte &amp; 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>						
<b>Possible Hazard Identification</b>						
<input type="checkbox"/> Unconfirmed <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 Special Instructions/QC Requirements: _____						
Empty Kit Relinquished by: _____ Date: _____						
Relinquished by: <i>Tom Blambert</i> Date/Time: 5/13/19						
Relinquished by: _____ Date/Time: _____						
Relinquished by: _____ Date/Time: _____						
Custody Seals Intact: _____ Yes <input type="checkbox"/> No <input type="checkbox"/>						
Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: 1.7						



SAMPLE RECEIPT FORM 1

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 <b>4912 4943 5420</b>	ECN <b>19E100</b> Recipient <b>Valerie Duran</b> Date <b>5/14/19</b> Time <b>935</b>
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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 type="checkbox"/> Sample ID	<input 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 checked="" 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 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 <b>1.7</b> °C	<input type="checkbox"/> Cooler 2 _____ °C
	<input type="checkbox"/> Cooler 3 _____ °C	<input type="checkbox"/> Cooler 4 _____ °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C
	<input type="checkbox"/> Cooler 8 _____ °C	<input type="checkbox"/> Cooler 9 _____ °C
	<input type="checkbox"/> Cooler 10 _____ °C	

Thermometer: **A - S/N 170324872**      **B - S/N 150555522**      **C - S/N 170324888**      **D - S/N \_\_\_\_\_**

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

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<b>1-7</b>	<b>1-20</b>	<b>D2</b>	<b>label analysis reads: VOCs, SW8260 SIM</b>	<b>RI</b>
/				

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:**

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- LEGEND:**
- |  |  |   |
|--|--|---|
| <p>Code Description- Sample Management</p> <p>D1 Analysis is not indicated in _____</p> <p><b>D2 Analysis mismatch COC vs label</b></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 &gt;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 checked="" 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 **Valerie Duran / Ceptea**      SRF **Ceptea**  
Date **5/14/19**      Date **5/14/19**

PM **[Signature]**  
Date **5/15/19**

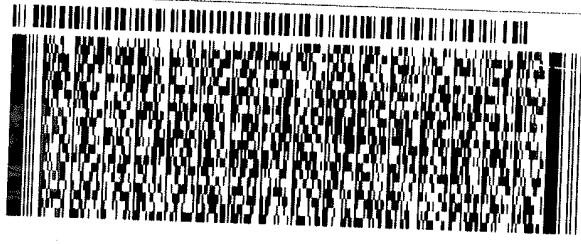
ORIGIN ID:TCMA (253) 922-2310  
SAMPLE RECEIVING  
TA-SEATTLE  
5755 8TH ST E  
FIFE, WA 98424  
UNITED STATES US

SHIP DATE: 13MAY19  
ACTWGT: 17.30 LB  
CAD: 989746/CAFE3211  
BILL SENDER

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

TORRANCE CA 90501

(253) 922-2310 REF: S680-33754  
PO: NO



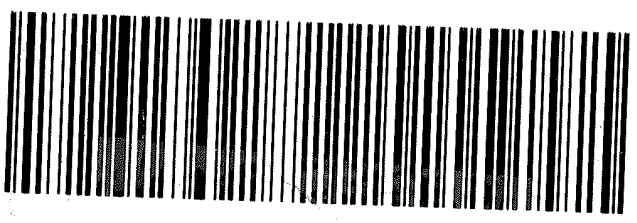
TRK# 4912 4943 5420  
0201

TUE - 14 MAY 10:3  
PRIORITY OVERNIGHT

92 HHRA 1.7

9050  
CA-US LA

Part # 169471-454 RITE EXP 12/10



## 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  
EDB BY GC/MS SIM

SDG#: 19E100

CASE NARRATIVE

Client : TESTAMERICA, INC.

Project: NW PIPE COMPANY GW MONITORING

SDG : 19E100

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

A total of seven (7) water samples were received on 05/14/19 to be analyzed for EDB 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. VOF5E09B and VOF5E12B 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. VOF5E09L/VOF5E09C and VOF5E12L/VOF5E12C 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.

Samples E100-04, -05, 06 and -07 was reported at dilution due to high concentration.

LAB CHRONICLE  
EDB BY GC/MS SIM

Client : TESTAMERICA, INC. SDG NO. : 19E100  
 Project : NW PIPE COMPANY GW MONITORING Instrument ID : F5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Prep. Data FN	Batch	Notes
WATER									
MBLK1W	V0F5E09B	1	NA	05/16/1912:57	05/16/1912:57	REY120	RDY169	V0F5E09	Method Blank
LCS1W	V0F5E09L	1	NA	05/16/1911:40	05/16/1911:40	REY117	RDY169	V0F5E09	Lab Control Sample (LCS)
LCD1W	V0F5E09C	1	NA	05/16/1912:06	05/16/1912:06	REY118	RDY169	V0F5E09	LCS Duplicate
TRIPBLANK-050919 (580-86076-3)	E100-01	1	NA	05/16/1913:47	05/16/1913:47	REY122	RDY169	V0F5E09	Field Sample
T4S1MW23-050919-0 (580-86076-1)	E100-02	1	NA	05/16/1918:25	05/16/1918:25	REY133	RDY169	V0F5E09	Field Sample
MW01-050919-0 (580-86076-2)	E100-02	1	NA	05/16/1918:51	05/16/1918:51	REY134	RDY169	V0F5E09	Field Sample
MBLK2W	V0F5E12B	1	NA	05/21/1911:43	05/21/1911:43	REY211	RDY169	V0F5E12	Method Blank
LCS2W	V0F5E12L	1	NA	05/21/1910:52	05/21/1910:52	REY209	RDY169	V0F5E12	Lab Control Sample (LCS)
LCD2W	V0F5E12C	1	NA	05/21/1911:17	05/21/1911:17	REY210	RDY169	V0F5E12	LCS Duplicate
MW01-050919-0 (580-86076-2)DL	E100-02I	100	NA	05/21/1913:24	05/21/1913:24	REY215	RDY169	V0F5E12	Diluted Sample
MW03-050919-0 (580-86076-4)	E100-04I	250	NA	05/21/1913:50	05/21/1913:50	REY216	RDY169	V0F5E12	Diluted Sample
MW06-050919-0 (580-86076-5)	E100-05I	250	NA	05/21/1914:15	05/21/1914:15	REY217	RDY169	V0F5E12	Diluted Sample
MW05-050919-0 (580-86076-7)	E100-07I	100	NA	05/21/1914:40	05/21/1914:40	REY218	RDY169	V0F5E12	Diluted Sample
MW100-050919-0 (580-86076-6)	E100-06I	250	NA	05/21/1915:06	05/21/1915:06	REY219	RDY169	V0F5E12	Diluted Sample
MW05-050919-0 (580-86076-7)DL	E100-07J	1000	NA	05/21/1915:35	05/21/1915:35	REY220	RDY169	V0F5E12	Diluted Sample
MW06-050919-0 (580-86076-5)DL	E100-05J	500	NA	05/21/1916:01	05/21/1916:01	REY221	RDY169	V0F5E12	Diluted Sample
MW100-050919-0 (580-86076-6)DL	E100-06J	1000	NA	05/21/1916:25	05/21/1916:25	REY222	RDY169	V0F5E12	Diluted Sample

FN - Filename  
 % Moist - Percent Moisture

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# SAMPLE RESULTS

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/16/19 18:25
Sample ID   : T4SIMW23-050919-0 (580-86076-1) Date Analyzed: 05/16/19 18:25
Lab Samp ID : E100-01                     Dilution Factor: 1
Lab File ID : REY133                       Matrix          : WATER
Ext Btch ID : VOF5E09                       % Moisture     : NA
Calib. Ref. : RDY169                       Instrument ID   : TOF5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	0.34	0.20	0.10
VINYL CHLORIDE	ND	0.10	0.020
TETRACHLOROETHENE	1.9	0.20	0.10
TCE	0.50	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.571	0.5000	114	70-130
4-BROMOFLUOROBENZENE	0.453	0.5000	90.6	70-130
TOLUENE-D8	0.439	0.5000	87.8	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client       : TESTAMERICA, INC.           Date Collected: 05/09/19
Project      : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.    : 19E100                     Date Extracted: 05/16/19 18:51 # 05/21/19 13:24
Sample ID    : MW01-050919-0 (580-86076-2) Date Analyzed: 05/16/19 18:51 # 05/21/19 13:24
Lab Samp ID  : E100-02 #E100-021         Dilution Factor: 1 # 100
Lab File ID  : REY134 #REY215           Matrix          : WATER
Ext Btch ID  : VOF5E09 #VOF5E12        % Moisture     : NA
Calib. Ref.  : RDY169 #RDY169          Instrument ID   : TOF5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
# CIS-1,2-DICHLOROETHYLENE	100	20	10
VINYL CHLORIDE	3.8	0.10	0.020
# TETRACHLOROETHENE	220	20	10
# TCE	28	20	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.578	0.5000	116	70-130
4-BROMOFLUOROBENZENE	0.468	0.5000	93.6	70-130
TOLUENE-D8	0.438	0.5000	87.6	70-130
# 1,2-DICHLOROETHANE-D4	54.5	50.00	109	70-130
# 4-BROMOFLUOROBENZENE	47.0	50.00	94.1	70-130
# TOLUENE-D8	46.0	50.00	92.0	70-130

# Members of the Associated File

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/16/19 18:51
Sample ID   : MW01-050919-0 (580-86076-2) Date Analyzed: 05/16/19 18:51
Lab Samp ID: E100-02                     Dilution Factor: 1
Lab File ID: REY134                      Matrix          : WATER
Ext Btch ID: VOF5E09                     % Moisture      : NA
Calib. Ref.: RDY169                     Instrument ID   : TOF5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	100E	0.20	0.10
VINYL CHLORIDE	3.8	0.10	0.020
TETRACHLOROETHENE	200E	0.20	0.10
TCE	30E	0.20	0.10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	0.578	0.5000	116	70-130
4-BROMOFLUOROBENZENE	0.468	0.5000	93.6	70-130
TOLUENE-D8	0.438	0.5000	87.6	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/21/19 13:24
Sample ID   : MW01-050919-0 (580-86076-2)DL Date Analyzed: 05/21/19 13:24
Lab Samp ID : E100-02I                   Dilution Factor: 100
Lab File ID : REY215                     Matrix          : WATER
Ext Btch ID : VOF5E12                     % Moisture     : NA
Calib. Ref.: RDY169                       Instrument ID   : TOF5
=====

```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	100	20	10
VINYL CHLORIDE	5.7J	10	2.0
TETRACHLOROETHENE	220	20	10
TCE	28	20	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	54.5	50.00	109	70-130
4-BROMOFLUOROBENZENE	47.0	50.00	94.1	70-130
TOLUENE-D8	46.0	50.00	92.0	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/16/19 13:47
Sample ID   : TRIPBLANK-050919 (580-86076-3) Date Analyzed: 05/16/19 13:47
Lab Samp ID: E100-03                     Dilution Factor: 1
Lab File ID: REY122                       Matrix          : WATER
Ext Btch ID: VOF5E09                       % Moisture      : NA
Calib. Ref.: RDY169                       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	0.536	0.5000	107	70-130
4-BROMOFLUOROBENZENE	0.462	0.5000	92.5	70-130
TOLUENE-D8	0.448	0.5000	89.6	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/21/19 13:50
Sample ID   : MW03-050919-0 (580-86076-4) Date Analyzed: 05/21/19 13:50
Lab Samp ID: E100-041                    Dilution Factor: 250
Lab File ID: REY216                       Matrix          : WATER
Ext Btch ID: VOF5E12                      % Moisture     : NA
Calib. Ref.: RDY169                       Instrument ID   : TOF5
=====

```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	860	50	25
VINYL CHLORIDE	46	25	5.0
TETRACHLOROETHENE	370	50	25
TCE	100	50	25

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	134	125.0	107	70-130
4-BROMOFLUOROBENZENE	113	125.0	90.1	70-130
TOLUENE-D8	112	125.0	89.5	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

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=====
Client       : TESTAMERICA, INC.           Date Collected: 05/09/19
Project      : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.    : 19E100                     Date Extracted: 05/21/19 14:15 # 05/21/19 16:01
Sample ID    : MW06-050919-0 (580-86076-5) Date Analyzed: 05/21/19 14:15 # 05/21/19 16:01
Lab Samp ID  : E100-051 #E100-05J        Dilution Factor: 250 # 500
Lab File ID  : REY217 #REY221            Matrix          : WATER
Ext Btch ID  : VOF5E12 #VOF5E12          % Moisture      : NA
Calib. Ref.  : RDY169 #RDY169           Instrument ID   : TOF5
=====

```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
# CIS-1,2-DICHLOROETHYLENE	1900	100	50
VINYL CHLORIDE	40	25	5.0
TETRACHLOROETHENE	980	50	25
TCE	210	50	25

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	134	125.0	107	70-130
4-BROMOFLUOROBENZENE	115	125.0	92.1	70-130
TOLUENE-D8	112	125.0	89.9	70-130
# 1,2-DICHLOROETHANE-D4	279	250.0	112	70-130
# 4-BROMOFLUOROBENZENE	220	250.0	88.2	70-130
# TOLUENE-D8	215	250.0	85.9	70-130

# Members of the Associated File

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/21/19 14:15
Sample ID   : Mw06-050919-0 (580-86076-5) Date Analyzed: 05/21/19 14:15
Lab Samp ID : E100-05I                   Dilution Factor: 250
Lab File ID : REY217                      Matrix          : WATER
Ext Btch ID : VOF5E12                     % Moisture      : NA
Calib. Ref. : RDY169                      Instrument ID   : TOF5
=====

```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	1900E	50	25
VINYL CHLORIDE	40	25	5.0
TETRACHLOROETHENE	980	50	25
TCE	210	50	25

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	134	125.0	107	70-130
4-BROMOFLUOROBENZENE	115	125.0	92.1	70-130
TOLUENE-D8	112	125.0	89.9	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/21/19 16:01
Sample ID   : MW06-050919-0 (580-86076-5)DL Date Analyzed: 05/21/19 16:01
Lab Samp ID : E100-05J                   Dilution Factor: 500
Lab File ID : REY221                     Matrix          : WATER
Ext Btch ID : VOF5E12                    % Moisture     : NA
Calib. Ref. : RDY169                     Instrument ID   : TOF5
=====

```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	1900	100	50
VINYL CHLORIDE	40J	50	10
TETRACHLOROETHENE	970	100	50
TCE	210	100	50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	279	250.0	112	70-130
4-BROMOFLUOROBENZENE	220	250.0	88.2	70-130
TOLUENE-D8	215	250.0	85.9	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client       : TESTAMERICA, INC.                Date Collected: 05/09/19
Project      : NW PIPE COMPANY GW MONITORING    Date Received: 05/14/19
Batch No.    : 19E100                          Date Extracted: 05/21/19 15:06 # 05/21/19 16:25
Sample ID    : MW100-050919-0 (580-86076-6)    Date Analyzed: 05/21/19 15:06 # 05/21/19 16:25
Lab Samp ID  : E100-06I #E100-06J             Dilution Factor: 250 # 1000
Lab File ID  : REY219 #REY222                 Matrix          : WATER
Ext Btch ID  : VOF5E12 #VOF5E12              % Moisture      : NA
Calib. Ref.  : RDY169 #RDY169                 Instrument ID   : TOF5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
# CIS-1,2-DICHLOROETHYLENE	1900	200	100
VINYL CHLORIDE	44	25	5.0
TETRACHLOROETHENE	1000	50	25
TCE	220	50	25

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	134	125.0	107	70-130
4-BROMOFLUOROBENZENE	107	125.0	85.6	70-130
TOLUENE-D8	101	125.0	81.1	70-130
# 1,2-DICHLOROETHANE-D4	579	500.0	116	70-130
# 4-BROMOFLUOROBENZENE	453	500.0	90.6	70-130
# TOLUENE-D8	446	500.0	89.2	70-130

# Members of the Associated File

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/21/19 15:06
Sample ID   : MW100-050919-0 (580-86076-6) Date Analyzed: 05/21/19 15:06
Lab Samp ID: E100-061                    Dilution Factor: 250
Lab File ID: REY219                       Matrix          : WATER
Ext Btch ID: VOF5E12                       % Moisture     : NA
Calib. Ref.: RDY169                         Instrument ID   : TOF5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	2000E	50	25
VINYL CHLORIDE	44	25	5.0
TETRACHLOROETHENE	1000	50	25
TCE	220	50	25

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	134	125.0	107	70-130
4-BROMOFLUOROBENZENE	107	125.0	85.6	70-130
TOLUENE-D8	101	125.0	81.1	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/21/19 16:25
Sample ID   : MW100-050919-0 (580-86076-6)DL Date Analyzed: 05/21/19 16:25
Lab Samp ID : E100-06J                   Dilution Factor: 1000
Lab File ID : REY222                     Matrix          : WATER
Ext Btch ID : VOF5E12                    % Moisture     : NA
Calib. Ref. : RDY169                     Instrument ID   : TOF5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	1900	200	100
VINYL CHLORIDE	43J	100	20
TETRACHLOROETHENE	980	200	100
TCE	210	200	100

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	579	500.0	116	70-130
4-BROMOFLUOROBENZENE	453	500.0	90.6	70-130
TOLUENE-D8	446	500.0	89.2	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

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=====
Client       : TESTAMERICA, INC.           Date Collected: 05/09/19
Project      : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.    : 19E100                     Date Extracted: 05/21/19 14:40 # 05/21/19 15:35
Sample ID    : MW05-050919-0 (580-86076-7) Date Analyzed: 05/21/19 14:40 # 05/21/19 15:35
Lab Samp ID  : E100-07I #E100-07J         Dilution Factor: 100 # 1000
Lab File ID  : REY218 #REY220            Matrix          : WATER
Ext Btch ID  : VOF5E12 #VOF5E12          % Moisture      : NA
Calib. Ref.  : RDY169 #RDY169            Instrument ID   : TOF5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
# CIS-1,2-DICHLOROETHYLENE	1700	200	100
VINYL CHLORIDE	14	10	2.0
# TETRACHLOROETHENE	4400	200	100
TCE	240	20	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	53.1	50.00	106	70-130
4-BROMOFLUOROBENZENE	46.0	50.00	91.9	70-130
TOLUENE-D8	43.8	50.00	87.6	70-130
# 1,2-DICHLOROETHANE-D4	580	500.0	116	70-130
# 4-BROMOFLUOROBENZENE	489	500.0	97.9	70-130
# TOLUENE-D8	469	500.0	93.7	70-130

# Members of the Associated File

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

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=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/21/19 14:40
Sample ID   : MW05-050919-0 (580-86076-7) Date Analyzed: 05/21/19 14:40
Lab Samp ID: E100-071                   Dilution Factor: 100
Lab File ID: REY218                     Matrix          : WATER
Ext Btch ID: VOF5E12                   % Moisture     : NA
Calib. Ref.: RDY169                     Instrument ID   : TOF5
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	1700E	20	10
VINYL CHLORIDE	14	10	2.0
TETRACHLOROETHENE	4300E	20	10
TCE	240	20	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	53.1	50.00	106	70-130
4-BROMOFLUOROBENZENE	46.0	50.00	91.9	70-130
TOLUENE-D8	43.8	50.00	87.6	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: 05/09/19
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/14/19
Batch No.   : 19E100                     Date Extracted: 05/21/19 15:35
Sample ID   : MW05-050919-0 (580-86076-7)DL Date Analyzed: 05/21/19 15:35
Lab Samp ID : E100-07J                   Dilution Factor: 1000
Lab File ID : REY220                     Matrix          : WATER
Ext Btch ID : VOF5E12                    % Moisture     : NA
Calib. Ref. : RDY169                     Instrument ID   : TOF5
=====

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PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
CIS-1,2-DICHLOROETHYLENE	1700	200	100
VINYL CHLORIDE	ND	100	20
TETRACHLOROETHENE	4400	200	100
TCE	240	200	100

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	580	500.0	116	70-130
4-BROMOFLUOROBENZENE	489	500.0	97.9	70-130
TOLUENE-D8	469	500.0	93.7	70-130



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# QC SUMMARIES

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: NA
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/16/19
Batch No.   : 19E100                     Date Extracted: 05/16/19 12:57
Sample ID   : MBLK1W                     Date Analyzed: 05/16/19 12:57
Lab Samp ID: VOF5E09B                    Dilution Factor: 1
Lab File ID: REY120                       Matrix          : WATER
Ext Btch ID: VOF5E09                      % Moisture      : NA
Calib. Ref.: RDY169                       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	0.548	0.5000	110	70-130
4-BROMOFLUOROBENZENE	0.460	0.5000	91.9	70-130
TOLUENE-D8	0.447	0.5000	89.4	70-130

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: TESTAMERICA, INC.  
PROJECT: NW PIPE COMPANY GW MONITORING  
BATCH NO.: 19E100  
METHOD: SW5030B/8260B SIM

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1  
SAMPLE ID: MBLK1W  
LAB SAMP ID: VOF5E09B VOF5E09L VOF5E09C  
LAB FILE ID: REY120 REY117 REY118  
DATE EXTRACTED: 05/16/1912:57 05/16/1911:40 05/16/1912:06 DATE COLLECTED: NA  
DATE ANALYZED: 05/16/1912:57 05/16/1911:40 05/16/1912:06 DATE RECEIVED: 05/16/19  
PREP. BATCH: VOF5E09 VOF5E09 VOF5E09  
CALIB. REF: RDY169 RDY169 RDY169

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	0.503	101	0.500	0.487	97	3	70-130	20
Vinyl Chloride	ND	0.500	0.395	79	0.500	0.388	78	2	60-140	20
Tetrachloroethene	ND	0.500	0.483	97	0.500	0.471	94	3	70-130	20
TCE	ND	0.500	0.527	105	0.500	0.506	101	4	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	0.541	108	0.500	0.491	98	70-130
4-Bromofluorobenzene	0.500	0.482	96	0.500	0.432	86	70-130
Toluene-d8	0.500	0.456	91	0.500	0.416	83	70-130

METHOD SW5030B/8260B SIM  
EDB BY GC/MS SIM

```

=====
Client      : TESTAMERICA, INC.           Date Collected: NA
Project     : NW PIPE COMPANY GW MONITORING Date Received: 05/21/19
Batch No.   : 19E100                     Date Extracted: 05/21/19 11:43
Sample ID   : MBLK2W                     Date Analyzed: 05/21/19 11:43
Lab Samp ID: VOF5E12B                    Dilution Factor: 1
Lab File ID: REY211                      Matrix          : WATER
Ext Btch ID: VOF5E12                     % Moisture     : NA
Calib. Ref.: RDY169                      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	0.515	0.5000	103	70-130
4-BROMOFLUOROBENZENE	0.463	0.5000	92.6	70-130
TOLUENE-D8	0.446	0.5000	89.3	70-130

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: TESTAMERICA, INC.  
PROJECT: NW PIPE COMPANY GW MONITORING  
BATCH NO.: 19E100  
METHOD: SW5030B/8260B SIM

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1  
SAMPLE ID: MBLK2W  
LAB SAMP ID: VOF5E12B VOF5E12L VOF5E12C  
LAB FILE ID: REY211 REY209 REY210  
DATE EXTRACTED: 05/21/1911:43 05/21/1910:52 05/21/1911:17 DATE COLLECTED: NA  
DATE ANALYZED: 05/21/1911:43 05/21/1910:52 05/21/1911:17 DATE RECEIVED: 05/21/19  
PREP. BATCH: VOF5E12 VOF5E12 VOF5E12  
CALIB. REF: RDY169 RDY169 RDY169

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	0.518	104	0.500	0.514	103	1	70-130	20
Vinyl Chloride	ND	0.500	0.426	85	0.500	0.417	83	2	60-140	20
Tetrachloroethene	ND	0.500	0.474	95	0.500	0.477	95	1	70-130	20
TCE	ND	0.500	0.501	100	0.500	0.501	100	0	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	0.537	107	0.500	0.536	107	70-130
4-Bromofluorobenzene	0.500	0.497	99	0.500	0.455	91	70-130
Toluene-d8	0.500	0.457	91	0.500	0.455	91	70-130





## Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 580-86076-1

**Login Number: 86076**

**List Source: Eurofins TestAmerica, Seattle**

**List Number: 1**

**Creator: Blankinship, Tom X**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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: CH2M Hill, Inc.

Job Number: 580-86076-1

**Login Number: 86076**  
**List Number: 2**  
**Creator: Ornelas, Olga**

**List Source: Eurofins TestAmerica, Irvine**  
**List Creation: 05/11/19 12:06 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	