#### DES Waste Management Division 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095

# DATA TRANSMITTAL INITIAL TREATMENT SYSTEM ANALYTICAL DATA TEMPORARY GROUNDWATER DISCHARGE PERMIT

Dartmouth College, Rennie Farm Site
Hanover Center Road
Hanover, New Hampshire
NHDES Site No. 201111109, DES Project No. 277737

#### Prepared For:

Dartmouth College Office of Environmental Health and Safety 37 Dewey Field Road, Suite 6216 Hanover, NH 03755 Phone Number: (603) 646-0235

RP Contact Name: Mr. Michael D. Cimis Assistant Director of Environmental Health & Safety RP Contact Email: Michael.D.Cimis@Dartmouth.EDU

Prepared By:
GZA GeoEnvironmental, Inc.
5 Commerce Park North, Suite 201
Bedford, New Hampshire 03110
Phone Number: (603) 232-8732
Contact Name: Mr. James M. Wieck, P.G.
Contact Email: James.wieck@gza.com
GZA Project No. 04.0190030.02

Date of Report: February 10, 2017



Proactive by Design

GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION MANAGEMENT

5 Commerce Park North Suite 201 Bedford, NH 03110 T: 603.623.3600 F: 603.624.9463 www.gza.com



#### Via Email

February 10, 2017 File No. 04.0190030.02

Mr. Paul Rydel, P.G. New Hampshire Department of Environmental Services 29 Hazen Drive, P.O. Box 95 Concord, New Hampshire 03301

Re: Data Transmittal

Initial Treatment System Analytical Data

Temporary Groundwater Discharge Permit (Permit)

Dartmouth College, Rennie Farm Site

Hanover Center Road Hanover, New Hampshire

NHDES Site No. 201111109, DES Project No. 277737

Dear Mr. Rydel:

As requested, GZA GeoEnvironmental, Inc. (GZA) prepared this data transmittal on behalf of Dartmouth College (Dartmouth), to provide the New Hampshire Department of Environmental Services (NHDES) with the results of initial water quality data collected in accordance with the Temporary Groundwater Discharge Permit (Permit;No. TGP-201111109-H-001) for the remedial system at the above referenced site. A copy of the Permit is attached for your reference.

Startup of the remedial system occurred on February 1, 2017. Operation of the system has been periodic to comply with the sampling date and lab turnaround requirements of the Permit. This non-continuous system operation was necessary to meet the laboratory turnaround requirements of the Permit given the non-business day period of the laboratory during weekends. As such, the day number of certain samples do not correspond with the calendar date following February 1, 2017.

This data transmittal includes the results of laboratory analyses for samples collected on Day 1 and Day 3 of the discharge. As we have discussed, supplemental samples were collected on the second day of the discharge period for analysis of the suite of metals required by the Permit. Further startup information will be provided following completion of the entire startup monitoring period.



Samples were collected by GZA and submitted to Eastern Analytical Inc. (EAI) of Concord, New Hampshire for analysis. During each of the sampling events, samples were collected from the treatment system influent (untreated groundwater), midpoint (after the lead Ambersorb treatment vessel), and effluent (final treated groundwater before discharge). As described in GZA's Remedial Design Report<sup>1</sup> (RDR) dated December 2, 2016, the treatment system includes: pretreatment using particulate and granular activated carbon (GAC), and treatment using two vessels filled with Ambersorb.

Day 1 and Day 3 samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B, 1,4-dioxane by EPA Method 8260B SIM, RCRA 8 metals, iron and manganese. The supplemental metals samples collected on Day 2 were analyzed for RCRA 8 metals, iron, and manganese.

Copies of the analytical laboratory reports provided by EAI are attached. Below is a summary of key findings of the sampling and analysis.

#### VOC results:

- Site VOCs 1,4-dioxane and Diethylether were detected in influent;
- Certain VOCs related to the system components and construction (materials and pipe glues) were detected in influent samples including: acetone, 2-butanone (MEK), and tetrahydrofuran (THF);
- VOCs were removed by the remedial system to below AGQS and lab reporting limits as indicated on the
  effluent sample results (he reporting limit for 1,4-dioxane is 0.25 μg/L, please refer to EAI's laboratory
  reports for reporting limits for other VOCs).

#### Metals results:

- Naturally occurring metals iron (Fe), manganese (Mn), and barium (Ba) were detected in system influent;
- Mercury (Hg), selenium (Se), and arsenic (As) were detected in certain midpoint and effluent samples. These metals are anticipated to be associated with virgin GAC that is present in the treatment train of the remedial system. Based on information from vendor of carbon, it is anticipated that concentrations will diminish over time. GZA has collected additional water quality samples from before and after the carbon vessel for metals analyses to confirm the source of the metals anticipated to be related to the virgin carbon.
- None of the detected metal concentrations exceed AGQS.

<sup>&</sup>lt;sup>1</sup> Report by GZA titled "Remedial Design Plans and Construction Specifications Report, Dartmouth College, Rennie Farm Site, Hanover Center Road, Hanover, New Hampshire, NHDES Site No. 201111109, DES Project No. 277737



We appreciate your review of this letter and look forward to receiving any comments you may have. Should you have any questions, please do not hesitate to contact Mr. James M. Wieck at 603-232-8732.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

James M. Wieck, P.G. Senior Project Manager

Keven R. Lamb, P.G., C.G.W.P.

Principal

JMW/SRL:kr

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Attachments: Permit

Eastern Analytical Inc. Laboratory Reports

cc: Ms. Maureen O'Leary, PhD, MBA, CBSP, Dartmouth College

Mr. Michael D. Cimis, CIH, CHMM, Dartmouth College

Ellen Arnold, Esq., Dartmouth College



**Permit** 



# The State of New Hampshire Department of Environmental Services

Clark B. Freise, Acting Commissioner



January 10, 2017

MR.MICHAEL D. CIMIS DARTMOUTH COLLEGE ENVIRONMENTAL HEALTH & SAFETY 37 DEWEY FIELD ROAD – SUITE 6216 HANOVER, NH 03755

#### TEMPORARY GROUNDWATER DISCHARGE PERMIT (5B6)

SUBJECT: HANOVER- Dartmouth College, Rennie Farm Site, Hanover Center Road,

Temporary Groundwater Discharge Permit – Groundwater Treatment

Site # 201111109 / RSN# / Activity#

Dear Mr. Cimis:

Please find enclosed the Temporary Groundwater Discharge Permit Number TGP-201111109-H-001, approved by the Water Division of the Department of Environmental Services (Department) for the discharge of treated groundwater generated during groundwater remediation activities.

The discharge shall not result in erosion or sedimentation or directly impact any surface water, wetland, or storm water drainage way. All water discharged shall be treated to meet Ambient Groundwater Quality Standards as outlined in Chapter Env-Or 600 – *Contaminated Site Management* prior to discharge. The discharge volume shall be limited to 7,200 gpd or less. Monitoring program for the treatment system is included in Condition #7. The discharge shall not exceed the site's infiltration capacity.

Please contact me at the number below when the discharge begins. Should you have any questions, please contact me at the Water Division at (603) 271-2858 or by e-mail at <u>mitchell.locker@des.nh.gov</u>.

Sincerely,

for Mitchell Locker, P.G.

copy:

Drinking Water & Groundwater Bureau

MDL/ml S:\WD-DWGB\...\...\2017mdl\Permits\201111109-H-001 tgp 5B6 remedial

e-copy Steve Roy, DES-WD / DWGB

Paul Rydel, DES-WMD / ORCB James Wieck, GZA Environmental

P.O. Box 95, 29 Hazen Drive, Concord, New Hampshire 03302-0095

Telephone: (603) 271-2858 DES Web site: **www.des.nh.gov** 



#### The

# NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES WATER DIVISION

hereby issues

#### TEMPORARY GROUNDWATER DISCHARGE PERMIT

NO. TGP-201111109-H-001

to the permittee

for the discharge of treated groundwater generated during groundwater remediation activities

at the DARTMOUTH COLLEGE RENNIE FARM SITE

located off of HANOVER CENTER ROAD

in HANOVER, NH

with infiltration to the ground on site.

TO: MR.MICHAEL D. CIMIS DARTMOUTH COLLEGE

ENVIRONMENTAL HEALTH & SAFETY 37 DEWEY FIELD ROAD – SUITE 6216

HANOVER, NH 03755

Date of Issuance: January 10, 2017 Date of Expiration: May 10, 2017

(continued)

Pursuant to authority in N.H. RSA 485-A:13, I(a), the New Hampshire Department of Environmental Services (Department), hereby grants this permit to discharge up to 7,200-gallons per day of treated groundwater for infiltration at the above described location subject to the following conditions:

#### STANDARD PERMIT CONDITIONS

- 1. The permittee shall not violate surface water quality standards (N.H. Admin. Rules, Env-Wq 1700) in any surface water body.
- 2. The discharge shall infiltrate to the ground on-site. The discharge shall not result in erosion or sedimentation on site or into any surface water, wetland, or drainage way.
- 3. The discharge shall not violate Ambient Groundwater Quality Standards (AGQS) adopted by the Department (N.H. Admin. Rules, Env-Wq 402).
- 4. The permittee shall discharge only treated groundwater related to the construction dewatering activities in accordance with the Temporary Groundwater Discharge Permit application dated December 29, 2016.
- 5. The permittee shall allow an authorized member of the Department's staff, or its agent, to enter the property covered by this permit for the purpose of collecting information, examining records, collecting samples, or undertaking other action associated with this permit.
- 6. The Department reserves the right under RSA 485-A, to require additional sampling of the discharge and/or discharge area.
- 7. For this dewatering and discharge action the permittee shall maintain a water quality monitoring program and submit treatment system monitoring results to the Department's Groundwater Discharge Permits Coordinator according to the following table.

Sampling Period	Sampling Frequency	Parameters
Start up or first day of operation (24 hr. turnaround)	Periodic headspace screening for first six hours of treatment system operation.	Portable gas chromatograph and/or volatile organic analyzer.
	Water samples collected after six hours of system operation.	(1)NHDES Full-List VOCs using EPA Method 8260B with SIM for low-level 1,4-dioxane analysis, RCRA-8 metals, iron, manganese - for effluent
Remainder of first week (48 hr. turnaround)	Water samples collected on day 3, 5 and 7.	NHDES Full-List VOCs using EPA Method 8260B with SIM for low-level 1,4-dioxane analysis, RCRA-8 metals, iron, manganese – for effluent for the primary vessel and treatment system influent.
Remainder of first month	Water samples collected weekly.	Same as above.
Remainder of permit	Water samples collected monthly.	Same as above.

<sup>(1)</sup> VOCs analysis shall be via EPA Method 8260B SIM or equal, and shall include 1,4-dioxane results with detection levels at 0.25 micrograms/liter (ug/l) or less.

Headspace screening shall be conducted when any laboratory sample is collected. Except for headspace screening, samples shall be analyzed by a laboratory certified by the U.S. Environmental Protection Agency and the New Hampshire Department of Environmental Services. Quality Assurance / Quality Control information shall be submitted with all laboratory results. The term "turnaround" shall mean the time span between sampling and notification of results to the permittee.

- 8. When modifications or repairs to the extraction, treatment or discharge system that causes the system to be shut down; the start-up sampling shall be performed in accordance with the first day sampling requirements outlined in Condition #7 upon initiation of treatment system start-up.
- 9. If verification sampling (Condition #7) documents an exceedance of AGQS the permittee shall resample the discharge to confirm the results. If resampling verifies the exceedance of AGQS the permittee shall notify the Department's Waste Management Division's Project Manager within one work day by telephone and within 72 hours in writing. An explanation of the cause for exceeding AGQS, a description of all corrective measures performed, and any maintenance conducted shall be submitted within one month of corrected issue or system shutdown.
- 10. All water discharged shall meet Ambient Groundwater Quality Standards prior to discharge and infiltration on site.

for Mitchell D. Locker

Water Division / Drinking Water & Groundwater Bureau

Permits Coordinator

Under RSA 21-0:14 and 21-0:7-IV, any person aggrieved by any terms or conditions of this permit may appeal to the Water Council in accordance with RSA 541-A and N.H. Admin. Rules, Env-WC 200. Such appeal must be made to the Council within 30 days and must be addressed to the Chairman, Water Council, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095.



**Eastern Analytical Inc. Laboratory Reports** 



professional laboratory and drilling services

Jim Wieck
GZA GeoEnvironmental, Inc. (NH)
5 Commerce Park North, Suite 201
Bedford, NH 03110

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Subject: Laboratory Report

Eastern Analytical, Inc. ID: 165268

Client Identification: Rennie Farm | 04.0190030.02

Date Received: 2/1/2017

Dear Mr. Wieck:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit</p>

> : "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director Date # of pages (excluding of

# SAMPLE CONDITIONS PAGE



EAI ID#: 165268

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Temperature upon	receipt (	(°C):	7.7
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Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received		Sample Matrix	Exceptions/Comments (other than thermal preservation)
165268.01	System Influent	2/1/17	2/1/17	aqueous	Adheres to Sample Acceptance Policy
165268.02	System Mid	2/1/17	2/1/17	aqueous	Adheres to Sample Acceptance Policy
165268.03	System Effluent	2/1/17	2/1/17	aqueous	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater, 20th Edition, 1998 and 22nd Edition, 2012
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992



EAI ID#: 165268

Client: GZA GeoEnvironmental, Inc. (NH)

Sample ID:	System Influent	System Mid	System Effluent
Lab Sample ID:	165268.01	165268.02	165268.03
Matrix:	agueous	agueous	agueous
Date Sampled:	2/1/17	2/1/17	2/1/17
Date Received:	2/1/17	2/1/17	2/1/17
Units:	ug/L	ug/L	ug/L
Date of Analysis:	2/2/17	2/1/17	2/1/17
Analyst:	BAM	BAM	BAM
-			
Method:	8260B	8260B	8260B
Dilution Factor:	2	1	1
Dichlorodifluoromethane	< 10	< 5	< 5
Chloromethane	< 4	< 2	< 2
Vinyl chloride	< 4	< 2	< 2
Bromomethane	< 4	< 2	< 2
Chloroethane	< 10	< 5	< 5
Trichlorofluoromethane	< 10	< 5	< 5
Diethyl Ether	20	< 5	< 5
Acetone	100	< 10	< 10
1,1-Dichloroethene	< 2	< 1	< 1
tert-Butyl Alcohol (TBA)	< 60	< 30	< 30
Methylene chloride	< 10	< 5	< 5
Carbon disulfide	< 5 < 5	< 5 < 5	< 5 < 5
Methyl-t-butyl ether(MTBE)	< 10	< 5 < 5	< 5 < 5
Ethyl-t-butyl ether(ETBE) Isopropyl ether(DIPE)	< 10	< 5 < 5	< 5
tert-amyl methyl ether(TAME)	< 10	< 5	< 5
trans-1,2-Dichloroethene	< 2	< 2	< 2
1,1-Dichloroethane	< 2	< 2	< 2
2,2-Dichloropropane	< 2	< 2	< 2
cis-1,2-Dichloroethene	< 2	< 2	< 2
2-Butanone(MEK)	130	< 10	< 10
Bromochloromethane	< 2	< 2	< 2
Tetrahydrofuran(THF)	370	< 10	< 10
Chloroform	< 2	< 2	< 2
1,1,1-Trichloroethane	< 2	< 2	< 2
Carbon tetrachloride	< 2	< 2	< 2
1,1-Dichloropropene	< 2	< 2	< 2
Benzene	< 2	< 1	< 1
1,2-Dichloroethane	< 2	< 2	< 2
Trichloroethene	< 2	< 2	< 2
1,2-Dichloropropane	< 2	< 2	< 2
Dibromomethane	< 2	< 2	< 2
Bromodichloromethane	< 1	< 0.5	< 0.5
1,4-Dioxane	< 100	< 50	< 50
4-Methyl-2-pentanone(MIBK)	< 20	< 10	< 10
cis-1,3-Dichloropropene	< 2	< 2	< 2
Toluene	< 2	< 1	< 1
trans-1,3-Dichloropropene	< 2	< 2	< 2
1,1,2-Trichloroethane	< 2 < 20	< 2 < 10	< 2 < 10
2-Hexanone Tetrachloroethene	< 20 < 2	< 10	< 10
1,3-Dichloropropane	< 2	< 2	< 2
Dibromochloromethane	< 2	< 2	< 2
1,2-Dibromoethane(EDB)	< 4	< 2	< 2
Chlorobenzene	< 2	< 2	< 2
1,1,1,2-Tetrachloroethane	< 2	< 2	< 2
Ethylbenzene	< 2	< 1	< 1
	- 2	- 1	- 1



EAI ID#: 165268

Client: GZA GeoEnvironmental, Inc. (NH)

Sample ID:	System Influent	System Mid	System
			Effluent
Lab Sample ID:	165268.01	165268.02	165268.03
Matrix:	aqueous	aqueous	aqueous
Date Sampled:	2/1/17	2/1/17	2/1/17
Date Received:	2/1/17	2/1/17	2/1/17
Units:	ug/L	ug/L	ug/L
Date of Analysis:	2/2/17	2/1/17	2/1/17
Analyst:	BAM	BAM	BAM
Method:	8260B	8260B	8260B
Dilution Factor:	2	1	1
mp-Xylene	< 2 < 2	< 1 < 1	< 1 < 1
o-Xylene Styrene	< 2	< 1	< 1
Bromoform	< 4	< 2	< 2
IsoPropylbenzene	< 2	< 1	< 1
Bromobenzene	< 2	< 2	< 2
1,1,2,2-Tetrachloroethane	< 2	< 2	< 2
1,2,3-Trichloropropane	< 2	< 2	< 2
n-Propylbenzene	< 2	< 1	< 1
2-Chlorotoluene	< 2	< 2	< 2
4-Chlorotoluene	< 2	< 2	< 2
1,3,5-Trimethylbenzene	< 2	< 1	< 1
tert-Butylbenzene	< 2 < 2	< 1	< 1
1,2,4-Trimethylbenzene sec-Butylbenzene	< 2	< 1 < 1	< 1 < 1
1,3-Dichlorobenzene	< 2	< 1	< 1
p-Isopropyltoluene	< 2	< 1	< 1
1,4-Dichlorobenzene	< 2	< 1	< 1
1,2-Dichlorobenzene	< 2	< 1	< 1
n-Butylbenzene	< 2	< 1	< 1
1,2-Dibromo-3-chloropropane	< 4	< 2	< 2
1,3,5-Trichlorobenzene	< 2	< 1	< 1
1,2,4-Trichlorobenzene	< 2	< 1	< 1
Hexachlorobutadiene	< 1	< 0.5	< 0.5
Naphthalene	< 10	< 5	< 5
1,2,3-Trichlorobenzene	< 2	< 1	< 1
4-Bromofluorobenzene (surr)	96 %R 94 %R	99 %R 103 %R	97 %R
1,2-Dichlorobenzene-d4 (surr) Toluene-d8 (surr)	94 %R 96 %R	95 %R	99 %R 97 %R
1,2-Dichloroethane-d4 (surr)	102 %R	105 %R	100 %R
1,2 Distributed and a (3011)	102 /01	100 /01	100 /01

Client: GZA GeoEnvironmental, Inc. (NH)

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 5	15 (74 %R)	14 (71 %R) (3 RPD)	2/1/2017	ua/L	40 - 160	20	8260B
Chloromethane	< 2	19 (93 %R)	18 (92 %R) (1 RPD)		_	40 - 160	20	8260B
Vinyl chloride	< 2	16 (82 %R)	16 (82 %R) (0 RPD)		-	70 - 130	20	8260B
Bromomethane	< 2	25 (126 %R)	25 (127 %R) (1 RPD)		-	40 - 160	20	8260B
Chloroethane	< 5	20 (101 %R)	20 (98 %R) (2 RPD)		-	70 - 130	20	8260B
Trichlorofluoromethane	< 5	17 (86 %R)	16 (81 %R) (6 RPD)		_	70 - 130	20	8260B
Diethyl Ether	< 5	18 (91 %R)	18 (90 %R) (1 RPD)		_	70 - 130	20	8260B
Acetone	< 10	20 (114 %R)	20 (105 %R) (8 RPD)		_	40 - 160	20	8260B
1,1-Dichloroethene	< 1	20 (98 %R)	19 (97 %R) (1 RPD)		_	70 - 130	20	8260B
tert-Butyl Alcohol (TBA)	< 30	90 (93 %R)	100 (96 %R) (3 RPD)		_	70 - 130	20	8260B
Methylene chloride	< 5	21 (103 %R)	20 (102 %R) (1 RPD)		_	70 - 130	20	8260B
Carbon disulfide	< 5	18 (92 %R)	18 (90 %R) (3 RPD)		_	70 - 130	20	8260B
Methyl-t-butyl ether(MTBE)	< 5	22 (110 %R)	22 (108 %R) (2 RPD)		_	70 - 130	20	8260B
Ethyl-t-butyl ether(ETBE)	< 5	21 (103 %R)	20 (101 %R) (2 RPD)		_	70 - 130	20	8260B
Isopropyl ether(DIPE)	< 5	21 (104 %R)	21 (103 %R) (1 RPD)		_	70 - 130	20	8260B
tert-amyl methyl ether(TAME)	< 5	21 (105 %R)	21 (105 %R) (0 RPD)		-	70 - 130	20	8260B
trans-1,2-Dichloroethene	< 2	22 (112 %R)	20 (102 %R) (9 RPD)		_	70 - 130	20	8260B
1,1-Dichloroethane	< 2	21 (104 %R)	20 (102 %R) (2 RPD)		-	70 - 130	20	8260B
2,2-Dichloropropane	< 2	22 (108 %R)	21 (105 %R) (3 RPD)		-	70 - 130	20	8260B
cis-1,2-Dichloroethene	< 2	20 (102 %R)	20 (100 %R) (2 RPD)		_	70 - 130	20	8260B
2-Butanone(MEK)	< 10	20 (98 %R)	20 (93 %R) (6 RPD)		_	40 - 160	20	8260B
Bromochloromethane	< 2	21 (103 %R)	20 (101 %R) (2 RPD)		-	70 - 130	20	8260B
Tetrahydrofuran(THF)	< 10	20 (122 %R)	30 (126 %R) (3 RPD)		_	70 - 130		8260B
Chloroform	< 2	21 (105 %R)	21 (103 %R) (2 RPD)		_	70 - 130	20	8260B
1,1,1-Trichloroethane	< 2	20 (102 %R)	20 (100 %R) (2 RPD)		-	70 - 130	20	8260B
Carbon tetrachloride	< 2	19 (97 %R)	19 (97 %R) (1 RPD)		_	70 - 130		8260B
1,1-Dichloropropene	< 2	21 (107 %R)	21 (103 %R) (4 RPD)		_	70 - 130		8260B
Benzene	< 1	21 (105 %R)	21 (103 %R) (2 RPD)		_	70 - 130		8260B
1,2-Dichloroethane	< 2	21 (105 %R)	21 (104 %R) (2 RPD)		-	70 - 130		8260B
Trichloroethene	< 2	21 (105 %R)	21 (106 %R) (2 RPD)		-	70 - 130		8260B
1,2-Dichloropropane	< 2	20 (102 %R)	20 (102 %R) (1 RPD)		_	70 - 130	20	8260B
Dibromomethane	< 2	21 (103 %R)	21 (103 %R) (1 RPD)			70 - 130	20	8260B
Bromodichloromethane	< 0.5	21 (107 %R)	21 (106 %R) (1 RPD)		-	70 - 130		8260B
1,4-Dioxane	< 50	< 50 (122 %R)	< 50 (99 %R) (21 RPD) !		-	40 - 160		8260B
4-Methyl-2-pentanone(MIBK)	< 10	20 (94 %R)	20 (95 %R) (1 RPD)		•	40 - 160		8260B
cis-1,3-Dichloropropene	< 2	21 (107 %R)	21 (106 %R) (2 RPD)		•	70 - 130		8260B
Toluene	< 1	21 (104 %R)	21 (103 %R) (1 RPD)		•	70 - 130		8260B
trans-1,3-Dichloropropene	< 2	20 (100 %R)	20 (101 %R) (1 RPD)		•	70 - 130		8260B
1,1,2-Trichloroethane	< 2	20 (98 %R)	20 (99 %R) (1 RPD)		_	70 - 130		8260B
2-Hexanone	< 10	20 (87 %R)	20 (87 %R) (1 RPD)		-	40 - 160		8260B
Tetrachloroethene	< 2	19 (97 %R)	20 (98 %R) (1 RPD)		•	70 - 130		8260B
1,3-Dichloropropane	< 2	19 (97 %R)	20 (98 %R) (1 RPD)		_	70 - 130		8260B
Dibromochloromethane	< 2	18 (91 %R)	19 (93 %R) (2 RPD)		-	70 - 130		8260B
1,2-Dibromoethane(EDB)	< 2	20 (99 %R)	20 (101 %R) (2 RPD)		-	70 - 130		8260B
Chlorobenzene	< 2	21 (103 %R)	21 (103 %R) (0 RPD)		_	70 - 130		8260B
1,1,1,2-Tetrachloroethane	< 2	19 (96 %R)	20 (98 %R) (2 RPD)		•	70 - 130		8260B
Fastern Analytical Inc		, ,	alytical com   800 287 0525		-			4



Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Ethylbenzene	< 1	21 (104 %R)	21 (103 %R) (1 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
mp-Xylene	< 1	39 (99 %R)	39 (98 %R) (0 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
o-Xylene	< 1	21 (103 %R)	21 (103 %R) (1 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
Styrene	< 1	21 (104 %R)	21 (104 %R) (0 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
Bromoform	< 2	17 (85 %R)	17 (86 %R) (2 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
IsoPropylbenzene	< 1	21 (104 %R)	21 (103 %R) (0 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
Bromobenzene	< 2	21 (104 %R)	21 (104 %R) (0 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,1,2,2-Tetrachloroethane	< 2	18 (90 %R)	18 (88 %R) (2 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,2,3-Trichloropropane	< 2	19 (96 %R)	20 (99 %R) (3 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
n-Propylbenzene	< 1	20 (100 %R)	21 (103 %R) (2 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
2-Chlorotoluene	< 2	19 (94 %R)	19 (95 %R) (1 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
4-Chlorotoluene	< 2	20 (101 %R)	21 (104 %R) (2 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,3,5-Trimethylbenzene	< 1	21 (103 %R)	21 (104 %R) (2 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
tert-Butylbenzene	< 1	20 (101 %R)	20 (101 %R) (0 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,2,4-Trimethylbenzene	< 1	21 (104 %R)	21 (106 %R) (3 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
sec-Butylbenzene	< 1	19 (97 %R)	20 (101 %R) (3 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,3-Dichlorobenzene	< 1	20 (99 %R)	20 (102 %R) (3 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
p-Isopropyltoluene	< 1	21 (105 %R)	21 (107 %R) (1 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,4-Dichlorobenzene	< 1	20 (99 %R)	20 (101 %R) (2 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,2-Dichlorobenzene	< 1	20 (100 %R)	20 (102 %R) (2 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
n-Butylbenzene	< 1	21 (107 %R)	22 (108 %R) (1 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,2-Dibromo-3-chloropropane	< 2	17 (87 %R)	18 (91 %R) (4 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,3,5-Trichlorobenzene	< 1	20 (98 %R)	20 (100 %R) (2 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,2,4-Trichlorobenzene	< 1	21 (104 %R)	21 (106 %R) (2 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
Hexachlorobutadiene	< 0.5	18 (90 %R)	19 (93 %R) (4 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
Naphthalene	< 5	23 (115 %R)	24 (122 %R) (6 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
1,2,3-Trichlorobenzene	< 1	20 (102 %R)	21 (107 %R) (5 RPD)	2/1/2017	ug/L	70 - 130	20	8260B
4-Bromofluorobenzene (surr)	100 %R	101 %R	97 %R	2/1/2017	% Rec	70 - 130	20	8260B
1,2-Dichlorobenzene-d4 (surr)	99 %R	100 %R	97 %R	2/1/2017	% Rec	70 - 130	20	8260B
Toluene-d8 (surr)	97 %R	96 %R	98 %R	2/1/2017	% Rec	70 - 130	20	8260B
1,2-Dichloroethane-d4 (surr)	100 %R	101 %R	96 %R	2/1/2017	% Rec	70 - 130	20	8260B

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

\*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

Analytes that exceed limits high but are not detected in the field samples do not impact the data. For analytes that show low recovery and are not detected in the field samples, a low point calibration standard has been analyzed to support the reporting limit.

Client: GZA GeoEnvironmental, Inc. (NH)

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 5	15 (75 %R)	15 (76 %R) (0 RPD)	2/2/2017	ua/l	40 - 160	20	8260B
Chloromethane	< 2	19 (94 %R)	19 (95 %R) (1 RPD)		-	40 - 160	20	8260B
Vinyl chloride	< 2	17 (87 %R)	18 (88 %R) (1 RPD)		-	70 - 130	20	8260B
Bromomethane	< 2	25 (127 %R)	26 (128 %R) (1 RPD)		-	40 - 160	20	8260B
Chloroethane	< 5	20 (102 %R)	20 (102 %R) (1 RPD)		-	70 - 130	20	8260B
Trichlorofluoromethane	< 5	18 (91 %R)	18 (91 %R) (1 RPD)		_	70 - 130	20	8260B
Diethyl Ether	< 5	18 (88 %R)	18 (90 %R) (1 RPD)		_	70 - 130	20	8260B
Acetone	< 10	20 (103 %R)	20 (116 %R) (12 RPD)		_	40 - 160	20	8260B
1,1-Dichloroethene	< 1	18 (89 %R)	19 (95 %R) (6 RPD)		_	70 - 130	20	8260B
tert-Butyl Alcohol (TBA)	< 30	90 (92 %R)	100 (100 %R) (8 RPD)		_	70 - 130	20	8260B
Methylene chloride	< 5	20 (100 %R)	20 (100 %R) (1 RPD)		_	70 - 130	20	8260B
Carbon disulfide	< 5	17 (86 %R)	18 (88 %R) (2 RPD)		_	70 - 130	20	8260B
Methyl-t-butyl ether(MTBE)	< 5	21 (106 %R)	21 (107 %R) (1 RPD)		_	70 - 130	20	8260B
Ethyl-t-butyl ether(ETBE)	< 5	20 (98 %R)	20 (99 %R) (1 RPD)		_	70 - 130	20	8260B
Isopropyl ether(DIPE)	< 5	20 (99 %R)	20 (100 %R) (2 RPD)		_	70 - 130	20	8260B
tert-amyl methyl ether(TAME)	< 5	20 (100 %R)	20 (102 %R) (2 RPD)		_	70 - 130	20	8260B
trans-1,2-Dichloroethene	< 2	21 (103 %R)	20 (101 %R) (2 RPD)		•	70 - 130	20	8260B
1,1-Dichloroethane	< 2	20 (98 %R)	20 (100 %R) (1 RPD)		_	70 - 130	20	8260B
2,2-Dichloropropane	< 2	20 (101 %R)	20 (100 %R) (1 RPD)		_	70 - 130	20	8260B
cis-1,2-Dichloroethene	< 2	19 (96 %R)	19 (97 %R) (0 RPD)		_	70 - 130	20	8260B
2-Butanone(MEK)	< 10	20 (95 %R)	20 (98 %R) (3 RPD)		_	40 - 160	20	8260B
Bromochloromethane	< 2	20 (99 %R)	20 (101 %R) (2 RPD)		-	70 - 130	20	8260B
Tetrahydrofuran(THF)	< 10	20 (123 %R)	30 (126 %R) (2 RPD)		-	70 - 130	20	8260B
Chloroform	< 2	20 (100 %R)	20 (101 %R) (1 RPD)		-	70 - 130	20	8260B
1,1,1-Trichloroethane	< 2	19 (97 %R)	20 (99 %R) (2 RPD)		-	70 - 130	20	8260B
Carbon tetrachloride	< 2	19 (95 %R)	19 (96 %R) (1 RPD)		-	70 - 130	20	8260B
1,1-Dichloropropene	< 2	20 (100 %R)	20 (101 %R) (2 RPD)		_	70 - 130	20	8260B
Benzene	< 1	20 (99 %R)	20 (101 %R) (2 RPD) 20 (100 %R) (1 RPD)		-	70 - 130	20	8260B
1,2-Dichloroethane	< 2	20 (102 %R)	21 (103 %R) (1 RPD)		_	70 - 130	20	8260B
Trichloroethene	< 2	20 (102 %R) 20 (102 %R)	21 (105 %R) (1 RPD) 21 (105 %R) (3 RPD)		_	70 - 130	20	8260B
1,2-Dichloropropane	< 2	20 (98 %R)	20 (100 %R) (2 RPD)		_	70 - 130	20	8260B
Dibromomethane	< 2	20 (99 %R) 20 (99 %R)	20 (100 %R) (2 RPD) 20 (100 %R) (1 RPD)		_	70 - 130	20	8260B
Bromodichloromethane	< 0.5	20 (99 %K) 21 (103 %R)	21 (104 %R) (1 RPD)		-	70 - 130	20	8260B
1,4-Dioxane	< 50.5	< 50 (113 %R)	< 50 (111 %R) (1 RPD)		•	40 - 160		8260B
4-Methyl-2-pentanone(MIBK)	< 10	20 (94 %R)	20 (97 %R) (4 RPD)		•	40 - 160		8260B
cis-1,3-Dichloropropene	< 2	20 (94 %K) 20 (101 %R)	21 (103 %R) (2 RPD)		•	70 - 130		8260B
Toluene	< 1	•	, , , ,		•			8260B
trans-1,3-Dichloropropene		20 (99 %R)	20 (99 %R) (0 RPD) 19 (97 %R) (1 RPD)		_	70 - 130		8260B
1,1,2-Trichloroethane	< 2 < 2	19 (96 %R)			-	70 - 130		8260B
		19 (96 %R)	19 (96 %R) (0 RPD)		-	70 - 130		
2-Hexanone Tetrachloroethene	< 10	20 (86 %R)	20 (90 %R) (5 RPD)		-	40 - 160		8260B
	< 2	19 (94 %R)	19 (95 %R) (1 RPD)		-	70 - 130		8260B
1,3-Dichloropropane	< 2	19 (95 %R)	19 (96 %R) (1 RPD)		_	70 - 130		8260B
Dibromochloromethane	< 2	18 (92 %R)	18 (92 %R) (1 RPD)		_	70 - 130		8260B
1,2-Dibromoethane(EDB)	< 2	20 (98 %R)	20 (98 %R) (0 RPD)		-	70 - 130		8260B
Chlorobenzene	< 2	20 (99 %R)	20 (100 %R) (2 RPD)		-	70 - 130		8260B
1,1,1,2-Tetrachloroethane	< 2	19 (96 %R)	19 (96 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B <b>6</b>



Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Ethylbenzene	< 1	20 (99 %R)	20 (101 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
mp-Xylene	< 1	37 (94 %R)	38 (95 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
o-Xylene	< 1	20 (99 %R)	20 (99 %R) (0 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
Styrene	< 1	20 (101 %R)	20 (100 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
Bromoform	< 2	17 (87 %R)	18 (88 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
IsoPropylbenzene	< 1	20 (101 %R)	20 (101 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
Bromobenzene	< 2	20 (99 %R)	20 (99 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,1,2,2-Tetrachloroethane	< 2	16 (82 %R)	17 (84 %R) (2 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,2,3-Trichloropropane	< 2	20 (99 %R)	20 (99 %R) (0 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
n-Propylbenzene	< 1	20 (98 %R)	20 (99 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
2-Chlorotoluene	< 2	18 (90 %R)	18 (92 %R) (2 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
4-Chlorotoluene	< 2	20 (98 %R)	20 (99 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,3,5-Trimethylbenzene	< 1	20 (100 %R)	20 (101 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
tert-Butylbenzene	< 1	19 (96 %R)	20 (99 %R) (3 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,2,4-Trimethylbenzene	< 1	20 (100 %R)	20 (102 %R) (2 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
sec-Butylbenzene	< 1	19 (95 %R)	19 (97 %R) (2 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,3-Dichlorobenzene	< 1	19 (96 %R)	20 (99 %R) (4 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
p-Isopropyltoluene	< 1	20 (100 %R)	21 (103 %R) (2 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,4-Dichlorobenzene	< 1	19 (97 %R)	20 (100 %R) (3 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,2-Dichlorobenzene	< 1	19 (96 %R)	20 (100 %R) (3 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
n-Butylbenzene	< 1	20 (102 %R)	21 (104 %R) (1 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,2-Dibromo-3-chloropropane	< 2	18 (88 %R)	18 (92 %R) (5 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,3,5-Trichlorobenzene	< 1	19 (96 %R)	19 (97 %R) (2 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,2,4-Trichlorobenzene	< 1	20 (100 %R)	21 (104 %R) (4 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
Hexachlorobutadiene	< 0.5	17 (87 %R)	18 (89 %R) (2 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
Naphthalene	< 5	22 (108 %R)	23 (116 %R) (7 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
1,2,3-Trichlorobenzene	< 1	20 (100 %R)	21 (105 %R) (5 RPD)	2/2/2017	ug/L	70 - 130	20	8260B
4-Bromofluorobenzene (surr)	98 %R	103 %R	100 %R	2/2/2017	% Rec	70 - 130	20	8260B
1,2-Dichlorobenzene-d4 (surr)	102 %R	97 %R	98 %R	2/2/2017	% Rec	70 - 130	20	8260B
Toluene-d8 (surr)	97 %R	97 %R	97 %R	2/2/2017	% Rec	70 - 130	20	8260B
1,2-Dichloroethane-d4 (surr)	104 %R	101 %R	100 %R	2/2/2017	% Rec	70 - 130	20	8260B

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

\*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

Analytes that exceed limits high but are not detected in the field samples do not impact the data. For analytes that show low recovery and are not detected in the field samples, a low point calibration standard has been analyzed to support the reporting limit.





Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Client Sample ID:

Lab Sample ID:

165268.01

Matrix:

Date Sampled:

2/1/17

Date Received:

2/1/17

				Analytical		Date	Time		
	Result	RL	Factor	Matrix	Units	Ana	alyzed	Method A	Analyst
1,4-Dioxane	45	3	10	AqTot	ug/L	2/2/17	13:02	8260B SIM	VG
4-Bromofluorobenzene (surr)	111 %R			AqTot	%	2/2/17	13:02	8260B SIM	VG
Toluene-d8 (surr)	95 %R			AqTot	%	2/2/17	13:02	8260B SIM	VG

Client Sample ID: System Mid
Lab Sample ID: 165268.02

Matrix: aqueous
Date Sampled: 2/1/17

Date Received: 2/1/17

			Dilution	Analytical		Date	Time		
	Result	RL	Factor	Matrix	Units	Ana	alyzed	Method .	Analyst
1,4-Dioxane	< 0.25	0.25	1	AqTot	ug/L	2/1/17	19:17	8260B SIM	l VG
4-Bromofluorobenzene (surr)	106 %R			AqTot	%	2/1/17	19:17	8260B SIM	l VG
Toluene-d8 (surr)	94 %R			AqTot	%	2/1/17	19:17	8260B SIM	I VG

# $\Lambda \Lambda \Lambda$

# LABORATORY REPORT

EAI ID#: **165268** 

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Client Sample ID:

System Effluent

Lab Sample ID:

165268.03

Matrix:

aqueous

Date Sampled:

2/1/17

Date Received:

2/1/17

	Result	RL	Dilution Factor	Analytical Matrix	Units	Date Ana	Time lyzed	Method A	Analyst
1,4-Dioxane	< 0.25	0.25	1	AqTot	ug/L	2/1/17	18:46	8260B SIM	VG
4-Bromofluorobenzene (surr)	106 %R			AqTot	%	2/1/17	18:46	8260B SIM	VG
Toluene-d8 (surr)	94 %R			AqTot	%	2/1/17	18:46	8260B SIM	VG





Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

				Date of			
Parameter Name	Blank	LCS	LCSD	Units Analysis	Limits	RPD	Method
1,4-Dioxane	< 0.25	5.0 (100 %R)	5.1 (101 %R) (1 RPD)	ug/L 2/1/17	70 - 130	20	8260B SIM
4-Bromofluorobenzene (surr)	107 %R	115 %R	114 %R	% Rec 2/1/17	70 - 130	50	8260B SIM
Toluene-d8 (surr)	94 %R	96 %R	95 %R	% Rec 2/1/17	70 - 130	50	8260B SIM

Samples were analyzed within holding times unless noted on the sample results page.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.

Exceptions to the above statements are flagged or noted above or on the QC Narrative page.

\*/! Flagged analyte recoveries deviated from the QA/QC limits.

EAI ID#: 165268





Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

				Date of			
Parameter Name	Blank	LCS	LCSD	Units Analysis	Limits R	PD	Method
1,4-Dioxane	< 0.25	5.0 (100 %R)	4.8 (97 %R) (4 RPD)	ug/L 2/2/17	70 - 130	20	8260B SIM
4-Bromofluorobenzene (surr)	108 %R	116 %R	116 %R	% Rec 2/2/17	70 - 130	50	8260B SIM
Toluene-d8 (surr)	95 %R	96 %R	96 %R	% Rec 2/2/17	70 - 130	50	8260B SIM

Samples were analyzed within holding times unless noted on the sample results page.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.

Exceptions to the above statements are flagged or noted above or on the QC Narrative page.

\*/! Flagged analyte recoveries deviated from the QA/QC limits.



EAI ID#: 165268

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Sample ID:	System Influent	System Mid	System Effluent						
Lab Sample ID: Matrix:	165268.01 aqueous	165268.02 aqueous	165268.03 aqueous						
Date Sampled:	2/1/17	2/1/17	2/1/17		Analytica	ı	Analysis		
Date Received:	2/1/17	2/1/17	2/1/17	RL	Matrix	Units	Date	Method Ar	nalyst
Arsenic	< 0.001	0.014	0.010	0.001	AqTot	mg/L	2/02/17	200.8	DS
Barium	0.007	0.049	0.051	0.001	AqTot	mg/L	2/02/17	200.8	DS
Cadmium	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/02/17	200.8	DS
Chromium	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/02/17	200.8	DS
Iron	5.3	< 0.05	0.11	0.05	AqTot	mg/L	2/02/17	200.8	DS
Lead	< 0.001	0.003	< 0.001	0.001	AqTot	mg/L	2/02/17	200.8	DS
Manganese	0.38	< 0.005	< 0.005	0.005	AqTot	mg/L	2/02/17	200.8	DS
Mercury	< 0.0001	0.0004	< 0.0001	0.0001	AqTot	mg/L	2/02/17	200.8	DS
Selenium	< 0.001	0.042	0.030	0.001	AqTot	mg/L	2/02/17	200.8	DS
Silver	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/02/17	200.8	DS

System Mid and System Effluent: The values for Arsenic and Selenium may be elevated due to matrix interference.





Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

				Date of			
Parameter Name	Blank	LCS	LCSD	Units Analysis	Limits	RPD	Method
Arsenic	< 0.001	0.99 (99 %R)	N	A mg/L 2/2/17	85 - 115	20	200.8
Barium	< 0.001	0.96 (96 %R)	N.	A mg/L 2/2/17	85 - 115	20	200.8
Cadmium	< 0.001	0.94 (94 %R)	N.	A mg/L 2/2/17	85 - 115	20	200.8
Chromium	< 0.001	0.89 (89 %R)	N.	A mg/L 2/2/17	85 - 115	20	200.8
Iron	< 0.05	11 (97 %R)	N.	A mg/L 2/2/17	85 - 115	20	200.8
Lead	< 0.001	0.90 (90 %R)	N.	A mg/L 2/2/17	85 - 115	20	200.8
Manganese	< 0.005	0.88 (88 %R)	N	A mg/L 2/2/17	85 - 115	20	200.8
Mercury	< 0.0001	0.0010 (96 %R)	N	A mg/L 2/2/17	85 - 115	20	200.8
Selenium	< 0.001	1.0 (101 %R)	N	A mg/L 2/2/17	85 - 115	20	200.8
Silver	< 0.001	0.10 (101 %R)	N	4 mg/L 2/2/17	85 - 115	20	200.8

Samples were analyzed within holding times unless noted on the sample results page.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.

Exceptions to the above statements are flagged or noted above or on the QC Narrative page.

<sup>\*/!</sup> Flagged analyte recoveries deviated from the QA/QC limits.

#### CHAIN-OF-CUSTODY RECORD

Page	of	
1 420	 O.	

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

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25 CHENELL DRIVE | CONCORD, NH 03301 | TEL: 603.228,0525 | 1.800.287.0525 | FAX: 603.228.4591 | E-MAIL: CUSTOMERSERVICE@EAILABS.COM | WWW.EAILABS.COM



professional laboratory and drilling services

Jim Wieck
GZA GeoEnvironmental, Inc. (NH)
5 Commerce Park North, Suite 201
Bedford, NH 03110

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Subject: Laboratory Report

Eastern Analytical, Inc. ID: 165371

Client Identification: Rennie Farm | 04.0190030

Date Received: 2/3/2017

Dear Mr. Wieck:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit

> : "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

Date

4

# of pages (excluding cover letter)

#### SAMPLE CONDITIONS PAGE



EAI ID#: 165371

Client: GZA GeoEnvironmental, Inc. (NH)
Client Designation: Rennie Farm | 04.0190030

Temperature upon receipt (°C): 3.7

Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received		Sample Matrix	 Exceptions/Comments (other than thermal preservation)
165371.01	System Influent	2/3/17	2/3/17	aqueous	Adheres to Sample Acceptance Policy
165371.02	System Mid	2/3/17	2/3/17	aqueous	Adheres to Sample Acceptance Policy
165371.03	System Effluent	2/3/17	2/3/17	aqueous	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater, 20th Edition, 1998 and 22nd Edition, 2012
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992



EAI ID#: 165371

Client: GZA GeoEnvironmental, Inc. (NH)

Sample ID:	System Influent	System Mid	System Effluent						
Lab Sample ID: Matrix:	165371.01	165371.02	165371.03						
watrix:	aqueous	aqueous	aqueous						
Date Sampled:	2/3/17	2/3/17	2/3/17		Analytica	J	Analysis		
Date Received:	2/3/17	2/3/17	2/3/17	RL	Matrix	Units	Date	Method A	nalyst
Arsenic	< 0.001	0.007	0.007	0.001	AqTot	mg/L	2/07/17	200.8	DS
Barium	0.009	0.52	0.51	0.001	AqTot	mg/L	2/07/17	200.8	DS
Cadmium	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS
Chromium	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS
Iron	4.4	< 0.05	< 0.05	0.05	AqTot	mg/L	2/07/17	200.8	DS
Lead	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS
Manganese	0.24	0.020	0.011	0.005	AqTot	mg/L	2/07/17	200.8	DS
Mercury	< 0.0001	0.0002	0.0002	0.0001	AqTot	mg/L	2/07/17	200.8	DS
Selenium	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS
Silver	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS





Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030

					Date of			
Parameter Name	Blank	LCS	LCSD	l	Units Analysis	Limits	RPD	Method
Arsenic	< 0.001	1.0 (103 %R)	N	1A	mg/L 2/7/17	85 - 115	20	200.8
Barium	< 0.001	0.97 (97 %R)	N	<b>I</b> A	mg/L 2/7/17	85 - 115	20	200.8
Cadmium	< 0.001	0.94 (94 %R)	٨	IA	mg/L 2/7/17	85 - 115	20	200.8
Chromium	< 0.001	0.94 (94 %R)	N	1A	mg/L 2/7/17	85 - 115	20	200.8
Iron	< 0.05	11 (100 %R)	N	1A	mg/L 2/7/17	85 - 115	20	200.8
Lead	< 0.001	0.92 (92 %R)	N	۱A	mg/L 2/7/17	85 - 115	20	200.8
Manganese	< 0.005	0.95 (95 %R)	N	1A	mg/L 2/7/17	85 - 115	20	200.8
Mercury	< 0.0001 0	).0010 (100 %R)	N	۱A	mg/L 2/7/17	85 - 115	20	200.8
Selenium	< 0.001	1.0 (104 %R)	N	۱A	mg/L 2/7/17	85 - 115	20	200.8
Silver	< 0.001	0.11 (111 %R)	N	۱A	mg/L 2/7/17	85 - 115	20	200.8

Samples were analyzed within holding times unless noted on the sample results page.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.

Exceptions to the above statements are flagged or noted above or on the QC Narrative page.

EAI ID#: 165371

<sup>\*/!</sup> Flagged analyte recoveries deviated from the QA/QC limits.

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		(apoonly)	표	GC Methane, Ethane, Ethene	EPA 8260 NH Full List	EPA 8260 NH HW Short List	EPA 8260 NH Petr. Short List	EPA 8021- Full List	PA 80	EPA 524.2 DW VOCs	EPA 624 WW VOCs	□ 601 □ 602 WW VOCs	EPA 8270 SVOCs	EPA 625 WW SVOCs	EPA 8082-PCBs	PA 80	TPH-GC (Mod. 8100)	PH-G	PH (M	VPH (MA DEP)	Metals U PPM-1.	Metals (List Below) **	TCLP - Specify Below	SPLP - Specify Below	EPA 300 🗆							
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V	•	_	TURNAROUND TIME: Standard Rush Days, Approved by: LAB USE: 3 Temp Blank Cooler Air																													
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professional laboratory and drilling services

Jim Wieck
GZA GeoEnvironmental, Inc. (NH)
5 Commerce Park North, Suite 201
Bedford, NH 03110

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Subject: Laboratory Report

Eastern Analytical, Inc. ID: 165411

Client Identification: Rennie Farm | 04.0190030.02

Date Received: 2/6/2017

Dear Mr. Wieck:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

: "less than" followed by the reporting limit

> : "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

Date

2 · B · 17

Date

# of pages (excluding cover letter)

#### SAMPLE CONDITIONS PAGE



EAI ID#: 165411

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Temperature upon receipt (°C): 1.1

Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date I Sampled	Sample % Dry Matrix Weight	Exceptions/Comments (other than thermal preservation)
165411.01	System Influent	2/6/17	2/6/17	aqueous	Adheres to Sample Acceptance Policy
165411.02	System Mid	2/6/17	2/6/17	aqueous	Adheres to Sample Acceptance Policy
165411.03	System Effluent	2/6/17	2/6/17	aqueous	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis. Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater, 20th Edition, 1998 and 22nd Edition, 2012
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992

1



Sample ID:

EALID#: 165411

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

System Influent

165411.01 Lab Sample ID: aqueous Matrix: ug/L 2/6/17 **Date Sampled:** Units: 2/6/17 Date of Analysis: 2/7/17 Date Received: 8260B Date of Extraction/Prep: Method: 1 BAM **Dilution Factor:** Analyst: Parameter Result RL **Parameter** Result RL < 5 5 < 2 2 Dichlorodifluoromethane Tetrachloroethene < 2 2 < 2 2 Chloromethane 1,3-Dichloropropane Vinyl chloride < 2 2 Dibromochloromethane < 2 2 Bromomethane < 2 2 1,2-Dibromoethane(EDB) < 2 2 Chloroethane < 5 5 Chlorobenzene < 2 2 2 Trichlorofluoromethane < 5 5 1,1,1,2-Tetrachloroethane < 2 5 Ethylbenzene < 1 1 Diethyl Ether 42 10 mp-Xylene 1 Acetone 10 < 1 o-Xylene < 1 1 1.1-Dichloroethene < 1 1 30 Styrene 1 tert-Butyl Alcohol (TBA) < 30 < 1 Methylene chloride < 5 5 Bromoform < 2 2 < 5 5 IsoPropylbenzene < 1 1 Carbon disulfide 5 < 2 2 Methyl-t-butyl ether(MTBE) < 5 Bromobenzene 2 5 < 2 Ethyl-t-butyl ether(ETBE) < 5 1,1,2,2-Tetrachloroethane 2 Isopropyl ether(DIPE) < 5 5 1,2,3-Trichloropropane < 2 < 5 5 1 tert-amyl methyl ether(TAME) n-Propylbenzene < 1 trans-1,2-Dichloroethene < 2 2 2-Chlorotoluene < 2 2 < 2 2 4-Chlorotoluene < 2 2 1,1-Dichloroethane < 2 2 1,3,5-Trimethylbenzene < 1 1 2,2-Dichloropropane cis-1,2-Dichloroethene < 2 2 tert-Butylbenzene < 1 1 2-Butanone(MEK) < 10 10 1,2,4-Trimethylbenzene < 1 1 < 2 2 sec-Butvlbenzene < 1 Bromochloromethane Tetrahydrofuran(THF) 30 10 1,3-Dichlorobenzene < 1 1 Chloroform < 2 2 p-Isopropyltoluene < 1 1 < 2 2 1,4-Dichlorobenzene < 1 1 1,1,1-Trichloroethane

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0.5

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< 1

< 5

< 1

96 %R

98 %R

98 %R

94 %R

< 0.5

Carbon tetrachloride

1,1-Dichloropropene

1,2-Dichloroethane

1,2-Dichloropropane

Bromodichloromethane

cis-1,3-Dichloropropene

trans-1,3-Dichloropropene

1,1,2-Trichloroethane

4-Methyl-2-pentanone(MIBK)

Trichloroethene

Dibromomethane

1,4-Dioxane

2-Hexanone

Toluene

Benzene

1,2-Dichlorobenzene

1,3,5-Trichlorobenzene

1,2,4-Trichlorobenzene

1,2,3-Trichlorobenzene

4-Bromofluorobenzene (surr)

1,2-Dichloroethane-d4 (surr)

1,2-Dichlorobenzene-d4 (surr)

Hexachlorobutadiene

1,2-Dibromo-3-chloropropane

n-Butylbenzene

Naphthalene

Toluene-d8 (surr)



EAI ID#: 165411

Client: GZA GeoEnvironmental, Inc. (NH)

Sample ID:	System Mid				
Lab Sample ID:	165411.02				
Matrix:	aqueous				
Date Sampled:	2/6/17			Units:	ug/L
Date Received:	2/6/17		Dat	e of Analysis:	2/7/17
				Method:	8260B
Date of Extraction/Prep:	1				BAM
Dilution Factor:				Analyst:	
Parameter	Result	RL	Parameter	Result	RL
Dichlorodifluoromethane	< 5	5	Tetrachloroethene	< 2	2
Chloromethane	< 2	2	1,3-Dichloropropane	< 2	2
Vinyl chloride	< 2	2	Dibromochloromethane	< 2	2
Bromomethane	< 2	2	1,2-Dibromoethane(EDB)	< 2	2
Chloroethane	< 5	5	Chlorobenzene	< 2	2 2
Trichlorofluoromethane	< 5	5	1,1,1,2-Tetrachloroethane	< 2 < 1	1
Diethyl Ether	< 5	5	Ethylbenzene	<1	1
Acetone	< 10	10	mp-Xylene o-Xylene	<1	1
1,1-Dichloroethene	< 1 < 30	1 30	Styrene	< 1	1
tert-Butyl Alcohol (TBA)	< 5	5	Bromoform	< 2	2
Methylene chloride	< 5	5	IsoPropylbenzene	< 1	1
Carbon disulfide	< 5	5	Bromobenzene	< 2	2
Methyl-t-butyl ether(MTBE) Ethyl-t-butyl ether(ETBE)	< 5	5	1,1,2,2-Tetrachloroethane	< 2	2
Isopropyl ether(DIPE)	< 5	5	1,2,3-Trichloropropane	< 2	2
tert-amyl methyl ether(TAME)	< 5	5	n-Propylbenzene	< 1	1
trans-1,2-Dichloroethene	< 2	2	2-Chlorotoluene	< 2	2
1,1-Dichloroethane	< 2	2	4-Chlorotoluene	< 2	2
2,2-Dichloropropane	< 2	2	1,3,5-Trimethylbenzene	< 1	1
cis-1,2-Dichloroethene	< 2	2	tert-Butylbenzene	< 1	1
2-Butanone(MEK)	< 10	10	1,2,4-Trimethylbenzene	< 1	1
Bromochloromethane	< 2	2	sec-Butylbenzene	< 1	1
Tetrahydrofuran(THF)	< 10	10	1,3-Dichlorobenzene	< 1	1
Chloroform	< 2	2	p-Isopropyltoluene	< 1	1
1,1,1-Trichloroethane	< 2	2	1,4-Dichlorobenzene	< 1	1
Carbon tetrachloride	< 2	2	1,2-Dichlorobenzene	<1	1
1,1-Dichloropropene	< 2	2	n-Butylbenzene	< 1	1
Benzene	< 1	1	1,2-Dibromo-3-chloropropane		2
1,2-Dichloroethane	< 2	2	1,3,5-Trichlorobenzene	< 1	1
Trichloroethene	< 2	2	1,2,4-Trichlorobenzene	< 1	1
1,2-Dichloropropane	< 2	2	Hexachlorobutadiene	< 0.5 < 5	0.5 5
Dibromomethane	< 2	2	Naphthalene	< 1	1
Bromodichloromethane	< 0.5 < 50	0.5 50	1,2,3-Trichlorobenzene 4-Bromofluorobenzene (surr)	•	•
1,4-Dioxane	< 10	10	1,2-Dichlorobenzene-d4 (sur		
4-Methyl-2-pentanone(MIBK)	< 2	2	Toluene-d8 (surr)	98 %R	
cis-1,3-Dichloropropene	< 1	1	1,2-Dichloroethane-d4 (surr)	97 %R	
Toluene	< 2	2	1,2-Diction detriante-u+ (Sun)	31 /0K	
trans-1,3-Dichloropropene 1,1,2-Trichloroethane	< 2	2			
2-Hexanone	< 10	10			
2 Hoxanone	- 10				



EAI ID#: 165411

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Sample ID: System Effluent

Lab Sample ID:	165411.03				
Matrix:	aqueous				
Date Sampled:	2/6/17			Units:	ug/L
Date Received:	2/6/17		Da	te of Analysis:	2/7/17
Date of Extraction/Prep:				Method:	8260B
Dilution Factor:	1			Analyst:	BAM
Dilution Factor.	,			Allalyst.	27
Parameter	Result	RL	Parameter	Result	RL
Dichlorodifluoromethane	< 5	5	Tetrachloroethene	< 2	2
Chloromethane	< 2	2	1,3-Dichloropropane	< 2	2
Vinyl chloride	< 2	2	Dibromochloromethane	< 2	2
Bromomethane	< 2	2	1,2-Dibromoethane(EDB)	< 2	2 2 2
Chloroethane	< 5	5	Chlorobenzene	< 2	2
Trichlorofluoromethane	< 5	5	1,1,1,2-Tetrachloroethane	< 2	
Diethyl Ether	< 5	5	Ethylbenzene	< 1	1
Acetone	< 10	10	mp-Xylene	< 1	1
1,1-Dichloroethene	< 1	1	o-Xylene	< 1	1
tert-Butyl Alcohol (TBA)	< 30	30	Styrene	< 1	1
Methylene chloride	< 5	5	Bromoform	< 2	2
Carbon disulfide	< 5	5	IsoPropylbenzene	< 1	1
Methyl-t-butyl ether(MTBE)	< 5	5	Bromobenzene	< 2	2
Ethyl-t-butyl ether(ETBE)	< 5	5	1,1,2,2-Tetrachloroethane	< 2	2 2
Isopropyl ether(DIPE)	< 5	5	1,2,3-Trichloropropane	< 2	2
tert-amyl methyl ether(TAME)	< 5	5	n-Propylbenzene	< 1	1
trans-1,2-Dichloroethene	< 2	2	2-Chlorotoluene	< 2	2
1,1-Dichloroethane	< 2	2	4-Chlorotoluene	< 2	2
2,2-Dichloropropane	< 2	2	1,3,5-Trimethylbenzene	< 1	1
cis-1,2-Dichloroethene	< 2	2	tert-Butylbenzene	< 1	1
2-Butanone(MEK)	< 10	10	1,2,4-Trimethylbenzene	< 1	1
Bromochloromethane	< 2	2	sec-Butylbenzene	< 1	1
Tetrahydrofuran(THF)	< 10	10	1,3-Dichlorobenzene	< 1	1
Chloroform	< 2	2	p-lsopropyltoluene	< 1	1
1,1,1-Trichloroethane	< 2	2	1,4-Dichlorobenzene	< 1	1
Carbon tetrachloride	< 2	2	1,2-Dichlorobenzene	< 1	1
					_

10

2

1

2

2

2

2

0.5

n-Butylbenzene

Naphthalene

1,2-Dibromo-3-chloropropane

1,3,5-Trichlorobenzene

1,2,4-Trichlorobenzene

1,2,3-Trichlorobenzene

Hexachlorobutadiene

< 2

< 1

< 2

< 2

< 2

< 2

< 2

< 10

< 0.5

1

2

1

1

5

1

0.5

< 1

< 2

< 1

< 1

< 5

< 1

< 0.5

1,1-Dichloropropene

1,2-Dichloroethane

1,2-Dichloropropane

Bromodichloromethane

1,1,2-Trichloroethane

2-Hexanone

Trichloroethene

Dibromomethane

Benzene

Client: GZA GeoEnvironmental, Inc. (NH)

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 5	15 (76 %R)	14 (72 %R) (5 RPD)	2/7/2017	ug/L	40 - 160	20	8260B
Chloromethane	< 2	19 (96 %R)	18 (92 %R) (4 RPD)		ug/L	40 - 160	20	8260B
Vinyl chloride	< 2	18 (91 %R)	18 (90 %R) (2 RPD)		-	70 - 130	20	8260B
Bromomethane	< 2	23 (117 %R)	23 (116 %R) (1 RPD)		-	40 - 160	20	8260B
Chloroethane	< 5	22 (108 %R)	21 (103 %R) (5 RPD)		_	70 - 130	20	8260B
Trichlorofluoromethane	< 5	19 (96 %R)	18 (91 %R) (5 RPD)		_	70 - 130	20	8260B
Diethyl Ether	< 5	19 (95 %R)	18 (90 %R) (5 RPD)		_	70 - 130	20	8260B
Acetone	< 10	20 (109 %R)	20 (101 %R) (8 RPD)		_	40 - 160	20	8260B
1,1-Dichloroethene	< 1	20 (99 %R)	18 (92 %R) (7 RPD)		_	70 - 130	20	8260B
tert-Butyl Alcohol (TBA)	< 30	100 (97 %R)	90 (91 %R) (6 RPD)		_	70 - 130	20	8260B
Methylene chloride	< 5	22 (108 %R)	21 (104 %R) (3 RPD)		_	70 - 130	20	8260B
Carbon disulfide	< 5	18 (91 %R)	18 (88 %R) (3 RPD)		_	70 - 130	20	8260B
Methyl-t-butyl ether(MTBE)	< 5	22 (111 %R)	21 (107 %R) (4 RPD)		_	70 - 130	20	8260B
Ethyl-t-butyl ether(ETBE)	< 5	21 (103 %R)	20 (98 %R) (4 RPD)		-	70 - 130	20	8260B
Isopropyl ether(DIPE)	< 5	21 (105 %R)	20 (101 %R) (3 RPD)		•	70 - 130	20	8260B
tert-amyl methyl ether(TAME)	< 5	21 (106 %R)	20 (100 %R) (6 RPD)		_	70 - 130	20	8260B
trans-1,2-Dichloroethene	< 2	22 (109 %R)	23 (113 %R) (3 RPD)		-	70 - 130	20	8260B
1,1-Dichloroethane	< 2	21 (106 %R)	20 (100 %R) (6 RPD)		_	70 - 130	20	8260B
2,2-Dichloropropane	< 2	21 (106 %R)	20 (100 %R) (4 RPD)		-	70 - 130	20	8260B
cis-1,2-Dichloroethene	< 2	21 (105 %R)	20 (100 %R) (4 RPD)		_	70 - 130	20	8260B
2-Butanone(MEK)	< 10	20 (95 %R)	20 (91 %R) (5 RPD)		-	40 - 160	20	8260B
Bromochloromethane	< 2	20 (93 %K) 20 (101 %R)	20 (91 %R) (3 RPD)		_	70 - 130	20	8260B
Tetrahydrofuran(THF)	< 10	20 (101 %R) 20 (120 %R)			_			
Chloroform	< 2	20 (120 %R) 22 (108 %R)	20 (119 %R) (1 RPD)		-	70 - 130	20	8260B
1,1,1-Trichloroethane	< 2	-	21 (104 %R) (4 RPD)	2/7/2017	-	70 - 130	20	8260B
Carbon tetrachloride	< 2	21 (103 %R)	20 (101 %R) (2 RPD)		-	70 - 130	20	8260B
		20 (102 %R)	20 (99 %R) (3 RPD)	2/7/2017	_	70 - 130	20	8260B
1,1-Dichloropropene Benzene	< 2	21 (105 %R)	20 (100 %R) (5 RPD)	2/7/2017	_	70 - 130	20	8260B
	< 1	21 (106 %R)	20 (102 %R) (4 RPD)		-	70 - 130	20	8260B
1,2-Dichloroethane	< 2	22 (109 %R)	21 (104 %R) (5 RPD)	2/7/2017	-	70 - 130	20	8260B
Trichloroethene	< 2	22 (111 %R)	21 (104 %R) (6 RPD)	2/7/2017	•	70 - 130	20	8260B
1,2-Dichloropropane	< 2	21 (105 %R)	20 (101 %R) (3 RPD)	2/7/2017	•	70 - 130	20	8260B
Dibromomethane	< 2	21 (104 %R)	20 (101 %R) (2 RPD)		_	70 - 130	20	8260B
Bromodichloromethane	< 0.5	22 (110 %R)	21 (107 %R) (3 RPD)	2/7/2017	_	70 - 130	20	8260B
1,4-Dioxane	< 50	< 50 (103 %R)	< 50 (89 %R) (15 RPD)		_	40 - 160	20	8260B
4-Methyl-2-pentanone(MIBK)	< 10	20 (95 %R)	20 (89 %R) (7 RPD)	2/7/2017	_	40 - 160	20	8260B
cis-1,3-Dichloropropene	< 2	22 (109 %R)	21 (104 %R) (5 RPD)	2/7/2017	_	70 - 130	20	8260B
Toluene	< 1	21 (104 %R)	20 (99 %R) (4 RPD)	2/7/2017	_	70 - 130	20	8260B
trans-1,3-Dichloropropene	< 2	20 (101 %R)	19 (97 %R) (4 RPD)	2/7/2017	_	70 - 130	20	8260B
1,1,2-Trichloroethane	< 2	20 (99 %R)	19 (95 %R) (4 RPD)	2/7/2017	-	70 - 130	20	8260B
2-Hexanone	< 10	20 (87 %R)	20 (81 %R) (7 RPD)	2/7/2017	ug/L	40 - 160	20	8260B
Tetrachloroethene	< 2	19 (97 %R)	18 (92 %R) (5 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,3-Dichloropropane	< 2	20 (99 %R)	19 (94 %R) (6 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
Dibromochloromethane	< 2	19 (96 %R)	18 (91 %R) (6 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,2-Dibromoethane(EDB)	< 2	20 (99 %R)	19 (93 %R) (6 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
Chlorobenzene	< 2	21 (104 %R)	20 (99 %R) (5 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,1,1,2-Tetrachloroethane	< 2	20 (100 %R)	19 (97 %R) (3 RPD)	2/7/2017	ug/L	70 - 130	20	82 <u>6</u> 0B
Eastern Analytical, Inc.		www.castornano	vtical com   800 287 0525	Louatomoroon	:00@00	otornonol	diaal a	_ 5

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Ethylbenzene	< 1	21 (104 %R)	20 (99 %R) (5 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
mp-Xylene	< 1	39 (98 %R)	37 (94 %R) (5 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
o-Xylene	< 1	21 (104 %R)	20 (100 %R) (4 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
Styrene	< 1	21 (105 %R)	20 (100 %R) (5 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
Bromoform	< 2	18 (90 %R)	17 (85 %R) (6 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
IsoPropylbenzene	< 1	21 (103 %R)	20 (98 %R) (5 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
Bromobenzene	< 2	20 (98 %R)	19 (96 %R) (2 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,1,2,2-Tetrachloroethane	< 2	15 (77 %R)	15 (76 %R) (1 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,2,3-Trichloropropane	< 2	19 (93 %R)	18 (88 %R) (5 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
n-Propylbenzene	< 1	19 (95 %R)	19 (94 %R) (1 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
2-Chlorotoluene	< 2	18 (90 %R)	18 (88 %R) (3 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
4-Chlorotoluene	< 2	20 (98 %R)	19 (94 %R) (4 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,3,5-Trimethylbenzene	< 1	20 (98 %R)	19 (95 %R) (2 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
tert-Butylbenzene	< 1	19 (96 %R)	19 (93 %R) (2 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,2,4-Trimethylbenzene	< 1	20 (99 %R)	19 (97 %R) (2 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
sec-Butylbenzene	< 1	19 (95 %R)	18 (92 %R) (3 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,3-Dichlorobenzene	< 1	19 (97 %R)	19 (93 %R) (4 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
p-Isopropyltoluene	< 1	20 (99 %R)	19 (96 %R) (3 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,4-Dichlorobenzene	< 1	19 (97 %R)	19 (94 %R) (3 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,2-Dichlorobenzene	< 1	19 (97 %R)	19 (95 %R) (2 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
n-Butylbenzene	< 1	20 (100 %R)	19 (97 %R) (3 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,2-Dibromo-3-chloropropane	< 2	16 (82 %R)	16 (79 %R) (4 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,3,5-Trichlorobenzene	< 1	19 (94 %R)	19 (93 %R) (1 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,2,4-Trichlorobenzene	< 1	20 (98 %R)	19 (95 %R) (3 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
Hexachlorobutadiene	< 0.5	17 (85 %R)	16 (82 %R) (3 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
Naphthalene	< 5	20 (101 %R)	20 (98 %R) (2 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
1,2,3-Trichlorobenzene	< 1	19 (97 %R)	19 (95 %R) (2 RPD)	2/7/2017	ug/L	70 - 130	20	8260B
4-Bromofluorobenzene (surr)	98 %R	106 %R	102 %R	2/7/2017	% Rec	70 - 130	20	8260B
1,2-Dichlorobenzene-d4 (surr)	99 %R	102 %R	99 %R	2/7/2017	% Rec	70 - 130	20	8260B
Toluene-d8 (surr)	96 %R	97 %R	96 %R	2/7/2017	% Rec	70 - 130	20	8260B
1,2-Dichloroethane-d4 (surr)	98 %R	104 %R	100 %R	2/7/2017	% Rec	70 - 130	20	8260B

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

Analytes that exceed limits high but are not detected in the field samples do not impact the data. For analytes that show low recovery and are not detected in the field samples, a low point calibration standard has been analyzed to support the reporting limit.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

<sup>\*/!</sup> Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.



EAI ID#: 165411

Client: GZA GeoEnvironmental, Inc. (NH)

Rennie Farm | 04.0190030.02 Client Designation:

Client Sample ID:

System Influent

Lab Sample ID:

165411.01

Matrix:

aqueous

Date Sampled:

2/6/17

Date Received:

2/6/17

	Result	RL	Dilution Factor	Analytical Matrix	Units	Date Ana	Time alyzed	Method A	nalyst
1,4-Dioxane 4-Bromofluorobenzene (surr) Toluene-d8 (surr)	75 110 %R 95 %R	3	10	AqTot AqTot AqTot	ug/L % %	2/7/17 2/7/17 2/7/17	15:31 15:31 15:31	8260B SIM 8260B SIM 8260B SIM	BAM BAM BAM

Client Sample ID:

System Mid

Lab Sample ID:

165411.02

Matrix:

aqueous

Date Sampled:

2/6/17

Date Received:

2/6/17

			Dilution	Analytical		Date	Time		
	Result	RL	Factor	Matrix	Units	Ana	alyzed	Method A	Analyst
1,4-Dioxane	< 0.25	0.25	1	AqTot	ug/L	2/7/17	15:01	8260B SIM	BAM
4-Bromofluorobenzene (surr)	108 %R			AqTot	%	2/7/17	15:01	8260B SIM	BAM
Toluene-d8 (surr)	94 %R			AqTot	%	2/7/17	15:01	8260B SIM	BAM

EAI ID#: 165411

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Client Sample ID:

System Effluent

Lab Sample ID:

165411.03

Matrix:

aqueous

Date Sampled:

2/6/17

Date Received:

2/6/17

	Result	RL	Dilution Factor	Analytical Matrix	Units	Date Ana	Time lyzed	Method A	nalyst
1,4-Dioxane	< 0.25	0.25	1	AqTot	ug/L	2/7/17	14:30	8260B SIM	BAM
4-Bromofluorobenzene (surr)	108 %R			AqTot	%	2/7/17	14:30	8260B SIM	BAM
Toluene-d8 (surr)	95 %R			AqTot	%	2/7/17	14:30	8260B SIM	BAM





Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

Parameter Name	Blank	LCS	LCSD	Date of Units Analysis	Limits RPD	Method
1,4-Dioxane	< 0.25	5.0 (99 %R)	4.8 (95 %R) (4 RPD)	ug/L 2/7/17	70 - 130 20	8260B SIM
4-Bromofluorobenzene (surr)	106 %R	116 %R	115 %R	% Rec 2/7/17	70 - 130 50	8260B SIM
Toluene-d8 (surr)	94 %R	96 %R	95 %R	% Rec 2/7/17	70 - 130 50	8260B SIM

Samples were analyzed within holding times unless noted on the sample results page. Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.

Exceptions to the above statements are flagged or noted above or on the QC Narrative page.

<sup>\*/!</sup> Flagged analyte recoveries deviated from the QA/QC limits.



EAI ID#: 165411

Client: GZA GeoEnvironmental, Inc. (NH)

		· · · · · · · · · · · · · · · · · · ·							
Sample ID:	System Influent	System Mid	System Effluent						
Lab Sample ID:	165411.01	165411.02	165411.03						
Matrix:	aqueous	aqueous	aqueous						
Date Sampled:	2/6/17	2/6/17	2/6/17		Analytica		Analysis		
Date Received:	2/6/17	2/6/17	2/6/17	RL	Analytica Matrix	Units	Date	Method A	nalyst
Arsenic	< 0.001	0.008	0.009	0.001	AqTot	mg/L	2/07/17	200.8	DS
Barium	0.008	0.48	0.42	0.001	AqTot	mg/L	2/07/17	200.8	DS
Cadmium	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS
Chromium	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS
Iron	5.3	< 0.05	< 0.05	0.05	AqTot	mg/L	2/07/17	200.8	DS
Lead	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS
Manganese	0.30	0.019	0.015	0.005	AqTot	mg/L	2/07/17	200.8	DS
Mercury	< 0.0001	0.0002	0.0002	0.0001	AqTot	mg/L	2/07/17	200.8	DS
Selenium	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS
Silver	< 0.001	< 0.001	< 0.001	0.001	AqTot	mg/L	2/07/17	200.8	DS

#### **QC REPORT**



Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: Rennie Farm | 04.0190030.02

					ate of			
Parameter Name	Blank	LCS	LCSD	Units An	alysis	Limits	RPD	Method
Arsenic	< 0.001	1.0 (102.0/ D)	NIA		717147	05 445	20	200.0
		1.0 (103 %R)	NA	. 5	2/7/17	85 - 115		200.8
Barium	< 0.001	0.97 (97 %R)	NA	mg/L 2	2/7/17	85 - 115	20	200.8
Cadmium	< 0.001	0.94 (94 %R)	NA	mg/L 2	2/7/17	85 - 115	20	200.8
Chromium	< 0.001	0.94 (94 %R)	NA	mg/L 2	2/7/17	85 - 115	20	200.8
Iron	< 0.05	11 (100 %R)	NA	mg/L 2	2/7/17	85 - 115	20	200.8
Lead	< 0.001	0.92 (92 %R)	NA	mg/L 2	2/7/17	85 - 115	20	200.8
Manganese	< 0.005	0.95 (95 %R)	NA	mg/L 2	2/7/17	85 - 115	20	200.8
Mercury	< 0.0001 (	0.0010 (100 %R)	NA	mg/L 2	2/7/17	85 - 115	20	200.8
Selenium	< 0.001	1.0 (104 %R)	NA	mg/L 2	2/7/17	85 - 115	20	200.8
Silver	< 0.001	0.11 (111 %R)	NA	mg/L 2	2/7/17	85 - 115	20	200.8

Samples were analyzed within holding times unless noted on the sample results page.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.

Exceptions to the above statements are flagged or noted above or on the QC Narrative page.

EAI ID#: 165411

<sup>\*/!</sup> Flagged analyte recoveries deviated from the QA/QC limits.

Page		_ of _	◢
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SAMPLE I.D.

WW-WASTE WATER

Professional laboratory & drilling services

System Influent 2/6/17 15:15
System Mid 2/6/17 15:08
System Effluent 2/6/17 15:00

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

8015B DRO MAEPI PEST 608 PCB ( PEST 8081A PCB 8 OIL & GREASE 1664

SVOC

=

8015B GRO

VOC

H

MATRIX (SEE BELOW)
GRAB/\*COMPOSITE

SAMPLING

DATE/TIME

\*If COMPOSITE.

INDICATE BOTH

START & FINISH

DATE /TIME

TCLP METALS

TCLP 1311 ABN METALS VOC PEST HERB DISSOLYED METALS (LIST BELOW)

TOTAL METALS (LIST BELOW)

**NORGANICS** 

NH<sub>3</sub> T. Phos.

20

T. RES. CHLORINE
PHENOLS TOC

		_			
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OR	r				
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	1	L	541	7	
	1	O	J-4 I		
_	*	•	•	-	

MICRO OTHER

I DIAL CIANIDE I DIAL SULHDE	REACTIVE CURINDE REACTIVE SULIDE FLISHPOINT GNITABILITY	TOTAL COLIFORM E. COLI FEGAL COLIFORM	ENTROCOCCI HETEKOTROPHIC PLATE COUNT				Of 00 # 04 CONTAINERS	NOTES MEOH VIAL #	
	METALS: 8 RCRA) 13 PP FE, MN PB, CU  OTHER METALS:  SAMPLES FIELD FILTERED? YES NO  NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)  8260 B FMI List VOCS  1, 4 - Dioxane Low Level SIM  Total RCRA-8, Mn, Fe Metals								
-	Suspi Field	ected (	Y: Contan INGS: _	IINATIO				NAVW FAIL ARS COM	
AII	· CUS	TOME	RSFRV	ICE(M)	FAII A	BS CO	MI W	WW FAILARS COM	i

PROJECT MANAGER: SAYVOCO TO TOPE						
COMPANY: GZA						
ADDRESS: 5 COMMERCE POUR North, Suite 201  CITY: Bedford STATE: NT ZIP: 03110  PHONE: 603-232-8732  EXT.:						
CITY: Bedford STATE: NIT ZIP: 03110						
PHONE: 603-232-8732 EXT.						
FAX: 603-624-9463						
E-MAIL: James, wiect @ gza.com SITE NAME: Rennie Form						
SITE NAME: Rennie Form						
PROJECT #: 04, 0190030,02						
STATE: NH MA ME VT OTHER:						
REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR						
GWP, Oil Fund, Brownfield or Other:						
QUOTE #: PO #:						

MATRIX: A-AIR; S-SOIL; GW-GROUND WATER; SW-SURFACE WATER; DW-DRINKING WATER;

Preservative: H-HCL; N-HNO3; S-H2SO4; Na-NaOH; M-MEOH

Proves Manager Tourses & latinet

JATE NEEDED: 12	110001 17[1	TEMP. ) \\ °C     *	11			
QA/QC REPORTING LEVEL A B C	REPORTING OPTIONS PRELIMS: YES OR NO	ICE? (VES) NO 0				
OR . PRESUMPTIVE CERTAINTY	IF YES: FAX OR PDF <b>ELECTRONIC OPTIONS</b> NO FAX E-MAIL PDF	Equis	01			
AMPLER(S): Al Jacobson, Christopher Melby al Jacobson 2-6-17 16:50 allely feller						
		RECEIVED BY:	TC			
RELINQUISHED BY: D	DATE: TIME: I	RECEIVED BY:				
RELINQUISHED BY: D	DATE: TIME: F	RECEIVED BY:	EL			

48 Hour TAT

Eastern Analytical, Inc.

25 CHENELL DRIVE | CONCORD, NH 03301 | Tel: 603.228.0525 | 1.800.287.0525 | FAX: 603.228.4591 | E-MAIL: CUSTOMERSERVICE@EAILABS.COM WWW.EAILABS.COM