DRINKING WATER SAMPLING REPORT
PROPERTY OWNED BY
CONFIDENTIAL CLIENT
MILWAUKEE, WISCONSIN

Prepared for:

Confidential Client
c/o Foley & Lardner
777 East Wisconsin Avenue
Milwaukee, Wisconsin 53202-5367

Prepared by:

GZA GeoEnvironmental, Inc.
N4140 DuPlainville Road
Pewaukee, Wisconsin 53072

August 3, 1995
File No. 150169

Copyright© 1995 GZA GeoEnvironmental, Inc.

Printed on Recycled Paper

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

August 3, 1995
File No. 150169

Confidential Client
c/o Foley & Lardner
777 East Wisconsin Avenue
Milwaukee, Wisconsin 53202-5367

Attention: Mr. Edward B. Witte, Esq.
Foley & Lardner

Subject: Drinking Water Sampling Report
Property Operated by Confidential Client
Milwaukee, Wisconsin

Dear Mr. Witte:

N4140 Duplainville Road
Pewaukee, Wisconsin
53072
414-691-2662
FAX 414-691-9279

In accordance with our proposal dated June 20, 1995, File No. 95099, GZA GeoEnvironmental, Inc. (GZA) is pleased to present Foley & Lardner, on behalf of its Confidential Client ("Client") with this Draft Drinking Water Sampling Report documenting the drinking water supply system sampling activities conducted in Milwaukee, Wisconsin ("Site").

GZA has prepared this report to present the field work performed and the corresponding results of the activities conducted by GZA in accordance with each task outlined in our proposal. Please note that this report is subject to the Limitations in Appendix A. The laboratory analytical results related to these activities have been compared to the relevant United States Environmental Protection Agency (USEPA) Maximum Contaminant Level (MCL) or MCL Goal (MCLG) for each parameter as provided in Wisconsin Administrative Code (WAC) Chapter NR 809.

SCOPE OF WORK

The scope of work completed by GZA involved the following tasks: (1) review relevant historical and water system information prior to coordinating sample collection activities; (2) collect drinking water samples from the distribution system; (3) arrange laboratory analyses for each drinking water sample collected per WAC Chapter NR 809; and (4) prepare this report documenting the activities performed and presenting the analytical results.

A Subsidiary of GZA
GeoEnvironmental
Technologies, Inc.

For the purposes of this project, GZA assumed the following: (1) the drinking water system at the Site is a "transient, non-community" system as defined in WAC Chapter NR 809.04; and (2) the sampling activities would not include an evaluation of the requirements related to sodium, nitrates, microbiological contaminants, turbidity, radioactivity, filtration and disinfection, reporting, public notification, record keeping, waivers, and variances pursuant to WAC Chapters NR 809.13 to 809.91, respectively.

Task 1 - Review Relevant System Information and Sample Collection Activities

During a meeting with the Client and Foley & Lardner on June 20, 1995, GZA reviewed the water supply testing station location map and drawings of the water supply piping layout and piping valve locations for the Site. GZA also reviewed a

Copyright© 1995 GZA GeoEnvironmental, Inc.

An Equal Opportunity Employer M/F/V/H
Printed on Recycled Paper

diagram prepared by Giles Engineering Associates, Inc. (Giles) related to the results of a recent subsurface investigation performed southeast of the existing Administration Building. Information related to previous water system sampling and analyses conducted or other drawings of the drinking water supply system at the Site were not made available by the Client for review.

Also during the June 20, 1995, meeting, GZA and the Client discussed the rationale for the number and locations of the drinking water samples to be collected, field protocols, and the laboratory analyses which should be considered. GZA also agreed to coordinate mobilization to the Site for collecting the samples with the Client to ensure access to the system and that system integrity was maintained to the Client's satisfaction. Flushing the system prior to sampling per the Client's current protocols was also discussed.

Based upon our pre-sampling discussions with and recommendations to the Client, review of the information provided to GZA, and in accordance with the cost and risk considerations of the Client, GZA collected the water samples identified in Task 2.

Task 2 - Collection of Drinking Water Supply System Samples

The potable water distribution system at the Site consists of an underground loop piping network fed by four main lines originating from the City of Milwaukee water system. The City of Milwaukee system provides all water, except bottled sources, used at the Site. The Client maintains the system on the Site throughout the year and operates the system on the Site for drinking, landscaping, and sanitary purposes primarily during the May to October period. For the winter months (November to April), the piping network at the Site is flushed and filled with anti-freeze; however, the portion of the loop which supplies the Administration Building remains in use throughout the year. During the months of operation (May to October), the entire supply system at the Site is flushed with water every Monday and Friday. Approximately three years ago, 15 water testing locations were installed, a four-quadrant piping layout was developed, and reportedly all piping dead-ends were removed from the network as depicted on Figure No. 1.

Although the City of Milwaukee owns the water supply system at the Site, for purposes of ensuring that safe drinking water is used during its operations, the Client requested that GZA sample the system to ensure that subsurface impacts reported by Giles in the area southeast of the Administration Building have not adversely impacted the quality of water supplied by the system on the Site. GZA collected samples from five locations considered by the Client and GZA to represent the chemical condition of the water supply system as used during the six-month period of operation.

GZA collected one water sample from each of the following sampling points (see Figure No. 1) as agreed upon by the Client: (1) the southeastern concession area sink located in the top level of the amphitheater; (2) the water fountains located adjacent to Water Testing Location Nos. 10, 11 and 12; (3) the central water fountains located in the

Children's Area adjacent to Water Testing Location No. 5; (4) the water fountains located in the North Gate area adjacent to Water Testing Location No. 1; and (5) the eating area sink located in the Administration Building. The system was not flushed on the morning of GZA's sample collection activities to ensure the samples collected would represent the water supply as used at the Site.

Each sampling location is serviced by either a common or isolated quadrant of the supply network at the Site. Samples were collected at the major points of use for consumption and not at the Water Testing Locations. For most of the sample collection points, the Water Testing Locations were approximately 50 to more than 200 feet away. These locations were chosen to ensure that samples representative of the entire length of the system to the actual point-of-use were collected. These sampling locations included points used for drinking or food preparation in order to be protective of public health in as conservative a manner as considered appropriate at this time.

During the afternoon of June 21, 1995, GZA collected each sample using dedicated and analytically-clean sample bottles provided by Northern Lake Service, Inc. and according to WAC Chapter NR 809 sampling requirements, as applicable. The weather at the time of sample collection was sunny with an air temperature of 85°, wind at 5-10 mph, and a relative humidity of approximately 45 percent.

To minimize the potential for cross contamination of samples between sampling locations and for phthalate compounds or other glove-related chemicals to be introduced into the samples collected, GZA personnel wore dedicated, disposable nitrile gloves at each sampling location. One trip blank and one duplicate sample were prepared for quality assurance/quality control purposes. By using dedicated sample bottles for each point and eliminating the use of sample transfer equipment, an equipment field blank was not required. Water used for either food preparation or drinking was collected from the amphitheater concession area sink (WS-1) and from the Administration Building kitchen area sink (WS-5) under identical conditions. For purposes of GZA's sampling activities, the cold water tap in both sinks was allowed to flow at 100 percent of point-of-use capacity for 15 minutes prior to beginning sample collection. Duplicate sample WS-5B was collected immediately following the collection of sample WS-5. Drinking water from each fountain at the Site flows continuously 24 hours per day during the May to October period of operation. Each water fountain sample (WS-2, WS-3 and WS-4) was collected under these conditions of operation.

Task 3 - Laboratory Analyses

Prior to collecting any samples, GZA discussed with the Client and Client's legal counsel the regulatory issues, analytical costs, and the timeliness of laboratory results needed by the Client. Giles had suggested a list of analyses for this system based upon its subsurface investigation results. GZA noted that the list of analyses suggested by Giles included groundwater analyses (PNAs/BNAs, Total Cyanide, Sulfide, and RCRA Heavy Metals) which are not Safe Drinking Water Act related.

As indicated to the Client, GZA believes that a conservative approach related to drinking water issues was to analyze each sample for the WAC Chapter NR 809 compounds required for new drinking water systems, except for pesticides, surfactants, carbamates, herbicides, PCBs, and any other parameters the system was assumed in compliance. In addition, GZA recommended that the analyses follow the intent of the information provided by Giles. BNA/PNA compounds were not included for SDWA analyses due to the following: (1) according to a SDWA certified laboratory there are no SDWA approved analyses for BNA/PNA compounds; (2) the solubility of Benzo(a)pyrene in water (the only BNA/PNA with a MCL/MCLG) is six orders of magnitude less than benzene. Therefore, at a minimum, the analyses should include volatile organics, inorganics, and secondary parameters under Safe Drinking Water Act certification and analytical protocols.

Based upon these discussions, the drinking water samples collected by GZA on June 21, 1995, including QA/QC samples, were packed and sealed in a cooler with ice at approximately 4°C under chain-of-custody protocols and shipped via overnight express for arrival before 10:30 a.m. on June 22, 1995, at Northern Lake Service, Inc. located in Crandon, Wisconsin. Northern Lake Service, Inc. is certified by the State of Wisconsin under Certification No. 721026460 to perform the drinking water analyses requested by GZA at this time. GZA requested each sample be analyzed for all drinking water parameters required for new drinking water systems under WAC Chapter NR 809 as related to volatile organic compounds, inorganic compounds, and secondary chemical and physical standards.

Task 4 - Analytical Results Reporting

On June 27, 1995, Northern Lake Service, Inc. provided GZA with the analytical results from the analyses of each water sample collected (WS-1 to WS-5B) as shown in Appendix B. As requested by the Client, GZA has compared the analytical results to the applicable MCL or MCLG for each parameter reported in the data. The MCLs and MCLGs represent the drinking water standards deemed appropriate under WAC Chapter NR 809 and/or the Federal Safe Drinking Water Act for the protection of human health. GZA has not undertaken any activities to independently verify or validate the information provided by Northern Lake Service, Inc.

Based upon the information made available by the laboratory at this time, the volatile organic compounds, inorganic compounds and secondary chemical and physical standards did not exceed MCLs. However, the corrosivity analysis indicated that the water is slightly corrosive. This condition does not necessarily indicate adverse impacts from the Site and may be a natural condition of the water supplied by the City of Milwaukee.

At this time, GZA has not been requested to make any recommendations or provide any advice to the Client or Client's legal counsel regarding possible follow-up actions based upon the laboratory results listed above. As indicated in our proposal for this project, GZA will provide such recommendations and advice upon request.

GZA appreciates this opportunity to provide assistance to you. Should you have any questions or need further information, please contact the undersigned at any time.

Very truly yours,

GZA GeoEnvironmental, Inc.

Mark A. Yannett
Project Manager
Environmental Scientist

Mark J. Krumenacher
Project Reviewer

John C. Osborne
Associate Principal
District Manager

\may\smrfst\150169B.rpt

Attachments

FIGURES

Printed on Recycled Paper

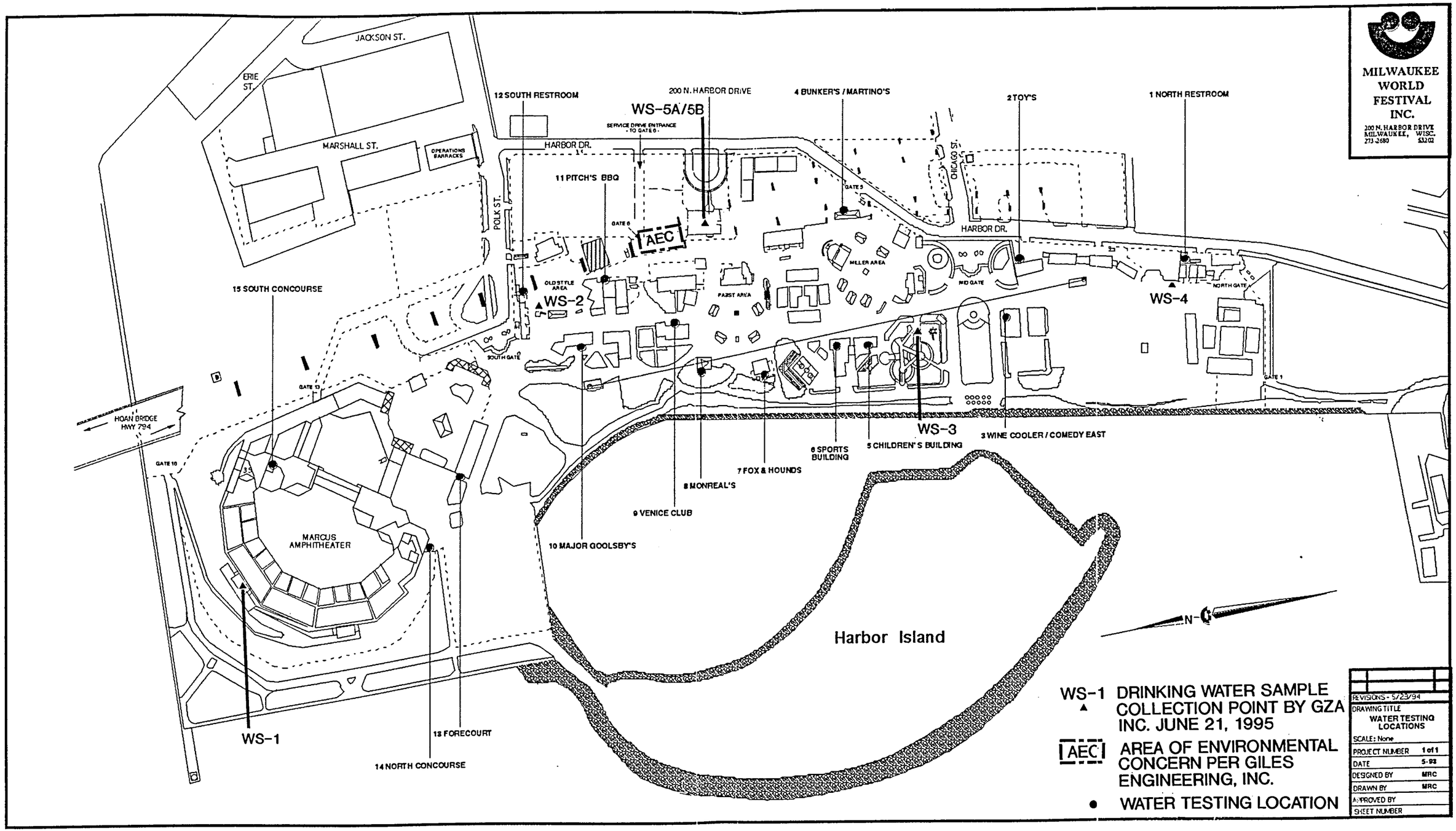
MILWAUKEE WORLD FESTIVAL INC.
200 N. HARBOR DRIVE
MILWAUKEE, WISC.
273-2680 53202
JACKSON ST.
ERIE ST.
MARSHALL ST.
OPERATIONS BARRACKS
POLK ST.
HARBOR DR.
CHICAGO ST.
12 SOUTH RESTROOM
200 N. HARBOR DRIVE
WS-5A/5B
SERVICE DRIVE ENTRANCE - TO GATE 6 -
4 BUNKER'S / MARTINO'S
2 TOY'S
1 NORTH RESTROOM
11 PITCH'S BBQ
GATE 6
GATE 5
AEC
OLD STYLE AREA
WS-2
PARST AREA
MILLER AREA
MID GATE
NORTH GATE
WS-4
GATE 1
15 SOUTH CONCOURSE
SOUTH GATE
GATE 13
HOAN BRIDGE HWY 794
GATE 10
WS-3
3 WINE COOLER / COMEDY EAST
6 SPORTS BUILDING
5 CHILDREN'S BUILDING
7 FOX & HOUNDS
8 MONREAL'S
9 VENICE CLUB
10 MAJOR GOOLSBY'S
MARCUS AMPHITHEATER
Harbor Island
N
WS-1
13 FORECOURT
14 NORTH CONCOURSE
WS-1 DRINKING WATER SAMPLE COLLECTION POINT BY GZA INC. JUNE 21, 1995
AEC AREA OF ENVIRONMENTAL CONCERN PER GILES ENGINEERING, INC.
WATER TESTING LOCATION
REVISIONS - 5/23/94
DRAWING TITLE
WATER TESTING LOCATIONS
SCALE: None
PROJECT NUMBER 1 of 1
DATE 5-93
DESIGNED BY MRC
DRAWN BY MRC
APPROVED BY
SHEET NUMBER

FIGURE NO. 1

APPENDIX A

Limitations

Printed on Recycled Paper

WATER SYSTEM SAMPLING LIMITATIONS

1. The results submitted in this Report are based in part upon the data obtained from a limited number of samples from widely spaced points of acquisition. The nature and extent of variations between these points may not become evident until further or more extensive sampling is conducted. If variations or other latent conditions then appear evident, it will be necessary to re-evaluate the representativeness of the results presented in this Report.

2. Where laboratory analyses have been conducted by an outside laboratory, GZA has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

3. It should be noted that variations in the types and concentrations of contaminants may occur due to seasonal water table fluctuations, distribution system practices, the passage of time, and other factors.

4. Chemical analyses have been performed for specific parameters during the course of this study, as detailed in the Report. It must be noted that additional constituents not searched for during the current study could be present at the Site.

\WATSAMP.LIM

Printed on Recycled Paper

APPENDIX B

Laboratory Analytical Results

Printed on Recycled Paper

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 15611

RECEIVED JUN 30 1995

Client: GZA GeoEnvironmental, Inc.
Attn: Mark Yannett
N4140 Duplainville Road
Pewaukee, WI 53072

Project Description: Foley & Lardner

Sample ID: WS-1 **NLS#: 82786**
Ref. Line 1 of COC 13523 Description: WS-1
Collected: 06/21/95 Received: 06/22/95 Reported: 06/27/95

Parameter	Result	Units	MDL	LOQ	Method	Date
Alkalinity, tot. as CaCO3	97	mg/L	2.7	9.4	EPA 310.2	06/27/95
Aluminum, tot. as Al by ICP	0.052	mg/L	0.014	0.051	SW846 6010	06/23/95
Antimony, tot. as Sb by ICP	ND	ug/L	1.6	5.7	SW846 6010	06/23/95
Arsenic, tot. as As by ICP	ND	ug/L	1.1	3.9	SW846 6010	06/23/95
Barium, tot. as Ba by ICP	18	ug/L	5.0	5.0	SW846 6010	06/23/95
Beryllium, tot. as Be by ICP	0.054	ug/L	0.051	0.18	SW846 6010	06/23/95
Cadmium, tot. as Cd by ICP	ND	ug/L	0.23	0.81	SW846 6010	06/23/95
Chloride, as Cl	12	mg/L	0.35	1.3	SW846 9251	06/27/95
Chromium, tot. as Cr by ICP	ND	ug/L	0.60	2.1	SW846 6010	06/23/95
Conductivity, lab	270	umho@25C	1.0		EPA 120.1	06/22/95
Copper, tot. as Cu by ICP	36	ug/L	0.68	2.4	SW846 6010	06/23/95
Corrosivity (Langelier Index)	-.88000000 S.I.				SM 203	06/27/95
	Additional Comments: Field temperature not provided. Calculation based on standard temperature of 20 degrees C.					
Cyanide, tot. (distilled) as CN	0.0060	mg/L	0.0020	0.0070	SW846 9010	06/27/95
Fluoride, as F	1.0	mg/L	0.020	0.060	EPA 340.2	06/23/95
Iron, tot. as Fe by ICP	0.055	mg/L	0.0017	0.0059	SW846 6010	06/23/95
Lead, tot. as Pb by ICP	1.9	ug/L	1.2	4.2	SW846 6010	06/23/95
Manganese, tot. as Mn by ICP	0.57	ug/L	0.086	0.30	SW846 6010	06/23/95
Mercury, tot. as Hg	ND	ug/L	0.095	0.34	SW846 7470	06/23/95
Nickel, tot. as Ni by ICP	4.4	ug/L	0.52	1.9	SW846 6010	06/23/95
Nitrogen, nitrate as N corrected for nitrite	0.25	mg/L	0.021	0.076	EPA 353.2	06/26/95
Nitrogen, Nitrite as N	ND	mg/L	0.0062	0.022	EPA 353.2	06/22/95
Nitrogen, NO2 + NO3 as N	0.25	mg/L	0.021	0.076	EPA 353.2	06/26/95
Odor, lab	Slight chlorine odor present.					06/22/95
pH, lab	7.1	s.u.	1.0		SW846 9045	06/22/95
Selenium, tot. as Se by furnace	ND	ug/L	1.4	5.1	SW846 7740	06/23/95
Solids, tot. dis. (TDS)	180	mg/L	2.0		EPA 160.1	06/24/95
Sulfate, as SO4	30	mg/L	0.56	2.1	SW846 9036	06/27/95
Thallium, tot. as Tl by ICP	ND	ug/L	1.3	4.6	SW846 6010	06/23/95
Turbidity	ND	NTU	0.50		EPA 180.1	06/22/95
Zinc, tot. as Zn by ICP	13	ug/L	12	12	SW846 6010	06/23/95
TTHM by EPA 524.2 (total trihalomethanes)	see attached		1.0		EPA 524.2	06/23/95
VOCs by EPA 524.2	see attached				EPA 524.2	06/23/95

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 15611

Client: GZA GeoEnvironmental, Inc.
Attn: Mark Yannett
N4140 Duplainville Road
Pewaukee, WI 53072

Project Description: Foley & Lardner

Sample ID: WS-2 **NLS#: 82787**
Ref. Line 2 of COC 13523 Description: WS-2
Collected: 06/21/95 Received: 06/22/95 Reported: 06/27/95

Parameter	Result	Units	MDL	LOQ	Method	Date
Alkalinity, tot. as CaCO3	96	mg/L	2.7	9.4	EPA 310.2	06/27/95
Aluminum, tot. as Al by ICP	0.024	mg/L	0.014	0.051	SW846 6010	06/23/95
Antimony, tot. as Sb by ICP	ND	ug/L	1.6	5.7	SW846 6010	06/23/95
Arsenic, tot. as As by ICP	1.6	ug/L	1.1	3.9	SW846 6010	06/23/95
Barium, tot. as Ba by ICP	18	ug/L	5.0	5.0	SW846 6010	06/23/95
Beryllium, tot. as Be by ICP	ND	ug/L	0.051	0.18	SW846 6010	06/23/95
Cadmium, tot. as Cd by ICP	ND	ug/L	0.23	0.81	SW846 6010	06/23/95
Chloride, as Cl	12	mg/L	0.35	1.3	SW846 9251	06/27/95
Chromium, tot. as Cr by ICP	ND	ug/L	0.60	2.1	SW846 6010	06/23/95
Conductivity, lab	280	umho@25C	1.0		EPA 120.1	06/22/95
Copper, tot. as Cu by ICP	0.97	ug/L	0.68	2.4	SW846 6010	06/23/95
Corrosivity (Langelier Index)	-.91000000 S.I.				SM 203	06/27/95
	Additional Comments: Field temperature not provided. Calculation based on standard temperature of 20 degrees C.					
Cyanide, tot. (distilled) as CN	0.0060	mg/L	0.0020	0.0070	SW846 9010	06/27/95
Fluoride, as F	0.99	mg/L	0.020	0.060	EPA 340.2	06/23/95
Iron, tot. as Fe by ICP	0.032	mg/L	0.0017	0.0059	SW846 6010	06/23/95
Lead, tot. as Pb by ICP	ND	ug/L	1.2	4.2	SW846 6010	06/23/95
Manganese, tot. as Mn by ICP	0.20	ug/L	0.086	0.30	SW846 6010	06/23/95
Mercury, tot. as Hg	ND	ug/L	0.095	0.34	SW846 7470	06/23/95
Nickel, tot. as Ni by ICP	ND	ug/L	0.52	1.9	SW846 6010	06/23/95
Nitrogen, nitrate as N corrected for nitrite	0.26	mg/L	0.021	0.076	EPA 353.2	06/26/95
Nitrogen, Nitrite as N	ND	mg/L	0.0062	0.022	EPA 353.2	06/22/95
Nitrogen, NO2 + NO3 as N	0.26	mg/L	0.021	0.076	EPA 353.2	06/26/95
Odor, lab	Slight chlorine odor present.					06/22/95
pH, lab	7.2	s.u.	1.0		SW846 9045	06/22/95
Selenium, tot. as Se by furnace	ND	ug/L	1.4	5.1	SW846 7740	06/23/95
Solids, tot. dis. (TDS)	200	mg/L	2.0		EPA 160.1	06/24/95
Sulfate, as SO4	29	mg/L	0.56	2.1	SW846 9036	06/27/95
Thallium, tot. as Tl by ICP	ND	ug/L	1.3	4.6	SW846 6010	06/23/95
Turbidity	ND	NTU	0.50		EPA 180.1	06/22/95
Zinc, tot. as Zn by ICP	40	ug/L	12	12	SW846 6010	06/23/95
TTHM by EPA 524.2 (total trihalomethanes)	see attached		1.0		EPA 524.2	06/23/95
VOCs by EPA 524.2	see attached				EPA 524.2	06/23/95

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 15611

Client: GZA GeoEnvironmental, Inc.
Attn: Mark Yannett
N4140 Duplainville Road
Pewaukee, WI 53072

Project Description: Foley & Lardner

Sample ID: WS-3 **NLS#: 82788**
Ref. Line 3 of COC 13523 Description: WS-3
Collected: 06/21/95 Received: 06/22/95 Reported: 06/27/95

Parameter	Result	Units	MDL	LOQ	Method	Date
Alkalinity, tot. as CaCO3	97	mg/L	2.7	9.4	EPA 310.2	06/27/95
Aluminum, tot. as Al by ICP	0.048	mg/L	0.014	0.051	SW846 6010	06/23/95
Antimony, tot. as Sb by ICP	ND	ug/L	1.6	5.7	SW846 6010	06/23/95
Arsenic, tot. as As by ICP	2.0	ug/L	1.1	3.9	SW846 6010	06/23/95
Barium, tot. as Ba by ICP	18	ug/L	5.0	5.0	SW846 6010	06/23/95
Beryllium, tot. as Be by ICP	0.056	ug/L	0.051	0.18	SW846 6010	06/23/95
Cadmium, tot. as Cd by ICP	ND	ug/L	0.23	0.81	SW846 6010	06/23/95
Chloride, as Cl	11	mg/L	0.35	1.3	SW846 9251	06/27/95
Chromium, tot. as Cr by ICP	ND	ug/L	0.60	2.1	SW846 6010	06/23/95
Conductivity, lab	280	umho@25C	1.0		EPA 120.1	06/22/95
Copper, tot. as Cu by ICP	5.2	ug/L	0.68	2.4	SW846 6010	06/23/95
Corrosivity (Langelier Index)	-.78000000 S.I.				SM 203	06/27/95
	Additional Comments: Field temperature not provided. Calculation based on standard temperature of 20 degrees C.					
Cyanide, tot. (distilled) as CN	0.0050	mg/L	0.0020	0.0070	SW846 9010	06/27/95
Fluoride, as F	0.97	mg/L	0.020	0.060	EPA 340.2	06/23/95
Iron, tot. as Fe by ICP	0.041	mg/L	0.0017	0.0059	SW846 6010	06/23/95
Lead, tot. as Pb by ICP	ND	ug/L	1.2	4.2	SW846 6010	06/23/95
Manganese, tot. as Mn by ICP	0.26	ug/L	0.086	0.30	SW846 6010	06/23/95
Mercury, tot. as Hg	ND	ug/L	0.095	0.34	SW846 7470	06/23/95
Nickel, tot. as Ni by ICP	ND	ug/L	0.52	1.9	SW846 6010	06/23/95
Nitrogen, nitrate as N corrected for nitrite	0.24	mg/L	0.021	0.076	EPA 353.2	06/26/95
Nitrogen, Nitrite as N	0.0070	mg/L	0.0062	0.022	EPA 353.2	06/22/95
Nitrogen, NO2 + NO3 as N	0.25	mg/L	0.021	0.076	EPA 353.2	06/26/95
Odor, lab	Very slight chlorine odor present.					06/22/95
pH, lab	7.3	s.u.	1.0		SW846 9045	06/22/95
Selenium, tot. as Se by furnace	ND	ug/L	1.4	5.1	SW846 7740	06/23/95
Solids, tot. dis. (TDS)	160	mg/L	2.0		EPA 160.1	06/24/95
Sulfate, as SO4	32	mg/L	0.56	2.1	SW846 9036	06/27/95
Thallium, tot. as Tl by ICP	1.8	ug/L	1.3	4.6	SW846 6010	06/23/95
Turbidity	ND	NTU	0.50		EPA 180.1	06/22/95
Zinc, tot. as Zn by ICP	ND	ug/L	12	12	SW846 6010	06/23/95
TTHM by EPA 524.2 (total trihalomethanes)	see attached		1.0		EPA 524.2	06/23/95
VOCs by EPA 524.2	see attached				EPA 524.2	06/23/95

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 15611

Client: GZA GeoEnvironmental, Inc.
Attn: Mark Yannett
N4140 Duplainville Road
Pewaukee, WI 53072

Project Description: Foley & Lardner

Sample ID: WS-4 **NLS#: 82789**
Ref. Line 4 of COC 13523 Description: WS-4
Collected: 06/21/95 Received: 06/22/95 Reported: 06/27/95

Parameter	Result	Units	MDL	LOQ	Method	Date
Alkalinity, tot. as CaCO3	97	mg/L	2.7	9.4	EPA 310.2	06/27/95
Aluminum, tot. as Al by ICP	0.025	mg/L	0.014	0.051	SW846 6010	06/23/95
Antimony, tot. as Sb by ICP	1.9	ug/L	1.6	5.7	SW846 6010	06/23/95
Arsenic, tot. as As by ICP	1.6	ug/L	1.1	3.9	SW846 6010	06/23/95
Barium, tot. as Ba by ICP	18	ug/L	5.0	5.0	SW846 6010	06/23/95
Beryllium, tot. as Be by ICP	ND	ug/L	0.051	0.18	SW846 6010	06/23/95
Cadmium, tot. as Cd by ICP	ND	ug/L	0.23	0.81	SW846 6010	06/23/95
Chloride, as Cl	12	mg/L	0.35	1.3	SW846 9251	06/27/95
Chromium, tot. as Cr by ICP	ND	ug/L	0.60	2.1	SW846 6010	06/23/95
Conductivity, lab	280	umho@25C	1.0		EPA 120.1	06/22/95
Copper, tot. as Cu by ICP	1.7	ug/L	0.68	2.4	SW846 6010	06/23/95
Corrosivity (Langelier Index)	-.87000000 S.I.				SM 203	06/27/95
	Additional Comments: Field temperature not provided. Calculation based on standard temperature of 20 degrees C.					
Cyanide, tot. (distilled) as CN	0.0050	mg/L	0.0020	0.0070	SW846 9010	06/27/95
Fluoride, as F	0.97	mg/L	0.020	0.060	EPA 340.2	06/23/95
Iron, tot. as Fe by ICP	0.033	mg/L	0.0017	0.0059	SW846 6010	06/23/95
Lead, tot. as Pb by ICP	ND	ug/L	1.2	4.2	SW846 6010	06/23/95
Manganese, tot. as Mn by ICP	0.26	ug/L	0.086	0.30	SW846 6010	06/23/95
Mercury, tot. as Hg	ND	ug/L	0.095	0.34	SW846 7470	06/23/95
Nickel, tot. as Ni by ICP	ND	ug/L	0.52	1.9	SW846 6010	06/23/95
Nitrogen, nitrate as N corrected for nitrite	0.25	mg/L	0.021	0.076	EPA 353.2	06/26/95
Nitrogen, Nitrite as N	ND	mg/L	0.0062	0.022	EPA 353.2	06/22/95
Nitrogen, NO2 + NO3 as N	0.25	mg/L	0.021	0.076	EPA 353.2	06/26/95
Odor, lab	Moderate amount of chlorine odor present.					06/22/95
pH, lab	7.2	s.u.	1.0		SW846 9045	06/22/95
Selenium, tot. as Se by furnace	ND	ug/L	1.4	5.1	SW846 7740	06/23/95
Solids, tot. dis. (TDS)	160	mg/L	2.0		EPA 160.1	06/24/95
Sulfate, as SO4	28	mg/L	0.56	2.1	SW846 9036	06/27/95
Thallium, tot. as Tl by ICP	3.3	ug/L	1.3	4.6	SW846 6010	06/23/95
Turbidity	ND	NTU	0.50		EPA 180.1	06/22/95
Zinc, tot. as Zn by ICP	21	ug/L	12	12	SW846 6010	06/23/95
TTHM by EPA 524.2 (total trihalomethanes)	see attached		1.0		EPA 524.2	06/23/95
VOCs by EPA 524.2	see attached				EPA 524.2	06/23/95

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 15611

Client: GZA GeoEnvironmental, Inc.
Attn: Mark Yannett
N4140 Duplainville Road
Pewaukee, WI 53072

Project Description: Foley & Lardner

Sample ID: WS-5 **NLS#: 82790**
Ref. Line 5 of COC 13523 Description: WS-5
Collected: 06/21/95 Received: 06/22/95 Reported: 06/27/95

Parameter	Result	Units	MDL	LOQ	Method	Date
Alkalinity, tot. as CaCO3	98	mg/L	2.7	9.4	EPA 310.2	06/27/95
Aluminum, tot. as Al by ICP	0.016	mg/L	0.014	0.051	SW846 6010	06/23/95
Antimony, tot. as Sb by ICP	1.8	ug/L	1.6	5.7	SW846 6010	06/23/95
Arsenic, tot. as As by ICP	2.5	ug/L	1.1	3.9	SW846 6010	06/23/95
Barium, tot. as Ba by ICP	18	ug/L	5.0	5.0	SW846 6010	06/23/95
Beryllium, tot. as Be by ICP	ND	ug/L	0.051	0.18	SW846 6010	06/23/95
Cadmium, tot. as Cd by ICP	ND	ug/L	0.23	0.81	SW846 6010	06/23/95
Chloride, as Cl	11	mg/L	0.35	1.3	SW846 9251	06/27/95
Chromium, tot. as Cr by ICP	ND	ug/L	0.60	2.1	SW846 6010	06/23/95
Conductivity, lab	280	umho@25C	1.0		EPA 120.1	06/22/95
Copper, tot. as Cu by ICP	11	ug/L	0.68	2.4	SW846 6010	06/23/95
Corrosivity (Langelier Index)	-.88000000 S.I.				SM 203	06/27/95
	Additional Comments: Field temperature not provided. Calculation based on standard temperature of 20 degrees C.					
Cyanide, tot. (distilled) as CN	0.0050	mg/L	0.0020	0.0070	SW846 9010	06/27/95
Fluoride, as F	1.0	mg/L	0.020	0.060	EPA 340.2	06/23/95
Iron, tot. as Fe by ICP	0.051	mg/L	0.0017	0.0059	SW846 6010	06/23/95
Lead, tot. as Pb by ICP	ND	ug/L	1.2	4.2	SW846 6010	06/23/95
Manganese, tot. as Mn by ICP	0.75	ug/L	0.086	0.30	SW846 6010	06/23/95
Mercury, tot. as Hg	ND	ug/L	0.095	0.34	SW846 7470	06/23/95
Nickel, tot. as Ni by ICP	ND	ug/L	0.52	1.9	SW846 6010	06/23/95
Nitrogen, nitrate as N corrected for nitrite	0.27	mg/L	0.021	0.076	EPA 353.2	06/26/95
Nitrogen, Nitrite as N	ND	mg/L	0.0062	0.022	EPA 353.2	06/22/95
Nitrogen, NO2 + NO3 as N	0.27	mg/L	0.021	0.076	EPA 353.2	06/26/95
Odor, lab	No odor detected.					06/22/95
pH, lab	7.2	s.u.	1.0		SW846 9045	06/22/95
Selenium, tot. as Se by furnace	ND	ug/L	1.4	5.1	SW846 7740	06/23/95
Solids, tot. dis. (TDS)	180	mg/L	2.0		EPA 160.1	06/24/95
Sulfate, as SO4	28	mg/L	0.56	2.1	SW846 9036	06/27/95
Thallium, tot. as Tl by ICP	ND	ug/L	1.3	4.6	SW846 6010	06/23/95
Turbidity	ND	NTU	0.50		EPA 180.1	06/22/95
Zinc, tot. as Zn by ICP	17	ug/L	12	12	SW846 6010	06/23/95
TTHM by EPA 524.2 (total trihalomethanes)	see attached		1.0		EPA 524.2	06/23/95
VOCs by EPA 524.2	see attached				EPA 524.2	06/23/95

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 15611

Client: GZA GeoEnvironmental, Inc.
Attn: Mark Yannett
N4140 Duplainville Road
Pewaukee, WI 53072

Project Description: Foley & Lardner

Sample ID: WS-5B NLS#: 82791
Ref. Line 6 of COC 13523 Description: WS-5B
Collected: 06/21/95 Received: 06/22/95 Reported: 06/27/95

Parameter	Result	Units	MDL	LOQ	Method	Date
Alkalinity, tot. as CaCO3	98	mg/L	2.7	9.4	EPA 310.2	06/27/95
Aluminum, tot. as Al by ICP	ND	mg/L	0.014	0.051	SW846 6010	06/23/95
Antimony, tot. as Sb by ICP	ND	ug/L	1.6	5.7	SW846 6010	06/23/95
Arsenic, tot. as As by ICP	2.5	ug/L	1.1	3.9	SW846 6010	06/23/95
Barium, tot. as Ba by ICP	18	ug/L	5.0	5.0	SW846 6010	06/23/95
Beryllium, tot. as Be by ICP	ND	ug/L	0.051	0.18	SW846 6010	06/23/95
Cadmium, tot. as Cd by ICP	ND	ug/L	0.23	0.81	SW846 6010	06/23/95
Chloride, as Cl	12	mg/L	0.35	1.3	SW846 9251	06/27/95
Chromium, tot. as Cr by ICP	ND	ug/L	0.60	2.1	SW846 6010	06/23/95
Conductivity, lab	290	umho@25C	1.0		EPA 120.1	06/22/95
Copper, tot. as Cu by ICP	11	ug/L	0.68	2.4	SW846 6010	06/23/95
Corrosivity (Langelier Index)	-.88000000 S.I.				SM 203	06/27/95
	Additional Comments: Field temperature not provided. Calculation based on standard temperature of 20 degrees C.					
Cyanide, tot. (distilled) as CN	0.0050	mg/L	0.0020	0.0070	SW846 9010	06/27/95
Fluoride, as F	1.0	mg/L	0.020	0.060	EPA 340.2	06/23/95
Iron, tot. as Fe by ICP	0.051	mg/L	0.0017	0.0059	SW846 6010	06/23/95
Lead, tot. as Pb by ICP	ND	ug/L	1.2	4.2	SW846 6010	06/23/95
Manganese, tot. as Mn by ICP	0.69	ug/L	0.086	0.30	SW846 6010	06/23/95
Mercury, tot. as Hg	ND	ug/L	0.095	0.34	SW846 7470	06/23/95
Nickel, tot. as Ni by ICP	0.56	ug/L	0.52	1.9	SW846 6010	06/23/95
Nitrogen, nitrate as N corrected for nitrite	0.26	mg/L	0.021	0.076	EPA 353.2	06/26/95
Nitrogen, Nitrite as N	ND	mg/L	0.0062	0.022	EPA 353.2	06/22/95
Nitrogen, NO2 + NO3 as N	0.26	mg/L	0.021	0.076	EPA 353.2	06/26/95
Odor, lab	Slight chlorine odor present.					06/22/95
pH, lab	7.2	s.u.	1.0		SW846 9045	06/22/95
Selenium, tot. as Se by furnace	ND	ug/L	1.4	5.1	SW846 7740	06/23/95
Solids, tot. dis. (TDS)	180	mg/L	2.0		EPA 160.1	06/24/95
Sulfate, as SO4	28	mg/L	0.56	2.1	SW846 9036	06/27/95
Thallium, tot. as Tl by ICP	ND	ug/L	1.3	4.6	SW846 6010	06/23/95
Turbidity	ND	NTU	0.50		EPA 180.1	06/22/95
Zinc, tot. as Zn by ICP	16	ug/L	12	12	SW846 6010	06/23/95
TTHM by EPA 524.2 (total trihalomethanes)	see attached		1.0		EPA 524.2	06/23/95
VOCs by EPA 524.2	see attached				EPA 524.2	06/23/95

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 15611

Client: GZA GeoEnvironmental, Inc.
Attn: Mark Yannett
N4140 Duplainville Road
Pewaukee, WI 53072

Project Description: Foley & Lardner

Sample ID: Trip Blank NLS#: 82792
Ref. Line 7 of COC 13523 Description: Trip Blank
Collected: 06/21/95 Received: 06/22/95 Reported: 06/27/95

Parameter	Result	Units	MDL	LOQ	Method	Date
TTHM by EPA 524.2 (total trihalomethanes)	see attached		1.0		EPA 524.2	06/23/95
VOCs by EPA 524.2	see attached				EPA 524.2	06/23/95

Please note that analytical results greater than the MDL but less than the LOQ are within a region of "Less-Certain Quantitation". Results greater than the LOQ are considered to be in the region of "Certain Quantitation".

MDL = Method Detection Limit LOQ = Limit of Quantitation ND = Not Detected Date = Date Analysis Performed
DWB = Dry Weight Basis NA = Not Applicable

Jim Fisher
Laboratory Director

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82786 WS-1 ug/L
Benzene	0.070	0.25	ND
Bromobenzene	0.24	0.85	ND
Bromochloromethane	0.070	0.25	ND
Bromodichloromethane	0.080	0.29	3.7
Bromoform	0.11	0.37	0.13
Bromomethane	0.060	0.21	ND
n-Butylbenzene	0.20	0.69	ND
sec-Butylbenzene	0.24	0.85	ND
tert-Butylbenzene	0.23	0.80	ND
Carbon Tetrachloride	0.040	0.13	ND
Chlorobenzene	0.10	0.35	ND
Chloroethane	0.14	0.48	ND
Chloroform	0.070	0.23	4.1
Chloromethane	0.070	0.23	ND
2-Chlorotoluene	0.18	0.64	ND
4-Chlorotoluene	0.21	0.75	ND
Dibromochloromethane	0.070	0.25	1.8
1,2-Dibromo-3-Chloropropane	0.22	0.80	ND
1,2-Dibromoethane	0.080	0.28	ND
Dibromomethane	0.10	0.34	ND
1,2-Dichlorobenzene	0.22	0.78	ND
1,3-Dichlorobenzene	0.24	0.86	ND
1,4-Dichlorobenzene	0.22	0.78	ND
Dichlorodifluoromethane	0.080	0.25	ND
1,1-Dichloroethane	0.10	0.33	ND
1,2-Dichloroethane	0.090	0.32	ND
1,1-Dichloroethene	0.090	0.30	ND
cis-1,2-Dichloroethene	0.090	0.30	ND
trans-1,2-Dichloroethene	0.050	0.18	ND
1,2-Dichloropropane	0.080	0.27	ND
1,3-Dichloropropane	0.080	0.26	ND
2,2-Dichloropropane	0.10	0.34	ND
1,1-Dichloropropene	0.070	0.24	ND
cis-1,3-Dichloropropene	0.080	0.27	ND
trans-1,3-Dichloropropene	0.10	0.33	ND
Ethylbenzene	0.20	0.69	ND
Hexachlorobutadiene	0.22	0.78	ND
Isopropylbenzene	0.22	0.79	ND
p-Isopropyltoluene	0.24	0.84	ND
Methylene Chloride	0.18	0.63	ND
Naphthalene	0.14	0.51	ND
n-Propylbenzene	0.21	0.72	ND
Styrene	0.19	0.67	ND
ortho-Xylene	0.19*	0.66	ND
1,1,1,2-Tetrachloroethane	0.090	0.29	ND
1,1,2,2-Tetrachloroethane	0.20	0.70	ND
Tetrachloroethene	0.070	0.24	ND
Toluene	0.11	0.37	ND
1,2,3-Trichlorobenzene	0.16	0.56	ND
1,2,4-Trichlorobenzene	0.18	0.63	ND
1,1,1-Trichloroethane	0.060	0.22	ND
1,1,2-Trichloroethane	0.070	0.24	ND
Trichloroethene	0.070	0.24	ND
Trichlorofluoromethane	0.080	0.27	ND

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82786 WS-1 ug/L
1,2,3-Trichloropropane	0.20	0.74	ND
1,2,4-Trimethylbenzene	0.23	0.83	ND
1,3,5-Trimethylbenzene	0.23	0.82	ND
Vinyl Chloride	0.090	0.29	ND
meta,para-Xylene	0.37	1.3	ND

Surrogate Recovery on Bromofluorobenzene = 100 %

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82787 WS-2 ug/L
Benzene	0.070	0.25	ND
Bromobenzene	0.24	0.85	ND
Bromochloromethane	0.070	0.25	ND
Bromodichloromethane	0.080	0.29	4.5
Bromoform	0.11	0.37	0.12
Bromomethane	0.060	0.21	ND
n-Butylbenzene	0.20	0.69	ND
sec-Butylbenzene	0.24	0.85	ND
tert-Butylbenzene	0.23	0.80	ND
Carbon Tetrachloride	0.040	0.13	ND
Chlorobenzene	0.10	0.35	ND
Chloroethane	0.14	0.48	ND
Chloroform	0.070	0.23	5.0
Chloromethane	0.070	0.23	ND
2-Chlorotoluene	0.18	0.64	ND
4-Chlorotoluene	0.21	0.75	ND
Dibromochloromethane	0.070	0.25	2.0
1,2-Dibromo-3-Chloropropane	0.22	0.80	ND
1,2-Dibromoethane	0.080	0.28	ND
Dibromomethane	0.10	0.34	ND
1,2-Dichlorobenzene	0.22	0.78	ND
1,3-Dichlorobenzene	0.24	0.86	ND
1,4-Dichlorobenzene	0.22	0.78	ND
Dichlorodifluoromethane	0.080	0.25	ND
1,1-Dichloroethane	0.10	0.33	ND
1,2-Dichloroethane	0.090	0.32	ND
1,1-Dichloroethene	0.090	0.30	ND
cis-1,2-Dichloroethene	0.090	0.30	ND
trans-1,2-Dichloroethene	0.050	0.18	ND
1,2-Dichloropropane	0.080	0.27	ND
1,3-Dichloropropane	0.080	0.26	ND
2,2-Dichloropropane	0.10	0.34	ND
1,1-Dichloropropene	0.070	0.24	ND
cis-1,3-Dichloropropene	0.080	0.27	ND
trans-1,3-Dichloropropene	0.10	0.33	ND
Ethylbenzene	0.20	0.69	ND
Hexachlorobutadiene	0.22	0.78	ND
Isopropylbenzene	0.22	0.79	ND
p-Isopropyltoluene	0.24	0.84	ND
Methylene Chloride	0.18	0.63	ND
Naphthalene	0.14	0.51	ND
n-Propylbenzene	0.21	0.72	ND
Styrene	0.19	0.67	ND
ortho-Xylene	0.19*	0.66	ND
1,1,1,2-Tetrachloroethane	0.090	0.29	ND
1,1,2,2-Tetrachloroethane	0.20	0.70	ND
Tetrachloroethene	0.070	0.24	ND
Toluene	0.11	0.37	ND
1,2,3-Trichlorobenzene	0.16	0.56	ND
1,2,4-Trichlorobenzene	0.18	0.63	ND
1,1,1-Trichloroethane	0.060	0.22	ND
1,1,2-Trichloroethane	0.070	0.24	ND
Trichloroethene	0.070	0.24	ND
Trichlorofluoromethane	0.080	0.27	ND

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82787 WS-2 ug/L
1,2,3-Trichloropropane	0.20	0.74	ND
1,2,4-Trimethylbenzene	0.23	0.83	ND
1,3,5-Trimethylbenzene	0.23	0.82	ND
Vinyl Chloride	0.090	0.29	ND
meta,para-Xylene	0.37	1.3	ND

Surrogate Recovery on Bromofluorobenzene = 98.0 %

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82788 WS-3 ug/L
Benzene	0.070	0.25	ND
Bromobenzene	0.24	0.85	ND
Bromochloromethane	0.070	0.25	ND
Bromodichloromethane	0.080	0.29	4.5
Bromoform	0.11	0.37	0.12
Bromomethane	0.060	0.21	ND
n-Butylbenzene	0.20	0.69	ND
sec-Butylbenzene	0.24	0.85	ND
tert-Butylbenzene	0.23	0.80	ND
Carbon Tetrachloride	0.040	0.13	ND
Chlorobenzene	0.10	0.35	ND
Chloroethane	0.14	0.48	ND
Chloroform	0.070	0.23	5.2
Chloromethane	0.070	0.23	ND
2-Chlorotoluene	0.18	0.64	ND
4-Chlorotoluene	0.21	0.75	ND
Dibromochloromethane	0.070	0.25	2.0
1,2-Dibromo-3-Chloropropane	0.22	0.80	ND
1,2-Dibromoethane	0.080	0.28	ND
Dibromomethane	0.10	0.34	ND
1,2-Dichlorobenzene	0.22	0.78	ND
1,3-Dichlorobenzene	0.24	0.86	ND
1,4-Dichlorobenzene	0.22	0.78	ND
Dichlorodifluoromethane	0.080	0.25	ND
1,1-Dichloroethane	0.10	0.33	ND
1,2-Dichloroethane	0.090	0.32	ND
1,1-Dichloroethene	0.090	0.30	ND
cis-1,2-Dichloroethene	0.090	0.30	ND
trans-1,2-Dichloroethene	0.050	0.18	ND
1,2-Dichloropropane	0.080	0.27	ND
1,3-Dichloropropane	0.080	0.26	ND
2,2-Dichloropropane	0.10	0.34	ND
1,1-Dichloropropene	0.070	0.24	ND
cis-1,3-Dichloropropene	0.080	0.27	ND
trans-1,3-Dichloropropene	0.10	0.33	ND
Ethylbenzene	0.20	0.69	ND
Hexachlorobutadiene	0.22	0.78	ND
Isopropylbenzene	0.22	0.79	ND
p-Isopropyltoluene	0.24	0.84	ND
Methylene Chloride	0.18	0.63	ND
Naphthalene	0.14	0.51	ND
n-Propylbenzene	0.21	0.72	ND
Styrene	0.19	0.67	ND
ortho-Xylene	0.19	0.66	ND
1,1,1,2-Tetrachloroethane	0.090	0.29	ND
1,1,2,2-Tetrachloroethane	0.20	0.70	ND
Tetrachloroethene	0.070	0.24	ND
Toluene	0.11	0.37	ND
1,2,3-Trichlorobenzene	0.16	0.56	ND
1,2,4-Trichlorobenzene	0.18	0.63	ND
1,1,1-Trichloroethane	0.060	0.22	ND
1,1,2-Trichloroethane	0.070	0.24	ND
Trichloroethene	0.070	0.24	ND
Trichlorofluoromethane	0.080	0.27	ND

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82788 WS-3 ug/L
1,2,3-Trichloropropane	0.20	0.74	ND
1,2,4-Trimethylbenzene	0.23	0.83	ND
1,3,5-Trimethylbenzene	0.23	0.82	ND
Vinyl Chloride	0.090	0.29	ND
meta,para-Xylene	0.37	1.3	ND

Surrogate Recovery on Bromofluorobenzene = 102 %

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82789 WS-4 ug/L
Benzene	0.070	0.25	ND
Bromobenzene	0.24	0.85	ND
Bromochloromethane	0.070	0.25	ND
Bromodichloromethane	0.080	0.29	4.1
Bromoform	0.11	0.37	ND
Bromomethane	0.060	0.21	ND
n-Butylbenzene	0.20	0.69	ND
sec-Butylbenzene	0.24	0.85	ND
tert-Butylbenzene	0.23	0.80	ND
Carbon Tetrachloride	0.040	0.13	ND
Chlorobenzene	0.10	0.35	ND
Chloroethane	0.14	0.48	ND
Chloroform	0.070	0.23	4.9
Chloromethane	0.070	0.23	ND
2-Chlorotoluene	0.18	0.64	ND
4-Chlorotoluene	0.21	0.75	ND
Dibromochloromethane	0.070	0.25	1.8
1,2-Dibromo-3-Chloropropane	0.22	0.80	ND
1,2-Dibromoethane	0.080	0.28	ND
Dibromomethane	0.10	0.34	ND
1,2-Dichlorobenzene	0.22	0.78	ND
1,3-Dichlorobenzene	0.24	0.86	ND
1,4-Dichlorobenzene	0.22	0.78	ND
Dichlorodifluoromethane	0.080	0.25	ND
1,1-Dichloroethane	0.10	0.33	ND
1,2-Dichloroethane	0.090	0.32	ND
1,1-Dichloroethene	0.090	0.30	ND
cis-1,2-Dichloroethene	0.090	0.30	ND
trans-1,2-Dichloroethene	0.050	0.18	ND
1,2-Dichloropropane	0.080	0.27	ND
1,3-Dichloropropane	0.080	0.26	ND
2,2-Dichloropropane	0.10	0.34	ND
1,1-Dichloropropene	0.070	0.24	ND
cis-1,3-Dichloropropene	0.080	0.27	ND
trans-1,3-Dichloropropene	0.10	0.33	ND
Ethylbenzene	0.20	0.69	ND
Hexachlorobutadiene	0.22	0.78	ND
Isopropylbenzene	0.22	0.79	ND
p-Isopropyltoluene	0.24	0.84	ND
Methylene Chloride	0.18	0.63	ND
Naphthalene	0.14	0.51	ND
n-Propylbenzene	0.21	0.72	ND
Styrene	0.19	0.67	ND
ortho-Xylene	0.19	0.66	ND
1,1,1,2-Tetrachloroethane	0.090	0.29	ND
1,1,2,2-Tetrachloroethane	0.20	0.70	ND
Tetrachloroethene	0.070	0.24	ND
Toluene	0.11	0.37	ND
1,2,3-Trichlorobenzene	0.16	0.56	ND
1,2,4-Trichlorobenzene	0.18	0.63	ND
1,1,1-Trichloroethane	0.060	0.22	ND
1,1,2-Trichloroethane	0.070	0.24	ND
Trichloroethene	0.070	0.24	ND
Trichlorofluoromethane	0.080	0.27	ND

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82789 WS-4 ug/L
1,2,3-Trichloropropane	0.20	0.74	ND
1,2,4-Trimethylbenzene	0.23	0.83	ND
1,3,5-Trimethylbenzene	0.23	0.82	ND
Vinyl Chloride	0.090	0.29	ND
meta,para-Xylene	0.37	1.3	ND

Surrogate Recovery on Bromofluorobenzene = 96.0 %

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82790 WS-5 ug/L
Benzene	0.070	0.25	ND
Bromobenzene	0.24	0.85	ND
Bromochloromethane	0.070	0.25	ND
Bromodichloromethane	0.080	0.29	4.5
Bromoform	0.11	0.37	0.13
Bromomethane	0.060	0.21	ND
n-Butylbenzene	0.20	0.69	ND
sec-Butylbenzene	0.24	0.85	ND
tert-Butylbenzene	0.23	0.80	ND
Carbon Tetrachloride	0.040	0.13	ND
Chlorobenzene	0.10	0.35	ND
Chloroethane	0.14	0.48	ND
Chloroform	0.070	0.23	5.7
Chloromethane	0.070	0.23	ND
2-Chlorotoluene	0.18	0.64	ND
4-Chlorotoluene	0.21	0.75	ND
Dibromochloromethane	0.070	0.25	1.9
1,2-Dibromo-3-Chloropropane	0.22	0.80	ND
1,2-Dibromoethane	0.080	0.28	ND
Dibromomethane	0.10	0.34	ND
1,2-Dichlorobenzene	0.22	0.78	ND
1,3-Dichlorobenzene	0.24	0.86	ND
1,4-Dichlorobenzene	0.22	0.78	ND
Dichlorodifluoromethane	0.080	0.25	ND
1,1-Dichloroethane	0.10	0.33	ND
1,2-Dichloroethane	0.090	0.32	ND
1,1-Dichloroethene	0.090	0.30	ND
cis-1,2-Dichloroethene	0.090	0.30	ND
trans-1,2-Dichloroethene	0.050	0.18	ND
1,2-Dichloropropane	0.080	0.27	ND
1,3-Dichloropropane	0.080	0.26	ND
2,2-Dichloropropane	0.10	0.34	ND
1,1-Dichloropropene	0.070	0.24	ND
cis-1,3-Dichloropropene	0.080	0.27	ND
trans-1,3-Dichloropropene	0.10	0.33	ND
Ethylbenzene	0.20	0.69	ND
Hexachlorobutadiene	0.22	0.78	ND
Isopropylbenzene	0.22	0.79	ND
p-Isopropyltoluene	0.24	0.84	ND
Methylene Chloride	0.18	0.63	ND
Naphthalene	0.14	0.51	ND
n-Propylbenzene	0.21	0.72	ND
Styrene	0.19	0.67	ND
ortho-Xylene	0.19	0.66	ND
1,1,1,2-Tetrachloroethane	0.090	0.29	ND
1,1,2,2-Tetrachloroethane	0.20	0.70	ND
Tetrachloroethene	0.070	0.24	ND
Toluene	0.11	0.37	ND
1,2,3-Trichlorobenzene	0.16	0.56	ND
1,2,4-Trichlorobenzene	0.18	0.63	ND
1,1,1-Trichloroethane	0.060	0.22	ND
1,1,2-Trichloroethane	0.070	0.24	ND
Trichloroethene	0.070	0.24	ND
Trichlorofluoromethane	0.080	0.27	ND

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82790 WS-5 ug/L
1,2,3-Trichloropropane	0.20	0.74	ND
1,2,4-Trimethylbenzene	0.23	0.83	ND
1,3,5-Trimethylbenzene	0.23	0.82	ND
Vinyl Chloride	0.090	0.29	ND
meta,para-Xylene	0.37	1.3	ND

Surrogate Recovery on Bromofluorobenzene = 100 %

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82791 WS-5B ug/L
Benzene	0.070	0.25	ND
Bromobenzene	0.24	0.85	ND
Bromochloromethane	0.070	0.25	ND
Bromodichloromethane	0.080	0.29	4.6
Bromoform	0.11	0.37	0.12
Bromomethane	0.060	0.21	ND
n-Butylbenzene	0.20	0.69	ND
sec-Butylbenzene	0.24	0.85	ND
tert-Butylbenzene	0.23	0.80	ND
Carbon Tetrachloride	0.040	0.13	ND
Chlorobenzene	0.10	0.35	ND
Chloroethane	0.14	0.48	ND
Chloroform	0.070	0.23	5.5
Chloromethane	0.070	0.23	ND
2-Chlorotoluene	0.18	0.64	ND
4-Chlorotoluene	0.21	0.75	ND
Dibromochloromethane	0.070	0.25	2.0
1,2-Dibromo-3-Chloropropane	0.22	0.80	ND
1,2-Dibromoethane	0.080	0.28	ND
Dibromomethane	0.10	0.34	ND
1,2-Dichlorobenzene	0.22	0.78	ND
1,3-Dichlorobenzene	0.24	0.86	ND
1,4-Dichlorobenzene	0.22	0.78	ND
Dichlorodifluoromethane	0.080	0.25	ND
1,1-Dichloroethane	0.10	0.33	ND
1,2-Dichloroethane	0.090	0.32	ND
1,1-Dichloroethene	0.090	0.30	ND
cis-1,2-Dichloroethene	0.090	0.30	ND
trans-1,2-Dichloroethene	0.050	0.18	ND
1,2-Dichloropropane	0.080	0.27	ND
1,3-Dichloropropane	0.080	0.26	ND
2,2-Dichloropropane	0.10	0.34	ND
1,1-Dichloropropene	0.070	0.24	ND
cis-1,3-Dichloropropene	0.080	0.27	ND
trans-1,3-Dichloropropene	0.10	0.33	ND
Ethylbenzene	0.20	0.69	ND
Hexachlorobutadiene	0.22	0.78	ND
Isopropylbenzene	0.22	0.79	ND
p-Isopropyltoluene	0.24	0.84	ND
Methylene Chloride	0.18	0.63	ND
Naphthalene	0.14	0.51	ND
n-Propylbenzene	0.21	0.72	ND
Styrene	0.19	0.67	ND
ortho-Xylene	0.19	0.66	ND
1,1,1,2-Tetrachloroethane	0.090	0.29	ND
1,1,2,2-Tetrachloroethane	0.20	0.70	ND
Tetrachloroethene	0.070	0.24	ND
Toluene	0.11	0.37	ND
1,2,3-Trichlorobenzene	0.16	0.56	ND
1,2,4-Trichlorobenzene	0.18	0.63	ND
1,1,1-Trichloroethane	0.060	0.22	ND
1,1,2-Trichloroethane	0.070	0.24	ND
Trichloroethene	0.070	0.24	ND
Trichlorofluoromethane	0.080	0.27	ND

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82791 WS-5B ug/L
1,2,3-Trichloropropane	0.20	0.74	ND
1,2,4-Trimethylbenzene	0.23	0.83	ND
1,3,5-Trimethylbenzene	0.23	0.82	ND
Vinyl Chloride	0.090	0.29	ND
meta,para-Xylene	0.37	1.3	ND

Surrogate Recovery on Bromofluorobenzene = 98.0 %

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82792 Trip Blank ug/L
Benzene	0.070	0.25	ND
Bromobenzene	0.24	0.85	ND
Bromochloromethane	0.070	0.25	ND
Bromodichloromethane	0.080	0.29	ND
Bromoform	0.11	0.37	ND
Bromomethane	0.060	0.21	ND
n-Butylbenzene	0.20	0.69	ND
sec-Butylbenzene	0.24	0.85	ND
tert-Butylbenzene	0.23	0.80	ND
Carbon Tetrachloride	0.040	0.13	ND
Chlorobenzene	0.10	0.35	ND
Chloroethane	0.14	0.48	ND
Chloroform	0.070	0.23	ND
Chloromethane	0.070	0.23	ND
2-Chlorotoluene	0.18	0.64	ND
4-Chlorotoluene	0.21	0.75	ND
Dibromochloromethane	0.070	0.25	ND
1,2-Dibromo-3-Chloropropane	0.22	0.80	ND
1,2-Dibromoethane	0.080	0.28	ND
Dibromomethane	0.10	0.34	ND
1,2-Dichlorobenzene	0.22	0.78	ND
1,3-Dichlorobenzene	0.24	0.86	ND
1,4-Dichlorobenzene	0.22	0.78	ND
Dichlorodifluoromethane	0.080	0.25	ND
1,1-Dichloroethane	0.10	0.33	ND
1,2-Dichloroethane	0.090	0.32	ND
1,1-Dichloroethene	0.090	0.30	ND
cis-1,2-Dichloroethene	0.090	0.30	ND
trans-1,2-Dichloroethene	0.050	0.18	ND
1,2-Dichloropropane	0.080	0.27	ND
1,3-Dichloropropane	0.080	0.26	ND
2,2-Dichloropropane	0.10	0.34	ND
1,1-Dichloropropene	0.070	0.24	ND
cis-1,3-Dichloropropene	0.080	0.27	ND
trans-1,3-Dichloropropene	0.10	0.33	ND
Ethylbenzene	0.20	0.69	ND
Hexachlorobutadiene	0.22	0.78	ND
Isopropylbenzene	0.22	0.79	ND
p-Isopropyltoluene	0.24	0.84	ND
Methylene Chloride	0.18	0.63	ND
Naphthalene	0.14	0.51	ND
n-Propylbenzene	0.21	0.72	ND
Styrene	0.19	0.67	ND
ortho-Xylene	0.19.	0.66	ND
1,1,1,2-Tetrachloroethane	0.090	0.29	ND
1,1,2,2-Tetrachloroethane	0.20	0.70	ND
Tetrachloroethene	0.070	0.24	ND
Toluene	0.11	0.37	ND
1,2,3-Trichlorobenzene	0.16	0.56	ND
1,2,4-Trichlorobenzene	0.18	0.63	ND
1,1,1-Trichloroethane	0.060	0.22	ND
1,1,2-Trichloroethane	0.070	0.24	ND
Trichloroethene	0.070	0.24	ND
Trichlorofluoromethane	0.080	0.27	ND

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82792 Trip Blank ug/L
1,2,3-Trichloropropane	0.20	0.74	ND
1,2,4-Trimethylbenzene	0.23	0.83	ND
1,3,5-Trimethylbenzene	0.23	0.82	ND
Vinyl Chloride	0.090	0.29	ND
meta,para-Xylene	0.37	1.3	ND

Surrogate Recovery on Bromofluorobenzene = 96.0 %

ANALYTICAL RESULTS: GCMS Drinking Water Total Trihalomethanes

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82786 WS-1 ug/L
Bromodichloromethane	0.080	0.29	3.7
Bromoform	0.11	0.37	0.13
Chloroform	0.070	0.23	4.1
Dibromochloromethane	0.070	0.25	1.8
TTHM in Water, (Summation)			9.7
Surrogate Recovery on Bromofluorobenzene = 100 %			

Analyte Name	MDL ug/L	LOQ ug/L	82787 WS-2 ug/L
Bromodichloromethane	0.080	0.29	4.5
Bromoform	0.11	0.37	0.12
Chloroform	0.070	0.23	5.0
Dibromochloromethane	0.070	0.25	2.0
TTHM in Water, (Summation)			12
Surrogate Recovery on Bromofluorobenzene = 98.0 %			

Analyte Name	MDL ug/L	LOQ ug/L	82788 WS-3 ug/L
Bromodichloromethane	0.080	0.29	4.5
Bromoform	0.11	0.37	0.12
Chloroform	0.070	0.23	5.2
Dibromochloromethane	0.070	0.25	2.0
TTHM in Water, (Summation)			12
Surrogate Recovery on Bromofluorobenzene = 102 %			

Analyte Name	MDL ug/L	LOQ ug/L	82789 WS-4 ug/L
Bromodichloromethane	0.080	0.29	4.1
Bromoform	0.11	0.37	ND
Chloroform	0.070	0.23	4.9
Dibromochloromethane	0.070	0.25	1.8
TTHM in Water, (Summation)			11
Surrogate Recovery on Bromofluorobenzene = 96.0 %			

Analyte Name	MDL ug/L	LOQ ug/L	82790 WS-5 ug/L
Bromodichloromethane	0.080	0.29	4.5
Bromoform	0.11	0.37	0.13
Chloroform	0.070	0.23	5.7
Dibromochloromethane	0.070	0.25	1.9
TTHM in Water, (Summation)			12
Surrogate Recovery on Bromofluorobenzene = 100 %			

Analyte Name	MDL. ug/L	LOQ ug/L	82791 WS-5B ug/L
Bromodichloromethane	0.080	0.29	4.6
Bromoform	0.11	0.37	0.12
Chloroform	0.070	0.23	5.5
Dibromochloromethane	0.070	0.25	2.0
TTHM in Water, (Summation)			12
Surrogate Recovery on Bromofluorobenzene = 98.0 %			

ANALYTICAL RESULTS: GCMS Drinking Water Total Trihalomethanes

Customer: GZA GeoEnvironmental, Inc.
Project Description: Foley & Lardner
Northern Lake Service Project Number: 15611

Analyte Name	MDL ug/L	LOQ ug/L	82792 Trip Blank ug/L
Bromodichloromethane	0.080	0.29	ND
Bromoform	0.11	0.37	ND
Chloroform	0.070	0.23	ND
Dibromochloromethane	0.070	0.25	ND
TTHM in Water, (Summation)			ND

Surrogate Recovery on Bromofluorobenzene = 96.0 %

43262

CLERMONT PRINTING (715) 623-7606

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520
Tel: (715) 478-2777 • Fax: (715) 478-3060

NO. 13523

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

Wisconsin Lab Cert. No. 721026460

RETURN THIS FORM WITH SAMPLES.

CLIENT: GZA GeoEnvironmental, Inc.
PROJECT TITLE: Foley & Lardner
ADDRESS: N4140 Duplainville Rd.
PROJECT NO.:
P.O. NO.: 20.0588
CITY: Pewaukee STATE: WI ZIP: 53072
CONTACT: Mark Yannett
PHONE: 414-691-2662 FAX: 691-9279

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	SAMPLE TYPE	GRAB/ COMP.	CONTAINER/PRESERVATIVE					COLLECTION REMARKS
1.	82786	WS-1	6-21-95	2:40	H_2O							Analyze For:
2.	82787	WS-2		2:55								-Volatile Organic
3.	82788	WS-3		3:05								Compounds
4.	82789	WS-4		3:20								-Inorganic Compounds
5.	82790	WS-5		3:45								-Total Trihalomethan
6.	82791	WS-5B		3:45								-Secondary Inorganic
7.	82792	Trip Blank										Chemical & Physical
8.												Per NR 809.11,
9.												809.22, 809.25
10.												809.61
11.												
12.												

SAMPLE TYPE:
SW = surface water, DW = drinking water, PROD = product
WW = wastewater, TIS = tissue, SOIL = soil
GW = groundwater, AIR = air, SED = sediment
describe others

CONTAINER: P = plastic, G = glass, V = glass vial, B = plastic bag, describe others

PRESERVATIVES & PREPARATION: NP = nothing added, S = sulfuric acid, N = nitric acid, Z = zinc acetate, OH = sodium hydroxide, HA = hydrochloric & ascorbic acid, H = hydrochloric acid, F = field filtered

COLLECTED BY (signature): Robert C. R
CUSTODY SEAL NO. (IF ANY) DATE/TIME

RELINQUISHED BY (signature) RECEIVED BY (signature) DATE/TIME

RELINQUISHED BY (signature) RECEIVED BY (signature) DATE/TIME

DISPATCHED BY (signature) METHOD OF TRANSPORT DATE/TIME

RECEIVED AT NLS BY (signature): D. Cottrell
DATE/TIME: 6-22-95 10:00
CONDITION
TEMP: 0.2

SEAL INTACT? ☐ YES ☐ NO
SEAL #
REMARKS & OTHER INFORMATION

Rec'd by UPS

IMPORTANT: 1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE SHIPPER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.