Marlin Environmental, Inc.

SITE INVESTIGATION
COMPLETION REPORT

VILLAGE OF LAKE ZURICH
61 WEST MAIN STREET
LAKE ZURICH, LAKE COUNTY, ILLINOIS 60047
LUST INCIDENT No. 20100090
IEPA LPC No. 0970855130

Prepared for:

Mr. Bob Vitas
VILLAGE OF LAKE ZURICH
505 Telser Road
Lake Zurich, Illinois 60047

Prepared by:

MARLIN ENVIRONMENTAL, INC.
3935 Commerce Drive
St. Charles, Illinois 60174

July 12, 2010

Kyle R. Webb, P.G.
Senior Professional Geologist

Shawn D. Wolfe
Project Manager

Marlin Environmental, Inc.

INVOICE

July 22, 2010

Mr. Mike Brown
Public Works Department
Village of Lake Zurich
505 Telser Road
Lake Zurich, Illinois 60047

RE: INVOICE FOR ENVIRONMENTAL CONSULTING SERVICES – IEPA STAGE 2 SITE INVESTIGATION AND REGULATORY REPORTING– 61 WEST MAIN STREET, LAKE ZURICH

Invoice No: 895-07122010 **Authorization: Village of Lake Zurich Purchase Orders #41166, #41146 & #11000024**

PROFESSIONAL SERVICES DUE FOR:

Drilling Costs	**$1,250.00**
Analytical Costs	**$553.46**
Consulting Costs	**$8,564.78**
Consultant Materials Costs	**$397.00**
Subcontractor Handling Charges	**$200.40**
Actual Project Total (Amount Due This Invoice)	**$10,965.64**
Projected Cost (Based Upon Proposal #10-2172)	**$13,661.48**
Amount Left in Purchase Order #41166	**$1,272.77**
Amount Left in Purchase Order #41146	**$5,904.00**
Amount Left in Purchase Order #11000024	**$13,661.48**

3935 Commerce Drive • St. Charles, Illinois 60174 • (630) 444-1933 • Fax (630) 444-1939

Please withdraw $1,272.77 from #41166 and withdraw $5,904.00 from #41146 (to close out PO #'s).

Total = $7,176.77 (to close out #41166 and #41146) with an additional withdrawal of $3,788.87 from #11000024 leaving a balance of $9,872.61 in PO #11000024 to put towards the Corrective Action Plan.

THANK YOU

Please Make Check Payable to:
Marlin Environmental, Inc.
3935 Commerce Drive
St. Charles, Illinois 60174

Drilling and Monitoring Well Costs Form

1. Drilling

Number of Borings to Be Drilled	Type HSA/PUSH/ Injection	Depth (feet) of Each Boring	Total Feet Drilled	Reason for Drilling
12	PUSH	20.00	240.00	On-Site Stage 2 Soil Investigation

	Total Feet	Rate per Foot ($)	Total Cost
Total Feet via HSA:			
Total Feet via PUSH:	240.00	5.21	$1,250.00
Total Feet for Injection via PUSH:		.00	
		Total Drilling Costs:	$1,250.00

2. Monitoring / Recovery Wells

Number of Wells	Type of Well HSA / PUSH / 4" or 6" Recovery / 8" Recovery	Diameter of Well (inches)	Depth of Well (feet)	Total Feet of Wells to Be Installed

Well Installation	Total Feet	Rate per Foot ($)	Total Cost
Total Feet via HSA:			
Total Feet via PUSH:			
Total Feet of 4" or 6" Recovery:			
Total Feet of 8" or Greater Recovery:			
		Total Well Costs:	

Total Drilling and Monitoring Well Costs:	$1,250.00

Environmental Soil Probing Corp.

P.O. Box 4270
St.Charles, IL 60174

Invoice

Date	Invoice #
6/21/2010	569

Bill To
Marlin Environmental, Inc. 3935 Commerce Dr. St. Charles, IL 60174

RECEIVED
JUN 2 3 2010
Marlin Environmental Inc.

Terms	Due Date	project
Net 30	7/21/2010	Lake Zurich,IL

Item	Description	Qty	Rate	Amount
66DT Geoprobe			1,250.00	1,250.00

Subtotal	$1,250.00
Sales Tax (7.25%)	$0.00
Total	$1,250.00
Payments/Credits	$0.00
Balance Due	$1,250.00

Project Number 895
Project Name V. of LZ - 61 W. Main St.
Project Phase Stage 2
Approved by KRW
Date Approved 7/6/10

Phone #	Fax #
(630)846-0625	(630)584-7997

Analytical Costs Form

Laboratory Analysis	Number of Samples		Cost ($) per Analysis		Total per Parameter
Chemical Analysis					
BETX Soil with MTBE EPA 8260	7	X	60.00	=	$420.00
BETX Water with MTBE EPA 8260		X		=	
COD (Chemical Oxygen Demand)		X		=	
Corrosivity		X		=	
Flash Point or Ignitability Analysis EPA 1010		X		=	
Fraction Organic Carbon Content (f_{oc}) ASTM-D 2974-00		X		=	
Fat, Oil, & Grease (FOG)		X		=	
LUST Pollutants Soil - analysis must include volatile, base/ neutral, polynuclear aromatics and metals list in Section 732, Appendix B and 734 Appendix B		X		=	
Dissolved Oxygen (DO)		X		=	
Paint Filter (Free Liquids)		X		=	
PCB / Pesticides (combination)		X		=	
PCBs		X		=	
Pesticides		X		=	
pH		X		=	
Phenol		X		=	
Polynuclear Aromatics PNA, or PAH SOIL EPA 8270		X		=	
Polynuclear Aromatics PNA, or PAH WATER EPA 8270		X		=	
Reactivity		X		=	
SVOC - Soil (Semi-Volatile Organic Compounds)		X		=	
SVOC - Water (Semi-Volatile Organic Compounds)		X		=	
TKN (Total Kjeldahl) "nitrogen"		X		=	
TPH (Total Petroleum Hydrocarbons)		X		=	
VOC (Volatile Organic Compounds) - Soil (Non-Aqueous)		X		=	
VOC (Volatile Organic Compounds) - Water		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
Geo-Technical Analysis					
Soil Bulk Density (p_b) ASTM D2937-94		X		=	
Ex-situ Hydraulic Conductivity / Permeability		X		=	
Moisture Content (w) ASTM D2216-92 / D4643-93		X		=	
Porosity		X		=	
Rock Hydraulic Conductivity Ex-situ		X		=	
Sieve / Particle Size Analysis ASTM D422-63 / D1140-54		X		=	
Soil Classification ASTM D2488-90 / D2487-90		X		=	
Soil Particle Density (p_s) ASTM D854-92		X		=	
		X		=	
		X		=	
		X		=	

Analytical Costs Form

Metals Analysis					
Soil preparation fee for Metals TCLP Soil (one fee per soil sample)		X		=	
Soil preparation fee for Metals Total Soil (one fee per soil sample)		X		=	
Water preparation fee for Metals Water (one fee per water sample)		X		=	
Arsenic TCLP Soil		X		=	
Arsenic Total Soil		X		=	
Arsenic Water		X		=	
Barium TCLP Soil		X		=	
Barium Total Soil		X		=	
Barium Water		X		=	
Cadmium TCLP Soil		X		=	
Cadmium Total Soil		X		=	
Cadmium Water		X		=	
Chromium TCLP Soil		X		=	
Chromium Total Soil		X		=	
Chromium Water		X		=	
Cyanide TCLP Soil		X		=	
Cyanide Total Soil		X		=	
Cyanide Water		X		=	
Iron TCLP Soil		X		=	
Iron Total Soil		X		=	
Iron Water		X		=	
Lead TCLP Soil		X		=	
Lead Total Soil		X		=	
Lead Water		X		=	
Mercury TCLP Soil		X		=	
Mercury Total Soil		X		=	
Mercury Water		X		=	
Selenium TCLP Soil		X		=	
Selenium Total Soil		X		=	
Selenium Water		X		=	
Silver TCLP Soil		X		=	
Silver Total Soil		X		=	
Silver Water		X		=	
Metals TCLP Soil (a combination of all metals) RCRA		X		=	
Metals Total Soil (a combination of all metals) RCRA		X		=	
Metals Water (a combination of all metals) RCRA		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
Other					
EnCore® Sampler, purge-and-trap sampler, or equivalent sampling device	7	X	11.12	=	$77.84
Sample Shipping per sampling event[1]	1	X	55.62	=	$55.62

[1]A sampling event, at a minimum, is all samples (soil and groundwater) collected in a calendar day.

Total Analytical Costs: $ 553.46

Invoice

First Environmental Laboratories, Inc.

Invoice Number: 87541

IL ELAP / NELAC Accreditation # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Tax I.D. No. 36-3925322

Invoice Date: Jun 15, 2010

Page: 1

Sold To:
MARLIN ENVIRONMENTAL
3935 Commerce Drive
St. Charles, IL 60174

RECEIVED
JUN 17 2010
Marlin Environmental Inc.

Remit To:
FIRST ENVIRONMENTAL LABORATORIES, INC.
1600 Shore Road Suite D
Naperville, IL 60563

Customer ID: MAR01

Customer PO	Payment Terms	Due Date	Sales Rep ID
	Net 90 Days	9/13/10	

Quantity	Item	Description	Unit Price	Extension
4.00		Project ID:Village of Lake Zurich - 61 W. Main St. BTEX First Environmental File ID:10-2259 THANK YOU!	60.00	240.00

Project Number 895
Project Name Village of Lake Zurich - stage "2"
Project Phase Stage "2" - County Grant Site
Approved by KRW
Date Approved 6/21/10

TOTAL AMOUNT DUE **$ 240.00**

First Environmental Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Invoice

Invoice Number: 87646

Tax I.D. No. 36-3925322

Invoice Date: Jun 22, 2010

Page: 1

Sold To:
MARLIN ENVIRONMENTAL
3935 Commerce Drive
St. Charles, IL 60174

RECEIVED
JUN 2 4 2010
Marlin Environmental Inc.

Remit To:
FIRST ENVIRONMENTAL LABORATORIES, INC.
1600 Shore Road Suite D
Naperville, IL 60563

Customer ID: MAR01

Customer PO	Payment Terms	Due Date	Sales Rep ID
	Net 90 Days	9/20/10	

Quantity	Item	Description	Unit Price	Extension
3.00		Project ID:Village of Lake Zurich - 61 W. Main St. BTEX First Environmental File ID:10-2404 THANK YOU!	60.00	180.00

Project Number 895
Project Name V of LZ - 61 W. Main
Project Phase Stage 2
Approved by KRW
Date Approved 7/7/10

TOTAL AMOUNT DUE **$ 180.00**

Consulting Personnel Costs Form

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
Webb	Senior Prof. Geologist	5.00	122.35	$611.75
Stage 2-Plan	Stage 2 regs, determine where to drill & sample, setup and consulting			
Wolfe	Project Manager	5.00	100.11	$500.55
Stage 2-Plan	Stage 2 Plan design, writing & attachments			
Webb	Senior Project Manager	5.00	100.11	$500.55
Stage 2-Plan	Stage 2 Plan & budget			
Wolfe	Senior Project Manager	3.00	111.23	$333.69
Stage 2-Plan	Stage 2 Plan & budget review & comments			
LoPiccolo	Senior Admin. Assistant	4.00	50.05	$200.20
Stage 2-Plan	Stage 2 Plan attachments, binding, submittal, copies			
Renguso	Senior Prof. Geologist	3.00	122.35	$367.05
Stage 2-Plan	Report Final Review & Budget Certification			
Renguso	Senior Project Manager	4.00	111.23	$444.92
Stage 2-Field	Stage 2 office time, project management, subcontractor management			
Webb	Senior Project Manager	2.00	111.23	$222.46
Stage 2-Field	JULIE coordination, SWAP database updates			
Webb	Project Manager	4.00	100.11	$400.44
Stage 2-Field	Stage 2 Field Travel Time and Job Prep - To and From Site - Drilling			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
Webb	Project Manager	8.00	100.11	$800.88
Stage 2-Field	Stage 2 field drilling, soil screening & sampling, mapping			
Wolfe	Senior Project Manager	8.00	111.23	$889.84
SICR	Site Investigation Completion Report Preparation			
Webb	Project Manager	12.00	100.11	$1,201.32
SICR	Site Investigation Completion Report Preparation - Attachments, Tables, SWAP Search			
Waughn	Senior Draftperson/CAD	2.00	66.74	$133.48
Stage 2-Field	Stage 2 Maps			
LoPiccolo	Senior Admin. Assistant	2.00	50.05	$100.10
Stage 2-Field	Stage 2 office time, files			
Gray	Project Manager	8.00	100.11	$800.88
Stage 2-Results	Stage 2 results evaluation and data			
Schumacher	Senior Project Manager	4.00	111.23	$444.92
Stage 2-Pay	Stage 2 actual costs budget prep and invoice processing			
Renguso	Senior Prof. Geologist	5.00	122.35	$611.75
SICR	Site Investigation Completion Report Preparation- Review and Certification			

*Refer to the applicable Maximum Payment Amounts document.

Total of Consulting Personnel Costs	**$8,564.78**

Consultant's Materials Costs Form

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
Field Vehicle	1.00	125.00	Day	$125.00
Stage 2-Field	Drilling			
Consultant Field Equipment and Sampling Kit	1.00	15.00	Day	$15.00
Stage 2-Field	Drilling			
Photoionization Detector	1.00	130.00	Day	$130.00
Stage 2-Field	Soil screening drilling			
Water Interface Probe	1.00	45.00	Day	$45.00
Stage 2-Field	Statics while drilling			
Measuring Wheel	1.00	15.00	Day	$15.00
Stage 2-Field	Mapping & Site Survey Measurements			
Consultant Latex Gloves	1.00	12.00	Box	$12.00
Stage 2-Field	Sampling Activities			
Digital Camera	1.00	20.00	Day	$20.00
Stage 2-Field	Site & Utility Mapping & Site Survey Drilling Documentation			
OSHA Health & Safety Plan	1.00	35.00	Each	$35.00
Stage 2-Field	OSHA Required HASP			

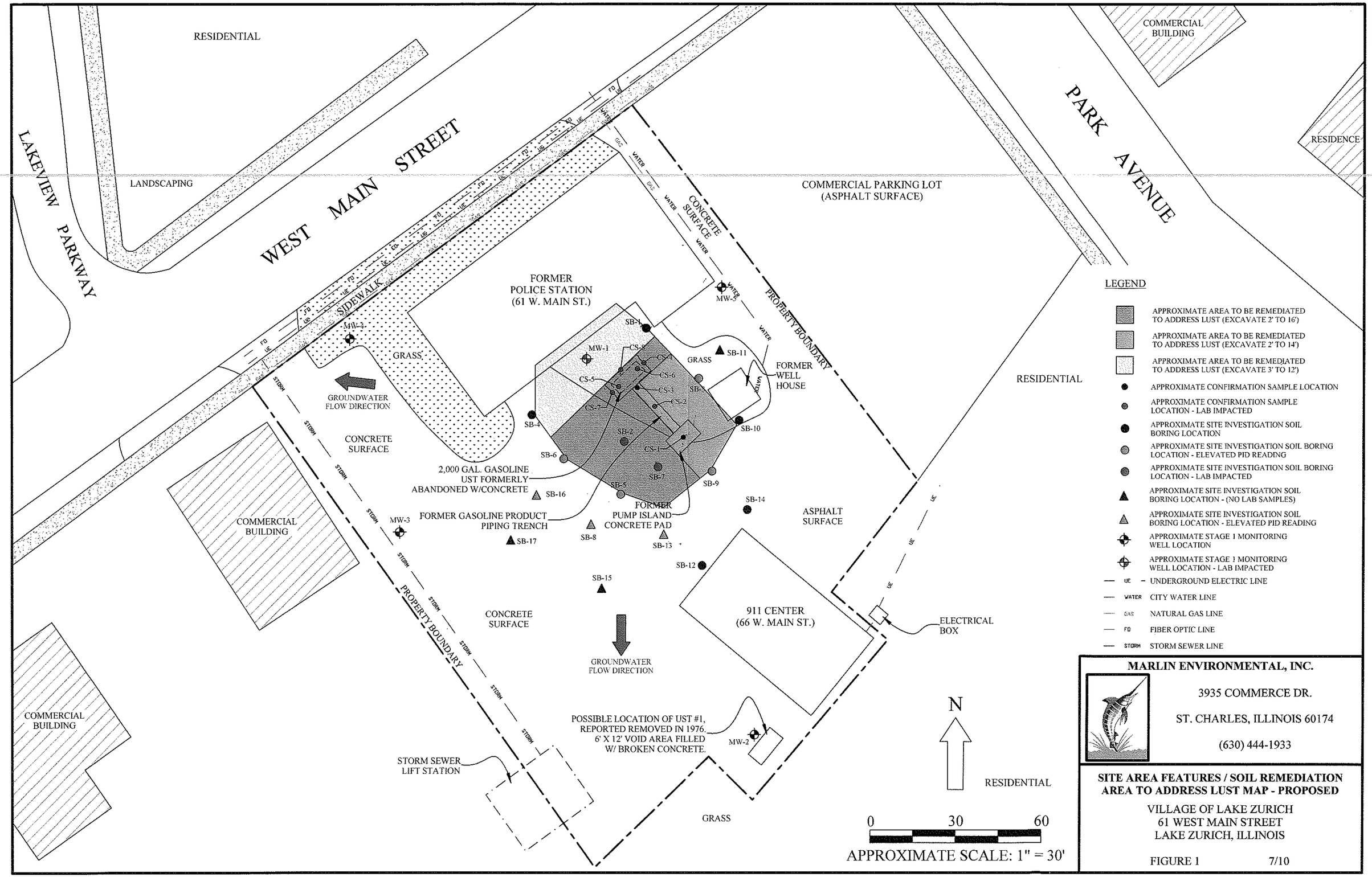
Total of Consultant Materials Costs	**$397.00**

Handling Charges Form

Subcontract or Field Purchase Cost:	Eligible Handling Charges as a Percentage of Cost:
$0 - $5,000	12%
$5,001 - $15,000	$600 + 10% of amt. over $5,000
$15,001- $50,000	$1,600 + 8% of amt. over $15,000
$50,001 - $100,000	$4,400 + 5% of amt. over $50,000
$100,001 - $1,000,000	$6,900 + 2% of amt. over $100,000

Subcontractor Name or Field Purchase	Type of Work Performed by Subcontractor	Subcontractor or Field Purchase Amount ($)
Environmental Soil Probing Corp.	Stage 2 Drilling Services (Invoice #569)	1,250.00
First Environmental Laboratories, Inc	Stage 2 Soil Analytical Services (Invoice #87	240.00
First Environmental Laboratories, Inc.	Stage 2 Soil Analytical Services (Invoice #87	180.00
	Total Subcontractor and Field Purchase Costs:	$1,670.00

Total Handling Charges:	$200.40



MARLIN ENVIRONMENTAL, INC.

3935 COMMERCE DR.

ST. CHARLES, ILLINOIS 60174

(630) 444-1933

SITE AREA FEATURES / SOIL REMEDIATION AREA TO ADDRESS LUST MAP - PROPOSED

VILLAGE OF LAKE ZURICH
61 WEST MAIN STREET
LAKE ZURICH, ILLINOIS

FIGURE 1 7/10

TABLE OF CONTENTS

Illinois Environmental Protection Agency
Leaking Underground Storage Tank Program
Site Investigation Completion Report

A. Site Identification

IEMA Incident # (6 digit): 100090 IEPA LPC # (10 digit): 0970855130

Site Name: Village of Lake Zurich

Site Address (Not a P.O. Box): 61 West Main Street

City: Lake Zurich County: Lake Zip Code: 60047

Leaking UST Technical File

B. Site Information

1. Will the owner/operator seek reimbursement from the Underground Storage Tank Fund? Yes ☐ No ☒

2. Has a Site Investigation Plan been submitted? Yes ☒ No ☐

   Date(s) of approval letter(s): March 18, 2010 (Stage 1 Certification)

C. Site Investigation Results

1. Site history with respect to the release;

The investigation site is the Village of Lake Zurich former Police Department and 911 Emergency Center facilities located at 61 West Main Street within the village limits of Lake Zurich, in Lake County, Illinois. **Figure 1** displays the surrounding land usage map. The surrounding land usage to the north and south is residential while the land usage to the east and west is commercial. The site is currently vacant and the buildings are awaiting demolition to make way for a new mixed commercial and residential redevelopment.

Discovery of Release

- On January 28, 2010, Grand Slam Enterprises, Inc. conducted the excavation and removal of one (1) 2,000-gallon capacity gasoline underground storage tank (UST) along with the integral product piping. The tank was removed under the supervision of the Office of the Illinois State Fire Marshal (OSFM) representative, Mr. Robert Kowalski, who witnessed and observed the UST system removal activities. The tank was found to be filled with concrete upon inspection but was ordered removed by Mr. Kowalski.

- During the UST removal activities, Mr. Robert Kowalski of the OSFM observed indications of a tank system release (corrosion holes in the base of the tank and along the product lines) and associated contaminated soils displaying obvious heavy staining and odors in the cavity. Water was observed infiltrating the base of the tank cavity. Mr. Kowalski ordered the Village of Lake Zurich to contact the Illinois Emergency Management Agency (IEMA) to report a release of gasoline associated with the tank. The Village of Lake Zurich notified IEMA and received leaking UST (LUST) incident #20100090 concerning the release of gasoline at this facility.

LUST Removal Soil Confirmation Sampling Activities

- Eight (8) soil confirmation samples were collected following tank and piping removal and analyzed for the indicator contaminants of BTEX/MTBE, Lead (Total and TCLP) and pH parameters, per current IEPA protocols.

- Six (6) of the eight (8) soil confirmation samples collected displayed concentrations of one or more BTEX parameters above the corresponding most stringent Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Soil Remediation Objectives (SROs). No MTBE impacts were detected in the confirmation samples collected. Seven (7) of the eight (8) soil samples exceeded the IEPA TACO Tier 1 SRO for Class I Groundwater for TCLP Lead. However, the concentrations of Total Lead in each of these samples were below the pH-specific Tier 1 SRO [107 milligrams per kilogram (mg/kg)] of Appendix B, Table C of 35 Illinois Administrative Code (IAC) 734.

- Marlin Environmental, Inc. produced the 45-Day Report for this LUST facility on behalf of the Village of Lake Zurich. Pursuant to 35 IAC 734.310 and 734.315(b), Marlin Environmental, Inc. designed a Stage 1 Site Investigation Plan (SIP). The IEPA approved of the Stage 1 SIP in a correspondence letter dated March 18, 2010.

The objectives of the Site Investigation were to determine the current nature, concentration, direction of movement, rate of movement, and extent of the applicable indicator contaminants that exceed the Tier 1 remediation objectives of 35 IAC 742 as well as the significant physical features of the site and surrounding area that may affect contaminant transport and risk to human health, safety and the environment.

The technical approach utilized to meet the objectives included the installation and sampling of migration pathway soil borings, the sampling of shallow groundwater monitoring wells, a water well survey using the IEPA/United States Geological Survey (USGS) Source Water Assessment Program (SWAP) database and data evaluations in accordance with the IEPA-approved SIP.

Stage 1 Site Investigation Activities (April 2010)

- In April 2010, Marlin Environmental, Inc. mobilized to the site with a professional drilling crew to advance a total of nine (9) soil borings (MW-1 through MW-5 and SB-1 through SB-4) to depths of 20 feet below surface grade (bsg). Five (5) of the nine (9) soil borings were converted into shallow groundwater monitoring wells. The locations of MW-1 through MW-5 and SB-1 through SB-4 are illustrated in **Figure 2**. The soil borings were advanced in strategic locations designed to help evaluate and define both the lateral and vertical extents of contamination based upon the results of the Early Action soil confirmation sampling. The soil boring logs and monitoring well completion diagrams are included in **Attachment 1**.

- A total of 36 soil samples were collected for indicator constituent analysis from the nine (9) soil borings advanced during Stage 1 (four (4) soil samples per soil boring). Two (2) out of the 36 soil samples [MW-1 (8'-10') and SB-2 (12'-14')] were impacted above the most stringent IEPA TACO Tier 1 Class I SROs. The Stage 1 indicator contaminant laboratory soil analytical data is summarized in **Table I**. The laboratory analytical reports are included in **Attachment 2**.

- Marlin Environmental, Inc. then mobilized to the site to conduct the groundwater monitoring and sampling activities. Prior to collecting groundwater analytical samples, the static depth to water data

was collected from each well. The static depth to water data is summarized in **Table II**. The natural groundwater flow trend, and contaminant flow trend, is towards the northwest towards Lake Zurich and to the southwest following the sloping topography.

- The groundwater flow trends are presented in **Figure 3**. The two dominant flow trends at this facility have led to a contaminant plume that seems to be traveling both northwest and southwest, with the former tank and former product piping essentially along a plane of higher elevation.

- Once the depth to water data had been collected, groundwater samples were collected and analyzed for BTEX/MTBE and Total Lead indicator data. The groundwater analytical data is summarized in **Table III** and the laboratory analytical reports are included in **Attachment 2**.

- The groundwater analytical data indicates that monitoring well MW-4 displayed Total Lead concentrations slightly in excess of the most stringent IEPA TACO Tier 1 Class I Groundwater Remediation Objectives (GROs). This exceedence is considered to be very minor and will be addressed using the Village of Lake Zurich groundwater ordinance, which has been approved by the IEPA for use as an institutional control.

- The results of the Stage 1 Site Investigation activities indicated that soil contamination lacked adequate delineation on-site for the purposes of evaluating the extents of contamination for redevelopment planning. Based upon the results of the Stage 1 Site Investigation and pursuant to 35 IAC 734.320, a Stage 2 Site Investigation was necessary to properly define and properly delineate the extent of soil contamination at the site, evaluate potential preferential contaminant migration pathways and evaluate the extents of contamination for redevelopment planning (i.e. where might construction developers encounter special waste soils that display elevated PID readings).

<u>Stage 2 Extent Refinement Site Investigation Activities (June 2010)</u>

- Based upon the results of the Stage 1 Site Investigation, Marlin Environmental, Inc. determined that a Stage 2 Site Investigation was necessary to refine and properly delineate the extent of soil and groundwater contamination and evaluate potential preferential contaminant migration pathways for redevelopment planning.

- Marlin Environmental, Inc. mobilized to the site with a professional drilling crew in June, 2010 to advance a total of 13 soil borings (SB-5 through SB-17) to depths of 20 feet bsg. The locations of soil borings SB-5 through SB-17 are illustrated in **Figure 2**. The soil borings were advanced in strategic locations designed to refine both the lateral and vertical extents of soil contamination based upon the results of the Early Action soil confirmation and Stage 1 Site Investigation sampling. Soil boring logs are included as part of **Attachment 1**.

- A total of seven (7) soil samples were collected from the 13 soil borings advanced during the Stage 2 Site Investigation. The laboratory analysis of the soil samples returned concentrations of one or more BTEX/MTBE parameters above the most stringent IEPA TACO Tier 1 SROs in one (1) of the seven (7) soil samples [SB-7 (12'-14')]. The Stage 2 Site Investigation soil analytical results are summarized in **Table IV** and the laboratory analytical reports, including chain-of-custody and laboratory certification forms, are included as part of **Attachment 2**.

- The results of the Stage 2 Site Investigation activities indicate that both soil and groundwater contamination are defined to the most stringent IEPA TACO Tier 1 Remediation Objectives at this LUST facility. The Stage 2 soil borings vertically defined the extents of soil contamination and laterally refined the extents of soil contamination.

2. Site description:

a. Area surrounding the site;

The site is located at 61 West Main Street in downtown Lake Zurich. The site is a former Police Department and 911 Emergency Call Center. The surrounding land usage to the north and south is residential while the land usage to the east and west is commercial. The site is currently vacant and the buildings are awaiting demolition to make way for a new mixed commercial and residential redevelopment.

b. Local geology, hydrogeology, and hydrology;

The Illinois State Geological Survey (ISGS) map entitled *"Quaternary Deposits of Illinois"* (Lineback, 1979) indicates that the site's subsurface geology is classified as the Wadsworth Till Member of the Wedron Formation, which is described as "mostly gray clayey and silty clayey till". According to ISGS Circular 532 (Berg, Kempton and Cartwright, 1984), entitled "Potential for Contamination of Shallow Aquifers in Illinois" (Plate 1), the subsurface native soil conditions are typical of the "E" region, which consists of "uniform, relatively impermeable silty or clayey till at least 50 feet thick".

There are isolated pockets of urban fill materials throughout the site. The native soil at the site generally consists of clayey silt with variable amounts of medium to coarse sand and gravel underlain by stiff grey clay to the boring termination depth of twenty (20) feet bsg. The geologic cross sectional map of the site is included as **Figure 4**.

The hydraulic conductivity of the site was determined in the field to be 3.714×10^{-4} centimeters per second (cm/s) at monitoring well MW-1, typical of clay and silt according to Table 3.7 found in the book *Applied Hydrogeology, Fourth Edition* (C.W. Fetter, 2001). The hydraulic conductivity value was obtained by performing an in-situ slug test. The hydraulic gradient of the site was calculated to be 0.0849 ft/ft, indicating a relatively flat gradient despite the sloping topography. The calculated theoretical well yield is 1,360.28 gallons/day (gal/day) at MW-1. The hydraulic conductivity, hydraulic gradient and well yield data and calculations are provided in **Attachment 3** of this report.

Prior to groundwater sampling, static depths to water level measurements were obtained in order to help interpret groundwater flow trends. The monitoring well elevation data is summarized in **Table III**. The static depth to the apparent water level in the monitoring wells ranged from 6.03 feet below top of casing (BTOC) to 11.96 feet BTOC. The calculated elevation of the apparent water table, as measured from an arbitrary benchmark located onsite, ranges from 84.92 feet in MW-2 to 93.30 feet in MW-1. The localized groundwater flow directions are noted with arrows on **Figure 3**.

c. Local geography and topography;

The site is located at 61 West Main Street, within the village limits of the Village of Lake Zurich, Lake County, Illinois. Geographically the site is located in the northwest ¼ of Section 20, Township 43 North, and Range 10 East.

The topography of the site slopes fairly significantly towards the southwest.

d. Existing and potential migration pathways and exposure routes; and

Existing and potential migration pathways and exposure routes are noted in **Figure 2** and include the migration of contaminants through the permeable site soils and groundwater regime, potentially contacting underground utility conduits, storm or sanitary sewers, vaults, basements or other confined spaces.

e. Current and projected post-remediation land use;

The site is currently a former police station and 911 emergency call center awaiting redevelopment into a mixed-use commercial and residential redevelopment. Some portions of the site may be used for underground parking.

3. Site investigation results:

Prior to conducting field activities, a review of appropriate scientific publications and regional geological maps was conducted. Using this geological research data on the anticipated subsurface soil conditions as part of the basis for the proposed site investigation, Marlin Environmental Inc., personnel arranged with representatives of JULIE members to determine the locations of the underground utilities located on and adjacent to the site.

Once identified by the appropriate JULIE members, the utilities were evaluated on a risk basis and the soil borings locations were determined in respect to those locations. The methodology behind the investigation was to advance as many soil borings as was needed to accurately define the threat petroleum hydrocarbons have to the environment from their uncontrolled migration through the soil.

Field activities were documented by the Marlin Environmental, Inc. Field Project Manger while on-site and were used to produce the soil boring logs and updated site maps presented in this report. Soil samples collected during the Stage 2 Site Investigation indicated compliance with the most stringent IEPA TACO Tier 1 SROs, indicating soil impacts identified during previous Early Action and Site Investigation activities have been fully delineated. Groundwater samples collected during the Stage 1 Site Investigation indicated only a minor Total Lead exceedence of the Tier 1 GRO, that are considered addressed through reliance upon the Village of Lake Zurich groundwater ordinance to address the groundwater ingestion human exposure pathway.

Please refer to Section C(1) of this report for a description of the soil sampling, monitoring well installation and groundwater sampling activities conducted during each phase of Site Investigation as well as a detailed discussion of the laboratory analytical results of the soil and groundwater samples collected during each phase of Site Investigation.

Soil Sampling Methods:
Marlin Environmental Inc. mobilized to the site with a drill rig and professional crew to perform the Site Investigation activities. The drilling activities for the completion of the soil borings were conducted using a dual capability (direct-push for soil borings and hollow stem augers for monitoring well installation) combination rig as part of the Stage 1 and Stage 2 Site Investigation activities. The soil borings were sampled using a four-foot macro-core sampler to collect undisturbed, continuous soil samples. Soil samples were collected during the advancement of each soil boring. The soil samples were collected using a stainless steel sampling tool.

The sampling tools were thoroughly cleansed with a non-phosphate detergent wash and distilled water rinse between each sampling event to help prevent possible cross-contamination. The soil sampling procedures were performed in accordance with IEPA protocols. Disposable nitrile sampling gloves were worn during sampling to help prevent exposure and possible cross-contamination between the samples.

Representative samples from each soil sample interval were placed into Ziplock Baggies and sealed. The soil within the bags was then broken up to increase the surface area for volatilization. The bag samples were allowed to warm to room temperature for approximately one-half hour. A field portable photoionization detector (PID) probe tip was then inserted through the seal of the bags to measure the concentrations of volatile organic vapors within the headspace of each of the bags. Please refer to the soil boring logs included in **Attachment 1** of this report for the PID screening results. PID detections were usually detected within the two (2) to 12 foot depth intervals.

Soil samples for potential laboratory quantitative analysis were collected during the advancement of each soil boring. The selected soil samples were placed into the appropriate laboratory approved jars in accordance with IEPA protocols.

Soil Analytical Results Discussion:
The soil BTEX analytical results were compared against the most stringent SROs of 35 IAC 742 in an effort to determine the extent and degree of soil contamination associated with the LUST incident at the facility.

The laboratory analytical results indicated that after the drilling and sampling of the 22 migration pathway soil borings (SB-1 through SB-17 and MW-1 through MW-5), the lateral and vertical extents of the soil impaction have been defined at this LUST facility.

The soil sample collection depths were determined in the field and were based on criteria such as: soil type, PID readings, presence or absence of groundwater table depth while drilling, staining, adjacent potential preferential pathways and previous soil results. Soil samples were collected from key compliance points and along suspected migration pathways. Soil samples were collected appropriately to provide vertical delineation.

Monitoring Well Installation/Groundwater Sampling Methods:
After the completion of the soil boring and sampling activities, the monitoring well soil borings were converted into monitoring wells using hollow stem auger techniques. A total of five (5) groundwater monitoring wells were installed to determine if an applicable indicator contaminant groundwater quality standard had been exceeded and to calculate the current groundwater gradient and flow direction from groundwater elevations measured in the completed monitoring wells.

Upon reaching completion depths for each well boring, a monitoring well was constructed inside of the well borings. Monitoring wells were constructed of 2-inch diameter Schedule 40 PVC well materials. Ten-foot sections of well screen were installed to intercept the shallow water table. The screened intervals were installed to allow seasonal fluctuations of groundwater levels. This allows for the collection of representative groundwater samples from the shallow soil unit that is the most likely medium for the uncontrolled migration of potential contaminants away from the LUST source.

A sand filter pack was installed around the well screens from the bottom of the borehole extending above the top of the well screen. A bentonite seal was installed above the sand pack interval. Bentonite chips

were installed from above the seal extending to the near surface to seal the annulus of the well. A flush mounted bolt down steel well box with cover was installed into a concrete casing and mounded slightly to divert surface water and possible surface contaminants away from the well point. Each well was additionally equipped with an expandable riser pipe cap.

The monitoring wells were developed by bailing several well volumes to help assure hydraulic connection with the surrounding formation water and to minimize turbidity of the sample.

An elevation survey was conducted upon completion of the monitoring well bolt down covers. The survey was conducted using standard transit and rod techniques in relation to an arbitrary on-site benchmark of 100.00-feet. The elevation survey was used to determine ground surface elevations and accurate top of casing reference point elevations for the monitoring wells.

Monitoring well purging and sampling was performed using disposable bailers and nylon cord. For each well sampled, a new set of materials and supplies were used. New sample gloves were also worn by the sampler for each sampling task to help prevent cross contamination between the groundwater samples. Several well volumes of water were removed from each monitoring well prior to groundwater sample collection.

The groundwater samples were collected into properly preserved 40-ml vials and jars, stored in a cooler on ice and were delivered to First Environmental Laboratories, Inc. (IL ELAP/NELAC #100292) in Naperville, Illinois for quantitative chemical analysis. Field and laboratory blanks were prepared for the groundwater sampling activities to help ensure that cross-contamination did not occur. The laboratory prepared a blank sample that was present in the cooler during sampling and transportation activities. While in the field collecting groundwater samples, one set of jars labeled as the field blank was also prepared. The jars were filled in the field with distilled water to simulate the groundwater sampling procedures, handling and exposure.

Groundwater Analytical Results Discussion:
The groundwater analytical results from monitoring wells MW-1 through MW-5 and field/trip blanks were compared against the most stringent IEPA TACO Tier 1 GROs to define the degree and extent of groundwater contamination associated with the LUST.

The laboratory analytical results indicated that after the sampling of the 5 Site Investigation monitoring wells (MW-1 through MW-5) the lateral extents of the dissolved impaction plume have been defined at this LUST facility with the understanding that the groundwater ingestion human exposure pathway will be addressed by relying upon the Village of Lake Zurich Groundwater Ordinance.

a. Map(s) showing locations of all borings and groundwater monitoring wells completed as part of the site investigation and the groundwater flow direction;

   Please refer to **Figures 2** and **3**.

b. Map(s) showing the horizontal extent of soil and groundwater contamination exceeding the most stringent Tier 1 remediation objectives (ROs);

   Please refer to **Figure 5**, which illustrates the horizontal extent of soil and groundwater contamination.

c. Map cross-section(s) showing the horizontal and vertical extents of soil and groundwater contamination exceeding the most stringent Tier 1 ROs;

Figure 4 illustrates the geologic cross section of the site and vertical extents of soil contamination. The horizontal extent of soil and groundwater contamination is illustrated on **Figure 5**.

d. Soil boring logs and monitoring well construction diagrams for all borings drilled and groundwater monitoring wells installed as part of site investigation;

The soil boring logs and monitoring well construction diagrams are included in **Attachment 1**.

e. Analytical results, chain of custody forms, and laboratory certifications;

The laboratory reports, chain-of-custody forms and laboratory certifications are presented in **Attachment 2**.

f. Table(s) comparing analytical results to the most stringent Tier 1 ROs (include sample depth, date collected, and detection limits); and

Table I summarizes the results of the Stage 1 Site Investigation soil laboratory analytical samples in a tabular format. **Table II** summarizes the Site Investigation groundwater analytical results. **Table IV** summarizes the results of the Stage 2 Site Investigation soil laboratory analytical samples in a tabular format.

g. Potable water supply well survey;

Marlin Environmental, Inc. utilized the IEPA/USGS Source Water Assessment Program (SWAP) database in order to obtain research data and conduct the IEPA required water well survey. The result of the data inquiry is illustrated on **Figure 6** and lists three (3) wells within 2,500 feet of the former UST system. One (1) community water supply (CWS) well (CWS #20255 / ISGS #00345) was identified within the 2,500-foot radius. According to the IEPA SWAP Fact Sheet for the Village of Lake Zurich, CWS well #20255 has been properly abandoned. Of the remaining wells identified from the IEPA/USGS SWAP database, one (1) appears to be a private water supply well (ISGS #00348) and the other appears to be owned by the Village (ISGS #00347). Both of these wells are located more than 200 feet from the former UST system. A visual reconnaissance of the area surrounding the subject site did not reveal evidence for the existence of the well owned by the Village (ISGS #00347). The six (6) active CWS wells for the Village of Lake Zurich are all screened within a bedrock aquifer and are located more than 2,500 feet away from the former UST system. The corresponding IEPA/ISGS data printed from the SWAP database and ISWS database, the SWAP Fact Sheet for the Village of Lake Zurich, and the 2010 Village of Lake Zurich Water Quality Report are presented in **Attachment 4**.

The Village of Lake Zurich has a village-wide ordinance approved by the IEPA for use as an institutional control that prohibits the private use of groundwater as a potable water supply by the installation or use of potable water supply wells or by any other method. The Village of Lake Zurich has also entered into a Memorandum of Understanding (MOU) with the IEPA with regards to using the local ordinance as an institutional control.

CLASS III SPECIAL RESOURCE GROUNDWATER

The Division of Public Water Supply and Groundwater Section of the Bureau of Water at the IEPA has established and listed (updated Environmental Register – December 2009) multiple areas within Illinois as "Class III: Special Resource Groundwater" that are demonstrably unique and are suitable for application of a water quality standard more stringent than otherwise applicable. According to the updated list established by the IEPA, no Class III: Special Resource Groundwater areas exist in the area surrounding the site.

SURFACE WATER BODY SURVEY

An on-site inspection in conjunction with a review of the USGS topographic map was conducted to identify any surface water bodies within 100 feet of the UST system. Lake Zurich is approximately 300 feet to the southwest of this LUST facility.

4. Conclusion that includes an assessment of the sufficiency of the data;

In summary, the Site Investigation performed at this facility included the advancement of 22 soil borings, with five (5) being converted into monitoring wells. The purpose of this investigation, performed in general accordance with the IEPA Site Investigation guidelines, was to determine the nature, degree and extent of soil and groundwater contamination present beneath this LUST facility and surroundings.

- The laboratory analytical results indicated that after the drilling and sampling of the 22 migration pathway soil borings (SB-1 through SB-17 and MW-1 through MW-5), the lateral and vertical extents of the soil impaction identified during Early Action soil sampling have been defined at this LUST facility. The vertical extent of soil contamination, as based upon laboratory analytical results and detectable PID readings in the soil borings, is approximately 10 feet as contamination ranged from 2 feet below surface grade to 12 feet below surface grade.

- The laboratory analytical results indicated that after the sampling of the five (5) Site Investigation monitoring wells (MW-1 through MW-5) the lateral extents of the dissolved impaction plume have been defined adequately at this LUST facility with the understanding that the residual dissolved lead plume will be addressed through reliance upon the IEPA approved Village of Lake Zurich Groundwater Ordinance.

- Marlin Environmental, Inc. utilized the IEPA/USGS Source Water Assessment Program (SWAP) database in order to obtain research data and conduct the IEPA required water well survey. The result of the data inquiry is illustrated on **Figure 6** and lists three (3) wells within 2,500 feet of the former UST system. One (1) community water supply (CWS) well (CWS #20255 / ISGS #00345) was identified within the 2,500-foot radius. According to the IEPA SWAP Fact Sheet for the Village of Lake Zurich, CWS well #20255 has been properly abandoned. Of the remaining wells identified from the IEPA/USGS SWAP database, one (1) appears to be a private water supply well (ISGS #00348) and the other appears to be owned by the Village (ISGS #00347). Both of these wells are located more than 200 feet from the former UST system. A visual reconnaissance of the area surrounding the subject site did not reveal evidence for the existence of the well owned by the Village (ISGS #00347). The six (6) active CWS wells for the Village of Lake Zurich are all screened within a bedrock aquifer and are located more than 2,500 feet away from the former UST system. The corresponding IEPA/ISGS data printed from the SWAP database and ISWS database, the SWAP Fact Sheet for the Village of Lake Zurich, and the 2010 Village of Lake Zurich Water Quality Report are presented in **Attachment 4**.

The laboratory analytical results of the Site Investigation have defined the lateral and vertical extents of soil and groundwater impaction associated with this LUST site. **The Village of Lake Zurich hereby**

petitions the Agency to agree with the extent findings of this Site Investigation and approve this Site Investigation Completion Report (SICR). A Corrective Action Plan (CAP) will be forwarded to the Agency for pre-approval to address the soil contamination exceeding the IEPA TACO Tier 1 ROs upon receipt of the approval of this SICR by the Agency.

Soil and groundwater analytical data was obtained from suspected exposure routes, migration pathways, and nearby potential sensitive environmental receptors in keeping with the IEPA Site Investigation guidelines. The data was obtained in an effort to help investigate the physical features of the site that may affect contaminant migration away from the LUST source and produce and increased threat to human health, safety and the environment.

Based upon the soil and groundwater analytical data obtained during the Site Investigation performed at the site, it appears that the data collected ***is sufficient*** to determine the extents of the applicable indicator contaminants exceeding the corresponding Tier 1 remediation objectives of 35 IAC 742. The data was collected following proper sampling protocols. The samples were properly handled, preserved as applicable, transported under chain-of-custody and analyzed by an Illinois accredited environmental laboratory (IL ELAP/NELAC Certification #100292) for the appropriate indicator contaminants.

5. **Site map(s) meeting the requirements of 35 Ill. Adm. Code 734.440; and**

   Figure 2 meets the requirements of 35 IAC 734.440.

6. **Budget forms of actual costs (documenting actual work performed during the previous stage)**

IEPA LUST Fund reimbursement is not being sought for this site as the tank from which the LUST pertains to is not eligible for reimbursement from the LUST Fund since the tank was taken out-of-service well before 1974.

COMMENT

Marlin Environmental, Inc. has performed this investigation in a professional manner using the degree of skill and care conducted for similar projects, under comparable conditions as those used by other reputable and competent environmental consultants, at the time these services were provided.

The scope and depth of this project was directed and agreed to by the client in our signed contract. All findings are based on documentary review, analytical results, conversations and site observations as noted in this report. Marlin Environmental, Inc. employed experienced and trained professionals in attempting to successfully evaluate the subsurface conditions at this site, in accordance with IEPA regulation and/or guidelines. It is possible that some materials containing petroleum hydrocarbon constituents were not visible or accessible to the professionals, and may not have been identified or addressed during this investigation.

This report is not intended to represent an exhaustive research of all potential hazards, which may exist at the site and is not representative of future conditions, previous activities or events that may have taken place prior to or after our demobilization from the site. Activities that transpire prior to or after our demobilization from the site are not considered relevant to this study.

The conclusions or opinions provided by Marlin Environmental, Inc. are based solely on the scope of work conducted, analytical results obtained and limited explorations described within this report. No warranty, expressed or implied, is made concerning the professional opinions or analytical results included in this report.

D. Signatures

All plans, budgets, and reports must be signed by the owner or operator and list the owner's or operator's full name, address, and telephone number

UST Owner or Operator

Name: Village of Lake Zurich
Contact: Mr. Bob Vitas
Address: 505 Telser Road
City: Lake Zurich
State: Illinois
ZIP Code: 60047
Phone Number: (847) 540-1696
Signature:
Date: July 25, 2009

Consultant

Company: Marlin Environmental, Inc.
Contact: Shawn D. Wolfe
Address: 3935 Commerce Drive
City: Saint Charles
State: Illinois
ZIP Code: 60174
Phone Number: (630) 444-1933
Signature: Shawn D. Wolfe
Date: July 12, 2010

I certify under penalty of law that all activities that are the subject of this report were conducted under my supervision or were conducted under the supervision of another Licensed Professional Engineer or Licensed Professional Geologist and reviewed by me; that this report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in this report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 734, and generally accepted standards and practices of my profession; and that the information presented is accurate and complete. I am aware there are significant penalties for submitting false statements or representations to the Illinois EPA, including but not limited to fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].

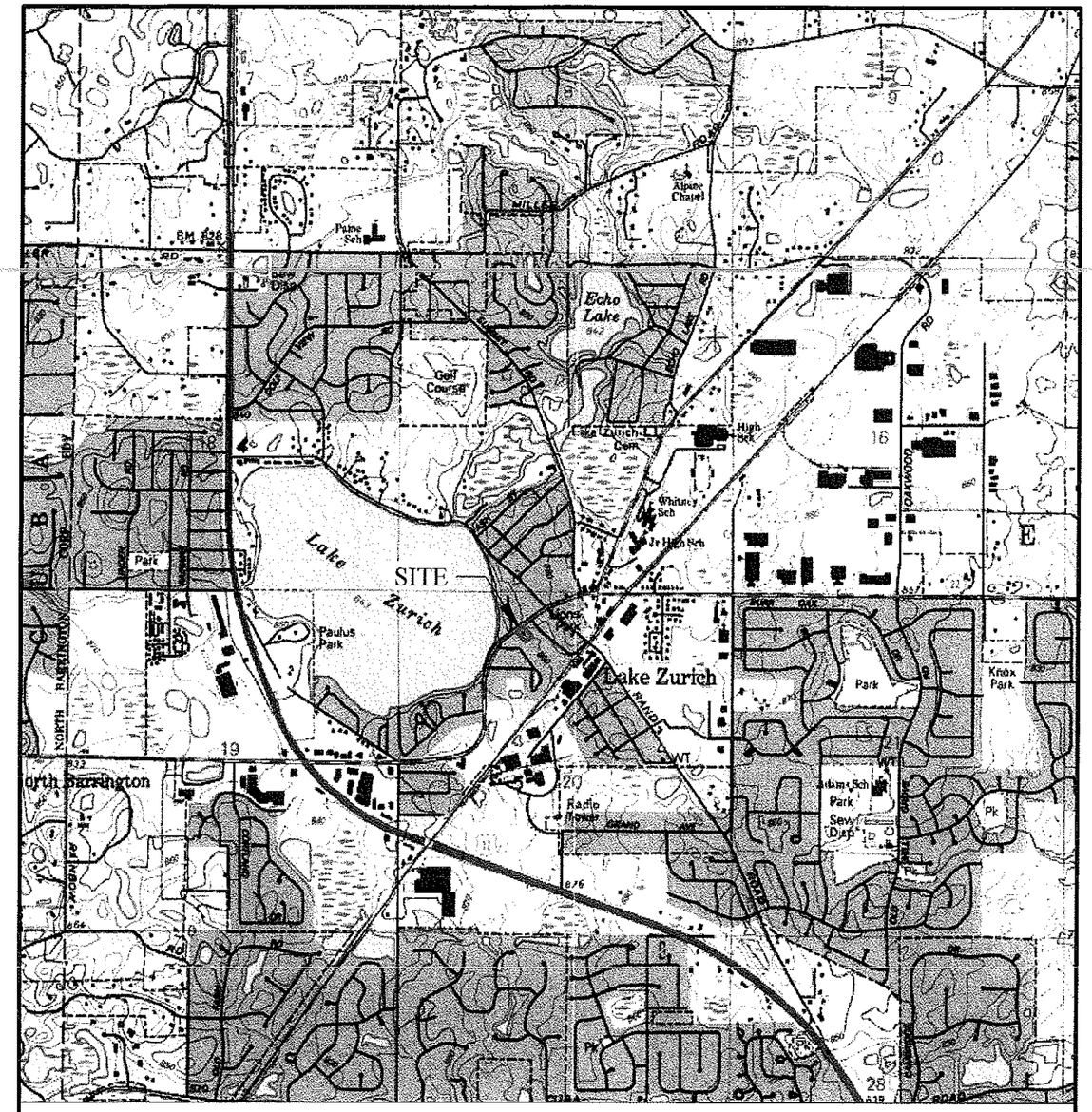
Licensed Professional Engineer or Geologist

Name: Kyle R. Webb, P.G.
Company: Marlin Environmental, Inc.
Address: 3935 Commerce Drive
City: St. Charles
State: Illinois
ZIP Code: 60174
Phone: (630) 444-1933
IL Registration No.: 196-001253
License Expiration Date: 03-31-2011
Signature: Kyle R. Webb
Date: July 12, 2010

L.P.E. or L.P.G. Seal

LICENSED PROFESSIONAL GEOLOGIST
KYLE R.
WEBB
196-001253
ILLINOIS

FIGURES



NORTH

0 2000 4000

SCALE: 1" = 2000'

TOWNSHIP: 43N
RANGE: 10E
SECTION: 20

LAKE ZURICH, ILLINOIS USGS
TOPOGRAPHIC QUADRANGLE

MARLIN ENVIRONMENTAL, INC.

3935 COMMERCE DR.

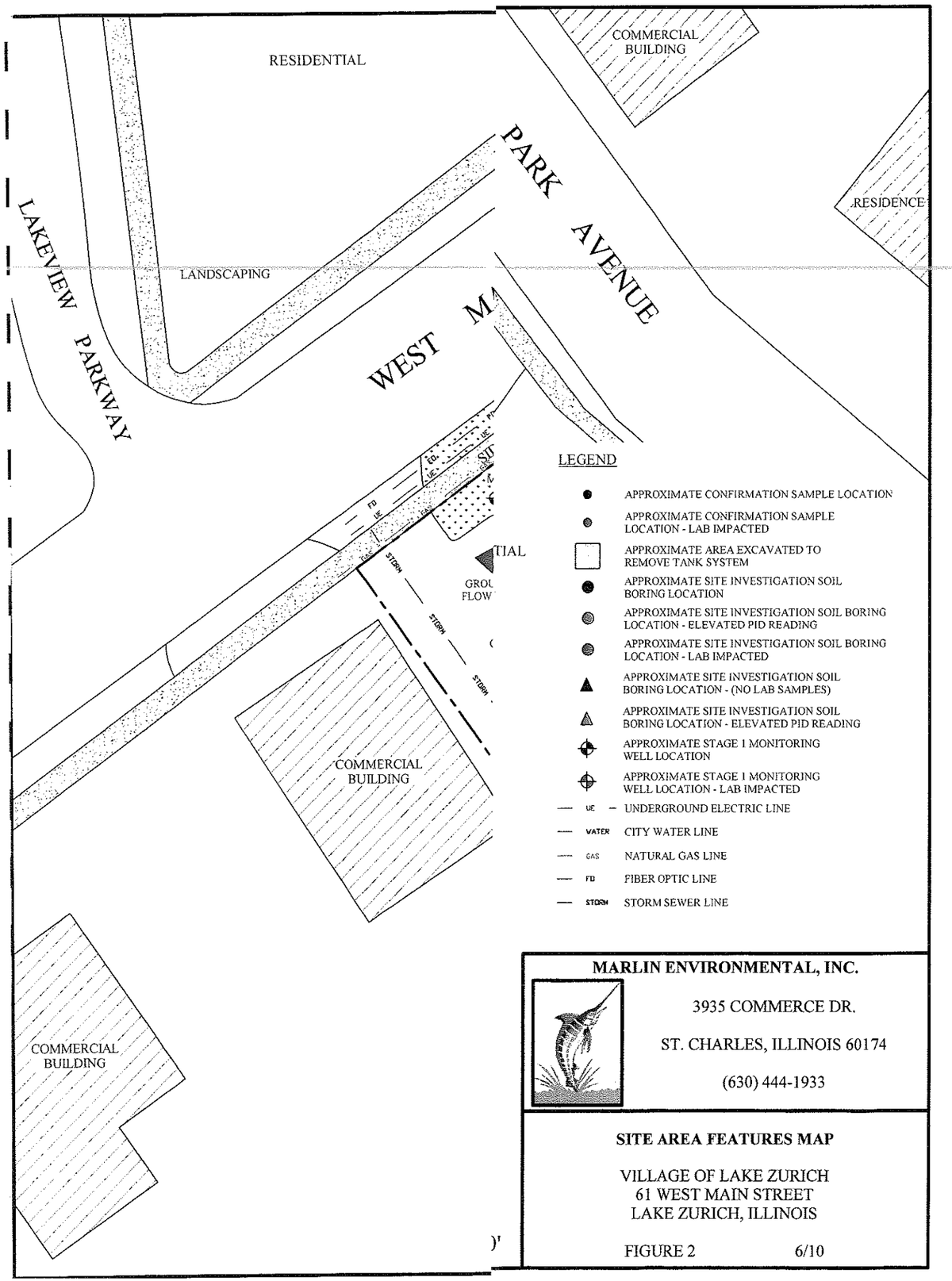
ST. CHARLES, ILLINOIS 60174

(630) 444-1933

SURROUNDING LAND USAGE MAP

VILLAGE OF LAKE ZURICH
61 WEST MAIN STREET
LAKE ZURICH, ILLINOIS

FIGURE 1 6/10



MARLIN ENVIRONMENTAL, INC.

3935 COMMERCE DR.

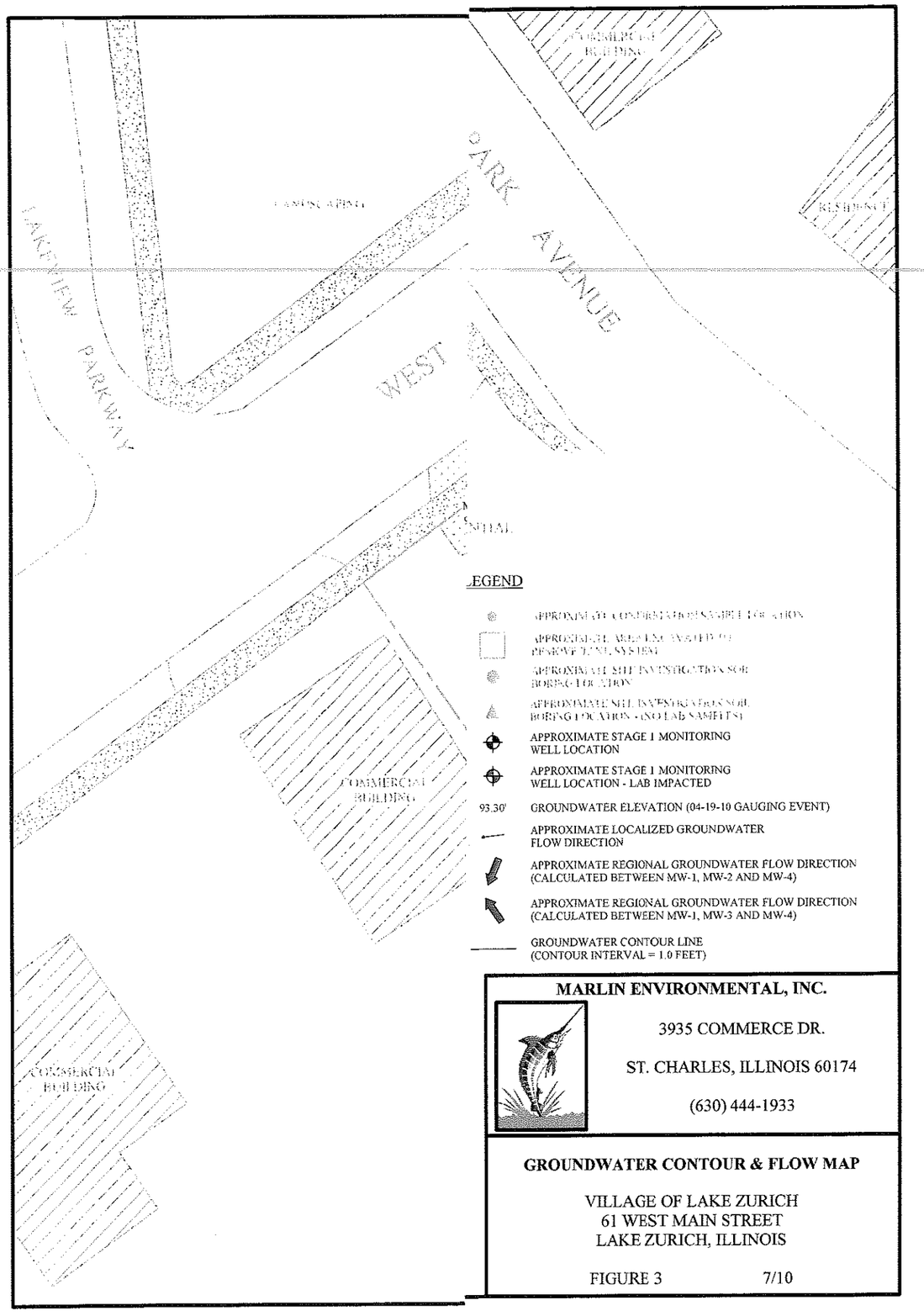
ST. CHARLES, ILLINOIS 60174

(630) 444-1933

SITE AREA FEATURES MAP

VILLAGE OF LAKE ZURICH
61 WEST MAIN STREET
LAKE ZURICH, ILLINOIS

FIGURE 2 6/10



MARLIN ENVIRONMENTAL, INC.

3935 COMMERCE DR.

ST. CHARLES, ILLINOIS 60174

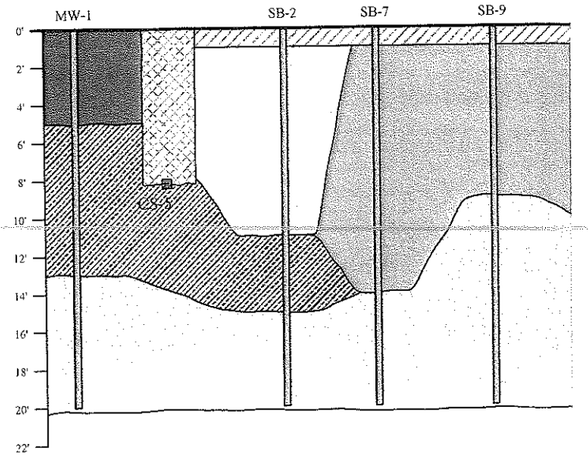
(630) 444-1933

GROUNDWATER CONTOUR & FLOW MAP

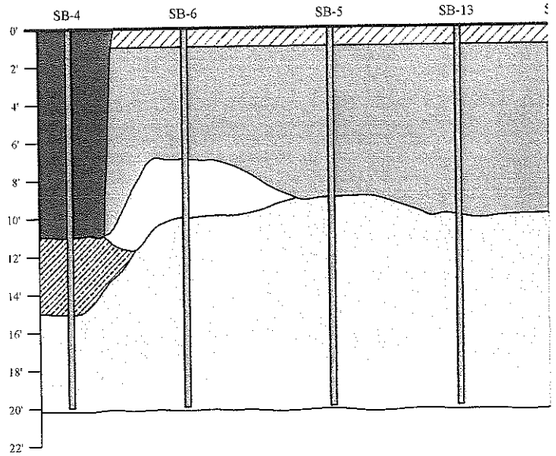
VILLAGE OF LAKE ZURICH
61 WEST MAIN STREET
LAKE ZURICH, ILLINOIS

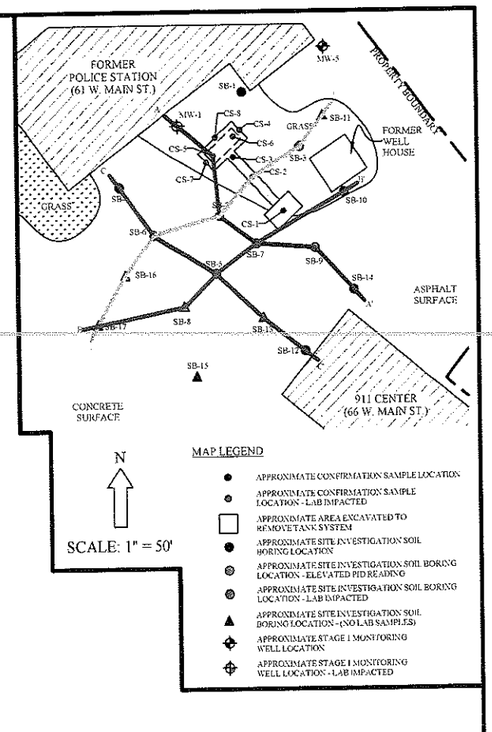
FIGURE 3 7/10

CROSS SECTION A - A'



CROSS SECTION C - C'





0 25 50

APPROXIMATE HORIZONTAL SCALE: 1" = 25'

CLAYEY SILT

SAND / GRAVEL

FILL MATERIALS

SILT

CLAY

MARLIN ENVIRONMENTAL, INC.

3935 COMMERCE DR.

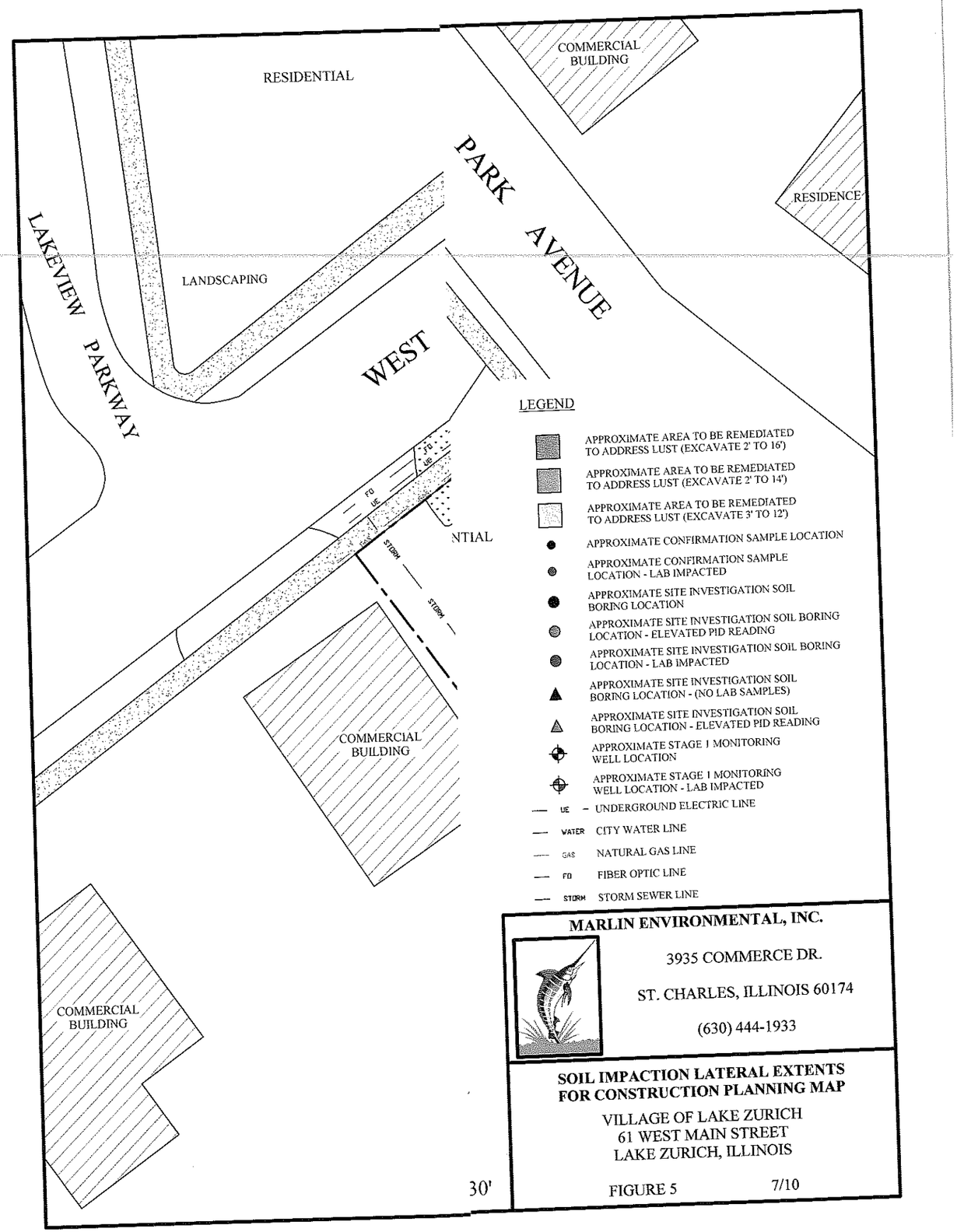
ST. CHARLES, ILLINOIS 60174

(630) 444-1933

GEOLOGIC CROSS SECTION MAP

VILLAGE OF LAKE ZURICH
61 WEST MAIN STREET
LAKE ZURICH, ILLINOIS

FIGURE 4 7/10



MARLIN ENVIRONMENTAL, INC.

3935 COMMERCE DR.

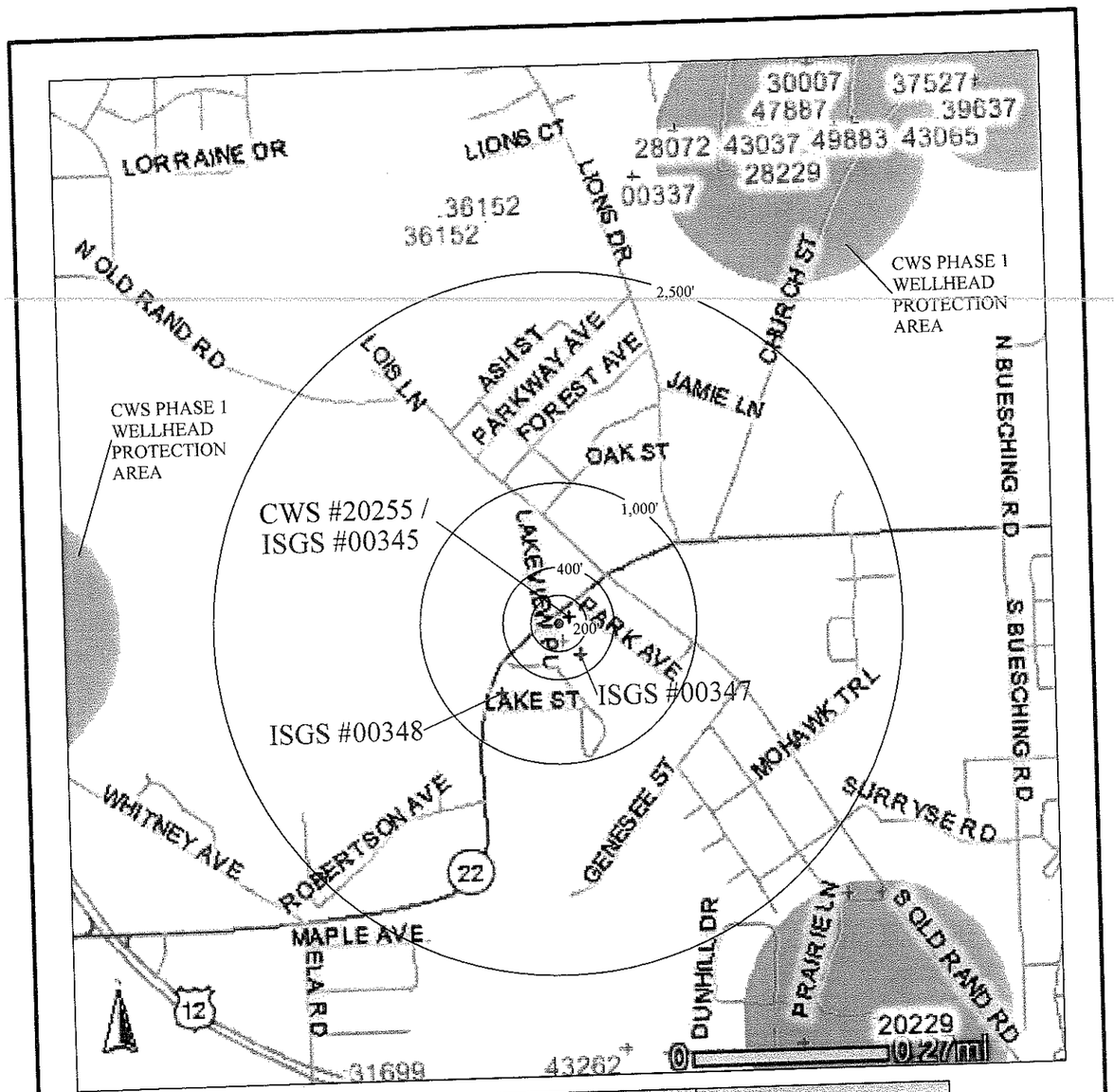
ST. CHARLES, ILLINOIS 60174

(630) 444-1933

SOIL IMPACTION LATERAL EXTENTS FOR CONSTRUCTION PLANNING MAP

VILLAGE OF LAKE ZURICH
61 WEST MAIN STREET
LAKE ZURICH, ILLINOIS

FIGURE 5 7/10



WELL ID #	SETBACK ZONE	APPROXIMATE DISTANCE TO SITE	DEPTH OF WELL	WELL STATUS / OWNER
CWS #20255 / ISGS #00345	N/A	90'	421'	Abandoned CWS / Lake Zurich
ISGS #00347	200'	269'	287'	Water / Village of Lake Zurich
ISGS #00348	200'	637'	183'	Water / Gretchen Wilkie

ISGS = Illinois State Geologic Survey
CWS = Community Water Supply
N/A = Not Applicable
Note: Information for ISGS/CWS wells compiled from the IEPA Community Water Supply database information.

SOURCE: IEPA/USGS SOURCE WATER ASSESSMENT PROGRAM (SWAP) ONLINE DATABASE

+ ISGS WELL
+ COMMUNITY WATER SUPPLY WELL

MARLIN ENVIRONMENTAL, INC.

3935 COMMERCE DR.

ST. CHARLES, ILLINOIS 60174

(630) 444-1933

WATER WELL SURVEY MAP

VILLAGE OF LAKE ZURICH
61 WEST MAIN STREET
LAKE ZURICH, ILLINOIS

FIGURE 6 7/10

TABLES

TABLE I

Summary of Soil Analytical Results - Stage 1 Site Investigation

		MW-1 (3'-5')	MW-1 (8'-10')	MW-1 (12'-14')	MW-1 (17'-19')	MW-2 (3'-5')	MW-2 (8'-10')	Most Stringent IEPA TACO Tier 1 Soil Remediation Objectives
Date of Sample Collection:		04/06/2010	04/06/2010	04/06/2010	04/06/2010	04/06/2010	04/06/2010	
Contaminants of Concern:								
BTEX/MTBE Organic Compounds (5035A/8260B)								
Date Analyzed:	**Units**	04/09/2010	04/12/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	
Benzene	µg/kg	<5.0	**5,200**	<5.0	<5.0	<5.0	<5.0	30
Toluene	µg/kg	<5.0	**30,500**	<5.0	<5.0	<5.0	<5.0	12,000
Ethylbenzene	µg/kg	<5.0	**13,400**	<5.0	<5.0	<5.0	<5.0	13,000
Total Xylenes	µg/kg	<5.0	**73,500**	<5.0	<5.0	<5.0	<5.0	5,600
Solids, Total (160.3)								
Date Analyzed:	**Units**	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	
Total Solids	%	86.26	86.39	83.82	86.51	78.97	82.98	---

		MW-2 (12'-14')	MW-2 (17'-19')	MW-3 (3'-5')	MW-3 (8'-10')	MW-3 (12'-14')	MW-3 (17'-19')	Most Stringent IEPA TACO Tier 1 Soil Remediation Objectives
Date of Sample Collection:		04/06/2010	04/06/2010	04/06/2010	04/06/2010	04/06/2010	04/06/2010	
Contaminants of Concern:								
BTEX/MTBE Organic Compounds (5035A/8260B)								
Date Analyzed:	**Units**	04/09/2010	04/09/2010	04/12/2010	04/12/2010	04/12/2010	04/12/2010	
Benzene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	30
Toluene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	12,000
Ethylbenzene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	13,000
Total Xylenes	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5,600
Solids, Total (160.3)								
Date Analyzed:	**Units**	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	
Total Solids	%	82.95	84.94	85.23	90.73	76.60	86.44	---

		MW-4 (3'-5')	MW-4 (8'-10')	MW-4 (12'-14')	MW-4 (17'-19')	MW-5 (3'-5')	MW-5 (8'-10')	Most Stringent IEPA TACO Tier 1 Soil Remediation Objectives
Date of Sample Collection:		04/06/2010	04/06/2010	04/06/2010	04/06/2010	04/07/2010	04/07/2010	
Contaminants of Concern:								
BTEX/MTBE Organic Compounds (5035A/8260B)								
Date Analyzed:	**Units**	04/12/2010	04/12/2010	04/12/2010	04/12/2010	04/12/2010	04/12/2010	
Benzene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	30
Toluene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	12,000
Ethylbenzene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	13,000
Total Xylenes	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5,600
Solids, Total (160.3)								
Date Analyzed:	**Units**	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	
Total Solids	%	87.60	89.69	86.02	90.14	87.14	89.01	---

Note: Analytical testing results for BTEX are expressed in parts-per-billion (ppb) concentrations.

Note: Exceedences of the most stringent IEPA TACO Tier 1 SROs in **bold**.

TABLE I

Summary of Soil Analytical Results - Stage 1 Site Investigation

		MW-5 (12'-14')	MW-5 (17'-19')	SB-1 (3'-5')	SB-1 (8'-10')	SB-1 (12'-14')	SB-1 (17'-19')	Most Stringent IEPA TACO Tier 1 Soil Remediation Objectives
Date of Sample Collection:		04/07/2010	04/07/2010	04/07/2010	04/07/2010	04/07/2010	04/07/2010	
Contaminants of Concern:								
BTEX/MTBE Organic Compounds (5035A/8260B)								
Date Analyzed:	**Units**	04/12/2010	04/12/2010	04/12/2010	04/13/2010	04/12/2010	04/12/2010	
Benzene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	30
Toluene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	12,000
Ethylbenzene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	13,000
Total Xylenes	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5,600
Solids, Total (160.3)								
Date Analyzed:	**Units**	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	
Total Solids	%	71.92	86.16	88.20	91.06	90.67	83.92	---

		SB-2 (3'-5')	SB-2 (8'-10')	SB-2 (12'-14')	SB-2 (17'-19')	SB-3 (3'-5')	SB-3 (8'-10')	Most Stringent IEPA TACO Tier 1 Soil Remediation Objectives
Date of Sample Collection:		04/07/2010	04/07/2010	04/07/2010	04/07/2010	04/07/2010	04/07/2010	
Contaminants of Concern:								
BTEX/MTBE Organic Compounds (5035A/8260B)								
Date Analyzed:	**Units**	04/12/2010	04/12/2010	04/13/2010	04/12/2010	04/12/2010	04/12/2010	
Benzene	µg/kg	<5.0	<25.0	**2,080**	<5.0	6.5	<5.0	30
Toluene	µg/kg	<5.0	<500	<5.0	<5.0	<5.0	<5.0	12,000
Ethylbenzene	µg/kg	7.7	<500	<5.0	<5.0	216	68.2	13,000
Total Xylenes	µg/kg	<5.0	1,260	<5.0	<5.0	23.1	12	5,600
Solids, Total (160.3)								
Date Analyzed:	**Units**	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	
Total Solids	%	95.08	89.35	90.29	83.22	90.00	91.32	---

		SB-3 (12'-14')	SB-3 (17'-19')	SB-4 (3'-5')	SB-4 (8'-10')	SB-4 (12'-14')	SB-4 (17'-19')	Most Stringent IEPA TACO Tier 1 Soil Remediation Objectives
Date of Sample Collection:		04/07/2010	04/07/2010	04/07/2010	04/07/2010	04/07/2010	04/07/2010	
Contaminants of Concern:								
BTEX/MTBE Organic Compounds (5035A/8260B)								
Date Analyzed:	**Units**	04/12/2010	04/12/2010	04/12/2010	04/12/2010	04/12/2010	04/12/2010	
Benzene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	30
Toluene	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	12,000
Ethylbenzene	µg/kg	78.2	<5.0	<5.0	<5.0	<5.0	<5.0	13,000
Total Xylenes	µg/kg	28.9	<5.0	<5.0	<5.0	<5.0	<5.0	5,600
Solids, Total (160.3)								
Date Analyzed:	**Units**	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	04/09/2010	
Total Solids	%	86.10	84.70	89.37	84.76	86.66	85.14	---

Note: Analytical testing results for BTEX are expressed in parts-per-billion (ppb) concentrations.

Note: Exceedences of the most stringent IEPA TACO Tier 1 SROs in **bold**.

TABLE II

Summary of Groundwater Analytical Results - Stage 1 Site Investigation

		MW-1	MW-2	MW-3	MW-4	IEPA TACO Tier 1Groundwater Remediation Objectives
Date of Sample Collection:		04/19/2010	04/19/2010	04/19/2010	04/19/2010	Class I
Contaminants of Concern:						
BTEX/MTBE Organic Compounds (5030B/8260B)						
Date Analyzed:	**Units**	**04/22/2010**	**04/22/2010**	**04/22/2010**	**04/22/2010**	
Benzene	µg/L	<5.0	<5.0	<5.0	<5.0	5.0
Toluene	µg/L	<5.0	<5.0	<5.0	<5.0	1,000
Ethylbenzene	µg/L	<5.0	<5.0	<5.0	<5.0	700
Total Xylenes	µg/L	<5.0	<5.0	<5.0	<5.0	10,000
Methyl-tert-butylether (MTBE)	µg/L	<5.0	<5.0	<5.0	5	70
Total Metals (6010B)						
Date Analyzed:	**Units**	**04/23/2010**	**04/23/2010**	**04/23/2010**	**04/23/2010**	
Lead	ug/L	<2	6	3	**11**	7.5

		MW-5	Field Blank	Trip Blank		IEPA TACO Tier 1Groundwater Remediation Objectives
Date of Sample Collection:		04/19/2010	04/19/2010	---		Class I
Contaminants of Concern:						
BTEX/MTBE Organic Compounds (5030B/8260B)						
Date Analyzed:	**Units**	**04/22/2010**	**04/22/2010**	**04/22/2010**		
Benzene	µg/L	<5.0	<5.0	<5.0		5.0
Toluene	µg/L	<5.0	<5.0	<5.0		1,000
Ethylbenzene	µg/L	<5.0	<5.0	<5.0		700
Total Xylenes	µg/L	<5.0	<5.0	<5.0		10,000
Methyl-tert-butylether (MTBE)	µg/L	<5.0	<5.0	<5.0		70
Total Metals (6010B)						
Date Analyzed:	**Units**	**04/23/2010**	**---**	**---**		
Lead	ug/L	4	---	---		7.5

Note: Analytical testing results for BTEX are expressed in parts-per-billion (ppb) concentrations.

Note: Exceedences of the IEPA TACO Tier 1 GROs in **bold**.

TABLE III

Summary of Groundwater Monitoring Well Elevation Data

MONITORING WELL	GROUND SURFACE ELEVATION	TOP OF CASING ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION
MW-1	99.45'	99.33'	6.03'	93.30'
MW-2	95.04'	94.57'	9.65'	84.92'
MW-3	99.84'	99.53'	6.33'	93.20'
MW-4	102.12'	101.84'	10.64'	91.20'
MW-5	109.23'	109.03'	11.96'	97.07'

Note: All measurements are in feet.
Monitoring wells were gauged on April 19, 2010.

TABLE IV

Summary of Soil Analytical Results - Stage 2 Site Investigation

		SB-5 (12'-14')	SB-6 (12'-14')	SB-7 (12'-14')	SB-10 (12'-14')	Most Stringent IEPA TACO Tier 1 Soil Remediation Objectives
Date of Sample Collection:		06/08/2010	06/08/2010	06/08/2010	06/08/2010	
Contaminants of Concern:						
BTEX/MTBE Organic Compounds (5035A/8260B)						
Date Analyzed:	**Units**	06/14/2010	06/14/2010	06/14/2010	06/14/2010	
Benzene	µg/kg	<5.0	<5.0	**660**	<5.0	30
Toluene	µg/kg	<5.0	<5.0	420	<5.0	12,000
Ethylbenzene	µg/kg	<5.0	<5.0	10,400	<5.0	13,000
Total Xylenes	µg/kg	<5.0	<5.0	**26,700**	<5.0	5,600
Solids, Total (160.3)						
Date Analyzed:	**Units**	06/11/2010	06/11/2010	06/11/2010	06/11/2010	
Total Solids	%	86.31	91.32	85.49	84.06	---

		SB-9 (10'-12')	SB-12 (12'-14')	SB-14 (12'-14')		Most Stringent IEPA TACO Tier 1 Soil Remediation Objectives
Date of Sample Collection:		06/08/2010	06/08/2010	06/08/2010		
Contaminants of Concern:						
BTEX/MTBE Organic Compounds (5035A/8260B)						
Date Analyzed:	**Units**	06/21/2010	06/21/2010	06/21/2010		
Benzene	µg/kg	<5.0	<5.0	8.2		30
Toluene	µg/kg	<5.0	<5.0	5.5		12,000
Ethylbenzene	µg/kg	32.7	<5.0	<5.0		13,000
Total Xylenes	µg/kg	80.3	<5.0	10.5		5,600
Solids, Total (160.3)						
Date Analyzed:	**Units**	06/18/2010	06/18/2010	06/18/2010		
Total Solids	%	84.55	85.40	85.63		---

Note: Analytical testing results for BTEX are expressed in parts-per-billion (ppb) concentrations.

Note: Exceedences of the most stringent IEPA TACO Tier 1 SROs in **bold**.

ATTACHMENT 1

LUST Incident No.: 20100090 | **Boring Number:** MW-1 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich

Address: 61 West Main Street, Lake Zurich, IL

Boring Location: A few feet Northwest of the cavity.

Date: **Start** 4/6/10 **Finish** 4/6/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Gravel Surface				
	FOUR FOOT MACROCORE		Fill	1	Gravel surface and fill – sand and gravel	D	NA	<1	
1		30%		2					
			Fill	3	Moist, brown, loose sand and gravel	M		<1	Soil Sample Interval
				4					
			Fill	5	Grey, loose sand and gravel, odor	M		14	
2		35%	ML	6	Clayey Silt		1.75		
				7	Grey, odor of old petroleum, silt with clay	M		51	
			ML	8					Soil Sample Interval
				9	Black, strong odor, moist, silt with some fine sand	M		202	
3		40%	ML	10			2.50		
				11	Grey, odor of old petroleum, some fine sand	M		38	
			ML	12					Soil Sample Interval
				13	Grey, moist, more stiff and cohesive, less silt	M		<1	
4		50%	CL	14	Clay		3.25		
				15	Grey, stiff, dense, no odor, clay	M		<1	
			CL	16					
				17	Same as above, no odor	M/W		<1	Soil Sample Interval
5		90%	CL	18			>4.50		
				19	Same as above, no odor	M/W		<1	
			CL	20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling ~16'
▽ Depth After Drilling 6.03' (4/19/10)

Auger Depth 20' Rig Drill Rig

Rotary Depth N/A Geologist Kyle R. Webb

Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

LUST Incident No.: 20100090	**Boring Number:** MW-2	**Page** 1 **of** 1
Site Name: Village of Lake Zurich **Address:** 61 West Main Street Lake Zurich, IL	**Boring Location:** Southwest of the former 911 Call Center in the suspected space that may have been occupied by an old tank removed in 1976.	**Date:** **Start** 4/6/10 **Finish** 4/6/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Gravel/Dirt Surface				
1	FOUR FOOT MACROCORE	40%	Fill	1	Gravel surface and fill – sand and gravel	D	NA	<1	
				2					
			Fill	3	Moist, brown, loose sand and gravel	M	1.50	<1	Soil Sample Interval
				4					
2		50%	Fill	5	Same as above, loose sand and gravel	M		<1	
				6					
			ML	7	Clayey Silt	M	1.75	<1	
				8	Brown, moist, silt with clay and trace fine sand				Soil Sample Interval
				9		M		<1	
3		40%	ML	10	Brown, as above		2.25		
				11		M		<1	
			ML	12	Brown, moist, as above, little fine sand				Soil Sample Interval
				13		M		<1	
4		75%		14	Brown, more stiff, more cohesive, more clay content				
			CL	15	Clay	M	3.25	<1	
				16	Grey, moist, stiff, some silt, some fine sand				
				17		M/W	4.00	<1	Soil Sample Interval
5		90%	CL	18	Stiff, grey, dense clay, no sand but trace gravel				
				19		M/W	>4.50	<1	
			CL	20	Same as above, dense, medium plastic clay				
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling ~17'
▽ Depth After Drilling 9.65' (4/19/10)

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

LUST Incident No.: 20100090 | **Boring Number:** MW-3 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich

Address: 61 West Main Street, Lake Zurich, IL

Boring Location: Western well location on the east side of the sewer line to investigate that potential migration pathway.

Date: Start 4/6/10 Finish 4/6/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Asphalt Surface				
1	FOUR FOOT MACROCORE	30%	Fill	1	Gravel surface and fill – sand and gravel	D	NA	<1	
				2					
			Fill	3	Moist, brown, loose sand and gravel	M	1.50	<1	Soil Sample Interval
				4					
2		30%	Fill	5	Same as above, loose sand and gravel	M		<1	
				6					
			Fill	7	Same as above, a bit more dense, some silt	M	1.75	<1	
				8					
3		50%	ML	9	Same as above	M		<1	Soil Sample Interval
				10	Clayey Silt		2.25		
				11	Brown, moist, medium dense, some fine sand	M		<1	
			ML	12					Soil Sample Interval
4		90%	ML	13	Brown, as above, trace fine sand, more dense	M	3.00	<1	
				14					
				15	Brown, more clay content, more dense	M		<1	
			CL	16	Clay		4.00		
5		90%	CL	17	Grey, stiff, cohesive, trace fine sand, some silt	M/W		<1	Soil Sample Interval
				18					
				19	As above, hard and stiff	M/W	>4.50	<1	
			CL	20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling ~17'
▽ Depth After Drilling 6.33' (4/19/10)

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** MW-4 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich

Address: 61 West Main Street, Lake Zurich, IL

Boring Location: Northwest of the former tank cavity between the cavity and Lake Zurich.

Date: **Start** 4/6/10 **Finish** 4/6/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Grass Surface				
			Fill	1	Topsoil and grass surface	D	NA	<1	
1		25%		2					
			Fill	3	Moist, brown, loose sand and gravel	M	1.50	<1	Soil Sample Interval
				4					
			Fill	5	Same as above, brown	M		<1	
2		50%		6					
			Fill	7	Brown, moist, loose	M	1.25	<1	
				8					Soil
				9	Same as above	M		<1	Sample
3		75%	ML	10					Interval
				11	Same as above	M	1.75	<1	
			ML	12	Clayey Silt		2.25		Soil
				13	Brown, some clay, some fine sand, trace small gravel	M		<1	Sample
4		90%	ML	14			3.00		Interval
				15	Brown, moist, higher clay content, some small gravel	M		<1	
			CL	16	Clay		3.75		
				17	Grey, more stiff, cohesive	M/W		<1	Soil
5		90%	CL	18			4.25		Sample
				19	Same as above, more dense and stiff	M/W	>4.50	<1	Interval
			CL	20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

FOUR FOOT MACROCORE

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
- ▼ Depth While Drilling ~16'
- ▽ Depth After Drilling 10.64' (4/19/10)

Auger Depth 20' Rig Drill Rig

Rotary Depth N/A Geologist Kyle R. Webb

Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** MW-5 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich

Address: 61 West Main Street, Lake Zurich, IL

Boring Location: A few feet off of the Southeast corner of the former Police station building.

Date: **Start** 4/7/10 **Finish** 4/7/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Grass Surface				
1	FOUR FOOT MACROCORE	25%	Fill	1	Topsoil and grass surface	D	NA	<1	
				2					
			Fill	3	Moist, brown, loose sand and gravel	M	1.00	<1	Soil Sample Interval
				4					
2		35%	Fill	5	Same as above, loose gravel	M		<1	
				6					
			Fill	7	Brown, loose moist gravel with sand	M	1.50	<1	
				8					
3		50%	Fill	9	Brown, loose gravel	M		<1	Soil Sample Interval
				10					
			Fill	11	Same as above	M	2.00	<1	
			ML	12	Clayey Silt				Soil Sample Interval
4		75%		13	Brown, some clay, some fine sand, trace small gravel	M	2.50	<1	
			ML	14					
				15	Brown, moist, higher clay content, some small gravel	M		<1	
			CL	16	Clay		3.50		
5		90%		17	Grey, more stiff, cohesive	M/W		<1	Soil Sample Interval
			CL	18			4.25		
				19	Same as above, more dense and stiff	M/W		<1	
			CL	20			>4.50		
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling ~17'
▽ Depth After Drilling 11.96' (4/19/10)

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090	**Boring Number:** SB-1	**Page** 1 **of** 1
Site Name: Village of Lake Zurich **Address:** 61 West Main Street Lake Zurich, IL	**Boring Location:** Northeast of the former LUST cavity in the alcove near the former Police Department back entrance.	**Date:** **Start** 4/7/10 **Finish** 4/7/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Gravel Surface				
1	FOUR FOOT MACROCORE	25%	Fill	1	Gravel surface with loose sand	D	NA	<1	
				2					
			Fill	3	Moist, brown, loose sand and gravel	M	1.00	<1	Soil Sample Interval
				4					
2		45%	Fill	5	Same as above, loose gravel	M	1.25	<1	
				6					
			Fill	7	Brown, loose moist gravel with sand	M	1.50	<1	
				8					Soil
3		65%	Fill	9	Brown, loose gravel	M		<1	Sample
				10			2.25		Interval
			Fill	11	Same as above	M		<1	
			ML	12	Clayey Silt		3.00		Soil
4		80%		13	Brown, some clay, some fine sand, trace small gravel	M		<1	Sample
			ML	14			3.50		Interval
				15	Brown, moist, higher clay content, some small gravel	M		<1	
			CL	16	Clay		4.25		
5		90%		17	Grey, more stiff, cohesive	M/W		<1	Soil Sample Interval
			CL	18					
				19	Same as above, more dense and stiff	M/W	>4.50	<1	
			CL	20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling ~17'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-2 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich

Address: 61 West Main Street, Lake Zurich, IL

Boring Location: Southwest of the former LUST cavity and the former product piping line run.

Date: **Start** 4/7/10 **Finish** 4/7/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Asphalt Surface				
1	FOUR FOOT MACROCORE	25%	Fill	1	Asphalt surface with loose sand	D	NA	<1	
				2					
			Fill	3	Moist, brown, loose sand and gravel, odor	M	0.75	4.6	Soil Sample Interval
				4					
2		50%	Fill	5	Same as above, loose gravel, odor of old petroleum	M	1.00	7.2	
				6					
			Fill	7	Brown, loose moist gravel with sand, slight odor	M	1.50	11	
				8					Soil
3		75%	Fill	9	Brown, loose gravel, old petroleum odor	M	2.00	17	Sample Interval
				10					
			Fill	11	Same as above, stronger odor of old petroleum	M		31	
			ML	12	Clayey Silt		3.25		Soil
4		75%		13	Brown, some clay, some fine sand, trace small gravel	M		49	Sample Interval
			ML	14					
				15	Brown, moist, higher clay content, some small gravel	M	3.75	12	
			CL	16	Clay				
5		90%		17	Grey, more stiff, cohesive, very slight odor	M/W	4.25	2.8	Soil Sample Interval
			CL	18					
				19	Same as above, more dense and stiff, no odor	M/W	>4.50	<1	
			CL	20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling ~17'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-3 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich

Address: 61 West Main Street, Lake Zurich, IL

Boring Location: Southeast of the former product line product piping run.

Date: **Start** 4/7/10 **Finish** 4/7/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Grass Surface				
1	FOUR FOOT MACROCORE	35%	Fill	1	Grass with topsoil	D	NA	<1	
				2					
			Fill	3	Moist, brown, loose sand and gravel, odor	M	0.75	17	Soil Sample Interval
				4					
2		25%	Fill	5	Same as above, loose gravel, old petroleum odor	M		6.5	
				6					
			Fill	7	Brown, loose moist gravel with sand	M	1.25	<1	
				8					
3		75%	Fill	9	Brown, loose gravel, old petroleum odor	M		8.4	Soil Sample Interval
				10					
			Fill	11	Same as above, weak old petroleum odor	M	2.00	4.3	
			ML	12	Clayey Silt				Soil Sample Interval
				13	Brown, some clay, some fine sand, trace small gravel	M	2.50	7.9	
4		75%	ML	14					
				15	Brown, moist, higher clay content, some small gravel	M		2.2	
			CL	16	Clay		3.75		
				17	Grey, more stiff, cohesive, no odor	M/W		<1	Soil Sample Interval
5		90%	CL	18					
				19	Same as above, more dense and stiff, no odor	M/W	>4.50	<1	
			CL	20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling ~17'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

LUST Incident No.: 20100090					**Boring Number:** SB-4		**Page** 1 **of** 1		
Site Name: Village of Lake Zurich **Address:** 61 West Main Street Lake Zurich, IL					**Boring Location:** Northwest of the former LUST cavity near the southwest corner of the building.		**Date:** **Start** 4/7/10 **Finish** 4/7/10		
Sample Number	**Sample Device**	**Sample Recovery**	**Lithology Symbol**	**Depth (feet)**	**Detailed Soil and Rock Description** Gravel Surface	**Natural Moisture Content %**	**Hand Penetrometer Qu**	**OVA/*PID*/FID/OVM**	**Remarks**
1	FOUR FOOT MACROCORE	25%	Fill	1	Gravel surface with loose sand	D	NA	<1	
				2					
			Fill	3	Moist, brown, loose sand and gravel	M	0.75	<1	Soil Sample Interval
				4					
2		50%	Fill	5	Same as above, loose gravel	M	1.25	<1	
				6					
			Fill	7	Brown, loose moist gravel with sand	M	1.50	<1	
				8					
3		75%	Fill	9	Brown, loose gravel	M		<1	Soil Sample Interval
				10			2.50		
			Fill	11	Same as above	M		<1	
			ML	12	Clayey Silt		3.00		Soil Sample Interval
4		90%		13	Brown, some clay, some fine sand, trace small gravel	M		<1	
			ML	14			3.50		
				15	Brown, moist, higher clay content, some small gravel	M		<1	
5		90%	CL	16	Clay		4.25		
				17	Grey, more stiff, cohesive	M/W		<1	Soil Sample Interval
			CL	18					
				19	Same as above, more dense and stiff	M/W	>4.50	<1	
			CL	20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling ~17'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-5 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich | **Boring Location:** South west of SB-2 | **Date:** **Start** 6/8/10

Address: 61 West Main Street, Lake Zurich, IL | **Finish** 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/PID/FID/OVM	Remarks
					Asphalt Surface				
			Fill	1	Asphalt surface and fill – sand and gravel	D	NA	<1	
1		75%	ML	2	Silt				
				3	Olive green (petroleum stained) with medium sand	M	1.50	93	
				4					
				5	Olive - grey stained, strong odor, w/ medium sand	M		115	
2		75%	ML	6					
				7	Brown with odor, although not as strong	M	2.25	20	
				8					
				9	Odor absent, brown silt with gravel	M		<1	
3		95%	CL	10	Clay				
				11	Brown, odor absent	M	3.25	<1	Soil Sample Interval 12'-14'
				12					
				13	As above, odor absent	M		<1	
4		95%	CL	14			3.50		
				15	Grey, stiff, highly plastic, odor absent	M/W		<1	
				16			>4.50		
				17	As above, odor absent, very stiff	M/W		<1	
5		95%	CL	18			>4.50		
				19	As above, odor absent, very stiff	M/W		<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

FOUR FOOT MACROCORE

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling ~15'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-6 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich | **Boring Location:** South west of SB-2 | **Date:** **Start** 6/8/10

Address: 61 West Main Street, Lake Zurich, IL | **Finish** 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/PID/FID/OVM	Remarks
					Asphalt Surface				
	FOUR FOOT MACROCORE		Fill	1	Asphalt surface and fill – sand and gravel	D	NA	<1	
1		50%	ML	2	Silt				
				3	Brown, some olive staining, odor	M	0.75	16	
				4					
			ML	5	Brown with olive stains, odor	M		21	
2		60%		6					
				7	Brown, slight but discernable odor	M	1.50	3.5	
			Fill?	8	Coarse Sand and Gravel Fill (?)		N/A		
				9	Perched water in the sand at 9'	W		<1	
3		75%		10	Sand does not have an odor				
			CL	11	Clay	M	2.75	<1	Soil Sample Interval 12'-14'
				12	Grey, medium plastic clay with silt and gravel				
				13		M	3.50	<1	
4		95%	CL	14					
				15	Grey, stiff, dense clay	M/W	4.25	<1	
				16	As above, very stiff, highly plastic		>4.50		
				17		M/W		<1	
5		95%	CL	18	As above, very stiff and dense clay		>4.50		
				19		M/W		<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling Perched at 9'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-7 | **Page** 1 of 1

Site Name: Village of Lake Zurich | **Boring Location:** Southeast of SB-2 | **Date:** Start 6/8/10

Address: 61 West Main Street, Lake Zurich, IL | Finish 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/PID/FID/OVM	Remarks
					Asphalt Surface				
			Fill	1	Asphalt surface and fill – sand and gravel	D	NA	<1	
1		50%	ML	2	Silt		0.75		
				3	Brown, odor, some olive mottles	M		17	
				4					
			ML	5	Olive and grey, odor, some medium sand	M		34	
2		75%		6					
				7	Olive, heavy odor	M		52	
			ML	8			2.50		
				9	Olive, odor, some gravel and medium sand	M		26	
3		95%		10					
			ML	11	Olive and grey, same odor as above	M		30	Soil Sample Interval 12'-14'
				12					
				13	Olive and grey, same odor as above	M		38	
4	FOUR FOOT MACROCORE	95%		14			3.75		
			CL	15	Clay	M		4.7	
				16					
				17	Grey, dense clay, no odor, medium plastic, slight odor	M/W	>4.50	<1	
5		95%	CL	18					
				19	As above, very stiff and dense clay	M/W		<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 17'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-8 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich | **Boring Location:** Southwest of SB-5 | **Date:** **Start** 6/8/10

Address: 61 West Main Street, Lake Zurich, IL | **Finish** 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Asphalt Surface				
			Fill	1	Asphalt surface and fill – Gravel	D	NA	<1	
1		75%	Fill	2	Coarse Sand and Gravel	M		11	
				3	Odor immediately at 2', grey sand			25	
				4					
				5	Grey, loose sand with gravel, odor	M	N/A	59	
2		95%		6					
				7	Strong petroleum odor, grey and brown loose sand			72	
				8		W			
			Fill	9	As above			41	
3		95%	CL	10	Clay	M			
				11	Abrupt transition to grey clay, slight odor		3.25	4.6	
				12	Odor absent at ~12'	M			
				13				<1	
4		95%	CL	14	Stiff, dense grey clay	M	4.00		
				15				<1	
				16	As above	M	>4.50		
				17				<1	
5		95%	CL	18	As above, very stiff	M/W			
				19				<1	
				20	As above, stiff, dense	M/W	>4.50		
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

FOUR FOOT MACROCORE

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling Perched at 8.5'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-9 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich | **Boring Location:** Southeast of SB-7 | **Date:** Start 6/8/10

Address: 61 West Main Street, Lake Zurich, IL | Finish 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/PID/FID/OVM	Remarks
					Asphalt Surface				
			Fill	1	Asphalt surface and fill – Gravel	D	NA	<1	
1	FOUR FOOT MACROCORE	50%	ML	2	Silt	M			
				3	Brown silt with olive staining, slight odor		1.00	3.6	
				4		M			
				5	Olive and gray stained silt with odor			12	
2		75%	ML	6		M	1.75		
				7	As above, odor			17	
				8		M			
				9	As above, odor			21	Soil Sample Interval 10'-12'
3		95%	CL	10	Clay	M	2.50		
				11	Grey, stiff clay with a slight odor			10	
				12		M			
				13	As above, odor absent ~12'			<1	
4		95%	CL	14		M			
				15	Grey, stiff, medium plastic clay with angular gravel		3.75	<1	
				16		M/W			
				17				<1	
5		95%	CL	18	As above, stiff	M/W	<4.50		
				19				<1	
				20	As above, stiff	M/W			
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 16'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090	**Boring Number:** SB-10	**Page** 1 **of** 1
Site Name: Village of Lake Zurich **Address:** 61 West Main Street Lake Zurich, IL	**Boring Location:** South of the well house	**Date:** **Start** 6/8/10 **Finish** 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description Grass Surface	Natural Moisture Content %	Hand Penetrometer Qu	OVA/PID/FID/OVM	Remarks
			Fill	1	Topsoil fill	M	NA	<1	
1	FOUR FOOT MACROCORE	75%	ML	2	Silt				
				3	Brown silt with medium sand, no odor	M	1.50	<1	
				4					
				5	Same as above, some medium sand and gravel	M		<1	
2		95%	ML	6					
				7	Same as above	M		<1	
			CL	8	Clay				
				9	Brown clay with some silt and some angular gravel	M	3.00	<1	
3		95%		10					
				11		M		<1	Soil Sample Interval 12'-14'
				12	As above, no odor				
				13		M		<1	
4		95%	CL	14	Grey, stiff, dense medium plastic clay		4.25		
				15		M/W		<1	
				16	Grey, very stiff and dense clay		>4.50		
				17		M/W		<1	
5		95%	CL	18					
				19	Same as above, some angular gravel	M/W		<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 15'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-11 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich

Address: 61 West Main Street, Lake Zurich, IL

Boring Location: North of the well house, north east of SB-3

Date: Start 6/8/10 Finish 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Grass Surface				
	FOUR FOOT MACROCORE		Fill	1	Topsoil fill	M	NA	<1	
1		50%	ML	2	Silt		1.25		
				3	Brown silt with medium sand, no odor	M		<1	
				4					
				5	Same as above, some medium sand and gravel	M		<1	
2		75%	ML	6					
				7	Same as above	M	2.25	<1	
				8					
			CL	9	Clay	M		<1	
3		95%		10	Brown, medium plastic clay with silt		3.25		
				11		M		<1	
				12					
				13	Brown, medium plastic clay with some silt	M		<1	
4		95%	CL	14					
				15		M		<1	
				16	Grey, stiff and dense highly plastic clay		<4.50		
				17		M/W		<1	
5		95%	CL	18					
				19	Same as above	M/W		<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 16'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

LUST Incident No.: 20100090 | **Boring Number:** SB-12 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich

Address: 61 West Main Street, Lake Zurich, IL

Boring Location: In front (North face) of the former 911 center

Date: Start 6/8/10 Finish 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Asphalt Surface				
			Fill	1	Asphalt base gravel	M		<1	
1	FOUR FOOT MACROCORE	75%	ML	2	Silt		1.25		
				3	Brown, some medium sand	M		<1	
				4					
				5		M		<1	
2		75%	ML	6	Brown, some medium sand and angular gravel				
				7		M		<1	
				8					
				9	Same as above, brown, no odor	M	2.50	<1	
3		75%	ML	10					
			CL	11	Clay	M		<1	Soil Sample Interval 12'-14'
				12	Brown, medium plastic, no odor				
				13		M	3.75	<1	
4		95%	CL	14	Grey, stiff, dense clay, no odor				
				15		M		<1	
				16			<4.50		
				17		M/W		<1	
5		95%	CL	18	Grey, stiff, dense clay, highly plastic				
				19		M/W	<4.50	<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 17'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

LUST Incident No.: 20100090 | **Boring Number:** SB-13 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich | **Boring Location:** south east of SB-5 | **Date:** Start 6/8/10

Address: 61 West Main Street, Lake Zurich, IL | Finish 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Asphalt Surface				
			Fill	1	Asphalt base gravel	M		<1	
1	FOUR FOOT MACROCORE	50%	ML	2	Silt				
				3	Olive, odor, silt with medium sand	M	1.00	24	
				4					
				5	Olive, odor, same as above	M		45	
2		75%	ML	6					
				7	Olive – grey, odor, silt with medium sand and gravel	M		28	
				8					
				9	Grey, odor, silt with medium to coarse sand	M	2.50	19	
3		95%		10					
			CL	11	Clay	M		12	
				12	Brown with grey mottles, very slight odor		3.25		
				13		M		<1	
4		95%	CL	14	Brown, no odor, stiff clay, medium plastic				
				15		M		<1	
				16	Grey, stiff and dense clay		>4.50		
				17		M/W		<1	
5		95%	CL	18					
				19	As above, very stiff clay	M/W	>4.50	<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 17'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing

Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-14 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich | **Boring Location:** south east of SB-9 | **Date:** Start 6/8/10

Address: 61 West Main Street, Lake Zurich, IL | Finish 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Asphalt Surface				
	FOUR FOOT MACROCORE		Fill	1	Asphalt base gravel	M		<1	
1		50%	ML	2	Silt		1.25		
				3	Brown, some medium sand and gravel, no odor	M		<1	
				4					
				5		M		<1	
2		50%	ML	6					
				7	As above, no odor	M		<1	
				8					
				9		M	3.00	<1	
3		75%		10	As above, brown silt with medium to coarse sand				
			CL	11	Clay	M		<1	Soil Sample Interval 12'-14'
				12	Brown, stiff, dense clay, no odor		4.25		
				13		M		<1	
4		95%	CL	14					
				15	Brown, stiff, very dense clay with high plasticity	M	>4.50	<1	
				16					
				17		M/W		<1	
5		95%	CL	18	Grey, same as above, no odor		>4.50		
				19		M/W		<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 17'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-15 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich | **Boring Location:** South west of SB-13 | **Date:** Start 6/8/10

Address: 61 West Main Street, Lake Zurich, IL | Finish 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Asphalt Surface				
			Fill	1	Asphalt base gravel	M		<1	
1	FOUR FOOT MACROCORE	50%	ML	2	Silt				
				3	Brown, with medium sand, no odor	M	1.25	<1	
				4					
				5	As above	M		<1	
2		75%	ML	6					
				7		M		<1	
				8	As above		3.00		
				9		M		<1	
3		95%	CL	10	Clay				
				11	Brown, medium plastic with some gravel, no odor	M		<1	
				12			4.25		
				13		M		<1	
4		95%	CL	14	As above				
				15	Grey, stiff and dense, no odor, some gravel	M/W	>4.50	<1	
				16					
				17		M/W		<1	
5		95%	CL	18					
				19	As above, very stiff and dense, no odor	M/W	>4.50	<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 15'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090 | **Boring Number:** SB-16 | **Page** 1 **of** 1

Site Name: Village of Lake Zurich | **Boring Location:** south west of SB-6 | **Date:** **Start** 6/8/10

Address: 61 West Main Street, Lake Zurich, IL | **Finish** 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
					Asphalt Surface				
			Fill	1	Asphalt base gravel	M		<1	
1	FOUR FOOT MACROCORE	50%	ML	2	Silt		1.00		
				3	Olive – grey, odor	M		18	
				4					
				5	Grey, odor, with medium sand	M		42	
2		50%	ML	6					
				7	Grey, strong odor of petroleum	M		66	
				8					
				9	Grey, odor, more dense silt (more clay)	M	3.25	27	
3		75%	ML	10					
				11	Clay	M		9	
				12	Brown with grey mottles, slight odor		4.25		
				13		M		<1	
4		95%	CL	14					
				15	Grey, stiff and dense, highly plastic, no odor	M/W	>4.50	<1	
				16					
				17		M/W		<1	
5		95%	CL	18					
				19	As above, no odor	M/W	>4.50	<1	
				20					
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 15'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

LUST Incident No.: 20100090	**Boring Number:** SB-17	**Page** 1 **of** 1
Site Name: Village of Lake Zurich **Address:** 61 West Main Street Lake Zurich, IL	**Boring Location:** West of SB-8 and south west of SB-16	**Date:** **Start** 6/8/10 **Finish** 6/8/10

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description Asphalt Surface	Natural Moisture Content %	Hand Penetrometer Qu	OVA/*PID*/FID/OVM	Remarks
			Fill	1	Asphalt base gravel	M		<1	
1	FOUR FOOT MACROCORE	75%	ML	2	Silt		1.25		
				3	Brown, with medium sand and some gravel	M		<1	
				4					
				5	As above	M		<1	
2		75%	ML	6					
				7	Brown, with medium to coarse sand	M		<1	
				8			3.00		
				9	As above, brown, no odor	M		<1	
3		95%	CL	10	Clay				
				11	Brown, stiff and dense, medium plastic, no odor	M	4.25	<1	
				12					
				13	As above	M		<1	
4		95%	CL	14					
				15	Grey, very stiff, highly plastic, no odor	M/W	>4.50	<1	
				16					
				17		M/W		<1	
5		95%	CL	18	As above				
				19		M/W	>4.50	<1	
				20	As above				
				21	End of Boring				
				22					
				23					
				24					
				25					
				26					
				27					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data
▼ Depth While Drilling 15'
▽ Depth After Drilling Not Applicable

Auger Depth 20' Rig Drill Rig
Rotary Depth N/A Geologist Kyle R. Webb
Driller/Co. Environmental Soil Probing
Note: Boring backfilled unless otherwise noted.

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Dec-96

ATTACHMENT 2

First Environmental Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

April 15, 2010

Mr. Kyle Webb
MARLIN ENVIRONMENTAL
3935 Commerce Drive
St. Charles, IL 60174

Project ID: Village of Lake Zurich - 61 W. Main St.
First Environmental File ID: 10-1269
Date Received: April 08, 2010

Dear Mr. Kyle Webb:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002468: effective 02/23/10 through 02/28/11.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

William Mottashed
Project Manager

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Case Narrative

MARLIN ENVIRONMENTAL

Project ID: **Village of Lake Zurich - 61 W. Main St.**

First Environmental File ID: **10-1269**

Date Received: **April 08, 2010**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.

Method Comments

Lab Number	Sample ID	Comments:
10-1269-026	SB-2 (8'-10')	*BTEX Organic Compounds* The reporting limits are elevated due to matrix interference.

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-1 (3'-5')
Sample No: 10-1269-001
Date Collected: 04/06/10
Time Collected: 8:18
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	86.26		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/09/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-1 (8'-10')
Sample No: 10-1269-002
Date Collected: 04/06/10
Time Collected: 8:26
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 04/09/10				
Total Solids	86.39		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 04/12/10				
Benzene	5,200	5.0	ug/kg	
Toluene	30,500	5.0	ug/kg	
Ethylbenzene	13,400	5.0	ug/kg	
Xylene, Total	73,500	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-1 (12'-14')
Sample No: 10-1269-003
Date Collected: 04/06/10
Time Collected: 8:40
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 04/09/10				
Total Solids	83.82		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 04/09/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-1 (17'-19')
Sample No: 10-1269-004

Date Collected: 04/06/10
Time Collected: 8:57
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	86.51		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/09/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-2 (3'-5')
Sample No: 10-1269-005

Date Collected: 04/06/10
Time Collected: 9:24
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	78.97		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/09/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-2 (8'-10')
Sample No: 10-1269-006

Date Collected: 04/06/10
Time Collected: 9:43
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	82.98		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/09/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-2 (12'-14')
Sample No: 10-1269-007
Date Collected: 04/06/10
Time Collected: 9:58
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	82.95		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/09/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-2 (17'-19')
Sample No: 10-1269-008
Date Collected: 04/06/10
Time Collected: 10:07
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	84.94		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/09/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-3 (3'-5')
Sample No: 10-1269-009

Date Collected: 04/06/10
Time Collected: 10:34
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 04/09/10				
Total Solids	85.23		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-3 (8'-10')
Sample No: 10-1269-010

Date Collected: 04/06/10
Time Collected: 10:56
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	90.73		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-3 (12'-14')
Sample No: 10-1269-011

Date Collected: 04/06/10
Time Collected: 11:15
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	76.60		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-3 (17'-19')
Sample No: 10-1269-012

Date Collected: 04/06/10
Time Collected: 11:39
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 04/09/10				
Total Solids	86.44		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-4 (3'-5')
Sample No: 10-1269-013

Date Collected: 04/06/10
Time Collected: 12:06
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	87.60		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-4 (8'-10')
Sample No: 10-1269-014

Date Collected: 04/06/10
Time Collected: 12:19
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	89.69		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-4 (12'-14')
Sample No: 10-1269-015
Date Collected: 04/06/10
Time Collected: 12:35
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	86.02		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-4 (17'-19')
Sample No: 10-1269-016
Date Collected: 04/06/10
Time Collected: 12:53
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	90.14		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-5 (3'-5')
Sample No: 10-1269-017

Date Collected: 04/07/10
Time Collected: 8:14
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 04/09/10				
Total Solids	87.14		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-5 (8'-10')
Sample No: 10-1269-018

Date Collected: 04/07/10
Time Collected: 8:36
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	89.01		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-5 (12'-14')
Sample No: 10-1269-019

Date Collected: 04/07/10
Time Collected: 8:51
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	71.92		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: MW-5 (17'-19')
Sample No: 10-1269-020
Date Collected: 04/07/10
Time Collected: 9:12
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	86.16		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-1 (3'-5')
Sample No: 10-1269-021

Date Collected: 04/07/10
Time Collected: 9:50
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	88.20		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-1 (8'-10')
Sample No: 10-1269-022

Date Collected: 04/07/10
Time Collected: 9:59
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	91.06		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/13/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-1 (12'-14')
Sample No: 10-1269-023

Date Collected: 04/07/10
Time Collected: 10:15
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	90.67		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-1 (17'-19')
Sample No: 10-1269-024

Date Collected: 04/07/10
Time Collected: 10:30
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	83.92		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-2 (3'-5')
Sample No: 10-1269-025

Date Collected: 04/07/10
Time Collected: 10:53
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 04/09/10				
Total Solids	95.08		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	7.7	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-2 (8'-10')
Sample No: 10-1269-026

Date Collected: 04/07/10
Time Collected: 11:14
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	89.35		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 25.0	5.0	ug/kg	
Toluene	< 500	5.0	ug/kg	
Ethylbenzene	< 500	5.0	ug/kg	
Xylene, Total	1,260	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-2 (12'-14')
Sample No: 10-1269-027

Date Collected: 04/07/10
Time Collected: 11:30
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	90.29		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/13/10				
Benzene	2,080	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-2 (17'-19')
Sample No: 10-1269-028

Date Collected: 04/07/10
Time Collected: 11:43
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	83.22		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-3 (3'-5')
Sample No: 10-1269-029

Date Collected: 04/07/10
Time Collected: 12:06
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	90.00		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	6.5	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	216	5.0	ug/kg	
Xylene, Total	23.1	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-3 (8'-10')
Sample No: 10-1269-030

Date Collected: 04/07/10
Time Collected: 12:17
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	91.32		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	68.2	5.0	ug/kg	
Xylene, Total	12.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-3 (12'-14')
Sample No: 10-1269-031

Date Collected: 04/07/10
Time Collected: 12:38
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	86.10		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	78.2	5.0	ug/kg	
Xylene, Total	28.9	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-3 (17'-19')
Sample No: 10-1269-032

Date Collected: 04/07/10
Time Collected: 12:50
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	84.70		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-4 (3'-5')
Sample No: 10-1269-033

Date Collected: 04/07/10
Time Collected: 13:18
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	89.37		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-4 (8'-10')
Sample No: 10-1269-034

Date Collected: 04/07/10
Time Collected: 13:30
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total	**Method: 2540B**			
Analysis Date: 04/09/10				
Total Solids	84.76		%	
BTEX Organic Compounds	**Method: 5035A/8260B**			
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client:	MARLIN ENVIRONMENTAL	**Date Collected:**	04/07/10
Project ID:	Village of Lake Zurich - 61 W. Main St.	**Time Collected:**	13:48
Sample ID:	SB-4 (12'-14')	**Date Received:**	04/08/10
Sample No:	10-1269-035	**Date Reported:**	04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 04/09/10				
Total Solids	86.66		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-4 (17'-19')
Sample No: 10-1269-036

Date Collected: 04/07/10
Time Collected: 13:54
Date Received: 04/08/10
Date Reported: 04/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 04/09/10				
Total Solids	85.14		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 04/12/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

Illinois Environmental Protection Agency
Leaking Underground Storage Tank Program
Laboratory Certification for Chemical Analysis

A. Site Identification

IEMA Incident # (6- or 8-digit): 100090 IEPA LPC# (10-digit): 0970855130

Site Name: Village of Lake Zurich

Site Address (Not a P.O. Box): 61 W. Main Street

City: Lake Zurich County: Lake ZIP Code: 60047

Leaking UST Technical File

B. Sample Collector

I certify that:

1. Appropriate sampling equipment/methods were utilized to obtain representative samples. KW (initial)
2. Chain-of-custody procedures were followed in the field. KW (initial)
3. Sample Integrity was maintained by proper preservation. KW (initial)
4. All samples were properly labeled. KW (initial)

C. Laboratory Representative

I certify that:

1. Proper chain-of-custody procedures were followed as documented on the chain-of-custody forms (initial)
2. Sample integrity was maintained by proper preservation. (initial)
3. All samples were properly labeled. (initial)
4. Quality assurance/quality control procedures were established and carried out. (initial)

5. Sample holding times were not exceeded. (initial)

6. SW-846 Analytical Laboratory Procedure (USEPA) methods were used for the analyses. (initial)

7. An accredited lab performed quantitative analysis using test methods identified in 35 IAC 186.180 (for samples collected on or after January 1, 2003). (initial)

D. Signatures

I hereby affirm that all information contained in this form is true and accurate to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sample Collector

Name: Kyle Webb
Title: Senior Professional Geologist
Company: Marlin Environmental
Address: 3935 Commerce Drive
City: Saint Charles
State: Illinois
ZIP Code: 60174
Phone: 630-444-1933
Signature: Kyle R. Webb
Date: 4/20/10

Laboratory Representative

Name: Bill Mottashed
Title: Project Manager
Company: First Environmental
Address: 1600 Shore Road Ste D
City: Naperville
State: IL
ZIP Code: 60563
Phone: (630) 778-1200
Signature: W. Mottashed
Date: 4/15/10

CHAIN OF CUSTODY RECORD

Page 1 of 3 pgs

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com
IEPA Certification #100292

Company Name: Marlin Environmental
Street Address: 3935 Commerce Dr.
City: St. Charles State: IL Zip: 60174
Phone: 630-444-1933 Fax: 630-444-1937 e-mail:
Send Report To: Kyle Webb Via: Fax [X] e-mail [ ]
Sampled By: Kyle Webb

Project I.D.: Village of Lake Zurich - 61 W. Main St.
P.O. #.:

Matrix Codes: S = Soil W = Water O = Other

Date/Time Taken	Sample Description	Matrix	Analyses: BTEX	Comments	Lab I.D.
4/6/10 8:18am	MW-1 (3'-5')	Soil	X		10-1269-001
8:26am	MW-1 (8'-10')		X		002
8:40am	MW-1 (12'-14')		X		003
8:57am	MW-1 (17'-19')		X		004
9:24am	MW-2 (3'-5')		X		005
9:43am	MW-2 (8'-10')		X		006
9:58am	MW-2 (12'-14')		X		007
10:07am	MW-2 (17'-19')		X		008
10:34am	MW-3 (3'-5')		X		009
10:56am	MW-3 (8'-10')		X		010
11:15am	MW-3 (12'-14')		X		011
11:39am	MW-3 (17'-19')		X		012

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes__ No.__ _____°C
Received within 6 hrs. of collection:_____
Ice Present: Yes__ No__

Sample Refrigerated: Yes X No__
Refrigerator Temperature: 4 °C
5035 Vials Frozen: Yes X No__
Freezer Temperature: -17 °C

Containers Received Preserved: [ ] Yes [ ] No

Need to meet: IL. TACO [ ] IN. RISC [ ]

Notes and Special Instructions:

Relinquished By: Kyle Webb Date/Time 4-8-10 1418 Received By: [signature] Date/Time 4-8-10 1418
Relinquished By: _____ Date/Time _____ Received By: _____ Date/Time _____

Rev. 9/08

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com
IEPA Certification #100292

CHAIN OF CUSTODY RECORD

Company Name: Marlin Environmental
Street Address: 3935 Commerce Dr.
City: St. Charles State: IL Zip: 60174
Phone: 630-444-1933 Fax: 630-444-1931 e-mail:
Send Report To: Kyle Webb Via: Fax ☒ e-mail ☐
Sampled By: Kyle Webb

Project I.D.: Village of Lake Zurich-61 W. Main St.
P.O. #.:

Matrix Codes: S = Soil W = Water O = Other

Date/Time Taken	Sample Description	Matrix	Analyses: BTEX	Comments	Lab I.D.
4/6/10 12:06pm	MW-4 (3'-5')				10-1269-013
12:19pm	MW-4 (8'-10')				014
12:35pm	MW-4 (12'-14')				015
12:53pm	MW-4 (17'-19')				016
4/7/10 8:14am	MW-5 (3'-5')				017
8:36am	MW-5 (8'-10')				018
8:51am	MW-5 (12'-14')				019
9:12am	MW-5 (17'-19')				020
9:50am	SB-1 (3'-5')				021
9:59am	SB-1 (8'-10')				022
10:15am	SB-1 (12'-14')				023
10:30am	SB-1 (17'-19')				024

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes__ No.__ ____°C
Received within 6 hrs. of collection:____
Ice Present: Yes__ No__

Sample Refrigerated: Yes X No__
Refrigerator Temperature: 4 °C
5035 Vials Frozen: Yes X No__
Freezer Temperature: -14 °C

Containers Received Preserved: ☐ Yes ☐ No
Need to meet: IL. TACO ☐ IN. RISC ☐

Notes and Special Instructions:

Relinquished By: Kyle R. Webb Date/Time 4-8-10 1418 Received By: Date/Time 4-8-10 1418
Relinquished By: Date/Time Received By: Date/Time

CHAIN OF CUSTODY RECORD

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com
IEPA Certification #100292

Company Name: Marlin Environmental
Street Address: 3935 Commerce Drive
City: St. Charles State: IL Zip: 60174
Phone: 630-444-1933 Fax: 630-444-1939 e-mail:
Send Report To: Kyle Webb Via: Fax ☒ e-mail ☐
Sampled By: Kyle Webb

Project I.D.: Village of Lake Zurich-61 W. Main St.
P.O. #.:

Matrix Codes: S = Soil W = Water O = Other

Date/Time Taken	Sample Description	Matrix	Analyses: BTEX	Comments	Lab I.D.
4/7/10 10:53am	SB-2 (3'-5')		X		10-1269-025
11:14am	SB-2 (8'-10')		X		026
11:30am	SB-2 (12'-14')		X		027
11:43am	SB-2 (17'-19')		X		028
12:06pm	SB-3 (3'-5')		X		029
12:17pm	SB-3 (8'-10')		X		030
12:38pm	SB-3 (12'-14')		X		031
12:50pm	SB-3 (17'-19')		X		032
1:18pm	SB-4 (3'-5')		X		033
1:30pm	SB-4 (8'-10')		X		034
1:48pm	SB-4 (12'-14')		X		035
1:54pm	SB-4 (17'-19')		X		036

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes__ No__ ____°C
Received within 6 hrs. of collection:____
Ice Present: Yes__ No__

Sample Refrigerated: Yes X No__
Refrigerator Temperature: 4 °C
5035 Vials Frozen: Yes X No__
Freezer Temperature: -7 °C

Containers Received Preserved: ☐ Yes ☐ No

Need to meet: IL. TACO ☐ IN. RISC ☐

Notes and Special Instructions:

Relinquished By: Kyle Webb Date/Time 4-8-10 1416
Relinquished By: ____ Date/Time ____
Received By: ____ Date/Time 4-8-10 1416
Received By: ____ Date/Time ____

Rev. 9/08

First Environmental Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

April 27, 2010

Mr. Kyle Webb
MARLIN ENVIRONMENTAL
3935 Commerce Drive
St. Charles, IL 60174

Project ID: Village of Lake Zurich
First Environmental File ID: 10-1464
Date Received: April 20, 2010

Dear Mr. Kyle Webb:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002468: effective 02/23/10 through 02/28/11.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

William Mottashed
Project Manager

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Case Narrative

MARLIN ENVIRONMENTAL

Project ID: **Village of Lake Zurich**

First Environmental File ID: **10-1464**

Date Received: **April 20, 2010**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client:	MARLIN ENVIRONMENTAL	**Date Collected:**	04/19/10
Project ID:	Village of Lake Zurich	**Time Collected:**	10:00
Sample ID:	MW-1	**Date Received:**	04/20/10
Sample No:	10-1464-001	**Date Reported:**	04/27/10

Analyte	Result	R.L.	Units	Flags
BTEX Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 04/22/10				
Benzene	< 5.0	5.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	
Total Metals **Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 04/23/10		Preparation Date: 04/21/10		
Lead	< 0.002	0.002	mg/L	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich
Sample ID: MW-2
Sample No: 10-1464-002

Date Collected: 04/19/10
Time Collected: 10:17
Date Received: 04/20/10
Date Reported: 04/27/10

Analyte	Result	R.L.	Units	Flags
BTEX Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 04/22/10				
Benzene	< 5.0	5.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	
Total Metals **Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 04/23/10		Preparation Date: 04/21/10		
Lead	0.006	0.002	mg/L	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich
Sample ID: MW-3
Sample No: 10-1464-003

Date Collected: 04/19/10
Time Collected: 10:35
Date Received: 04/20/10
Date Reported: 04/27/10

Analyte	Result	R.L.	Units	Flags
BTEX Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 04/22/10				
Benzene	< 5.0	5.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	
Total Metals **Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 04/23/10		Preparation Date: 04/21/10		
Lead	0.003	0.002	mg/L	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich
Sample ID: MW-4
Sample No: 10-1464-004

Date Collected: 04/19/10
Time Collected: 10:49
Date Received: 04/20/10
Date Reported: 04/27/10

Analyte	Result	R.L.	Units	Flags
BTEX Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 04/22/10				
Benzene	< 5.0	5.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
Methyl-tert-butylether (MTBE)	5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	
Total Metals **Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 04/23/10		Preparation Date: 04/21/10		
Lead	0.011	0.002	mg/L	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich
Sample ID: MW-5
Sample No: 10-1464-005

Date Collected: 04/19/10
Time Collected: 11:12
Date Received: 04/20/10
Date Reported: 04/27/10

Analyte	Result	R.L.	Units	Flags
BTEX Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 04/22/10				
Benzene	< 5.0	5.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	
Total Metals **Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 04/23/10		Preparation Date: 04/21/10		
Lead	0.004	0.002	mg/L	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client:	MARLIN ENVIRONMENTAL	**Date Collected:**	04/19/10
Project ID:	Village of Lake Zurich	**Time Collected:**	9:33
Sample ID:	Field Blank	**Date Received:**	04/20/10
Sample No:	10-1464-006	**Date Reported:**	04/27/10

Analyte	Result	R.L.	Units	Flags
BTEX Organic Compounds **Method: 5030B/8260B** Analysis Date: 04/22/10				
Benzene	< 5.0	5.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client:	MARLIN ENVIRONMENTAL	**Date Collected:**	
Project ID:	Village of Lake Zurich	**Time Collected:**	
Sample ID:	Trip Blank	**Date Received:**	04/20/10
Sample No:	10-1464-007	**Date Reported:**	04/27/10

Analyte	Result	R.L.	Units	Flags
BTEX Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 04/22/10				
Benzene	< 5.0	5.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	

Illinois Environmental Protection Agency
Leaking Underground Storage Tank Program
Laboratory Certification for Chemical Analysis

A. Site Identification

IEMA Incident # (6- or 8-digit): 100090 IEPA LPC# (10-digit): 0970855130

Site Name: Village of Lake Zurich

Site Address (Not a P.O. Box): 61 W. Main Street

City: Lake Zurich County: Lake ZIP Code: 60047

Leaking UST Technical File

B. Sample Collector

I certify that:

1. Appropriate sampling equipment/methods were utilized to obtain representative samples. (initial)
2. Chain-of-custody procedures were followed in the field. (initial)
3. Sample integrity was maintained by proper preservation. (initial)
4. All samples were properly labeled. (initial)

C. Laboratory Representative

I certify that:

1. Proper chain-of-custody procedures were followed as documented on the chain-of-custody forms (initial)
2. Sample integrity was maintained by proper preservation. (initial)
3. All samples were properly labeled. (initial)
4. Quality assurance/quality control procedures were established and carried out. (initial)

5. Sample holding times were not exceeded. (initial)

6. SW-846 Analytical Laboratory Procedure (USEPA) methods were used for the analyses. (initial)

7. An accredited lab performed quantitative analysis using test methods identified in 35 IAC 186.180 (for samples collected on or after January 1, 2003). (initial)

D. Signatures

I hereby affirm that all information contained in this form is true and accurate to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sample Collector

Name: Ryan Waughen
Title: Project Manager
Company: Martin Environmental, Inc
Address: 3935 Commerce Drive
City: St. Charles
State: Illinois
ZIP Code: 60174
Phone: 630-444-1933
Signature: Ryan F Waughen
Date: 4/27/10

Laboratory Representative

Name: Bill Mottashed
Title: Project Manager
Company: First Environmental
Address: 1600 Shore Road Ste D
City: Naperville
State: IL
ZIP Code: 60563
Phone: (630) 778-1200
Signature: W. Mottashed
Date: 4/27/10

CHAIN OF CUSTODY RECORD

Page 1 of 1 pgs

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com
IEPA Certification #100292

Company Name: Martin Environmental
Street Address: 3935 Commerce Drive
City: St. Charles State: IL Zip: 60174
Phone: 630-444-1933 Fax: 630-444-1939 e-mail: on file
Send Report To: Kyle Webb Via: Fax ☒ e-mail ☒
Sampled By: Ryan Waughon

Project I.D.: Village of Lake Zurich
P.O. #.:

Matrix Codes: S = Soil W = Water O = Other

Date/Time Taken	Sample Description	Matrix	BTEX	MTBE	LEAD	Comments	Lab I.D.
4/19/10 10:00am	MW-1	GW	X	X	X		10-1464-001
4/19/10 10:17am	MW-2	GW	X	X	X		002
4/19/10 10:35am	MW-3	GW	X	X	X		003
4/19/10 10:49 am	MW-4	GW	X	X	X		004
4/19/10 11:12am	MW-5	GW	X	X	X		005
4/19/10 9:33am	Field Blank	GW	X	X			006
— —	Trip Blank	GW	X	X			007

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes__ No__ _____°C
Received within 6 hrs. of collection: _____
Ice Present: Yes__ No__

Sample Refrigerated: Yes X No__
Refrigerator Temperature: 4° °C
5035 Vials Frozen: Yes X No__
Freezer Temperature: 2° °C

Containers Received Preserved: ☐ Yes ☐ No
Need to meet: IL. TACO ☐ IN. RISC ☐

Notes and Special Instructions: _____

Relinquished By: [signature] Date/Time 4-20-10 1500 Received By: [signature] Date/Time 4-20-10 1500
Relinquished By: _____ Date/Time _____ Received By: _____ Date/Time _____

Rev. 9/08

First Environmental Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

June 15, 2010

Mr. Kyle Webb
MARLIN ENVIRONMENTAL
3935 Commerce Drive
St. Charles, IL 60174

Project ID: Village of Lake Zurich - 61 W. Main St.
First Environmental File ID: 10-2259
Date Received: June 09, 2010

Dear Mr. Kyle Webb:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002468: effective 02/23/10 through 02/28/11.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

William Mottashed
Project Manager

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Case Narrative

MARLIN ENVIRONMENTAL

Project ID: **Village of Lake Zurich - 61 W. Main St.**

First Environmental File ID: **10-2259**

Date Received: **June 09, 2010**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client:	MARLIN ENVIRONMENTAL	**Date Collected:**	06/08/10
Project ID:	Village of Lake Zurich - 61 W. Main St.	**Time Collected:**	8:32
Sample ID:	SB-5 (12'-14')	**Date Received:**	06/09/10
Sample No:	10-2259-001	**Date Reported:**	06/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 06/11/10				
Total Solids	86.31		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 06/14/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-6 (12'-14')
Sample No: 10-2259-002
Date Collected: 06/08/10
Time Collected: 9:05
Date Received: 06/09/10
Date Reported: 06/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 06/11/10				
Total Solids	91.32		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 06/14/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-7 (12'-14')
Sample No: 10-2259-003
Date Collected: 06/08/10
Time Collected: 10:53
Date Received: 06/09/10
Date Reported: 06/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 06/11/10				
Total Solids	85.49		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 06/14/10				
Benzene	660	5.0	ug/kg	
Toluene	420	5.0	ug/kg	
Ethylbenzene	10,400	5.0	ug/kg	
Xylene, Total	26,700	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-10 (12'-14')
Sample No: 10-2259-004

Date Collected: 06/08/10
Time Collected: 11:47
Date Received: 06/09/10
Date Reported: 06/15/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 06/11/10				
Total Solids	84.06		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 06/14/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

Illinois Environmental Protection Agency
Leaking Underground Storage Tank Program
Laboratory Certification for Chemical Analysis

A. Site Identification

IEMA Incident # (6- or 8-digit): 2010-0090 IEPA LPC# (10-digit): 0970855130

Site Name: Village of Lake Zurich

Site Address (Not a P.O. Box): 61 W. Main Street

City: Lake Zurich County: Lake ZIP Code: 60047

Leaking UST Technical File

B. Sample Collector

I certify that:

1. Appropriate sampling equipment/methods were utilized to obtain representative samples. KW (initial)
2. Chain-of-custody procedures were followed in the field. KW (initial)
3. Sample integrity was maintained by proper preservation. KW (initial)
4. All samples were properly labeled. KW (initial)

C. Laboratory Representative

I certify that:

1. Proper chain-of-custody procedures were followed as documented on the chain-of-custody forms (initial)
2. Sample integrity was maintained by proper preservation. (initial)
3. All samples were properly labeled. (initial)
4. Quality assurance/quality control procedures were established and carried out. (initial)

5. Sample holding times were not exceeded. (initial)

6. SW-846 Analytical Laboratory Procedure (USEPA) methods were used for the analyses. (initial)

7. An accredited lab performed quantitative analysis using test methods identified in 35 IAC 186.180 (for samples collected on or after January 1, 2003). (initial)

D. Signatures

I hereby affirm that all information contained in this form is true and accurate to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sample Collector

Name: Kyle Webb
Title: Senl Prof. Geologist
Company: Marlin Environmental
Address: 3935 Commerce Dr.
City: St. Charles
State: IL
ZIP Code: 60174
Phone: 630-444-1933
Signature: Kyle Webb
Date: 6-17-10

Laboratory Representative

Name: Bill Mottashed
Title: Project Manager
Company: First Environmental
Address: 1600 Shore Road Ste D
City: Naperville
State: IL
ZIP Code: 60563
Phone: (630) 778-1200
Signature: W. Mottashed
Date: 6/15/10

CHAIN OF CUSTODY RECORD

Page 1 of 1 pgs

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com
IEPA Certification #100292

Company Name: Marlin Environmental, Inc.
Street Address: 3935 Commerce Drive
City: St. Charles State: IL Zip: 60174
Phone: 630-444-1933 Fax: e-mail:
Send Report To: Kyle Webb Via: Fax ☐ e-mail ☐
Sampled By: Kyle Webb

Project I.D.: Village of Lake Zurich - 61 W. Main Street
P.O. #.:

Matrix Codes: S = Soil W = Water O = Other

Date/Time Taken	Sample Description	Matrix	Analyses: BTEX	Comments	Lab I.D.
6/8/10 8:32am	SB-5 (12'-14')	Soil	X		10-2259-001
9:05am	SB-6 (12'-14')		X		002
10:53am	SB-7 (12'-14')		X		003
11:47am	SB-10 (12'-14')		X		004

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes__ No__ ____°C
Received within 6 hrs. of collection:____
Ice Present: Yes__ No__

Sample Refrigerated: Yes X No__
Refrigerator Temperature:____°C
5035 Vials Frozen: Yes X No__
Freezer Temperature: 1.1 °C

Containers Received Preserved: ☐ Yes ☐ No
Need to meet: IL. TACO ☐ IN. RISC ☐

Notes and Special Instructions:

Relinquished By: Kyle R. Webb Date/Time 6/9/10 0910 Received By: Date/Time 6/9/10 0910
Relinquished By: Date/Time Received By: Date/Time

Rev. 4/08

First Environmental Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

June 22, 2010

Mr. Kyle Webb
MARLIN ENVIRONMENTAL
3935 Commerce Drive
St. Charles, IL 60174

Project ID: Village of Lake Zurich - 61 W. Main St.
First Environmental File ID: 10-2404
Date Received: June 17, 2010

Dear Mr. Kyle Webb:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002468: effective 02/23/10 through 02/28/11.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

William Mottashed
Project Manager

First Environmental Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Case Narrative

MARLIN ENVIRONMENTAL

Project ID: **Village of Lake Zurich - 61 W. Main St.**

First Environmental File ID: **10-2404**

Date Received: **June 17, 2010**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-9 (10'-12')
Sample No: 10-2404-001
Date Collected: 06/08/10
Time Collected: 11:19
Date Received: 06/17/10
Date Reported: 06/22/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 06/18/10				
Total Solids	84.55		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 06/21/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	32.7	5.0	ug/kg	
Xylene, Total	80.3	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-12 (12'-14')
Sample No: 10-2404-002
Date Collected: 06/08/10
Time Collected: 13:28
Date Received: 06/17/10
Date Reported: 06/22/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 06/18/10				
Total Solids	85.40		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 06/21/10				
Benzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

First
Environmental
Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: MARLIN ENVIRONMENTAL
Project ID: Village of Lake Zurich - 61 W. Main St.
Sample ID: SB-14 (12'-14')
Sample No: 10-2404-003
Date Collected: 06/08/10
Time Collected: 14:43
Date Received: 06/17/10
Date Reported: 06/22/10

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 06/18/10				
Total Solids	85.63		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 06/21/10				
Benzene	8.2	5.0	ug/kg	
Toluene	5.5	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Xylene, Total	10.5	5.0	ug/kg	

Illinois Environmental Protection Agency
Leaking Underground Storage Tank Program
Laboratory Certification for Chemical Analysis

A. Site Identification

IEMA Incident # (6- or 8-digit): 100090 IEPA LPC# (10-digit): 0970855130

Site Name: Village of Lake Zurich

Site Address (Not a P.O. Box): 61 W. Main Street

City: Lake Zurich County: Lake ZIP Code: 60047

Leaking UST Technical File

B. Sample Collector

I certify that:

1. Appropriate sampling equipment/methods were utilized to obtain representative samples. KW (initial)
2. Chain-of-custody procedures were followed in the field. KW (initial)
3. Sample integrity was maintained by proper preservation. KW (initial)
4. All samples were properly labeled. KW (initial)

C. Laboratory Representative

I certify that:

1. Proper chain-of-custody procedures were followed as documented on the chain-of-custody forms (initial)
2. Sample integrity was maintained by proper preservation. (initial)
3. All samples were properly labeled. (initial)
4. Quality assurance/quality control procedures were established and carried out. (initial)

5. Sample holding times were not exceeded. (initial)

6. SW-846 Analytical Laboratory Procedure (USEPA) methods were used for the analyses. (initial)

7. An accredited lab performed quantitative analysis using test methods identified in 35 IAC 186.180 (for samples collected on or after January 1, 2003). (initial)

D. Signatures

I hereby affirm that all information contained in this form is true and accurate to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sample Collector

Name: Kyle Webb
Title: Senior Project Manager
Company: Marlin Environmental
Address: 3935 Commerce Dr.
City: St. Charles
State: IL
ZIP Code: 60174
Phone: 630-444-1935 x19
Signature: Kyle Webb
Date: 6/22/10

Laboratory Representative

Name: Bill Mottashed
Title: Project Manager
Company: First Environmental
Address: 1600 Shore Road Ste D
City: Naperville
State: IL
ZIP Code: 60563
Phone: (630) 778-1200
Signature: W. Mottashed
Date: 6/22/10

CHAIN OF CUSTODY RECORD

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com
IEPA Certification #100292

Company Name: Marlin Environmental, Inc.
Street Address: 3935 Commerce Drive
City: St. Charles State: IL Zip: 60174
Phone: 630-444-1933 Fax: 630-444-1939 e-mail:
Send Report To: Kyle Webb Via: Fax ☒ e-mail ☐
Sampled By: Kyle Webb

Project I.D.: Village of Lake Zurich-61 W. Main Street
P.O. #.:

Matrix Codes: S = Soil W = Water O = Other

Date/Time Taken	Sample Description	Matrix	Analyses: BTEX	Comments	Lab I.D.
6/8/10 11:19am	SB-9 (10'-12')	Soil	X		10-2404-001
1:28pm	SB-12 (12'-14')		X		002
2:43pm	SB-14 (12'-14')		X		003

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6ºC Yes__ No__ _____ºC
Received within 6 hrs. of collection:_____
Ice Present: Yes__ No__

Sample Refrigerated: Yes X No__
Refrigerator Temperature: 4 ºC
5035 Vials Frozen: Yes X No__
Freezer Temperature: -1 ºC

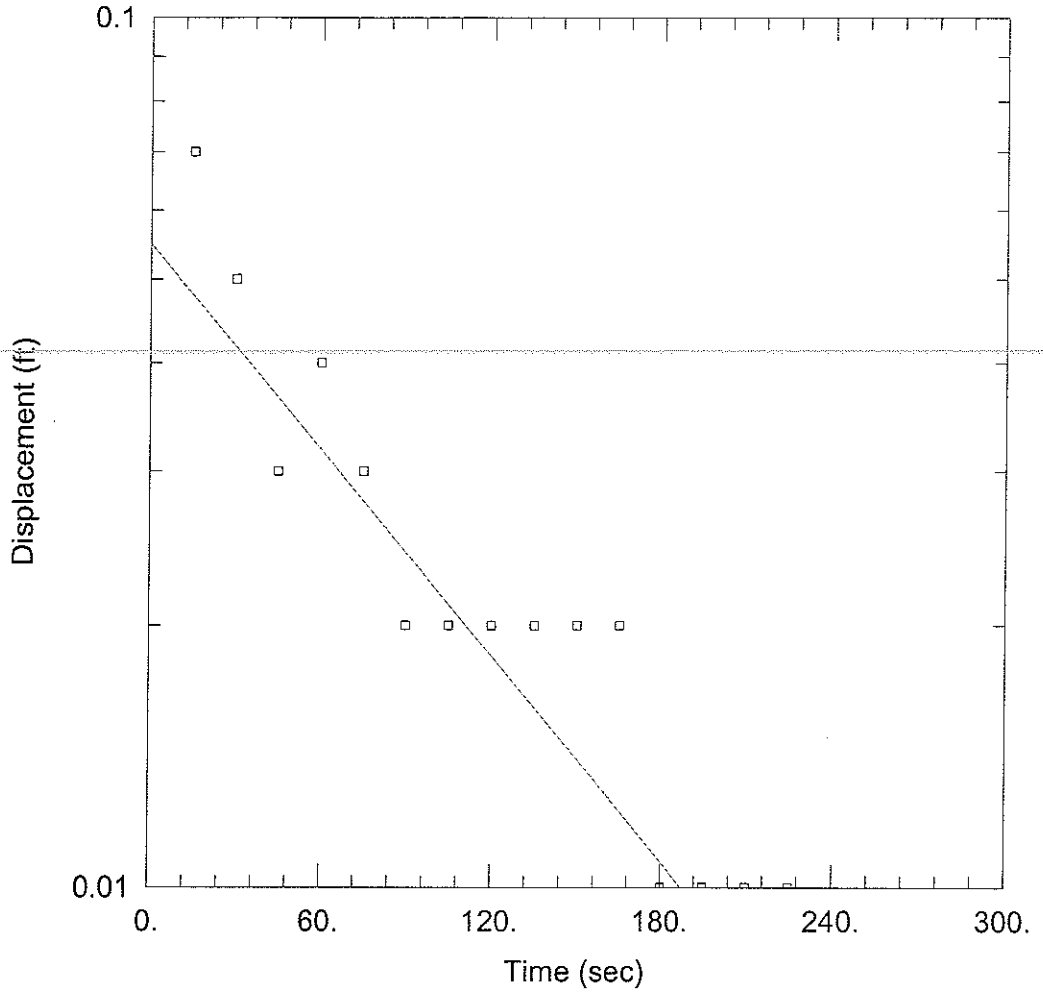
Containers Received Preserved: ☐ Yes ☐ No
Need to meet: IL. TACO ☐ IN. RISC ☐

Notes and Special Instructions _____

Relinquished By: Kyle Webb Date/Time 6/17/10 1540 Received By: _____ Date/Time _____
Relinquished By: _____ Date/Time _____ Received By: _____ Date/Time 6/17/10 1540

Rev. 9/08

ATTACHMENT 3



VILLAGE OF LAKE ZURICH - 61 WEST MAIN STREET

Data Set: N:\...\VillageofLakeZurich61main.aqt
Date: 06/23/10 Time: 07:07:49

PROJECT INFORMATION

Company: Marlin Environmental, Inc.
Client: Village of Lake Zurich
Test Location: Lake Zurich
Test Well: MW-1
Test Date: 4/19/10

AQUIFER DATA

Saturated Thickness: 13.56 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 1.17 ft
Wellbore Radius: 0.083 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.083 ft
Well Skin Radius: 0.583 ft
Total Well Penetration Depth: 13.56 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0003714 cm/sec y0 = 0.05488 ft

Data Set: N:\Marlin\Computer Programs\CurrentAqteSOLVE\AQTESOLV for Windows Pro 3.0\VillageofLakeZuri
Title: Village of Lake Zurich - 61 West Main Street
Date: 06/23/10
Time: 07:07:40

PROJECT INFORMATION

Company: Marlin Environmental, Inc.
Client: Village of Lake Zurich
Location: Lake Zurich
Test Date: 4/19/10
Test Well: MW-1

AQUIFER DATA

Saturated Thickness: 13.56 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Initial Displacement: 1.17 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.083 ft
Well Skin Radius: 0.583 ft
Screen Length: 10. ft
Total Well Penetration Depth: 13.56 ft
Gravel Pack Porosity: 0.3

No. of observations: 15

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
15.	0.07	90.	0.02	165.	0.02
30.	0.05	105.	0.02	180.	0.01
45.	0.03	120.	0.02	195.	0.01
60.	0.04	135.	0.02	210.	0.01
75.	0.03	150.	0.02	225.	0.01

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0003714	cm/sec
y0	0.05488	ft

HYDRAULIC GRADIENT CALCULATIONS

Village of Lake Zurich - 61 West Main Street

Groundwater elevation measurements collected on April 19, 2010

Monitoring Well	Groundwater Elevation	
MW-1	93.30	high
MW-2	84.92	low
MW-3	93.20	
MW-4	91.20	mid
MW-5	97.07	

$$\frac{\text{high} - \text{mid}}{X} = \frac{\text{high} - \text{low}}{144}$$

$$\frac{93.3 - 91.2}{X} = \frac{93.3 - 84.92}{144}$$

Distance between the well having the highest head and the well having the lowest head.

$$\frac{2.1}{X} = 0.0582$$

$$X = 36.1$$

The point between the well having the highest head and the well having the lowest head at which the head is the same as that in the intermediate well.

Median = 91.20

$$\frac{\text{mid} - \text{low}}{74} = \frac{91.2 - 84.92}{74} = 0.0849$$

Hydraulic Gradient = 0.0849

A line perpendicular to the water-level contour and through either the well with the highest head or the well with the lowest head. This line parallels direction of ground-water movement.

Project: Village of Lake Zurich - 61 West Main Street
Marlin Project No. 895
Calculated By: Kyle Webb Date: 6/23/2010
Checked By: Shawn Wolfe Date: 6/24/2010

MW-1

Thiem Equation for the Well Yield of an Unconfined Aquifer

Q =	5.16	= well yield (m3/day)
Q =	**1360.28**	**= well yield (gal/day)**
K =	3.7140E-04	= hydraulic conductivity of water bearing formation (cm/sec)
K =	**3.21E-01**	**= hydraulic conductivity of water bearing formation (m/day)**
K =	1.17E+02	= hydraulic conductivity of water bearing formation (m/yr)
K =	7.87E+00	= hydraulic conductivity of water bearing formation (gal/day/ft^2))
H =	15.00	= static head measured from bottom of aquifer (ft)
H =	**4.57**	**= static head measured from bottom of aquifer (m)**
h =	0.00	= depth of water in the well while pumping (ft)
h =	**0.00**	**= depth of water in the well while pumping (m)**
R =	30.00	= radius of the cone of depression (ft)
R =	**9.15**	**= radius of the cone of depression (m)**
d =	12.00	= diameter of the well (in)
r =	**0.152**	**= radius of the well (m)**

$$Q = \frac{1.366(K)(H^2 - h^2)}{\log R/r}$$

$$Q = 1360.28 \ gal/day$$

where:

K =	**3.21E-01**	**= hydraulic conductivity (m/day)**
H =	**4.57**	**= static head measured from bottom of aquifer (m)**
h =	**0.00**	**= depth of water in the well while pumping (m)**
R =	**9.15**	**= radius of the cone of depression (m)**
r =	**0.152**	**= radius of the well (m)**

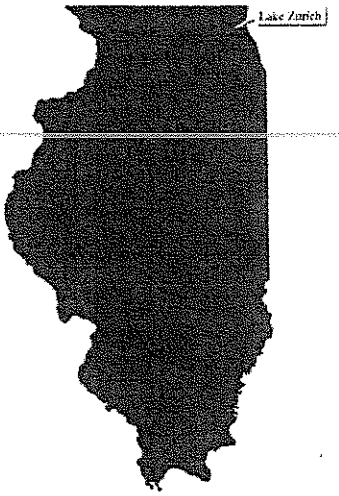
assuming:

1.) the aquifer thickness is 15 ft
2.) the well is completely dewatered or h = 0 m
3.) the radius of the cone of depression is twice the static head level or R = 2 x H
4.) the diameter of the pumping well is 12 in

ATTACHMENT 4

Illinois Environmental Protection Agency

USGS science for a changing world



Source Water Assessment Program

FACT SHEET

LAKE ZURICH

LAKE COUNTY

Prepared in cooperation with the U.S. Geological Survey.

Information and data used in the preparation of this Fact Sheet are provided by the Illinois EPA and are subject to revision.

IMPORTANCE OF SOURCE WATER:

The Village of Lake Zurich (Facility Number 0970850) utilizes six active community water supply wells. Wells #7 (Illinois EPA #20259), #8 (Illinois EPA #20260), #9 (Illinois EPA #00691), #10 (Illinois EPA #00636), #11 (Illinois EPA #00860), and #12 (Illinois EPA #01073) distribute 1,767,000 gallons per day to approximately 6,336 service connections and an estimated population of 17,591 persons.

WATER SUPPLIES THAT OBTAIN SOURCE WATER FROM THIS FACILITY:

No connected water supplies existed at the time this Source Water Assessment fact sheet was completed.

SOURCE OF WATER SUPPLY:

Well #7 is located off Old Mill Grove Road. Well #8 is located off Ensoll Road northeast of Lake Zurich. Well #9 is located south of the intersection of U.S. Route 12 and Deerpath Road. Well #10 is located east of U.S. Route 12 and north of State Route 22. Well #11 is located off Miller Street. Well #12 is located east of Midlothian Road. Wells #2 (Illinois EPA #20255), #3 (Illinois EPA #20256), #5 (Illinois EPA #20257) and well #6 (Illinois EPA #20258) have been properly abandoned. Well #7 and well #11 utilize deep bedrock aquifers of the Cambrian/Ordovician age. Well #8 and well #12 utilize deep bedrock aquifers of the Galena/Ironton and Galesville sandstone formation. Well #9 utilize a deep bedrock aquifer of the Galena/Glenwood and St. Peter formation. Well #10 utilize a deep bedrock aquifer of the Galena/Eau Claire formation. The aquifers utilized by this facility's wells are overlain by till or other fine grained material of low permeability (permeability is a measure of the ability of a soil or sediment to transmit fluids). These wells are not considered geologically sensitive by the Illinois EPA.

WELL DATA FOR THIS FACILITY:

Well ID	Well Description	Status	Depth (Feet)	Min Setback (Feet)	Aquifer Description
00636	WELL 10 E OF RT 12, N OF RT 22	A	1365	200	Cambrian/Ordovician
00691	WELL 9 S INTERSECTION HWY 1	A	1365	200	Cambrian/Ordovician
00860	WELL #11 MILLER STREET	A	1358	200	Cambrian/Ordovician
20255	WELL 2 NEAR VILLAGE HALL	B	421	200	Devonian/Silurian
20256	WELL 3 NWCOR RAND ROAD AN	B	443	200	Devonian/Silurian
20257	WELL 5 IN PW BLDG ONRT 12 S	B	1345	200	Cambrian/Ordovician
20258	WELL 6 S SIDE MILLER RD 0.5 MI	B	415	200	Devonian/Silurian
20259	WELL 7 445 OLD MILL GROVE RO	A	1333	200	Cambrian/Ordovician
20260	WELL 8 ENSOLL ROAD NE LAKE	A	1373	200	Cambrian/Ordovician
01073	WELL 12 E OF MIDLOTHIAN RD	A	1358	200	Cambrian/Ordovician

SOURCE WATER QUALITY:

The public water supply wells at Lake Zurich were sampled as part of the Statewide Groundwater Monitoring Network beginning on January 16, 1987. The sample's from Wells #7, #8 and #10 were analyzed for volatile organic compounds (VOC) and inorganic chemicals (IOC). Wells #7 and #8 were also sampled for synthetic organic compounds (SOC). Wells #9, #11, and #12 were sampled as part of a "new-well" monitoring program conducted by the Illinois EPA on April 24, 2001. At this time, samples were collected and analyzed for IOC, VOC and SOC.

Review of the VOC and SOC analyses did not indicated quantifiable levels of organic compounds. IOC analysis indicates that the concentrations of these compounds are consistent with those of other wells utilizing similar deep bedrock aquifers in Illinois. It should also be noted that the IOC results were consistent between the wells and all results were below the groundwater quality standards established under 35 Illinois Administrative Code Part 620.410.

FINISHED WATER QUALITY:

Finished water quality data tables of monitored parameters, contaminants detected, health advisory information, drinking water standards or maximum contaminant levels are available at http://www.epa.gov/ogwdw. Similar information on finished water quality is included in the Consumer Confidence Report (CCR) provided by the water supply to its customers. A review of this information does not indicate levels of organic compounds or inorganic chemicals which exceed the drinking water quality standards. Radium was detected in a sample in 1999 at a level of 10.1 picoCuries per liter (pCi/l), which is above the maximum contaminant level of 5.0 pCi/l.

POTENTIAL SOURCES OF CONTAMINATION:

The sites labeled on the Wellhead Protection Planning Map and included in the following tables are considered "potential" sources of contamination. (Maps and tables are not available in the Visually Impaired Accessible version. However, the information presented in the maps and tables is summarized within the following text sections of this fact sheet.) The Illinois EPA performed a detailed Well Site Survey in 1993 to identify potential sources of contamination to the village's wells. These sources are identified based on the nature of their activity, the availability of data in electronic databases, and their geographic proximity to the source water protection area. In addition, the Illinois EPA made use of information from its leaking underground storage tank database (http://epadata.epa.state.il.us/land/ust/search.asp) and site remediation program database (http://epadata.epa.state.il.us/land/srp/search.asp) to further assess potential sources of contamination to the community's source water. These databases include information from the Illinois EPA Division of Land Pollution Control (LPC) and the Illinois Emergency Management Agency (IEMA). The following is a list of facilities contained within these databases. As a result of multiple possible contamination sources, individual sites may be listed in the table more than once in relation to a well.

IEMA#	LPC#	Site Name Address City ZIP Code
20000529	0970855081	Graham C Stores Co. 1 North Rand Rd. Lake Zurich 60047
20000877	0870355013	Schuldt Excavating 500 Rose Rd. Lake Zurich 60047
20000956	0970855084	Int'l Fire Equipment Corp. 500 Telser Rd. Lake Zurich 60047
871432	0970855020	Mobil Oil Corp. 650 South Rand Rd. Lake Zurich 60047
881704	0970855006	Illinois Bronze Tank Co. 300 East Main St. Lake Zurich 60047
890612	0970855056	Sweeney Food Works Rt. 12 & Miller Rd. Lake Zurich 60047
891082	0970855026	Clark Oil & Refining 21775 North Hwy. 12 & Old Rand Rd. Lake Zurich 60047
891234	0970850003	Horning Wire 66 North Buesching Rd. Lake Zurich 60047
891543	0970850007	RA Briggs 155 South Old Pond Rd. Lake Zurich 60047
892060	0970855003	Chicago Metallic Prod. 800 Ela Rd. Lake Zurich 60047
900515	0970850007	RA Briggs 155 Old Rand Rd. Lake Zurich 60047
901067	0970855020	Mobil Oil Corp. 650 South Rand Rd. Lake Zurich 60047
901993	0970850011	Abbott,Dennis 450 Rt. 12 Lake Zurich 60047
911217	0970855032	Oakwood Partnership 225 Oakwood Rd. Lake Zurich 60047
920089	0970855050	Lake Zurich, Village of 351 Lions Dr. Lake Zurich 60047
921435	0970855046	Lake Zurich C.U.S.D. #95 66 Church St. Lake Zurich 60047
922451	0970855003	CM Prod. 800 Ela Rd. Lake Zurich 60047

930292 0970855011 Molon Motor & Coil Inc. 340 East Main St. Lake Zurich 60047
930407 0970855049 Chicago Park Dist. 26300 North Gilmer Rd. Lake Zurich 60047
930514 0970855011 Molon Motor & Coil Corp. 340 East Main St. Lake Zurich 60047
931008 0970855050 Lake Zurich, Village of 351 Lions Dr. Lake Zurich 60047
931745 0970850003 Horning Wire Corp. 66 North Buesching Rd. Lake Zurich 60047
932726 0970055008 Lake Cook Farm Supply 101 East Main St. Lake Zurich 60047
932839 0970855055 Graham Oil Co. 1 North Rand Rd. Lake Zurich 60047
940139 0970855056 J.M. Sweeney Co. 24545 West Miller Rd. Lake Zurich 60047
941259 0970855039 Daves Auto Repair 7 East Main St. Lake Zurich 60047
942000 0970855020 Mobil Oil Corp. 650 South Rand Rd. Lake Zurich 60047
950854 0970855059 Ela Township Hwy. Dept. Echo Lake & Midlothian Rd. Lake Zurich 60047
951437 0970855039 Dave's Auto Repair & Service 7 East Main St. Lake Zurich 60047
951619 0970855042 Lake Zurich School Dist. 100 Church St. Lake Zurich 60047
961399 0970855065 Lake Zurich C.U.S.D. #5 100 Church St. Lake Zurich 60047
970254 0970855074 Lake Zurich Tire & Battery 526 West Main St. Lake Zurich 60047
970636 0970855073 Mount St. Joseph 24955 North Highway 12 Lake Zurich 60047
971042 0970855046 Lake Zurich C.U.S.D. #95 66 Church St. Lake Zurich 60047
980157 0970855050 Lake Zurich, Village of 351 Lions Dr. Lake Zurich 60047
980190 0970855002 Betz Dearborn 300 Genesee St. Lake Zurich 60047
981076 0970855056 J.M. Sweeney Co. 24545 West Miller Rd. Lake Zurich 60047
982480 0970855002 Betz Dearborn, Inc. 300 Genesee St. Lake Zurich 60047
990581 0970855079 Koldon Moving & Storage 410 Telfer Rd. Lake Zurich 60047
990588 0970855039 Dave's Auto Repair 7 East Main St. Lake Zurich 60047
991410 0978055002 Lake Zurich Disposal 23084 North Quentin Rd. Lake Zurich 60047

LPC # Site Name Street City ZIP Code
0970855006 IBP Acquisitions Company 300 East Main Street Lake Zurich 60047

SITE DATA FOR THIS FACILITY:

Well ID	Map Code	Site Name	Site Description	Distance (Feet)
00636	02178	K-MART	BELOW GROUND STORAGE (PET	750
00636	02179	AMOCO	BELOW GROUND STORAGE (PET	1475
00636	02174	LAKE ZURICH CAR WASH & DET	EQUIPMENT/VEHICLE WASHING	1000
00636	02177	FRANKS NURSERY	STORE/SALES	650
00636	02176	A-1 CLEANERS	DRY CLEANERS	800
00636	02175	PHILLIPS 66	BELOW GROUND STORAGE (PET	900
00691	02173	JAGER PREMIUM BATTERIES	STORE/SALES	200
00691	02172	ALPINE ANIMAL HOSPITAL	HOSPITAL/CLINIC	700
00691	02171	DEERPATH COURT	STORE/SALES	900
20259	02148	ZURICH SEWAGE TREATMENT P	WASTE TREATMENT FACILITY	800
20260	02159	EXXON CHEMICAL AMERICA FIL	STORAGE ABOVE OR BELOW GR	1200
20260	02152	JPD GROUP INC TOUCHTONE P	MANUFACTURING PROCESS (e.g.	850
20260	02154	ARROW PNEUMATICS INC	MANUFACTURING PROCESS (e.g.	1050
20260	02155	COLONIAL HOSPITAL SUPPLY C	STORE/SALES	1175
20260	02156	EPIC CIRCUITS	MANUFACTURING PROCESS (e.g.	875
20260	02150	QUARTER MASTER INDUSTRIES	FOUNDRY/METAL WORKING	1250
20260	02158	CABLE TELEVISION	OFFICE	600
20260	02151	INTERNATIONAL FIRE EQUIPME	STORE/SALES	1050
20260	02160	UNKNOWN	WAREHOUSE	400
20260	02161	ECHO INC	STORAGE ABOVE OR BELOW GR	225
20260	02162	LAKE ZURICH GLASS & MIRROR	MANUFACTURING PROCESS (e.g.	0
20260	02163	ZURICH INTERNATIONAL	AUTO REPAIR	225
20260	02164	CATALYTIC PRODUCTS	CHEMICAL HANDLING (i.e. MANU	225
20260	02165	PREMIUM MARKETING	OFFICE	425

Well ID	Map Code	Site Name	Site Description	Distance (Feet)
20260	02166	WOLF MACHINE SHOP	MACHINE SHOP/SHED	650
20260	02157	SCHAFF PIANO STRING & SUPPL	MANUFACTURING PROCESS (e.g.	1000
20260	02167	ENERGY SCOUT INC	OFFICE	800
20260	02170	BISH CREATIVE DISPLAY	OFFICE	600
20260	02169	LAKECOOK NEWS	OFFICE	600
20260	02168	KOLDON MOVING & STORAGE	WAREHOUSE	700
20260	02153	GOUDIE TOOL & ENGINEERING	MANUFACTURING PROCESS (e.g.	750
20260	02149	K&R WELDING PRODUCTS INC	FOUNDRY/METAL WORKING	1350

OTHER IDENTIFIED POTENTIAL SOURCES:

For this community water supply, no additional potential sources of contamination have been identified beyond those in Illinois EPA databases.

SUSCEPTIBILITY TO CONTAMINATION:

Based on information obtained in a Well Site Survey, published in November 1993 by the Illinois EPA, thirty eight potential sources or possible problem sites were identified within the survey area of Lake Zurich wells. Information provided by the Leaking Underground Storage Tank and Remedial Project Management Sections of the Illinois EPA indicated several additional sites with ongoing remediation which may be of concern. Based on information provided by Lake Zurich's water supply officials, the following facilities, also indicated as potential sources in the site data table, have changed their status: K-Mart (tanks removed), and Lake Zurich Sewage Treatment Plant (no longer in service).

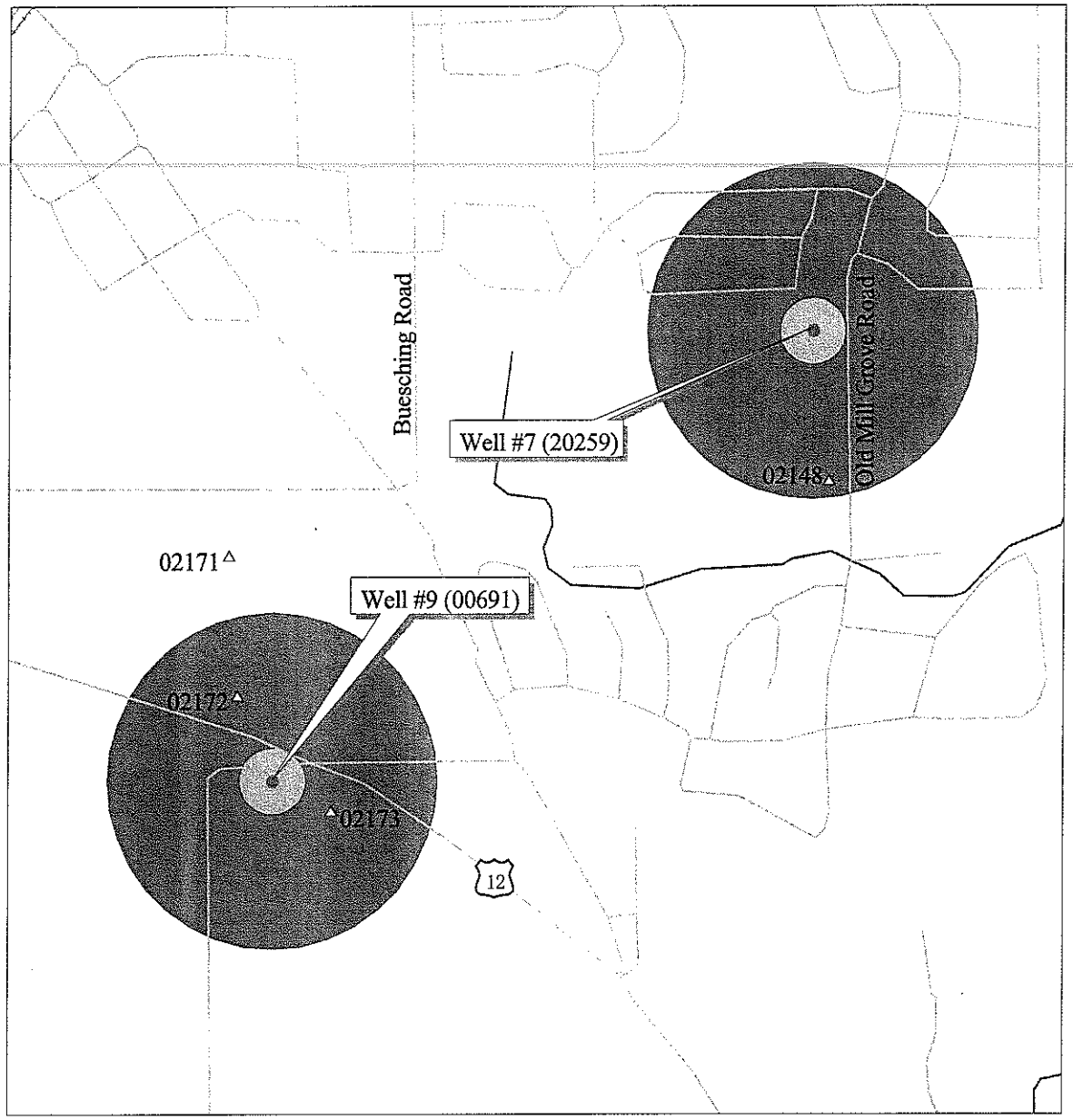
The Illinois EPA has determined that the Lake Zurich Community Water Supply's source water is not susceptible to contamination. This determination is based on a number of criteria including: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data on the wells.

SOURCE WATER PROTECTION EFFORTS:

The Illinois Environmental Protection Act provides minimum protection zones of 200 feet for Lake Zurich's wells. These minimum protection zones are regulated by the Illinois EPA.

To further minimize the risk to the facility's groundwater supply, the Illinois EPA recommends that threer additional activities be assessed. First, the community may wish to enact a "maximum setback zone" ordinance to further protect their water supply. These ordinances are authorized by the Illinois Environmental Protection Act and allow county and municipal officials the opportunity to provide additional protection up to a fixed distance, normally 1,000 feet, from their wells. Second, the water supply staff may wish to revisit their contingency planning documents. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a community will minimize their risk of being without safe and adequate water. Finally, the water supply staff is encouraged to review their cross connection control program to ensure that it remains current and viable. Cross connections to either the water treatment plant (for example, at bulk water loading stations) or in the distribution system may negate all source water protection initiatives provided by the community.

FIGURE 1: WELLHEAD PROTECTION PLANNING MAP FOR LAKE ZURICH (FACILITY #0970850)



Legend

- CWS Wells
- Potential Sources Of Contamination
- Rails
- Roads
- Streams
- Minimum Setback Zone
- Existing or Potential Maximum Setback Zone

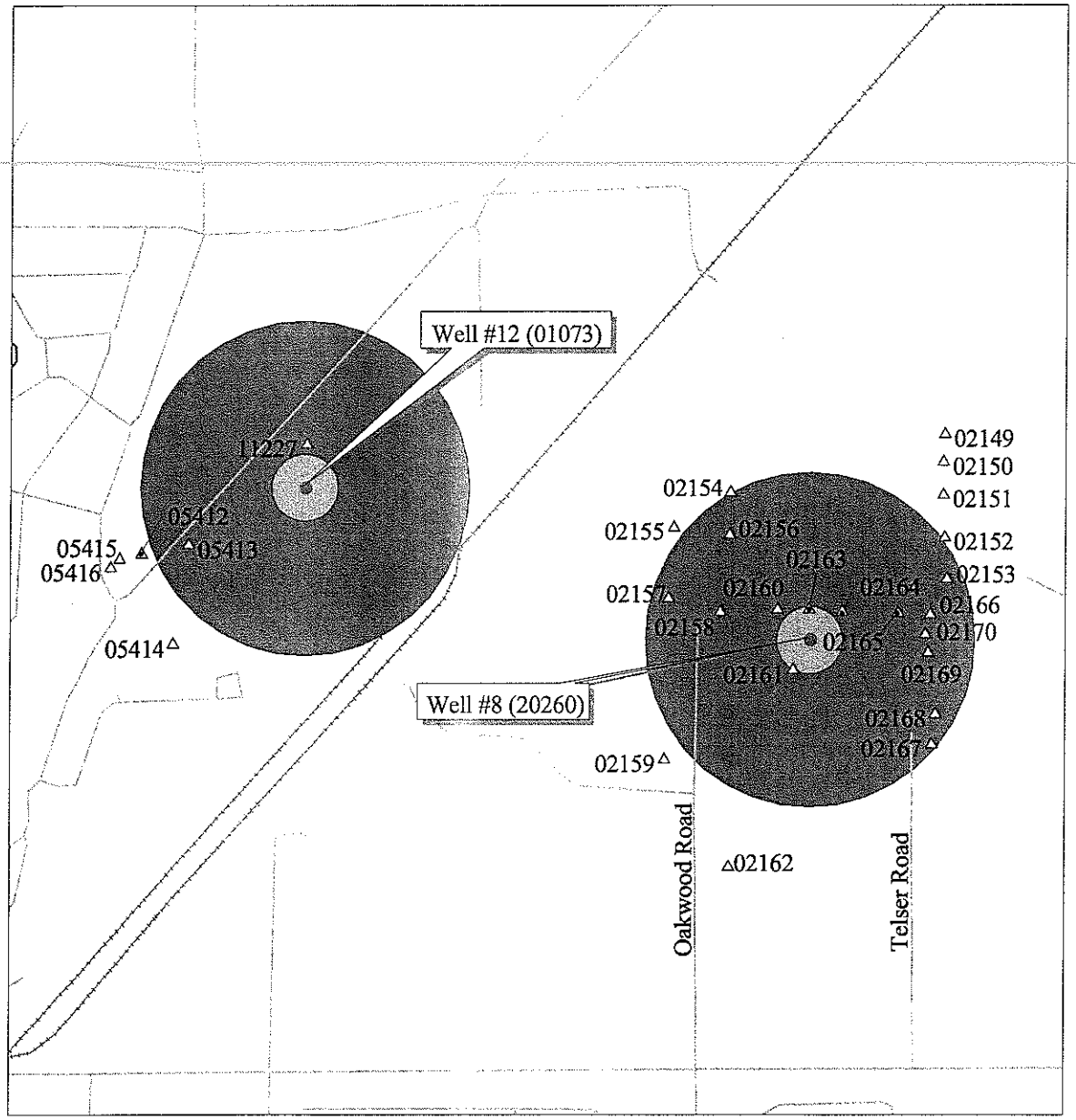
500 0 500 1000 1500 Feet

FOR MORE INFORMATION CONTACT:

Groundwater Section, Bureau of Water
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794-9276
Ph# (217)785-4787

Source Information
Roads, Rails, and Streams from Illinois DNR.
CWS Wells and Potential Sources from Illinois EPA.
Map compiled by Groundwater Section, Illinois EPA.

FIGURE 2: WELLHEAD PROTECTION PLANNING MAP FOR LAKE ZURICH (FACILITY #0970850b)



Legend

- CWS Wells
- Potential Sources Of Contamination
- Rails
- Roads
- Streams
- Minimum Setback Zone
- Existing or Potential Maximum Setback Zone

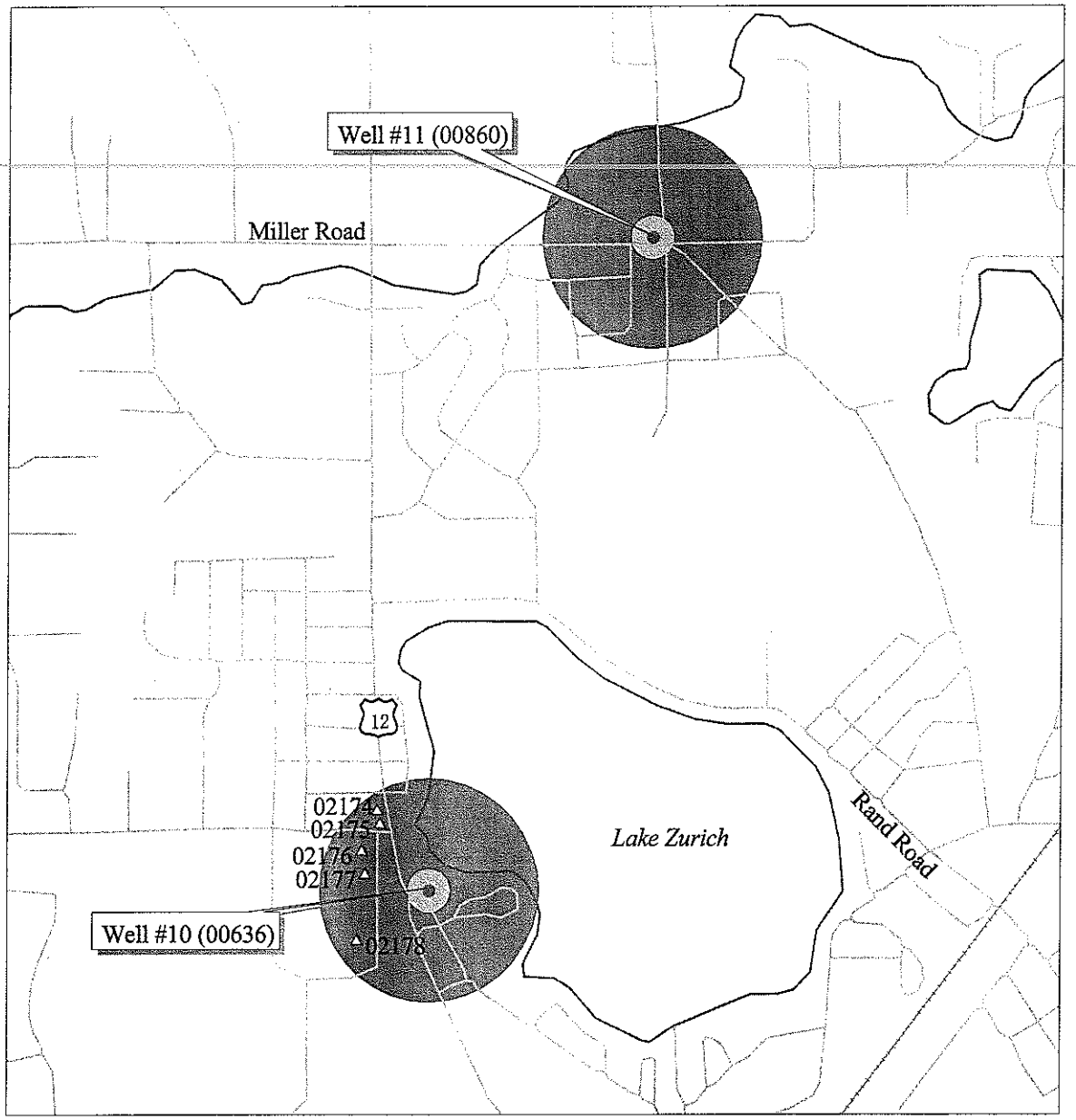
500 0 500 1000 1500 Feet

FOR MORE INFORMATION CONTACT:

Groundwater Section, Bureau of Water
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794-9276
Ph# (217)785-4787

Source Information
Roads, Rails, and Streams from Illinois DNR.
CWS Wells and Potential Sources from Illinois EPA.
Map compiled by Groundwater Section, Illinois EPA.

FIGURE 3: WELLHEAD PROTECTION PLANNING MAP FOR LAKE ZURICH (FACILITY #0970850c)



500 0 500 1000 1500 Feet

Legend

- CWS Wells
- Potential Sources Of Contamination
- Rails
- Roads
- Streams
- Minimum Setback Zone
- Existing or Potential Maximum Setback Zone

FOR MORE INFORMATION CONTACT:

Groundwater Section, Bureau of Water
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794-9276
Ph# (217)785-4787

Source Information
Roads, Rails, and Streams from Illinois DNR.
CWS Wells and Potential Sources from Illinois EPA.
Map compiled by Groundwater Section, Illinois EPA.

Community Water System Well: WL20255

Information and data displayed are provided by the Illinois Enivronmental Protection Agency (IEPA) and are subject to revision.

Well tables - glossary

SWPA Information **ISGS API Number:** 120970034500

Associated Site/GMZ IDs

Site Id	Distance(in ft)

Wells Within CWS No. IL0970850 Permit Details

Well IDs
WL00636
WL00691
WL00860
WL01073
WL20255
WL20256
WL20257
WL20258
WL20259
WL20260

Identification for Well No.	**WL20255**
Item	**Value**
Well ID	WL20255
Type	Community
Well Description	WELL 2 (20255) ABANDONED
CWS Facility Number	IL0970850
CWS Name	LAKE ZURICH

Regulations/Hydrogeology for Well No.	WL20255
Item	**Value**
Minimum Setback Zone Distance	200
Aquifer Properties Available	
Pumpage	0.00
ISWS Aquifer Code	5050

IEPA Regulated Recharge Areas

Recharge Area Id	Name	Proposal Date	Board Adopted Date

Hydrogeology for Well No.	WL20255
Item	**Item**
Log Type	
Well Log on File	False
At ISWS	False
Susceptibility	
Determination Date	12/30/1899 12:00:00 AM
Determination Method	
Scientific Aq. Condition	
Tritium Aq. Condition	
Policy Aq. Condition	

Well Construction for Well No.	WL20255
Item	**Value**
Completed Depth	0.00
Drilled Depth	421.00
Well Status	Inactive
Well Installation Date	1/1/1921
Reference Datum	
Measuring Point Elevation	0.00
MPE Determination	
Num. of Open Intervals	0
Top of Casing	1.17

www.epa.state.il.u

Rod R. Blagojevich, Governo

Map Server

Information and data displayed are provided by the Illinois Environmental Protection Agency (IEPA) and are subject to revision.

Illinois State Geological Survey (ISGS) Well Log Data

API number: 120970034500

For IEPA and USGS use only, do not quote or release.

API number not found in database

ISGS well data query page

www.epa.state.il.us

Rod R. Blagojevich, Governo

Map Server

Information and data displayed are provided by the Illinois Environmental Protection Agency (IEPA) and are subject to revision.

Illinois State Geological Survey (ISGS) Well Log Data

API number: 120970034501

For IEPA and USGS use only, do not quote or release.

API number not found in database

ISGS well data query page

www.epa.state.il.u

Rod R. Blagojevich, Governo

Map Server

Information and data displayed are provided by the Illinois Environmental Protection Agency (IEPA) and are subject to revision.

Illinois State Geological Survey (ISGS) Well Log Data

API number: 120970034700

For IEPA and USGS use only, do not quote or release.

ISGS Header Table Data

County_no	Farm name	Status	Twp	Tdir	Rng	Rdir	Section	Quarters	Comp date	Total depth	Lan
00347	Lake Zurich	WATER	43	N	10	E	20	*	0000-00-00	287	338(

ISGS Well Log Table

County_no	Formation	Thickness	Bottom
*	*	*	*

ISGS Pump Test Data Table

County_no	Pump gpm	Pump hrs	Stat levl	Pump levl	Wformation
*	*	*	*	*	*

ISGS Well Casing Data Table

County_no	Case diam	Case from	Case to	Case type
*	*	*	*	*

ISGS Open Interval Data Table

County_no	Scrn diam	Scrn lgth	Slot	Wfmfrom	Wfmto	Wformation
*	*	*	*	*	*	*

key:
* - No Data Available

www.epa.state.il.u

Rod R. Blagojevich, Governo

Map Server

Information and data displayed are provided by the Illinois Environmental Protection Agency (IEPA) and are subject to revision.

Illinois State Geological Survey (ISGS) Well Log Data

API number: 120970034800

For IEPA and USGS use only, do not quote or release.

ISGS Header Table Data

County_no	Farm name	Status	Twp	Tdir	Rng	Rdir	Section	Quarters	Comp date	Total depth	La
00348	Wilkie Gretchen	WATER	43	N	10	E	20	*	0000-00-00	183	33

ISGS Well Log Table

County_no	Formation	Thickness	Bottom
*	*	*	*

ISGS Pump Test Data Table

County_no	Pump gpm	Pump hrs	Stat levl	Pump levl	Wformation
00348	0	0	0	0	*

ISGS Well Casing Data Table

County_no	Case diam	Case from	Case to	Case type
*	*	*	*	*

ISGS Open Interval Data Table

County_no	Scrn diam	Scrn lgth	Slot	Wfmfrom	Wfmto	Wformation
00348	0.00	0	0.00	0	0	*

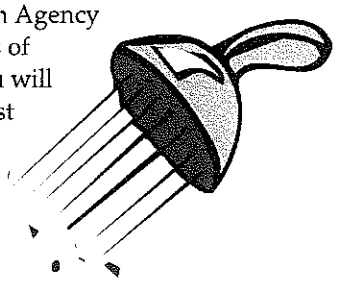
key:
* - No Data Available

Village of Lake Zurich

2010 Water Quality Report

Water Quality Report - 2010; Data Report Year - 2009

In 2009, the Village tap water was tested according to the United States Environmental Protection Agency and state drinking water health standards. After many years of upgrades to our water system, as of January 1, 2009, the Village has not exceeded the radium standard taken on a quarterly basis. You will see later on in the report that the Village did exceed the running average for radium during the first two quarters of 2009, because the running average takes into account the previous three quarters of sampling which included quarters in 2008 and was prior to bringing all treatment plants online. ***Future Water Quality Reports should show no violations of the radium standard, and you should feel confident that the Village is delivering water that is in full compliance with all drinking water standards.***



WATER SYSTEM INFORMATION

The Village's Utilities Division is located at the Public Works facility at 505 Telser Road. If you have any questions about this report or concerning your water system, please contact Bob Duprey, Assistant Public Works Director, or Steve Schmitt, Superintendent of Utilities, at 847-540-1696. Also, information about the Village's water system may at times be discussed at a Village Board meeting. These meetings are broadcast on channel 4, the local cable access channel, and available for streaming on the Internet via the Village website. Typically, all meetings commence at 7:00 PM in the boardroom at the Village Hall, and the agenda of the meeting is posted on the Friday prior. Check the Village's website, **www.volz.org** for the most current meeting information.

WELL INFORMATION

The Village uses groundwater provided by six wells drilled into the Cambrian – Ordovician Aquifer. We draw from the St. Peter, Galesville Sandstone portions of this aquifer. Our six wells are drilled to the following depths:

Well 7	1,333 feet
Well 8	1,373 feet
Well 9	1,365 feet
Well 10	1,340 feet
Well 11	1,358 feet (emergency use only)
Well 12	1,335 feet

Wells 7, 8, 9, 10 and 12 have ION Exchange Treatment Plants operational to reduce the combined radium levels to below EPA standard. Compliance has been achieved for all five ION exchange water plants. Lake Zurich now meets all USEPA and IEPA safe drinking water standards. As of December 31, 2008, Well 11 is on emergency use only status.

SOURCE WATER ASSESSMENT AVAILABILITY

The Village of Lake Zurich, (Facility Number 0970850) utilizes five active community water supply wells.[1] These are wells #7 (Illinois EPA #20259), #8 (Illinois EPA #20260), #9 (Illinois EPA #00691), #10 (Illinois EPA #00636), and # 12 (Illinois EPA #01073); #11 (Illinois EPA #008600) is emergency status only. The five wells distributed an average of 1,673,942 gallons per day to approximately 6,691 service connections and an estimated population of 19,932 persons. Based on information obtained in a Well Site Survey, published in November 1993 by the Illinois EPA, thirty eight potential sources or possible problem sites were identified within the survey area of Lake Zurich wells. Information provided by the Leaking Underground Storage Tank and Remedial Project Management Sections of the Illinois EPA indicated several additional sites with ongoing remediation which may be of concern. Based on information provided by Lake Zurich's water supply officials, the following facilities, also indicated as potential sources in the site data table, have changed their status: Kmart (tanks removed) and Lake Zurich Sewage Treatment Plant (no longer in service).

The Illinois EPA has determined that the Lake Zurich Community Water Supply's source water is not susceptible to contamination. This determination is based on a number of criteria including: monitoring conducted at the wells and at the entry points to the distribution system; and the available hydrogeologic data on the wells. The Illinois Environmental Protection Act provides minimum protection zones of 200 feet for Lake Zurich' s wells. These minimum protection zones are regulated by the Illinois EPA.

To further minimize the risk to the facility's groundwater supply, the Illinois EPA recommends that three additional activities be assessed. First, the community may wish to enact a "maximum setback zone" ordinance to further protect their water supply. These ordinances are authorized by the Illinois Environmental Protection Act and allow county and municipal officials the opportunity to provide additional protection up to a fixed distance, normally 1,000 feet, from their wells. Second, the water supply staff may wish to revisit their contingency planning documents. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a community will minimize their risk of being without safe and adequate water. Finally, the water supply staff is encouraged to review their cross connection control program to ensure that it remains current and viable. Cross connections to either the water treatment plant, (for example, at bulk water loading stations) or in the distribution system may negate all source water protection initiatives provided by the community. The Village has implemented all three of these activities.

Further information on our community water supply's source water assessment is available on the IEPA web site at **http://www.epa.state.il.us/water/drinking-water-watch/** or by calling the Groundwater Section of the Illinois EPA at (217) 785-4787.

FOR YOUR INFORMATION

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (**1-800-426-4791**).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV / AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA / CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (**1-800-426-4791**).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and radioactive materials and come into contact with substances resulting from the presence of animals or human activity. Possible contaminants consist of:

- *Microbial contaminants,* such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;
- *Inorganic contaminants,* such as salts and metals, which may be naturally occurring or result from urban storm water runoff, industrial or domestic waste water discharges, oil and gas production, mining or farming;
- *Pesticides and herbicides,* including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban storm water runoff and septic systems; and
- *Radioactive contaminants,* which may be naturally occurring or be the result of oil and gas production and mining activities.

FOR YOUR INFORMATION *(continued)*

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Should an individual elect to drink bottled water only, please be cautioned that most bottled water does not contain fluoride and other minerals needed for the body. Check with your dentist and/or physician about daily supplements to provide these vital elements found in common tap water.

TABLES

The "Water Quality Data" table included here identifies the highest level of each *detected* contaminant and the range of levels for the contaminant found during the WQR reporting year. For each detected contaminant the table lists the Maximum Contaminant Level (MCL), Maximum Contaminant Level Goal (MCLG), level found, range of detections, any MCL violations, and the known or likely source of the contaminant in drinking water.

ABOUT THE DATA

Unregulated Contaminants

A maximum contaminant level (MCL) for this contaminant has not been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring this contaminant is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.

Fluoride

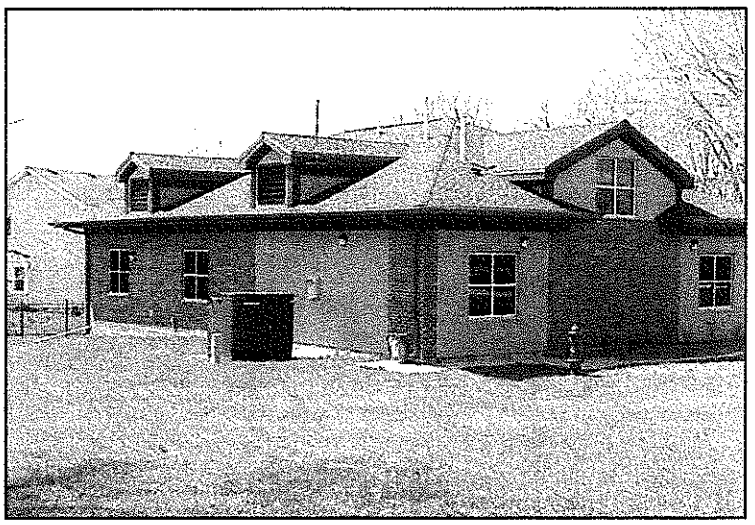
Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride range of 0.9 mg/L to 1.2 mg/L.

Iron

This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.

Sodium

There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials who are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.



Exterior appearance Well 9 Ion Exchange Water Plant

DEFINITIONS

USEPA: United States Environmental Protection Agency.
IEPA: Illinois Environmental Protection Agency.
WQR: Water Quality Report.
CDC: Center for Disease Control.
FDA: Food and Drug Administration.
CCR: Consumer Confidence Report.
AVG: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

2009 VIOLATION SUMMARY TABLE

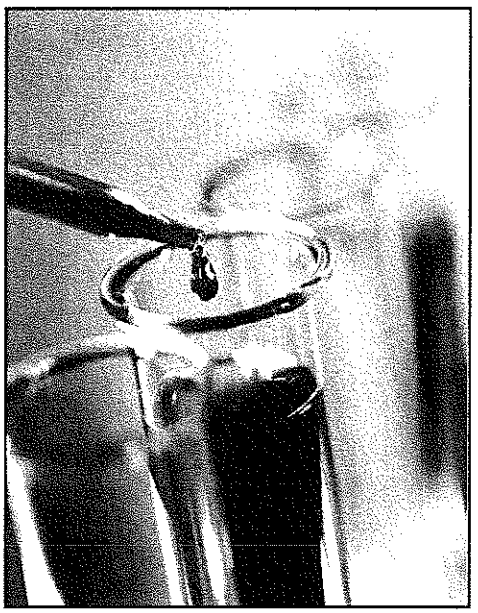
Combined Radium 226/228

Violations Table

Combined Radium 226/228			
Some people who drink water containing radium in excess of 226 or 228 of the MCL over the years may have an increased risk of getting cancer.			
Violation Type	**Violation Begin**	**Violation End**	**Violation Explanation**
MCL, average	01/01/2009	03/31/2009	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, average	04/01/2009	06/30/2009	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

Lake Zurich has taken the following actions specific to the violations listed above:

Demonstrating Compliance Phase
TP O5 Well 9 and TP 07 Well 12
ION Exchange Water Plants
For 2009



During monitoring period January 1, 2009 through March 31, 2009 First Quarter Samples for (2009 Q 1) exceeded the Combined Radium Maximum Contaminant Lever (MCL) of 5 pCi/L based on running annual average (RAA) for TP 05 Well 9 and TP 07 Well 12. Although the running annual average (RAA) is above the MCL, the Lake Zurich Water System is under a Compliance Commitment Agreement with the Illinois Environmental Protection Agency in the Demonstrating Compliance Phase. The First Quarter Samples for (2009 Q 1) January 1, 2009 through March 31, 2009 monitoring Period for TP 05 Well 9 5.0 pCi/L and TP 07 Well 12 3.5 pCi/L did not exceed the MCL; therefore, Public Notification Not Required.

This also occurred during the Second Monitoring Period April 1, 2009 through June 30, 2009 (2009 Q 2) during Demonstrating Compliance Phase. The Second Quarter Samples for (2009 Q 2)April 1, 2009 through June 30, 2009 monitoring period for TP 05 Well 9 3.4 pCi/L and TP 07 Well 12 3.5 pCi/L did not exceed the MCL; therefore Public Notification Not Required.

Lake Zurich achieved Radium Compliance for TP 05 Well 9 ION Exchange Water Plant and TP 07 Well 12 ION Exchange Water Plant on December 16, 2009. For 2009 the Combined Radium Range was 2.1 to 8.2 picocuries per liter.[2]

Compliance has been achieved for all five ION Exchange Water Plants. Lake Zurich now meets all USEPA and IEPA Safe Drinking Water Standards.

VULNERABILITY WAIVER

Due to the favorable monitoring history, aquifer characteristics, and inventory of potential sources of contamination, our water supply was issued a vulnerability waiver on January 1, 1993. This waiver was renewed on January 1, 2005. **This waiver is an indicator of the Village's excellent water quality.** The Illinois Environmental Protection Agency renewed the vulnerability waiver by Special Exception Permit (SEP) for LAKE ZURICH for the period January 1, 2008 to December 31, 2010.

END NOTES

[1] Groundwater Quality Protection Program – Lake Zurich Facility Number 0970850
Well site survey report IEPA/PWS/93-078. Prepared by: Division of Public Water Supplies
Published by: Illinois EPA, Springfield, IL - November 1993

[2] From 1989 to 1999 there was discussion that the radium standard would be raised to 20 pCi/l for Radium 226 and 20 pCi/l for Radium 228. This increase in the standard is based on information from the medical and scientific community.

[3] Combined Radium (Radium 226 & Radium 228) – Some levels of radium are found in all rock formations. As water passes through the rock formations, radium, along with other minerals, dissolve into the water. Some people who drink water that contains Radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer. This incidence of risk would be comparable to a person consuming 2 liters of Lake Zurich water per day for 70 years; the risk of bone cancer would increase 1 in 10,000.

Help Keep Our Water Clean and Protect the Environment!

Cleaning Up After Animals Keeps Our Water Safe!

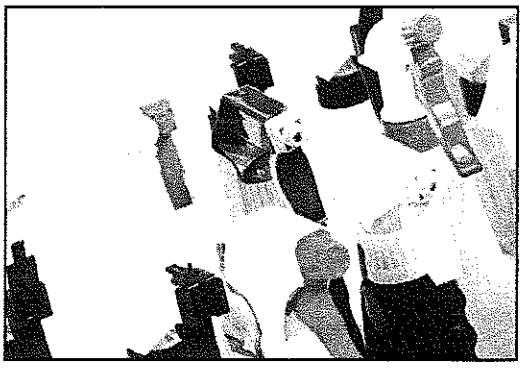
Did you know that animal waste left in your yard or in our parks eventually makes its way to the nearest body of fresh water after it rains? Dog waste and other waste not properly disposed of moves through the storm sewer system and into nearby creeks, streams, and rivers. Scientists have discovered that pet waste is a major cause of water pollution and a hazard to human health.

Please do your part for our environment and always clean up after your pet promptly.

Household Hazardous Waste Collections

Wondering what to do with old lawn, garden, and pool chemicals, motor oil, and household cleaners? These items cannot be discarded in your regular waste collection because they are considered hazardous. If you dump oil, paint, pet waste or other waste products down a storm drain it goes directly into the ponds and streams. This can contaminate our water supply. Please dispose of harmful materials properly!

The Illinois Environmental Protection Agency (IEPA) works with local communities to provide opportunities for the safe disposal of these household hazardous wastes. They work in conjunction with local agencies to provide special one-day collections. They also sponsor long-term facilities that are available to all Illinois residents for the proper disposal of these chemicals.



Residents have two ways to dispose of their household chemical waste:

1) Year-round Collection Events held at our permanent facility in Gurnee (twice a month by permit); and

2) Mobile Collections Events held at various locations throughout Lake County (April through November).

YEAR-ROUND RESIDENTIAL COLLECTION EVENTS AT OUR PERMANENT FACILITY - (Appointment required). The year-round program offers collections twice a month: the second Saturday of every month and the fourth Monday of every month (except December). These collections are for residential waste. Commercial waste will be turned away. The Gurnee facility is located at 1311 N. Estes Street. Due to road restructuring, please use Route 41 to Delany Road (north) to Grove (east) to Estes. Visit the Solid Waste Agency of Lake County's website at **www.swalco.org** for complete information.

June 2010

This newsletter is published by
Village of Lake Zurich
70 East Main Street
Lake Zurich, IL 60047 (voice) (847) 438-5141
(TDD) (847) 438-2349
Home page www.volz.org

*****ECRWSS**

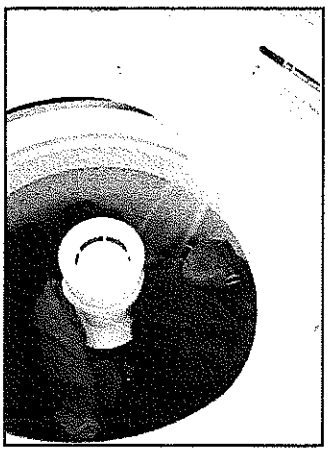
Postal Customer
Lake Zurich, IL 60047

Go Green ... Save Water, Save Money

The average household uses 350 gallons of water a day. You can cut back on water usage with common sense conservation. Here are five simple things you can do to help capture water savings around your home:

1. **Stop Those Leaks**
   Check indoor appliances and devices for leaks. Studies have shown homes can waste more than 10% from hidden leaks, allowing water and your money to go down the drain.

2. **Replace Your Toilet**
   Toilets are the largest water users in the home. And, if your home was built before 1992 and the toilet has never been replaced, it is very likely that you do not have a water-efficient 1.6 gallon per flush toilet. You can check the date stamp inside the toilet by lifting the lid and looking at the back of the toilet at the manufacturer's imprint of the make, model and date of manufacture.



3. **Replace Your Clothes Washer**
   The second largest water user in the home is the clothes washer. Energy Star™ rated washers that also have a water factor at or lower than 9.5, use 35-50% less water and 50% less energy per load. This saves you money on both your water and energy bills.

4. **Plant the Right Plants**
   With proper landscape design and irrigation, you can save a lot of money and time. Whether you are putting in new landscape or slowly changing the current landscaping, select plants that are appropriate for local climate conditions. For suggestions on which plants may be best, visit the Morton Arboretum web site at **www.mortonarb.org**.

5. **Water Wisely**
   Most water is wasted in your garden by watering when plants do not need the water. Avoid water loss through evaporation by watering early in the morning. Be attentive when watering by setting a timer. Don't water in hot, dry weather when grass goes dormant; dormant grass will recover in the fall. You might also consider using a rain barrel. For complete rain barrel ordering information, call (847) 223-1056, or link to: Lake County Soil and Water Conservation District, **http://www.lakecounty.il.gov/STORMWATER/LAKECOUNTYWATERSHED/BMPS/RainBarrelSale.htm**

For more information on how to reduce water and energy uses, visit the U.S. Department of Energy at **www.eere.energy.gov**. Remember, every drop counts!

Summer Watering Restrictions Effective June 1

From June 1 through September 15, watering is permitted between the hours of 5:00-10:00 AM and 5:00-10:00 PM every day for all addresses. These limitations on the times that outdoor water may be used are designated to allow sufficient time for the water storage tanks to recharge during both morning and evening hours. These hours are the most opportune to perform outside watering as there is less water loss due to evaporation.

The following outdoor water uses are permitted at all times: ☐ Water used from a bucket or sprinkling can ☐ Car washing using a hose with a nozzle ☐ Filling of kiddie pools, kiddie slides or other children's water toys or activities when being actively used.

2009 WATER QUALITY DATA

Water Quality Test Result

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.
Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.
Maximum Contaminant Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
mg/l: milligrams per liter or parts per million (ppm) - or one ounce in 7,350 gallons of water.
ug/l: micrograms per liter or parts per billion (ppb) - or one ounce in 7,350,000 gallons of water.
pCi/l: picocuries per liter, used to measure radioactivity.
N/A: Not applicable.
Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.
Range of Detections: This column represents a range of individual sample results, from lowest to highest that were collected during the CCR calendar year.
Date of Sample: If a date appears in this column, the Illinois EPA requires monitoring for this contaminant less than once per year because the concentrations do not frequently change. If no date appears in the column, monitoring for this contaminant was conducted during the Consumer Confidence Report calendar year.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

2009 Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines		1.12	0.2 - 1.12	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes.
Total Trihalomethanes [TTHMs]		6	6 - 6	no goal for the total	80	ppb	No	By-product of drinking water chlorination.

Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium		1.36	0.123 - 1.36	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride		1.08	0.895 - 1.08	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Iron		0.505	0 - 0.505		1.0	ppm	No	Erosion from naturally occurring deposits.
Sodium		111	40.5 - 111			ppm	No	Erosion from naturally occurring deposits; Used in water softener regeneration.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	01/22/2004	25	22 - 25	0	50	mrem/yr	No	Decay of natural and man-made deposits.
Combined Radium 226/228		8*	2.1 - 8.2	0	5	pCi/L	Yes	Erosion of natural deposits.
Gross alpha excluding radon and uranium		10.6	10.6 - 10.6	0	15	pCi/L	No	Erosion of natural deposits.
Uranium	01/04/2006	1.788	1.788 - 1.788	0	30	ug/l	No	Erosion of natural deposits.

* **8 pci/L** Running average of four quarterly samples for Well 12 for 2009 for first quarterly compliance monitoring period 1-1-09 to 3-31-09 (first quarterly period 2009). Also second quarterly compliance monitoring period 4-1-09 to 6-30-09 (second quarterly period 2009).

Volatile Organic Contaminants

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Xylenes		0.001	0 - 0.0006	10	10	ppm	No	Discharge from petroleum factories; Discharge from chemical factories.

Water Quality Data Table Footnote

MCL Statement: The maximum contaminant level (MCL) for TTHM and HAAS is 80 ppm and 60 ppm respectively and is currently only applicable to surface water supplies that serve 10,000 or more people. These MCLs became effective 01/01/2004 for supplies and surface supplies serving less than 10,000 people, any size water supply that purchase from a surface water source, and groundwater supplies service more than 10,000 people a state-imposed TTHM MCL of 100 ppm. Some people who drink water containing trihalomethanes in excess of the MCL over many years experience problems with their livers, kidneys, or central nervous systems, any may have increased risk of getting cancer.

Alpha Emitters: An MCL violation for this contaminant is determined after each quarter by calculating the average concentration of the four most recent quarters. This calculation is known as a running average, and if exceeded, a MCL violation is recorded. During the 2006 calendar year, the running average never exceeded the MCL.

Combined Radium: Some levels of radium are found in all rock formations. As water passes through the rock formations, radium, along with other minerals, dissolve into the water. Some people who drink water containing Radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer. Since May 17, 1991, the MCL for combined radium has been exceeded.