



Environmental Health Laboratories
The Nation's Drinking Water Laboratory
Division of Underwriters Laboratories Inc.

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South Bend, IN 46617
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LABORATORY REPORT

This report contains 6 pages.
(including the cover page)

If you have any questions concerning this report, please do not hesitate to call us at 1-800-332-4345 or 574-233-4777.

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LABORATORY REPORT

Client: Lake Papakeeche Home Owners Association
Attn: Randy Girod
8652 East Koher Road South
Syracuse, IN 46567

Report#: 1056461-63
Priority: Standard Written
Status: Final

Project/Site: Multiple

Samples Submitted: Three surface water samples

Copies to: None

Collected: 06/18/04

By: Client

Received: 06/18/04

REPORT SUMMARY

General Chemistry: Oil and grease was not detected in the sample submitted for analysis.

Microbiology: Fecal coliform was detected in the sample submitted for analysis at a concentration of 12 cfu/100mL.

Semi-Volatile Organic Chemicals: Atrazine was detected in the sample submitted for analysis at a concentration of 0.1 ug/L, which is less than the current MCL of 3 ug/L. None of the other semi-volatile organic chemicals included in the detailed parameter list were detected in the sample submitted for analysis.

Detailed quantitative results are presented on the following pages.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call us at (574) 233-4777.

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REVIEWED BY: 

DATE: 7/9/04

FINALIZED BY: 

DATE: 7-9-04

GENERAL CHEMISTRY —Surface Water

Site Description: B/W Dist 1 & 2 N Side of Promontory

Lab#: 1056463

Parameter	Method	MRL	Results
Oil & Grease, Total	EPA 1664	5.0	< 5.0 ppm

Note: Analysis was performed by Sherry Laboratories, Inc., Ft. Wayne, IN.

Analyzed: 07/05/04

Analyst: Ref. Lab (Sherry)

FECAL COLIFORM—Surface Water

Site Description: Dist 3 B/W Island & Cove

Lab#: 1056462

Parameter	Method	Limit	Results (cfu/100mL)
Fecal Coliform	SM 9222-D	200	12

Analyzed: 06/18/04

Analyst: JT

The presence of fecal coliform is indicative of fecal contamination. Although most fecal coliform bacteria are not pathogenic (i.e. non-disease producing), they are often detected when pathogenic organisms are present. When fecal coliform is not detected, the probability that pathogenic organisms are present is very low.

SEMI-VOLATILE ORGANIC CHEMICALS—Surface Water

Site Description: Near Tube B/W Dist 4 & 8

Lab #: 1056461

Parameter	Tradename	MCL (ug/L)	Result (ug/L)
Di(2-ethylhexyl)adipate		400	< 0.6
Di(2-ethylhexyl)phthalate		6	< 0.6
Benzo (a) pyrene		0.2	< 0.02
Alachlor	Lasso [®]	2	< 0.1
Aldrin	Aldrite [®]	NA	< 0.1
Atrazine	AAtrex [®]	3	0.1
Butachlor	Machete [®]	NA	< 0.1
Dieldrin	Panoram D-31 [®]	NA	< 0.1
Endrin	Hexadrin [®]	2	< 0.01
Heptachlor	Heptamul [®]	0.4	< 0.04
Heptachlor epoxide		0.2	< 0.02
Hexachlorobenzene	No Bunt [®]	0.2	< 0.1
Hexachlorocyclopentadiene		50	< 0.1
Gamma-BHC (Lindane)	Gammexane [®]	0.2	< 0.02
Methoxychlor	Marlate [®]	40	< 0.1
Metolachlor	Dual [®]	NA	< 0.1
Metribuzin	Lexone [®]	NA	< 0.1
Propachlor	Ramrod [®]	NA	< 0.1
Simazine	Princep [®]	4	< 0.07

NA = Not Applicable

Surrogate Standards	Limits (%)	% Recovery
		Undil
2,4,5,6-Tetrachloro-m-xylene	70-130	86
4,4'-Dichlorobiphenyl	70-130	102
Triphenylphosphate	70-130	126

Analyzed: 06/23/04

Analyst: BC

Method: 525.2

REFERENCES AND DEFINITIONS OF TERMS

General Chemistry

- References: 1. EPA-600/4-79-020
Methods for Chemical Analysis of Water and Wastes
2. Standard Methods For the Examination of Water and Wastewater
Vol. 19, 1995

Fecal Coliform

- Analytical technique: Membrane Filtration
Reference: Standard Methods For Examination of Water and Wastewater
Vol. 19, 1995

Semi-Volatile Organic Chemical (SOC) Water Analysis

- Analytical Technique: Capillary Gas Chromatography - Mass Spectrometry (GC/MS)
Reference: EPA/600/4-88/039
Methods for the Determination of Organic Compounds in Drinking Water, December 1988 (rev. July 1991).

Semi-Volatile Organic Chemicals (SOCs) are chemicals used in the manufacture of a wide range of products. These include chemicals used in the production of wood preservatives, hydraulic and electrical transformer oils, plastics, tars, creosotes, and other types of pesticide formulations. SOC's are usually categorized into the following groups: Phenols, Pesticides, PCBs, Phthalates, Polynuclear Aromatics, and other miscellaneous chemicals commonly referred to as Base Neutrals. The presence of these chemicals in water usually results from exposure of the water to waste materials or soils containing these materials or from an accidental spill.

MCL (Maximum Contaminant Levels) are the maximum allowable concentrations of "regulated" chemicals in public drinking water supplies. Note that monitoring requirements for public supplies are not currently applicable to private water systems.

Results: Values presented in the result column represent the lowest reportable value for a parameter after correcting for all sample dilutions.

"<" means "less than". The number given is the lowest reportable value by the procedure used for analysis.

1 ug/L = 1 microgram per liter = 1 part per billion (ppb)

1 mg/L = 1 milligram per liter = 1 part per million (ppm).

1 cfu = 1 Colony Forming Unit = a bacteria colony presumed to have originated from a single bacterium present in the sample.

Glossary of Terms

- LMB** **Laboratory Method Blank:** a sample of laboratory reagent water which is prepared and analyzed as a sample.
- LFB** **Laboratory Fortified Blank:** a sample of laboratory reagent water to which the analytes of interest are added at a known concentration.
- TB** **Trip Blank:** a sample of reagent water which is shipped to the field and used to monitor for contamination during sample collection.
- MS** **Matrix Spike:** a field sample to which the analytes of interest are added at a known concentration.
- MSD** **Matrix Spike Duplicate**
- QCS** **Quality Control Sample:** a sample of laboratory reagent water to which the analytes of interest are added at a known concentration. The difference between the LFB and QCS is that the analytes solutions which are added to the QCS are obtained from a separate vendor than those added to the LFB or used for the CCC.
- CCC** **Continuing Calibration Check:** a standard used to assure that the analytical instrument is properly calibrated.
- SS** **Surrogate Standards:** these are compounds which are different than the analytes of interest but which have similar chemical properties. For certain methods these are added to samples and are used to monitor analytical accuracy.
- IS** **Internal Standard:** these compounds are added to samples or extracts depending upon the method. They are used in certain methods to calculate the concentrations of the analytes of interest. The internal standards are different from the analytes of interest but have similar chemical properties.



Sampling and Shipping Instructions

Please *read all the instructions* before sampling to ensure proper test results.

1 Before Sampling

- Check the reverse side of this sheet for sample bottles contained in this kit.
- Remove refrigerant packs from shipping container and place in freezer.
The packs **must be frozen** before returning samples to the laboratory.
- Plan to have samples collected just prior to the normal pick-up time of your overnight carrier.

2 Sampling Steps

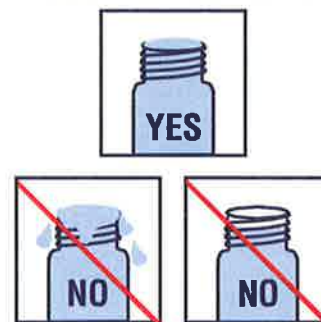
- If your sampling point has a faucet with an aerator, it must be removed prior to collection of the samples.
- Flush the cold water sampling line approximately 10 minutes immediately prior to sampling, so that stagnant water in the line is not collected.
- Do NOT touch inside the cap or around the edge of the bottle.
- Slow the water stream before collection.

Caution: Bottles may contain chemical preservatives. Avoid skin contact.

Your specific sampling instructions are checked below.

- * **Volatile Testing:** (44.7ml vials): Fill vials so that **NO AIR** remains when capped. **Do not overflow!** After tightening the cap, the vial should be inverted and tapped to check for air bubbles. If bubbles are present, do not empty the vial. Slowly add several additional drops of water until all air is eliminated. Take care not to flush away the preservative.
- * **Microbiology Testing:** Fill the bottle so that approximately 1 inch of air space remains at the top of the bottle.
- * **All Other Testing:** Fill all other sampling containers to the top of bottle.
 - Indicate sampling date, time and name of sampler on both the bottle labels and the enclosed Chain of Custody. Information on the Chain of Custody and labels must match and be complete.

VOLATILE TESTING

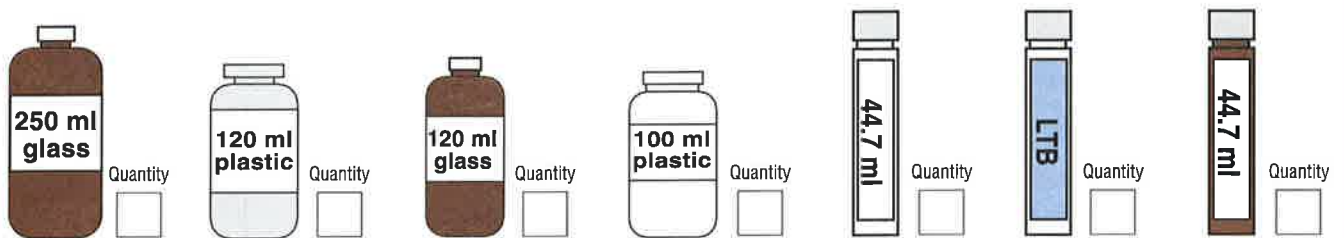
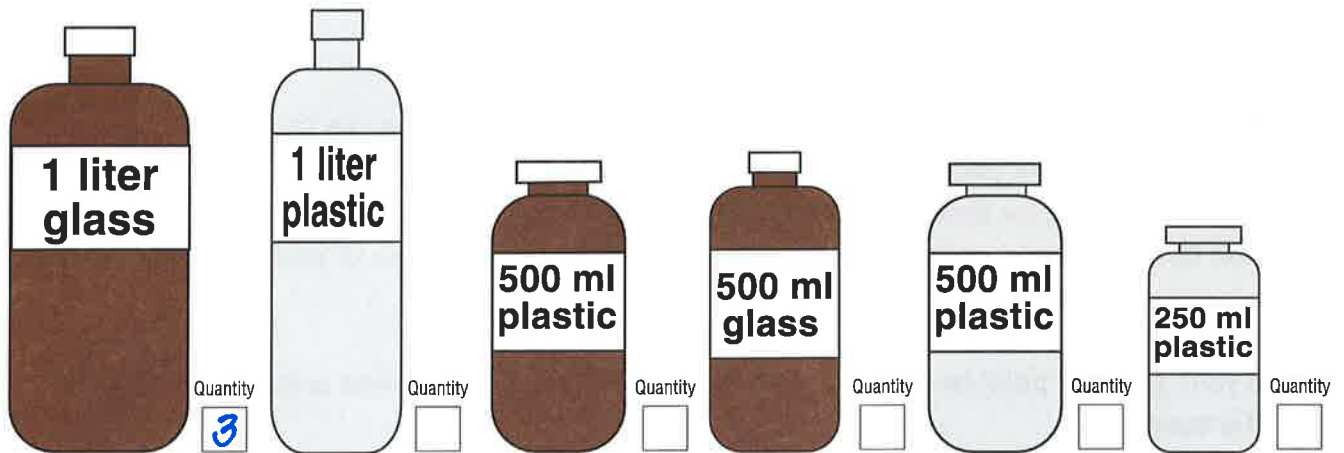


3 Shipping Instructions

- Place frozen refrigerant packs, samples and Chain of Custody into shipping container and return to EHL **immediately** after collection.
- Sample bottles must be hand delivered or sent by an **overnight** carrier.
- **Microbiology Testing:** Must be returned to EHL within **24 hours** of collection time.
- Laboratory **must be notified** prior to shipment of samples for Saturday delivery.

Sampling Containers

Fill all empty sampling containers included in this kit.



DO NOT OPEN blue labeled vials marked as **LTB (LAB TRIP BLANKS)**. LTBs should remain in the shipping container and be returned with the collected samples.

Field Trip Blank (FTB), when required, will have blue labels. Fill containers with reagent water either supplied by EHL or Client.

Quality Control samples, when required, will have red labels on all containers. Fill all containers from the same site.

Field Equipment Blanks (FEB), when requested, will have yellow labels on all containers. Fill all containers from the same site.



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Fecal Streptococcus & Enterococcus Sampling & Shipping Instructions For Bathing & Surface Water

As Easy As 1-2-3 !!!

PLEASE READ ALL THE INSTRUCTIONS BEFORE SAMPLING TO ENSURE PROPER TEST RESULTS.

1 *Before Sampling*

- Your sampling kit contains the bottles marked below.
- Remove blue refrigerant packs from shipping container and place in freezer. The packs **must be frozen** before returning samples to the laboratory.
- Plan to have samples collected just prior to the normal pick-up time of your overnight carrier.

2 *Sampling Steps*

- **Do NOT** touch inside the cap or around the edge of the bottle.
- **For Bathing Water:**
- Flush the cold water sampling line approximately 10 minutes immediately prior to sampling, so that stagnant water in the line is not collected. **For Surface Water:**
- Hold the sample bottle by the bottom or outside. **(Do not hold the bottle by the neck.)**
- Submerge the sample bottle under water (bottom first) to fill the entire bottle.
- If the water is flowing, the opening of the bottle should always face the stream flow.
- Indicate sampling date, time and name of sampler on both the bottle labels and the enclosed Chain of Custody.
- Custody. Information on the Chain of Custody and labels must match and be complete.

3 *Shipping Instructions*

- Place frozen blue refrigerant packs (**do not allow the packs to come in direct contact with the sample bottle**), sample bottle (**wrapped in foam holder**) and chain of custody into shipping container and return to EHL **immediately** after collection.
- Sample bottles must be hand delivered or sent by an **overnight** carrier.
- Laboratory **must be notified** prior to shipment of samples for Saturday delivery.

