ABSOLUTE HOME SERVICES

# Confidential Inspection Report

,

## Prepared for:

**This report is the exclusive property of the inspection company and the client whose name appears herewith and its use by any unauthorized persons is prohibited.**

# Inspection Table of Contents

# INSPECTION CONDITIONS AND LIMITATIONS

## CLIENT & SITE INFORMATION:

| | |
|---|---|
| *DATE OF INSPECTION:* | 04/16/2012. |
| *TIME OF ARRIVAL:* | 11:15 AM. |
| *INSPECTION SITE ADDRESS:* | Private Residence. |
| *INSPECTION SITE CITY/STATE/ZIP:* | Traverse City, MI, 49686. |
| *CLIENT NAME:* | XXXXXXXXXXXXX. |
| *CLIENT PHONE #:* | XXXXXXXXXXXXXXXX |
| *CLIENT E-MAIL ADDRESS:* | XXXXXXXXXXXXXXXXX. |

## CLIMATIC CONDITIONS:

| | |
|---|---|
| *WEATHER:* | Overcast. |
| *SOIL CONDITIONS:* | Damp. |
| *APPROXIMATE OUTSIDE TEMPERATURE:* | 50° F. |

## SITE INFORMATION:

| | |
|---|---|
| *HEALTH DEPARTMENT RECORDS:* | Records/permits were obtained from the local health department that pertain to this site. |
| *ESTIMATED DATE OF INSTALLATION OR AGE OF SYSTEM:* | 5/18/2002. |
| *NUMBER OF BEDROOMS SPECIFIED ON PERMIT:* | Three. |
| *NUMBER OF ACTUAL BEDROOMS NOTED IN HOME:* | Four, Bedrooms have been added to this structure with out increasing the size of the septic system. This can shorten the life span of a septic field, causing premature failure. |
| *NUMBER OF CURRENT OCCUPANTS:* | Appears to be 8 people. |
| *BUILDING TYPE:* | 1 family. |
| *SPACE BELOW GRADE:* | Finished Basement: this can limit the evaluation of some of the interior plumbing. |

## UTILITY SERVICES:

| | |
|---|---|
| *MISS DIGG NOTIFICATION:* | No, Miss Digg was not notified. The utilities were either installed overhead or appeared to not be located in the vicinity of the excavations. Therefore, Miss Digg was not necessary. |
| *WATER SOURCE:* | Private. |
| *UTILITIES STATUS:* | All utilities on. |

## OTHER INFORMATION:

| | |
|---|---|
| *AREA:* | Rural, Subdivision. |
| *HOUSE OCCUPIED?* | Yes. |
| *PEOPLE PRESENT:* | Client arrived towards the end of the inspection for a walk through to discuss findings and results of the inspection. |
| *COMMENTS OR INSPECTION LIMITATIONS:* | Note slow draining toilets on main level. Possible bow in interior waste plumbing line or in line between house and tank. Flush test from two main level toilets gets to tank but takes at least two flushes before paper shows up in tank. This can cause constant slow drain issues. Also note that there are plungers located in many of the bathrooms giving a good indication that there are issues with the internal plumbing lines properly discharging the waste stream. |

# SEPTIC SYSTEM DESCRIPTION

## SEPTIC TANK #1 DESCRIPTION

*TOTAL NUMBER OF TANKS:* A single tank was located at this site.

*TYPE OF TANK #1:* The septic tank on site is a concrete double chamber tank. This type of tank is designed to keep the solids in the front chamber and away from the effluent pipe. This will keep the solids from getting out to the drain field and causing blockage or failure.

*SIZE OF TANK:* 1600 Gallons.

*DEPTH OF TANK:* Less than 18"-satisfactory.

*CONDITION OF LIDS:* Satisfactory.

*CONDITION OF TANK:* Satisfactory.

*TYPE OF TEST:* Open and inspect tanks.

*WHEN WAS TANK LAST PUMPED:* Unknown.

*FLUID LEVEL ASSESSMENT:* Fluids were found to be at normal operating levels.

*SCUM THICKNESS:* 6" scum with 1" scum in rear chamber.

*SLUDGE OR SOLIDS THICKNESS:* 7" sludge with 2" sludge in rear chamber.

*PUMPING RECOMMENDATIONS:* The tank needs to be pumped immediately. There are heavy solids noted in the front chamber of the tank. The solids noted in the rear chamber can make there way out of the tank and in to the drain field. This can cause pre-mature failure of the system.

*PRESENCE OF FILTER:* There is not a filter present on this system. Installing a filter at the outlet effluent pipe can help keep solids from entering the drain field and causing blockage or pre-mature failure. This tank does have a concrete outlet baffle which helps separate solids. The baffle is starting to corrode but is functional.

## PUMP TANK DESCRIPTION

*TYPE OF TANK(S):* Sewage ejector pump in basement. Functions and discharges to primary system. Basin is not secure in concrete floor. Recommend filling void area with concrete.

## DRAIN FIELD SYSTEM EVALUATION

*TYPE OF DRAIN FIELD:* Conventional bed system.

*NUMBER OF DRAIN FIELDS:* One noted on permit and located during inspection.

*TYPE OF TEST APPLIED:* Auger holes or trenches were advanced to access and inspect the condition of the gravel bed.

*NUMBER OF AUGER HOLES ADVANCED INTO DRAIN BED:* Two.

*DRAIN FIELD EVALUATION RESULTS AND OBSERVATIONS:* Pooling of effluent noted in the drain field stone below the tile line in the second trench put down in the drain field. This is an indicator of heavy or extended use. Dirty stone was noted beneath the tile line. This can be a sign of advanced wear. This drain bed is relatively young in age but the stone and conditions noted in the field are not in line with what would be expected for a system of this age. Due to the very large number of occupants this system has had more use in its early stages than a typical drain field. The system is properly functioning and shows no signs of immediate failure or malfunction but it must be noted that the system has been overloaded for some time do to the large number of occupants in the home.

## SEPTIC SYSTEM RESULTS AND RECOMMENDATIONS

*CONCLUSION:* This system is properly functioning at this time and shows no signs of immediate failure or malfunction. It appears that the system has seen some advanced wear from the high number of occupants in the home. Normal life expectancy of a septic system is 30-35 years. Much of the life span of a septic system is dependent on the amount of use the system receives and the soil types available in the drain field area.

# WELL DESCRIPTION

## WELL AND PUMP INFORMATION

*Well Logged:* The local Health Department did have a well log on file and a copy of this log was obtained.

*Well Head Location:* Front yard.

*Pump Location:* The well pump is a submersible pump that is located inside the well casing and not viewable.

*Type of Pump:* Submersible.

*Size of Well/Casing:* 5"

*Depth of Well:* 260 feet.

*Estimated Age of Well:* 6/27/2002.

*Pressure Tank Location:* Basement.

*Pressure Gauge Present:* Yes, there is a pressure gauge present on this system.

*Is the Pressure Gauge Operational:* Yes, the pressure gauge is operational.

*Treatment System:* There is a water softening device installed on this system.

## WELL HEAD INFORMATION

*Well Head Condition:* The exposed portion of the well head and cap are in satisfactory condition.

*Well Head Height Above Grade:* 12" or Greater-This is the recommended height per Michigan State Well Construction Code.

The county health departments, in our region, have well placement restrictions of a minimum of fifty feet from any potential contamination sources, including but not limited to septic tanks, septic fields, drywells, buried fuel oil tanks, livestock barns...

## WELL HEAD LOCATION-DISTANCES FROM POTENTIAL POLLUTION SOURCES (Site Map Attached)

*Dwelling Foundation:* 36 feet.

*Septic Tank:* 97 feet.

*Septic Field:* 102 feet.

## WELL PRESSURE

*Pressure Rate-High (Cut Off):* 55 PSI.

*Pressure Rate-Low (Cut In):* 35 PSI.

*Pressure Interval:* 20 PSI - This is the normal operating interval recommended.

*Pressure Reading Location:* The pressure gauge installed on the system was functioning and used to acquire the

pressure readings.

## WELL VOLUME

*Location One Flow Rate:* Kitchen Faucet: 2.0 GPM.

*Location Two Flow Rate:* Bathroom Faucet: 1.5 GPM.

*Location Three Flow Rate:* Tub Spout: 3.0 GPM.

*Comments:* Flow tested at exterior spigot @ 7 GPM for 25 minutes. well appears strong and per health department permit information is submerged in 55 feet of water below static water level.

## WELL INSPECTION FINDINGS

*Flow Rate:* Does the flow rate remain above 3.0 GPM from an upper fixture after 30 minutes? Yes, the flow rate is acceptable.

*Pressure Interval:* When the pump cuts in or turns on, does the system pressure increase at least 16 PSI before the pump cuts out or turns off? Yes, the interval between cut in and cut out pressure is acceptable.

*Pump Cycle:* Does the pump cycle smoothly (no rapid cycling) indicating no water logging in the pressure tank? The pump cycle is a little long causing the pump to run over the one minute recommended run time. The cycle was 1 min 20 seconds at 5 GPM which is ok but a little longer than recommended.

*Electrical System:* Is the electrical system safe and adequate? The visible portion of the electrical wiring associate with the well system appear to be in satisfactory condition.

*Well Location:* Is the well head condition and location acceptable? The well head condition and location is in satisfactory condition.

*Well Construction:* Does the well system location, construction, and installation conform to local requirements typically enforced by local authorities? Yes, the well location and construction appear satisfactory.

## WATER QUALITY RESULTS (See Attached Lab Report)

*E.coli Bacteria:* ABSENT - No E.coli bacteria were detected in the water sample collected.

*Coliform Bacteria:* ABSENT - Coliform bacteria was not detected in the water sample collected.

*Nitrates/Nitrites (see attached Lab Report):* Nitrates were detected in the water samples associated with the subject sites water system.. However, the levels do **not** exceed USEPA/Local Health Department drinking water standards. Nitrates are often found in water supplies which are in areas where there is moderate to heavy use of fertilizers.

In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine the level of contaminants in drinking water at which no adverse health effects are likely to occur. These non-enforceable health goals, based solely on possible health risks and exposure over a lifetime with an adequate margin of safety, are called maximum contaminant level goals (MCLG). Contaminants are any physical, chemical,

biological or radiological substances or matter in water.

The MCLG for nitrate is 10 mg/L or 10 ppm. EPA has set this level of protection based on the best available science to prevent potential health problems. EPA has set an enforceable regulation for nitrate, called a maximum contaminant level (MCL), at 10 mg/L or 10 ppm. MCLs are set as close to the health goals as possible, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies. In this case, the MCL equals the MCLG, because analytical methods or treatment technology do not pose any limitation.

We recommend sampling in the future to monitor levels.

## OVERALL SYSTEM RATING

*Overall System Rating:* This system was functioning adequately at the time of the inspection.

SOS ANALYTICAL

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|---|---|---|---|
| COMPANY: | ABSOLUTE HOME SERVICES-BILL BAGERIS | SOS PROJECT NO: | 121344 - 1 |
| | | SAMPLED BY: | RYAN COX |
| NAME: | | | |
| PROJECT NO: | | DATE RECEIVED: | 4/17/2012 |
| WSSN: | | TIME RECEIVED: | 12:00 PM |
| WELL PERMIT: | | SAMPLE ID: | KITCHEN TAP |
| TAX ID: | | | |
| LOCATION: | [redacted] | DATE SAMPLED: | 4/16/2012 |
| | | TIME SAMPLED: | 12:00 PM |
| | TRAVERSE CITY | SAMPLE MATRIX: | DRINKING WATER |
| | MI | | |
| COUNTY: | GRAND TRAVERSE | | |
| TWP: | | | |

## INORGANICS

| Analysis | Concentration | LOD | Units | Analyst | Date Completed | Drinking Water Reg Limit(MCL) |
|---|---|---|---|---|---|---|
| NITROGEN, NITRATE - EPA 353.2 | 7.07 | 0.30 | mg/L (PPM) | KMJ | 4/18/2012 | 10 |

## SM9223 COLIFORM BACTERIA - PRESENCE/ABSENCE

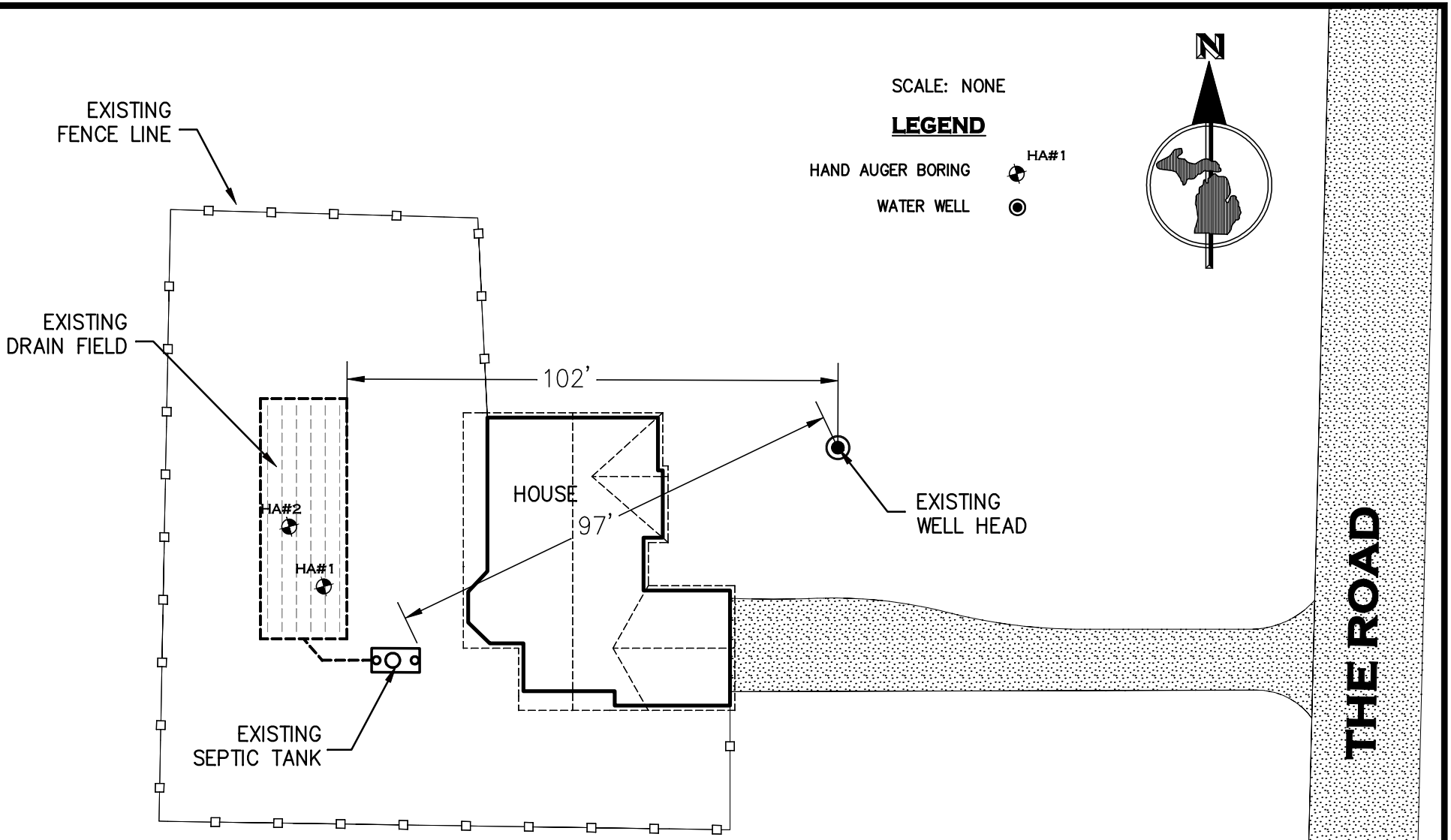
| | SAMPLE RESULT | Drinking Water Reg Limit(MCL) |
|---|---|---|
| TOTAL COLIFORM BACTERIA | ABSENT | ABSENT |
| E. coli BACTERIA | ABSENT | ABSENT |

ND = NOT DETECTED
LOD = LIMIT OF DETECTION
SMCL = FEDERAL NON-ENFORCEABLE LIMIT
MCL = MAXIMUM CONTAMINANT LEVEL

APPROVED BY: Kelly James FOR
SHANNA SHEA
LAB MANAGER



SOS ANALYTICAL, INC. IS CERTIFIED FOR COMPLIANCE MONITORING UNDER THE SAFE DRINKING WATER ACT.




ABSOLUTE HOME SERVICES
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Fax: (231) 929-5181

| PRJ: WELL/SEPTIC MAP TRAVERSE CITY | DATE: 4.17.12 |
|---|---|

| MNGR: | DRAWN: | CLIENT: |
|---|---|---|
| R.C. | R.A.C. | THE CLIENTS |

GENERAL NOTES:

1. PROPERTY LINES AND MEASURED FEATURES ARE APPROXIMATE ONLY. THIS IS NOT A BOUNDARY OR TOPOGRAPHIC SURVEY SO ACCURACY IS NOT GUARANTEED. THIS DRAWING SHALL NOT BE USED AS A SURVEY. IF ITEMS NOTED ON SITE MAP DO NOT APPEAR TO BE LOCATED ON KNOWN PARCEL A SURVEY IS RECOMMENDED BY A LICENSED SURVEYOR.