

C 1 2909 SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

COUNTY NUMBER A 516063

ST/CO USE ONLY DATE Received DATE WELL COMPLETED Depth of Well PERMIT NO. FROM "PERMIT TO DRILL WELL"

OWNER Horton R. STREET OR RFD Heather Glen Way TOWN Clarksville MD SUBDIVISION Sunbury Grove SECTION LOT 10

WELL LOG table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes handwritten entries: Sand 0-68, Conary Mica Rock 68-260.

GROUTING RECORD: WELL HAS BEEN GROUTED (Y), TYPE OF GROUTING MATERIAL (CM), NO. OF BAGS 16, NO. OF POUNDS 1504, GALLONS OF WATER 96, DEPTH OF GROUT SEAL 0-64 ft.

CASING RECORD: MAIN CASING TYPE (ST), Nominal diameter top (main) casing 6, Total depth of main casing 72.

OTHER CASING (if used) table with columns for diameter and depth.

SCREEN RECORD: screen type or open hole (ST), insert appropriate code below.

NUMBER OF UNSUCCESSFUL WELLS: 0, WELL HYDROFRACTURED (Y)

CIRCLE APPROPRIATE LETTER: A, E, P

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT...

DRILLERS LIC. NO. 1 M S D 0 2 4 1, DRILLERS SIGNATURE Joseph J. Mayne

LIC. NO. 1 D

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

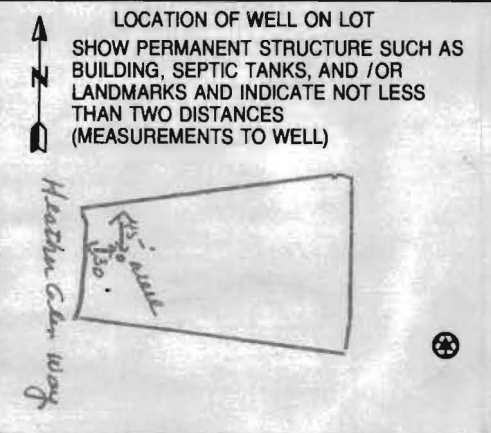
DEPTH (nearest ft.) table with columns for casing height and depth.

GRAVEL PACK IF WELL DRILLED, WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q

PUMPING TEST: HOURS PUMPED 3, PUMPING RATE 10 gal. per min., METHOD USED TO MEASURE PUMPING RATE Bucket, WATER LEVEL 19 ft. BEFORE PUMPING, 94 ft. WHEN PUMPING.

PUMP INSTALLED: DRILLER INSTALLED PUMP YES, TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29, CAPACITY: GALLONS PER MINUTE 31-35, PUMP HORSE POWER 37-41, PUMP COLUMN LENGTH 43-47, CASING HEIGHT 49 above LAND SURFACE, 2 (nearest) foot below.



B 1 1462

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

HO-95-0261

523944 please type

fill in this form completely

Date Received (APA)

01 20 06

OWNER INFORMATION

Horton R. D. 1370 Piccard Drive Rockville Md. 20850

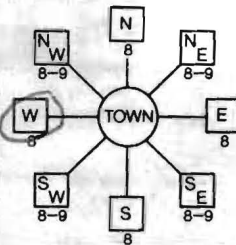
B 3 LOCATION OF WELL

Howard 23 Subdivision 18 Section 44 46 48 50 Clarksville 52 Nearest Town 71 Miles from town 4.2

DRILLER INFORMATION

Joseph L. Mayne MSD 024 Driller's Name License No. 76 81 Joseph L. Mayne Well Drilling Firm Name 5512 Ridge Rd. Mt. Airy Md 21791 Address Signature Date 1-6-06

B 4 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



Heather Glen way 11 NEAR WHAT ROAD 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)



34 25 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39

TAX MAP: 34 BLK: 17 PARCEL 77

B 2 WELL INFORMATION

APPROX. PUMPING RATE 5 (GAL. PER MIN.) 8 12 AVERAGE DAILY QUANTITY NEEDED 500 (GAL. PER DAY) 14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION I INDUSTRIAL, COMMERCIAL, DEWATERING P PUBLIC WATER SUPPLY WELL T TEST, OBSERVATION, MONITORING G GEO-THERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard 13 A510063 COUNTY NAME COUNTY NO. STATE SIGNATURE DATE ISSUED 2/24/06 CO SIGNATURE EXP. DATE 2/25/06 NORTH GRID 497 000 EAST GRID 814 000

APPROXIMATE DEPTH OF WELL 300 FEET

APPROXIMATE DIAMETER OF WELL 6 NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN AIR-ROTary AIR-PERCussion ROTARY (Hydraulic Rotary) CABLE REVerse-ROTary Drive-POINT other

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

- N THIS WELL WILL NOT REPLACE AN EXISTING WELL Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS D THIS WELL WILL DEEPEMED AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 52

Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROX. PERMIT NUMBER HO2006G003(01) PERMIT No. HO-95-0261

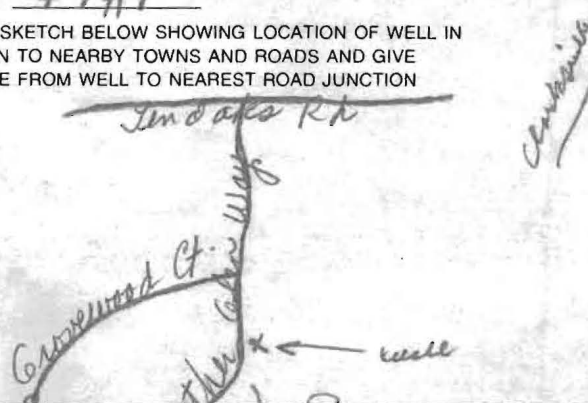
SPECIAL CONDITIONS

NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

This well must be tested for Radium & VOCs at the yield test.

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X SOURCES OF DRILLING WATER 1. well 2. 3. WRITE THE BOX NUMBER FROM THE MAP HERE E 814 4 N 497 7

DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION



FIELD DATA SHEET
HOWARD COUNTY WELL YIELD TEST

Well Permit No. HO - 95-0261
 Location of property (road) Heather Glen Way 7B
 Subdivision Tisbury Grove Lot ~~#~~ Block _____ Plat _____ Sec. _____
 Well Driller Joseph Mayne Owner D. R. Horton

Depth of well 260'
 Distance of measuring point (M.P.) above ground 2'
 Static water level (S.W.L.) below M.P. 19'

I. High rate pumping -- reservoir drawdown

Time pump started 7:15 Pumping rate 15 gpm.
 Total time 15 min. to reach pumping water level 94 ft. below M.P.

II. Recovery pump test data - observations to be recorded every 15 minutes

TIME (in 15 minute intervals)	WATER LEVEL below M.P.	PUMPING RATE time to fill 5 1 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
7:30	94	4 sec.	N/A	15 gpm.
7:45	92	6		10
8:00	92	6		10
8:15	91	6		10
8:30	91	6		10
8:45	91	6		10
9:00	91	6		10
9:15	91	6		10
9:30	91	6		10
9:45	90	6		10
10:00	90	6		10
10:15	90	6		10
10:30	90	6		10

**HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
WELL & SEPTIC PROGRAM
TEL: (410)313-1771 FAX: (410)313-2648**

Information Form for the Installation of the Well Pump, Pitless Adapter, and Supply Piping

NOTE: The installer is responsible for requesting an inspection prior to 9 am on the day of the desired inspection. No work is to be covered until approved by the Health Department. All installations must comply with the National Standard Plumbing Code (NSPC, as amended locally) and COMAR 26.04.04 (MD Well Construction Regulations). Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: Fogles Well Drilling LLC Telephone #: 410-795-5670
Address: PO Box 207
Woodbine, MD 21797

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer

License # and name of individual responsible for the field installation:
Name (Print): David C. Fogle License# MSD226

*A licensed individual must perform the actual installation. Apprentices must be under the supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification. Unlicensed individuals may be reported to the appropriate licensing agency.

Name of Property Owner: Williamsburg Group Telephone #: 410-977-3345
Subdivision: Argives @ Clarksville Lot #: 18 Well Tag #: HO-95-0261 ✓
Site Address: 6275 Heather Glen Way
Clarksville, MD

<u>Submersible Pump Data</u>	<u>Pitless Adapter</u>	<u>Well Cap and Electric Conduit</u>
Make: <u>Grundfos</u>	Make: <u>Campbell</u>	Two piece watertight cap: <u>YES</u>
Model #: <u>155GE07-180</u>	Model #: <u>N/A</u>	Screened, vented well cap: <u>YES</u>
Pump Capacity: <u>7</u> GPM	Depth: <u>36"</u> (36" min)	Cap secured to casing: <u>YES</u>
Well Yield: <u>7.5</u> GPM	NSF/WSC approved: <u>YES</u>	Conduit min 1 1/2" B.G.: <u>YES</u>
Depth of well encountered at time of pump installation: <u>240</u> (feet)		Conduit secured to well cap: <u>YES</u>
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4		
Torque anestors, Cable guards, or other acceptable method used- Must circle one		
Safety rope, if used, attached to brass rope adapter or other acceptable method <u>inside of well casing</u> <u>N/A</u>		

<u>Piping to house</u>	<u>House Connection</u>
Type: <u>1" poly pipe</u>	PVC sleeve to undisturbed soil at wall penetration: <u>YES</u>
PSI: <u>146</u> (160 psi min)	Length of sleeve (5" minimum from foundation): <u>5'</u>
Depth of supply line: <u>36"</u> (36" min)	Sleeve sealed properly: <u>YES</u>

The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

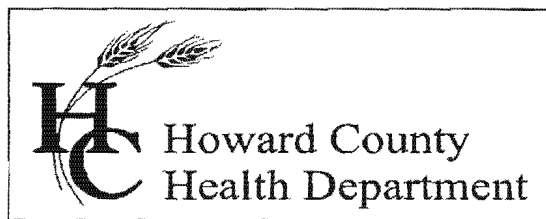
Signature of company representative responsible for installation: David Fogle date: 9/26/14

For Health Department Use Only - Not to be completed by Installer

Date Insp. Requested: _____ Date Insp. Approved: 9/26/14 Inspector: (KW)

Inspection Data:

Pitless adapter watertight & water supply line at least 36" below grade	<input checked="" type="checkbox"/>
Two piece cap installed and attached to casing securely	<input checked="" type="checkbox"/>
Elec. conduit extends at least 1 1/2" below grade/attached to cap properly	<input checked="" type="checkbox"/>
Safety rope not outside of well cap/casing	<input checked="" type="checkbox"/>
Correct well tag attached properly and casing 8" above finished grade	<input checked="" type="checkbox"/>
Water supply line sleeved adequately at house connection	<input checked="" type="checkbox"/>
Adequate grout observed below pitless adapter	<input checked="" type="checkbox"/>



Bureau of Environmental Health

8930 Stanford Blvd., Columbia, MD 21045
Main: 410-313-6300 | Fax: 410-313-6303
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
Facebook: www.facebook.com/hocohealth
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

INTERIM CERTIFICATE OF POTABILITY

Expiration Date – June 16, 2015

December 16, 2014

Homeowner
6275 Heather Glen Way
Clarksville, Maryland 21029

**RE: The Preserves at Clarksville, Lot #18
6275 Heather Glen Way
Building Permit: B14001012
Well Permit: HO-95-0261**

Dear Homeowner:

This is to advise you that the septic system installation and water well construction for the above referenced property have been inspected and approved. Final approval of the septic system was granted on **9/30/2014**. Final approval of the well line connection to the dwelling was granted on **9/26/20014**. The well construction was completed on **3/21/2006**. Water samples were collected on **12/08/2014**.

The water sample results indicate that the water samples submitted for testing were free of coliform and fecal coliform bacteria at the time of sampling and are bacteriologically safe for drinking. This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-95-0261. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

This Interim Certificate of Potability will expire **six months** from the date of issuance. Submission of a second bacteriological test indicating the water is free of coliform and fecal coliform bacteria is required prior to the expiration date, after which time a Final Certificate of Potability will be issued. **Failure to submit an additional sample and obtain a Final Certificate of Potability will result in a Notice of Violation and is punishable as a misdemeanor under the *Annotated Code of Maryland, Environment Article, 9-1311*, subject to a fine of up to \$500 or imprisonment not to exceed three months.**

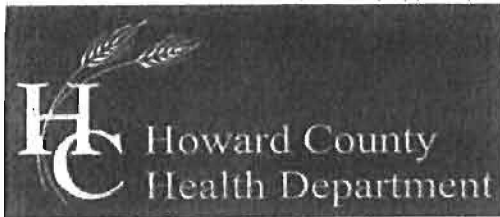
Please contact (410) 313-1773 to schedule a final water sample appointment or contact a Maryland certified water laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website:
<http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf>

Approving Authority,

A handwritten signature in cursive script that reads "Dana Bernard".

Dana Bernard, R.E.H.S,
Environmental Sanitarian
Well & Septic Program

cc: Howard County Dept. of Inspections, Licenses, and Permits
Community Hygiene Program
File



Bureau of Environmental Health
 7178 Columbia Gateway Drive, Columbia, MD 21046-2147
 Main: 410-313-2640 | Fax: 410-313-2648
 TDD 410-313-2323 | Toll Free 1-866-313-6300
 www.hchealth.org
 Facebook: www.facebook.com/hocohealth
 Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

**OPERATION AND MAINTENANCE AGREEMENT
 FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM
 HAVING AN ADVANCED PRE-TREATMENT SYSTEM**

THIS AGREEMENT is made this 3 day of March, among Heejung & Hyunsuk Kim, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 6275 Heather Glen Way, in the ___ Election District of Howard County, Maryland, and the deed to same is recorded or shall be recorded among the Land Records of Howard County, Maryland in Liber 15236 Folio 00041

WHEREAS, The Lot is suitable for the installation of a conventional on-site sewage disposal system with an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, in accordance with the Code of Maryland Regulations 26.04.02.07, effective January 1, 2013.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County to develop accurate and thorough test results.
- B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.
- D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.
- E. This agreement shall run with the land and upon Owner's taking title to the Lot shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as

HJK KHS

PAC018

long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Lot that the system shall require maintenance or other attention. Upon taking title to the Lot, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

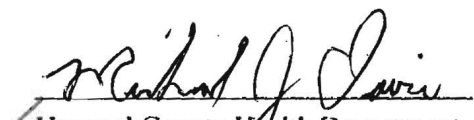
I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.


Owner Heejung Kim Date 3/8/14


Owner Hyungsuk Kim Date 3/8/14


Howard County Health Department
MICHAEL J. DAVIS 3/13/14

LR - Agreement 20.00
Recording Fee 20.00
Grantor/Grantee Name: Kim
Reference/Control #: 141
LR - Agreement 40.00
Surcharge 40.00
Subtotal: 60.00
Total: 120.00
#2573554-1
03/19/2014 12:24
#2573554 000503 - CC13-05
Howard Co
Columbia/CC05.03.04 -
Register 04 495



Bureau of Environmental Health

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Maura J. Rossman, M.D., Health Officer

REQUEST FOR TEMPORARY DEVIATION TO RADIUM STANDARDS FOR CERTIFICATE OF POTABILITY

DATE: 12-11-14 WELL PERMIT #: HO-95-0261

PROPERTY OWNER: WILLIAMSBURG GROUP LLC

SUBDIVISION & LOT #: PRESERVE @ CLARKSVILLE, LOT 18

PROPERTY ADDRESS: 6275 HEATHER GLEN WAY

TESTIMONIAL: Steps that will be taken, or that have already been taken, by the well owner or agent to bring the well into compliance with COMAR 26.04.04.09 (B) within forty-five (45) days. If post-treatment water samples have been taken, state the specific analyses that will be reported in results, e.g. Gross Alpha and Gross Beta and/or Radium.

WHOLE HOUSE WATER SOFTENER INSTALLED, AWAITING REVISED LAB RESULTS FOR GROSS ALPHA + GROSS BETA

CONDITIONS:

- 1) Within forty-five (45) days, the well installed under permit # HO-95-0261 will be documented to have Gross Alpha level of 15 pCi/l, Gross Beta level 50 pCi/l, and/or sum of Radium 226 and Radium 228 at level 5 pCi/l or less...
2) If the radium condition cannot be remediated to a level of Gross Alpha level of 15 pCi/l, Gross Beta level 50 pCi/l, and/or sum of Radium 226 and Radium 228 at level 5 pCi/l or less...

I hereby request that a Forty-five Day Temporary Deviation to COMAR 26.04.04.09 be granted for the well installed under permit #HO-95-0261. I am fully aware of the conditions under which this deviation will be granted, and of my responsibilities as the well owner which include advising any future buyer/tenant of the installation, condition and maintenance responsibilities of the radium removal device.

Prospective Owner's Original Signature(s) [Person(s) that intend to live in the dwelling.]

[Signature of Hyungsuk Kim]

HYUNGSUK KIM

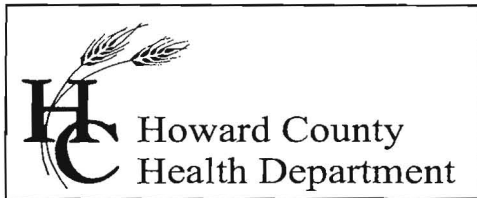
[Signature of Heejung Kim]

HEEJUNG KIM

Prospective Owner's Day Time Phone Number(s)

443 878 3417

443-878-0770



Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

July 7, 2006

D. R. Horton, Inc.
1370 Picardi Drive
Rockville, Maryland 20850

RE: Water Sample Results
~~18~~ Lot ~~17~~ Turnbury Grove
HO - 95 - 0261

To Whom this May Concern:

During the recent "yield test" of the well serving the future Lot 17 (located on Heather Glen Way), a sample was collected for volatile organic compounds (VOC's) on March 21, 2006. This testing was performed to establish a baseline evaluation of the well water supply due to known VOC ground water contamination concerns previously documented (during the 1990's and earlier) in properties nearby this development.

Results from this sampling were free of all tested VOC's to the limit of detection for the test method employed. Similar findings were noted for the corresponding Field and Trip Blank samples. With respect to these parameters, the future well water supply is **currently** safe for all uses.

A copy of the VOC test report is enclosed for your records.

If questions should arise, you may contact Stuart Oster of the Well & Septic Program at (410) 313 - 1771 or me at (410) 313 - 1773.

Sincerely,

Bert Nixon
Bert Nixon, Assistant Director
Bureau of Environmental Health

Enclosure
cc: Lot 17 Turnbury Grove Property File



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045
Main: 410-313-2640 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
Facebook: www.facebook.com/hocohealth
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

REQUEST FOR PERMANENT DEVIATION TO BACTERIA STANDARDS FOR CERTIFICATE OF POTABILITY

DATE: 12-11-14 WELL PERMIT #: HO-95-0261

PROPERTY OWNER: WILLIAMSBURG HOMES LLC

SUBDIVISION & LOT #: PRESERVE @ CLARKSVILLE, LOT 18

PROPERTY ADDRESS: 6275 HEATHER GLEN WAY

CONDITIONS:

- 1) Results for water samples collected on 12/2/14 for the well installed under permit #HO-95-0261 indicated that the water samples contained coliform bacteria. This bacteria is used as an indicator species which can help measure the sanitary protection of the well and water supply. Coliform bacteria by themselves do not usually cause disease, but their presence may indicate that surface contamination (insects, organic material, surface water, etc.) may have entered the water supply and the water may be potentially unsafe.
2) Repeated chlorination of the well failed to eliminate the presence of coliform bacteria in subsequent water samples.

I hereby request that an ultraviolet light disinfection system be approved for installation on the water supply to bring the well water into compliance with the potability standards described in COMAR 26.04.04.09 and that a Permanent Deviation to a Certificate of Potability be granted for the well installed under permit HO-95-0261. I understand that once the UV system has been installed, results of water samples indicating that the coliform contamination has been reduced to "absent" at the primary drinking tap must be delivered to the Health Department prior to issuance of a Permanent Deviation.

I am fully aware of the conditions under which this deviation will be granted, and of my responsibilities as the well owner, which include advising any future buyer/ tenant of the installation, condition and maintenance responsibilities of the water disinfection device.

Prospective Owner's Original Signature(s) [Person(s) that intend to live in the dwelling]

[Signature]

[Signature]

Prospective Owner's Printed Name(s)

Hyungsuk Kim

Heejung Kim

Prospective Owner's Day Time Phone Number(s)

443-878-3417

443-878-0770

Send Report To:

State of Maryland
DHMH - Laboratories Administration
Division of Environmental Chemistry
TRACE ORGANICS SECTION
201 W. Preston Street, Baltimore, Maryland 21201
J. Mehsen Joseph, Ph.D., Director

Lab No. Date Received

961405 MAR 23 1996

Do not write above this line

LABORATORY ANALYSIS REQUEST

Bottle No: HOBBTG17950261 Plant/Site Name: Turnberry Grove - Lot 19 County: Howard
Sample Source: Heather Glen Way Location: Well # HO-95-0261
Street Town or City (well no., lab sink, sample tap, etc.)

Sampler ID: 7485BB PWSID: Plant ID:

Collector: Brian Baker (410) 313-2643
(include telephone number)

Date Collected: 3/21/2006 Time Collected: 10:00 a.m. p.m.

Field Preserved: Yes No Preservative Used: 1:1 HCl + Ascorbic acid Na₂SO₄ 6 mg NH₄Cl

Sample Type: Drinking Water Landfill Source (Raw Water) Liquid
 Community Stream Distribution (Treated) Solid
 Non-Community Sediment Water Treatment Plant POE Other Well
 Private

Specify Program: SDWA NPDES CWA RCRA Consumer Products Other _____

Test Requested: Trihalomethanes Volatiles Semi-volatiles ? Haloacetic Acids

FIELD DATA: pH _____ Free Cl _____ Total Cl _____

Field Blank Bottle No.: HOBBTG17950261 Field
Trip Blank Bottle No.: HOBBTG17950261 Trip

Initial Yield Test
Remarks: Please Run Full Drinking Water Scan Incl. M+BE

Section Chief: [Signature] Date Reported: 4/7/06

Phone: (410) 767 - 5643

RECEIVED
HOWARD COUNTY HEALTH DEPARTMENT
APR 24 2006
FAX: (410) 333-5237

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
TRACE ORGANICS SECTION
 201 W. Preston Street, Baltimore, MD 21201
 John M. DeBoy, Dr. P.H., Director

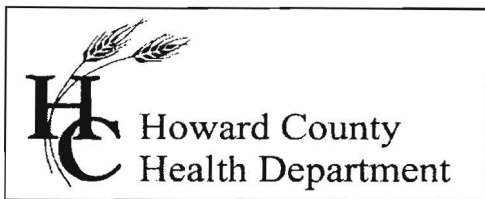
Certificate of Analysis - Volatiles

Sample Name: 961405 HOB BTG17950261WELL Method: EPA 524.2
 Date Analyzed: 04/04/06

<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>	<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>
<u>TRIHALOMETHANES</u>				<u>UNREGULATED</u>			
Bromodichloromethane	0.5	na	ND	Dichlorodifluoromethane	0.5	na	ND
Bromoform	0.5	na	ND	Chloromethane	0.5	na	ND
Chloroform	0.5	na	ND	Bromomethane	0.5	na	ND
Dibromochloromethane	0.5	na	ND	Chloroethane	0.5	na	ND
TOTAL THMs	-	30	-	Trichlorofluoromethane	0.5	na	ND
<u>REGULATED</u>				1,1-Dichloroethane	0.5	na	ND
Benzene	0.5	5	ND	1,3-Dichlorobenzene	0.5	na	ND
Carbon Tetrachloride	0.5	5	ND	Dibromomethane	0.5	na	ND
Chlorobenzene	0.5	100	ND	1,1-Dichloropropene	0.5	na	ND
1,4-Dichlorobenzene	0.5	75	ND	trans-1,3-Dichloropropene	0.5	na	ND
1,1-Dichloroethene	0.5	7	ND	1,1,2,2-Tetrachloroethane	0.5	na	ND
1,2-Dichloroethane	0.5	5	ND	1,3-Dichloropropane	0.5	na	ND
1,2-Dichlorobenzene	0.5	600	ND	2,2-Dichloropropane	0.5	na	ND
1,2-Dichloropropane	0.5	5	ND	cis-1,3-Dichloropropene	0.5	na	ND
cis-1,2-Dichloroethene	0.5	70	ND	2-Chlorotoluene	0.5	na	ND
trans-1,2-Dichloroethene	0.5	100	ND	4-Chlorotoluene	0.5	na	ND
Ethylbenzene	0.5	700	ND	Bromobenzene	0.5	na	ND
Styrene	0.5	100	ND	1,3,5-Trimethylbenzene	0.5	na	ND
Tetrachloroethene	0.5	5	ND	1,2,4-Trimethylbenzene	0.5	na	ND
Trichloroethene	0.5	5	ND	1,2,3-Trichlorobenzene	0.5	na	ND
1,1,1-Trichloroethane	0.5	200	ND	n-Propylbenzene	0.5	na	ND
Toluene	0.5	1000	ND	n-Butylbenzene	0.5	na	ND
Vinyl Chloride	0.5	2	ND	Naphthalene	0.5	na	ND
o-Xylene	0.5	na	ND	Hexachlorobutadiene	0.5	na	ND
m+p-Xylene	1.0	na	ND	Isopropylbenzene	0.5	na	ND
Total Xylenes	1.5	10000	ND	1,2,3-Trichloropropane	0.5	na	ND
Methylene Chloride	0.5	5	ND	1,2-Dibromo-3-Chloropropane	0.5	na	ND
1,1,2-Trichloroethane	0.5	5	ND	p-Isopropyltoluene	0.5	na	ND
1,2,4-Trichlorobenzene	0.5	70	ND	tert-Butylbenzene	0.5	na	ND
				sec-Butylbenzene	0.5	na	ND
				Bromochloromethane	0.5	na	ND
				1,1,1,2-Tetrachloroethane	0.5	na	ND
				1,2-Dibromoethane	0.5	na	ND
				Methyl-tert-Butyl Ether (MTBE)	0.5	na	ND
				Ethyl-tert-Butyl Ether (ETBE)	0.5	na	ND
				tert-Amyl Methyl Ether (TAME)	0.5	na	ND

*All results are in parts per billion (ppb)
 ND = Less than the detection limit
 na = not applicable
 e = estimated value

Section Chief: Deborah Miller Date Approved: 4/7/06




7178 Columbia Gateway Drive, Columbia MD 21046
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

February 8, 2006

MEMORANDUM

TO: Joseph L. Mayne Well Drilling
5512 Ridge Road
Mt. Airy, Maryland 21771
Faxed to 301-829-5384

FROM: Stuart Oster, R.S. 
Groundwater Management Section Supervisor
Well and Septic Program

RE: File Number: P-05-013
Title: Turnbery Grove

The Health Department requires that all the wells in this subdivision be tested for radium and V.O.C.'s (Volatile Organic Contaminants). The optimum time to sample would be when the yield test is being completed. When contacting this office about the yield test, please mention that these water test need to be collected. Also, attached is a letter dated November 21, 2005 from Bert Nixon further explaining the radium testing.

Cc: D. R. Horton, Inc.
File



Howard County
Health Department

3525 H Ellicott Mills Drive, Ellicott City, MD 21043
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

TO ALL INTERESTED PARTIES

When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

- The well site has been staked by Benchmark Engineering
(professional land surveyor or company employing professional land surveyors)
on 12-14-05 (date) and does not require a site inspection.
- The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify the proposed well site location.

This sheet, along with two copies of an acceptable well site plan, must be attached to the green well permit application.

Revised 6/10/03

33 Lots for D. R. Horton
Surnbury Grove

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
TRACE ORGANICS SECTION
 201 W. Preston Street, Baltimore, MD 21201
 John M. DeBoy, Dr. P.H., Director

Certificate of Analysis - Volatiles

Sample Name: 961405 TB
 Date Analyzed: 04/04/06

Method: EPA 524.2

<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>	<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>
TRihalOMETHANES				UNREGULATED			
Bromodichloromethane	0.5	na	ND	Dichlorodifluoromethane	0.5	na	ND
Bromoform	0.5	na	ND	Chloromethane	0.5	na	ND
Chloroform	0.5	na	ND	Bromomethane	0.5	na	ND
Dibromochloromethane	0.5	na	ND	Chloroethane	0.5	na	ND
TOTAL THMs	-	80	-	Trichlorofluoromethane	0.5	na	ND
REGULATED				1,1-Dichloroethane	0.5	na	ND
Benzene	0.5	5	ND	1,3-Dichlorobenzene	0.5	na	ND
Carbon Tetrachloride	0.5	5	ND	Dibromomethane	0.5	na	ND
Chlorobenzene	0.5	100	ND	1,1-Dichloropropene	0.5	na	ND
1,4-Dichlorobenzene	0.5	75	ND	trans-1,3-Dichloropropene	0.5	na	ND
1,1-Dichloroethene	0.5	7	ND	1,1,2,2-Tetrachloroethane	0.5	na	ND
1,2-Dichloroethane	0.5	5	ND	1,3-Dichloropropane	0.5	na	ND
1,2-Dichlorobenzene	0.5	600	ND	2,2-Dichloropropane	0.5	na	ND
1,2-Dichloropropane	0.5	5	ND	cis-1,3-Dichloropropene	0.5	na	ND
cis-1,2-Dichloroethene	0.5	70	ND	2-Chlorotoluene	0.5	na	ND
trans-1,2-Dichloroethene	0.5	100	ND	4-Chlorotoluene	0.5	na	ND
Ethylbenzene	0.5	700	ND	Bromobenzene	0.5	na	ND
Styrene	0.5	100	ND	1,3,5-Trimethylbenzene	0.5	na	ND
Tetrachloroethene	0.5	5	ND	1,2,4-Trimethylbenzene	0.5	na	ND
Trichloroethene	0.5	5	ND	1,2,3-Trichlorobenzene	0.5	na	ND
1,1,1-Trichloroethane	0.5	200	ND	n-Propylbenzene	0.5	na	ND
Toluene	0.5	1000	ND	n-Butylbenzene	0.5	na	ND
Vinyl Chloride	0.5	2	ND	Naphthalene	0.5	na	ND
o-Xylene	0.5	na	ND	Hexachlorobutadiene	0.5	na	ND
m+p-Xylene	1.0	na	ND	Isopropylbenzene	0.5	na	ND
Total Xylenes	1.5	10000	ND	1,2,3-Trichloropropane	0.5	na	ND
Methylene Chloride	0.5	5	ND	1,2-Dibromo-3-Chloropropane	0.5	na	ND
1,1,2-Trichloroethane	0.5	5	ND	p-Isopropyltoluene	0.5	na	ND
1,2,4-Trichlorobenzene	0.5	70	ND	tert-Butylbenzene	0.5	na	ND
				sec-Butylbenzene	0.5	na	ND
				Bromochloromethane	0.5	na	ND
				1,1,1,2-Tetrachloroethane	0.5	na	ND
				1,2-Dibromoethane	0.5	na	ND
				Methyl-tert-Butyl Ether (MTBE)	0.5	na	ND
				Ethyl-tert-Butyl Ether (ETBE)	0.5	na	ND
				tert-Amyl Methyl Ether (TAME)	0.5	na	ND

*All results are in parts per billion (ppb)
 ND = Less than the detection limit
 na = not applicable
 e = estimated value

Section Chief: Delores Miller Date Approved: 4/7/06

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
TRACE ORGANICS SECTION
 201 W. Preston Street, Baltimore, MD 21201
 John M. DeBoy, Dr. P.H., Director

Certificate of Analysis - Volatiles

Sample Name: 961405 FB
 Date Analyzed: 04/04/06

Method: EPA 524.2

<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>	<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>
<u>TRihalOMETHANES</u>				<u>UNREGULATED</u>			
Bromodichloromethane	0.5	na	ND	Dichlorodifluoromethane	0.5	na	ND
Bromoform	0.5	na	ND	Chloromethane	0.5	na	ND
Chloroform	0.5	na	ND	Bromomethane	0.5	na	ND
Dibromochloromethane	0.5	na	ND	Chloroethane	0.5	na	ND
TOTAL THMs	-	80	-	Trichlorofluoromethane	0.5	na	ND
<u>REGULATED</u>				1,1-Dichloroethane	0.5	na	ND
Benzene	0.5	5	ND	1,3-Dichlorobenzene	0.5	na	ND
Carbon Tetrachloride	0.5	5	ND	Dibromomethane	0.5	na	ND
Chlorobenzene	0.5	100	ND	1,1-Dichloropropene	0.5	na	ND
1,4-Dichlorobenzene	0.5	75	ND	trans-1,3-Dichloropropene	0.5	na	ND
1,1-Dichloroethene	0.5	7	ND	1,1,2,2-Tetrachloroethane	0.5	na	ND
1,2-Dichloroethane	0.5	5	ND	1,3-Dichloropropane	0.5	na	ND
1,2-Dichlorobenzene	0.5	600	ND	2,2-Dichloropropane	0.5	na	ND
1,2-Dichloropropane	0.5	5	ND	cis-1,3-Dichloropropene	0.5	na	ND
cis-1,2-Dichloroethene	0.5	70	ND	2-Chlorotoluene	0.5	na	ND
trans-1,2-Dichloroethene	0.5	100	ND	4-Chlorotoluene	0.5	na	ND
Ethylbenzene	0.5	700	ND	Bromobenzene	0.5	na	ND
Styrene	0.5	100	ND	1,3,5-Trimethylbenzene	0.5	na	ND
Tetrachloroethene	0.5	5	ND	1,2,4-Trimethylbenzene	0.5	na	ND
Trichloroethene	0.5	5	ND	1,2,3-Trichlorobenzene	0.5	na	ND
1,1,1-Trichloroethane	0.5	200	ND	n-Propylbenzene	0.5	na	ND
Toluene	0.5	1000	ND	n-Butylbenzene	0.5	na	ND
Vinyl Chloride	0.5	2	ND	Naphthalene	0.5	na	ND
o-Xylene	0.5	na	ND	Hexachlorobutadiene	0.5	na	ND
m+p-Xylene	1.0	na	ND	Isopropylbenzene	0.5	na	ND
Total Xylenes	1.5	10000	ND	1,2,3-Trichloropropane	0.5	na	ND
Methylene Chloride	0.5	5	ND	1,2-Dibromo-3-Chloropropane	0.5	na	ND
1,1,2-Trichloroethane	0.5	5	ND	p-Isopropyltoluene	0.5	na	ND
1,2,4-Trichlorobenzene	0.5	70	ND	tert-Butylbenzene	0.5	na	ND
				sec-Butylbenzene	0.5	na	ND
				Bromochloromethane	0.5	na	ND
				1,1,1,2-Tetrachloroethane	0.5	na	ND
				1,2-Dibromoethane	0.5	na	ND
				Methyl-tert-Butyl Ether (MTBE)	0.5	na	ND
				Ethyl-tert-Butyl Ether (ETBE)	0.5	na	ND
				tert-Amyl Methyl Ether (TAME)	0.5	na	ND

*All results are in parts per billion (ppb)

ND = Less than the detection limit

na = not applicable

e = estimated value

Section Chief:

Deborah Miller

Date Approved:

4/2/06

Phone: (410) 767-5896

Fax: (410) 225-9318

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #: 97853 Account #: 4470
Reference: Preserve at Clarksville Lot 18 Company: Williamsburg Homes LLC
Location: 6275 Heather Glen Way Requested By: Bob Corbett
Clarksville, MD 21029 Source: Well Water
Date/ Time Collected: 11/17/2014 1030 Site: Pressure Tank
Date/Time Rec'd: 11/17/2014 1240 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.8
Collected By: J. Yeager 6176JY Well #: HO-95-0261

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	23.8	MPN/ 100 ml	<1.0	SM18 9223	11/18/2014 / 0900 / LLO
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	11/18/2014 / 0900 / LLO
Nitrate	<1.0	mg/L	10	601	11/18/2014 / 1315 / CRS
Turbidity	1.46	NTU	<10	SM18 2130B	11/18/2014 / 1400 / CRS
Sand	NS	mg/L		Visual/Gravimetric	11/18/2014 / 1400 / CRS

NOT OK
12-15-14⁵

NOTES

- 1 mg/L = milligrams per liter (also, parts per million)
- 2 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 3 NS = None Seen (NS indicates less than 5 mg/L)
- 4 NTU = Nephelometric Turbidity Units
- 5 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 6 ND:None Detected
- 7 pH tested in lab, chlorine level tested on site
- 8 Visual well check: Sealed, vented cap

Reason for Test : Use & Occupancy

Building Permit # : 14001012

Date Reported: 11/18/2014

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #: 98185 Account #: 4470
Reference: Preserve at Clarksville Lot 18 Company: Williamsburg Homes LLC
Location: 6275 Heather Glen Way Requested By: Bob Corbett
Clarksville, MD 21029 Source: Well Water
Date/ Time Collected: 12/10/2014 1140 Site: Master Bath Sink Tap
Date/Time Rec'd: 12/10/2014 1828 Treatment: **
Chlorine ppm: Free: ND Total: ND pH: 7.5
Collected By: J. Yeager 6176JY Well #: HO-95-0261

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	12/11/2014 / 1245 / LLO
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	12/11/2014 / 1245 / LLO

NOTES

- 1 **Neutralizer/Softener/UV Light/Sediment Filter
- 2 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 3 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 4 ND:None Detected
- 5 Visual well check: Sealed, vented cap
- 6 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy

Building Permit # : 14001012

Date Reported: 12/11/2014

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #: 98114 Account #: 4470
Reference: Preserve at Clarksville Lot 18 Company: Williamsburg Homes LLC
Location: 6275 Heather Glen Way Requested By: Bob Corbett
Clarksville, MD 21029 Source: Well Water
Date/ Time Collected: 12/8/2014 1030 Site: Pressure Tank
Date/Time Rec'd: 12/8/2014 1235 Treatment: Neutralizer/Softener**
Chlorine ppm: Free: ND Total: ND pH: 6.9
Collected By: J. Yeager 6176JY Well #: HO-95-0261

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	7.5	MPN/ 100 ml	<1.0	SM18 9223	12/9/2014 / 1000 / LLO
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	12/9/2014 / 1000 / LLO

OK
12-15-14

NOTES

- 1 **Sample collected prior to treatment
- 2 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 3 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 4 ND:None Detected
- 5 pH & Chlorine level tested on site
- 6 Visual well check: Sealed, vented cap

Reason for Test : Use & Occupancy

Building Permit # : 14001012

Date Reported: 12/9/2014

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #: 98036 Account #: 4470
Reference: Preserve at Clarksville Lot 18 Company: Williamsburg Homes LLC
Location: 6275 Heather Glen Way Requested By: Bob Corbett
Clarksville, MD 21029 Source: Well Water
Date/ Time Collected: 12/2/2014 1051 Site: Pressure Tank
Date/Time Rec'd: 12/2/2014 1145 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.9
Collected By: J. Yeager 6176JY Well #: HO-95-0261

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	83.1	MPN/ 100 ml	<1.0	SM18 9223	12/3/2014 / 0900 / LLO
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	12/3/2014 / 0900 / LLO

NOT OK
DB
12-15-14

NOTES

- 1 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 2 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 3 ND:None Detected
- 4 pH & Chlorine level tested on site
- 5 Visual well check: Sealed, vented cap

Reason for Test : Use & Occupancy
Building Permit # : 14001012

Date Reported: 12/3/2014