

C1 2914

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

FILL IN THIS FORM COMPLETELY PLEASE TYPE

COUNTY NUMBER A 516 063

ST/CO USE ONLY DATE Received MM DD YY

DATE WELL COMPLETED MM DD YY 4 3 06

Depth of Well 22 220 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" Ho - 95 - 0264

OWNER Horton P. D. STREET OR RFD Heather Glen way TOWN Clarksville md SUBDIVISION Turnberry Grove SECTION LOT 28

WELL LOG table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes entries for Sand and Gray mica Rock.

GROUTING RECORD: WELL HAS BEEN GROUTED (Y), TYPE OF GROUTING MATERIAL (CM), NO. OF BAGS 13, NO. OF POUNDS 1222, GALLONS OF WATER 78, DEPTH OF GROUT SEAL 47 ft.

CASING RECORD: MAIN CASING TYPE (ST), Nominal diameter top (main) casing 6 inch, Total depth of main casing 52 feet.

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

SCREEN RECORD: screen type or open hole (ST), DEPTH (nearest ft.) table with columns 1-21.

PUMPING TEST: HOURS PUMPED 3, PUMPING RATE 15 gal. per min., METHOD USED TO MEASURE PUMPING RATE Bucket, WATER LEVEL 22 ft. before, 52 ft. when pumping.

PUMP INSTALLED: DRILLER INSTALLED PUMP YES, TYPE OF PUMP INSTALLED (S) submersible, CAPACITY: GALLONS PER MINUTE 31-35, PUMP HORSE POWER 37-41, PUMP COLUMN LENGTH 43-47, CASING HEIGHT 49 above, 2 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 MSD 024, DRILLERS SIGNATURE

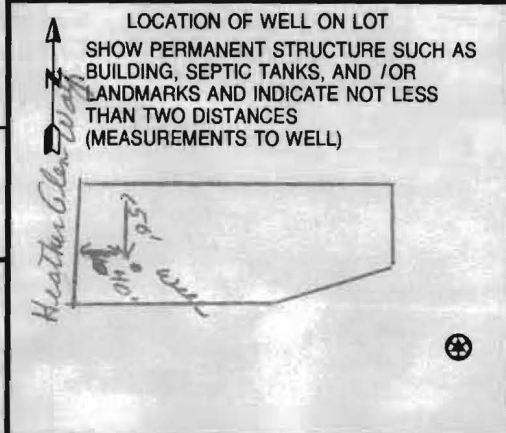
LIC. NO. 1 D

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

DEPTH (nearest ft.) table with columns 1-21, DIAMETER OF SCREEN (NEAREST INCH) 56-60

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 70 72 74 75 76 TELESCOPE CASING LOG INDICATOR OTHER DATA



B 1 1496

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type 523944

STATE PERMIT NUMBER HO-95-0264 fill in this form completely

Date Received (APA) 01 20 06

OWNER INFORMATION

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

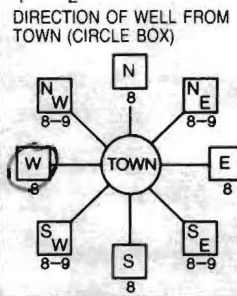
LOCATION OF WELL

Howard 21 Jumbo Grove 23 SECTION 44 46 LOT 21 48 50 CHARLEVILLE 52 MILES FROM TOWN 1/2

DRILLER INFORMATION

Joseph L Mayne M S D 024 5512 Ridgely Rd Mt. Airy Md 21071

DIRECTION OF WELL FROM TOWN



Heather Glen Way 30 ON WHICH SIDE OF ROAD 25 DISTANCE FROM ROAD 38 FT TAX MAP: 34 BLK: 17 PARCEL 27

WELL INFORMATION

APPROX. PUMPING RATE 5 AVERAGE DAILY QUANTITY NEEDED 500

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) INDUSTRIAL, COMMERCIAL, DEWATERING PUBLIC WATER SUPPLY WELL TEST, OBSERVATION, MONITORING GEO-THERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

HOWARD 13 A516063 COUNTY NAME COUNTY NO. STATE SIGNATURE DATE ISSUED 2/24/06 CO SIGNATURE EXP. DATE 2/25/07 NORTH GRID 497 000 EAST GRID 814 000

APPROXIMATE DEPTH OF WELL 300 FEET APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN AIR-ROTary AIR-PERcussion ROTARY (Hydraulic Rotary) CABLE REVerse-ROTary DRive-POINT

REPLACEMENT OR DEEPEENED WELLS (CIRCLE APPROPRIATE BOX)

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

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

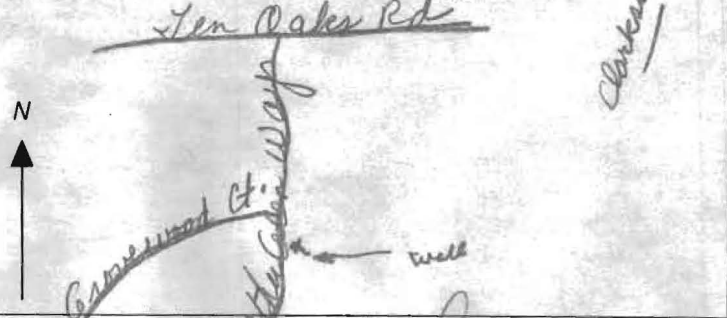
SOURCES OF DRILLING WATER

- 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



4/3/06 Samples taken during Yield Test - VOC + Radium

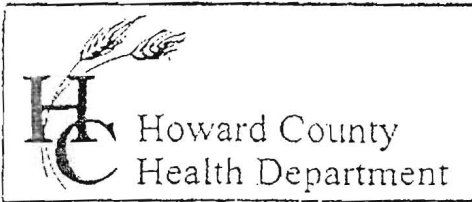
Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROP. PERMIT NUMBER H02006G003(01) PERMIT No. HO-95-0264

SPECIAL CONDITIONS

This well must be tested for radium & VOC's at the yield test.





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

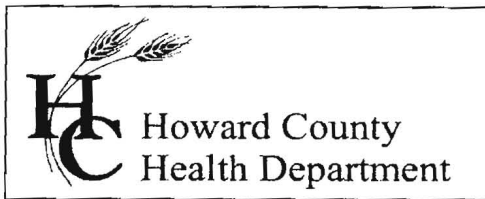
When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

- 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  
Lurnbury Grove*



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

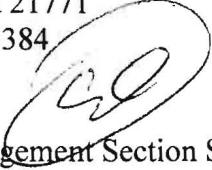
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**Penny E. Borenstein, M.D., M.P.H., Health Officer**

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

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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  
BUREAU OF ENVIRONMENTAL HEALTH  
WATER AND SEWERAGE PROGRAM  
TEL: (410)313-2640 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: \_\_\_\_\_ Telephone #: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

(**Must circle one**) Licensed Plumber      Licensed Well Driller      Licensed Well Pump Installer  
License # and name of individual responsible for the field installation:  
Name (Print): \_\_\_\_\_ License# \_\_\_\_\_

**\*A licensed individual must perform the actual installation. Apprentices must be under the direct supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification.**

Name of Property Owner: \_\_\_\_\_ Telephone #: \_\_\_\_\_  
Subdivision: \_\_\_\_\_ Lot #: 21 Well Tag #: HO-95-0264  
Site Address: 6255 Heather Glen Way

**Submersible Pump Data**

Make: \_\_\_\_\_  
Model #: \_\_\_\_\_  
Pump Capacity \_\_\_\_\_ GPM  
Well Yield: \_\_\_\_\_ GPM

**Pitless Adapter**

Make: \_\_\_\_\_  
Model#: \_\_\_\_\_  
Depth: \_\_\_\_\_ (36" min)  
NSF approved: \_\_\_\_\_

**Well Cap and Electric Conduit**

Two piece watertight cap: \_\_\_\_\_  
Screened, vented well cap: \_\_\_\_\_  
Cap secured to casing: \_\_\_\_\_  
Conduit min 18" B.G.: \_\_\_\_\_  
Conduit secured to well cap: \_\_\_\_\_

Depth of well encountered at time of pump installation: \_\_\_\_\_ (feet)  
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4

Torque arrestors or Cable guards are required – Must circle one  
Safety rope, if used, attached to inside of well casing with eye bolt \_\_\_\_\_

**Piping to house**

Type: \_\_\_\_\_  
PSI: \_\_\_\_\_ (160 psi min)

**House Connection**

PVC sleeved to undisturbed soil at wall penetration: \_\_\_\_\_  
Approximate length of sleeve (5 foot minimum): \_\_\_\_\_

Depth of supply line: \_\_\_\_\_ (36" min)      Sleeve caulked and sealed properly: \_\_\_\_\_

**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 \_\_\_\_\_ date \_\_\_\_\_

**For Health Department Use Only – Not to be completed by Installer**

Date Insp. Requested: \_\_\_\_\_ Date Insp. Approved: 7/3/2014 BB  
Inspection Data: Pitless adapter and water supply line at least 36" below grade \_\_\_\_\_  
Two piece cap installed and attached to casing securely \_\_\_\_\_  
Elec. conduit extends at least 18" below grade/attached to cap properly \_\_\_\_\_  
Safety rope installed inside of well casing \_\_\_\_\_  
Correct well tag attached properly and casing 8" above finished grade \_\_\_\_\_  
Water supply line sleeved adequately at house connection \_\_\_\_\_  
Adequate grout observed below pitless adapter \_\_\_\_\_

No → Casing Extended, No Grout Seen Down to 6'

**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 5676  
Address: PO BOX 202J  
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# MSD 226

\*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 Homes Telephone #:  
Subdivision: Preseries at Clarksville Lot #: 21 Well Tag #: HO-95-0264  
Site Address: 6755 Heather Glen Way  
Clarksville, MD 21029

<u>Submersible Pump Data</u>	<u>Pitless Adapter</u>	<u>Well Cap and Electric Conduit</u>
Make: <u>Kruidfos</u>	Make: <u>Campbell</u>	Two piece watertight cap: <u>YES</u>
Model #: <u>15SQP07-180</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>15</u> GPM	NSF/WSC approved: <u>YES</u>	Conduit min 18" B.G.: <u>YES</u>
Depth of well encountered at time of pump installation: <u>220</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 arrestors, 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>		

Piping to house  
Type: 1" poly pipe  
PSI: 110 (160 psi min)  
Depth of supply line: 36" (36" min)

House Connection  
PVC sleeve to undisturbed soil at wall penetration: YES  
Length of sleeve (5' minimum from foundation): 5'  
Sleeve sealed properly: YES

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: 7-3-14

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

Date Insp. Requested: \_\_\_\_\_ Date Insp. Approved: \_\_\_\_\_ Inspector: \_\_\_\_\_

Inspection Data: Pitless adapter watertight & water supply line at least 36" below grade \_\_\_\_\_

Two piece cap installed and attached to casing securely \_\_\_\_\_

Elec. conduit extends at least 18" below grade/attached to cap properly \_\_\_\_\_

Safety rope not outside of well cap/casing \_\_\_\_\_

Correct well tag attached properly and casing 8" above finished grade \_\_\_\_\_

Water supply line sleeved adequately at house connection \_\_\_\_\_

Adequate grout observed below pitless adapter \_\_\_\_\_

Send Report To:

Howard County  
Environmental  
Health

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

961504 APR-4 8  
Do not write above this line

**LABORATORY ANALYSIS REQUEST**

Bottle No: HOTG20BB950264 Well 1 Plant/Site Name: Turnberry Grove - Lot 20 County: Howard

Sample Source: Heather Glen Way Location: Well # 40-95-0264  
Street Town of City (well no., lab sink, sample tap, etc.)

Sampler ID: 7485AB PWSID:                      Plant ID:     

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

Date Collected: 4/3/06 Time Collected: 10:00 a.m.          p.m.

Field Preserved:  Yes  No Preservative Used:  HCl + Ascorbic acid  Na<sub>2</sub>SO<sub>4</sub>  6 mg NH<sub>4</sub>Cl

Sample Type:  Drinking Water  Landfill  Source (Raw Water)  Liquid  
 Community  Stream  Distribution (Treated)  Solid  
 Non-Community  Sediment  Water Treatment Plant POE  Other           
 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.: HOTG20BB950264 <sup>Field</sup>  
Trip Blank Bottle No.: HOTG20BB950264 Trip

Remarks: Taken During Yield Test  
Please Run Full Drinking Water Scan Including MTBE  
"only one sample collected 4/4/06" [initials]

Section Chief: [Signature] Date Reported: 4/24/06

•Phone: (410) 767 - 5643 •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: 961504 HOTG20BB950264WELL Method: EPA 524.2  
 Date Analyzed: 04/17/06

<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>	<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>
<b>TRIHALOMETHANES</b>				<b>UNREGULATED</b>			
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
<b>REGULATED</b>				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-Dunn Date Approved: 4/24/06

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: 961504 FB

Method:

EPA 524.2

Date Analyzed: 04/17/06

Contaminants	DL*	MCL*	Result*	Contaminants	DL*	MCL*	Result*
<b>TRIALOMETHANES</b>				<b>UNREGULATED</b>			
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
<b>REGULATED</b>				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 Dued*

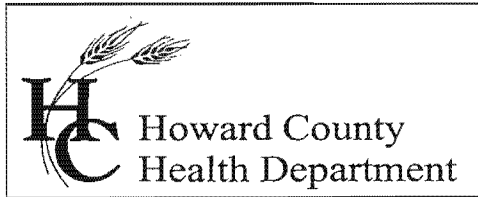
Date Approved:

*4/24/06*

Phone: (410) 767-5896

Fax: (410) 225-9318





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

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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  
Lot 20 Turnbury Grove  
HO - 95 - 0264

To Whom this May Concern:

During the recent "yield test" of the well serving the future Lot 20 (located on Heather Glen Way), a sample was collected for volatile organic compounds (VOC's) on April 3, 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.

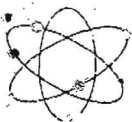
A copy of the VOC test report is enclosed for your records.

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, Assistant Director  
Bureau of Environmental Health

Enclosure  
cc: Lot 20 Turnbury Grove Property File



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	0604014-01	0604014-02	0604014-03	0604014-04
Client I.D.	HW-237-03	HOTG20BB950264	HOBF43BB950278	HOTG19BB950263
Gross Alpha	50.4	21.1	17.1	7.6
Error +/-	6.2	3.0	3.0	1.9
MDL	2.7	1.5	1.8	1.4
EPA Method	900.0	900.0	900.0	900.0
Prep Date	04/04/06	04/04/06	04/04/06	04/04/06
Analysis Date	04/05/06	04/05/06	04/05/06	04/05/06
Analyst	MJN	MJN	MJN	MJN
Gross Beta	22.6	17.7	6.8	12.0
Error +/-	2.3	2.0	1.6	1.9
MDL	2.3	2.1	2.1	2.2
EPA Method	900.0	900.0	900.0	900.0
Prep Date	04/04/06	04/04/06	04/04/06	04/04/06
Analysis Date	04/05/06	04/05/06	04/05/06	04/05/06
Analyst	MJN	MJN	MJN	MJN
Units	pCi/l	pCi/l	pCi/l	pCi/l

Send Report To:

Howard County  
Environmental  
Health

D.R. Horton  
1370 Piccard Drive  
State of Maryland  
Rockville, MD 20850

301-670-6144  
410-939-8793

DHMH - Laboratories  
Division of Environmental Chemistry  
**RADIATION LABORATORY**

201 W. Preston Street, Baltimore, Maryland 21201  
J. Mehsen Joseph, Ph.D., Director

**LABORATORY ANALYSIS REQUEST**

HOTG 20BB950264

Sample Bottle No. A: 1 No. B: \_\_\_\_\_ Field Blank Bottle No. 1: \_\_\_\_\_ No. 2: \_\_\_\_\_

Plant Site Name: Turnberry Grove - Lot 20 County: Howard

Sample Source: Heather Glen Way Location: Well # HO-95-0264  
(well no., lab sink, sample tap, etc.)

County:  1  3 Plant No.

Collector: Brian Baker Telephone No.: (410) 313-2643

Date Collected: 4/3/2006 Time Collected: 10:00 a.m. \_\_\_\_\_ p.m.

Nitric Acid Preserved: Yes  No  Iced: Yes  No

Submitters Code:   Federal Project:  Field Data: \_\_\_\_\_ pH \_\_\_\_\_ Chlorine \_\_\_\_\_

Remarks: Sample Taken During Well Yield Test

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Reported
✓	Gross Alpha	4000	0604014-02	21.1 ± 3.0	4/6/06
✓	Gross Beta	4100		17.7 ± 2.0	
	Radon-222 Bottle A	4004			
	Radon-222 Bottle B	4004			
	Field Blank #1	4004			
	Field Blank #2	4004			
	Tritium				
	Ra - 226	4020			
	Ra - 228	4030			
	Total Uranium	4006			

Date Received: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_



Bureau of Environmental Health

8930 Stanford Blvd, Columbia, MD 21045  
Main: 410-313-1771 | 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 TEMPORARY DEVIATION TO RADIUM STANDARDS FOR CERTIFICATE OF POTABILITY

DATE: 9-17-14 WELL PERMIT #: HO-95-<sup>0264</sup>~~0624~~

PROPERTY OWNER: Himanshu + Gopi Patel

SUBDIVISION & LOT #: The Preserve at Clarksville, Lot 21

PROPERTY ADDRESS: 6255 Heather Glen Way, Clarksville, MD 21029

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.

1. Install water treatment device
2. Obtain post-treatment Gross Alpha(Short Term and Long Term), post-treatment Gross Beta (Short term and long term), raw water Radium 226 and Radium 228, and Post treatment Radium 226 and Radium 228.

CONDITIONS:

- 1) Within forty-five (45) days, the well installed under permit # HO-95-0264 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 (including reported margin of error) at the primary drinking tap as a result of installation of a water softener system, or at the reverse osmosis tap.
- 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 (including reported margin of error) via installation of a water softener treatment or reverse osmosis system, then drilling a replacement well would likely be necessary. Issuance of a Final Certificate of Potability will be delayed until the issue is resolved.

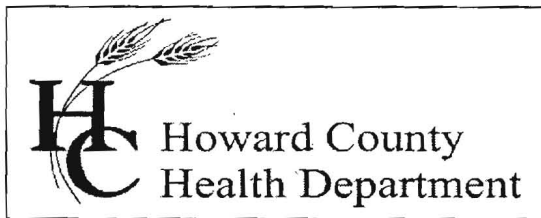
I hereby request that a Forty-five Day Temporary Deviation to COMAR 26.04.04.09 be granted for the well installed under permit #HO-95-0264. I am fully aware of the conditions under which this deviation will be granted, and of my responsibilities as the well owner which include advising any future buyer/tenant 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.]

[Handwritten Signature]      [Handwritten Signature]

Prospective Owner's Day Time Phone Number(s)

240-472-6727



Bureau of Environmental Health

8930 Stanford Blvd., Columbia, MD 21045  
Main: 410-313-1771 | Fax: 410-313-2648  
TDD 410-313-2323 | Toll Free 1-866-313-6300  
[www.hchealth.org](http://www.hchealth.org)  
Facebook: [www.facebook.com/hocohealth](http://www.facebook.com/hocohealth)  
Twitter: HowardCoHealthDep

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

TEMPORARY INTERIM CERTIFICATE OF POTABILITY  
**TEMPORARY DEVIATION FOR RADIUM**

Expiration Date – NOVEMBER 2, 2014

September 18, 2014

Himanshu Patel and Gopi Patel  
6255 Heather Glen Way  
Clarksville, MD 21029

**RE: The Preserve at Clarksville, Lot 21  
6255 Heather Glen Way  
Building Permit: B13004595  
Well Permit: HO-95-0264**

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 **9/12/2014**. Final approval of the well line connection to the dwelling was granted on **7/3/2014**. The well construction was completed on **4/3/2006**. Water samples were collected on **8/8/2014 and 9/3/2014**.

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.

Gross Alpha and Beta samples were also collected on **4/3/2006**. Results showed a Gross Alpha level of **21.1 ± 3.0 pCi/L** and Gross Beta level of **17.7 ± 2.0 pCi/L**. **This exceeds the maximum contaminant limit (MCL) of 15 pCi/L and/or 50 pCi/L, respectively.**

This is a **temporary deviation** to allow additional time for installation of a radionuclide removal system and submission of water sample results indicating that the treated water meets EPA recommendations.

This Department will grant a **temporary deviation** to the Interim Certificate of Potability on condition that water sample results for pre- and post-treatment short term and long term gross alpha/beta and radium 226/228 are submitted to this Department **within 45 days**. Those results must indicate that the radionuclide removal system is effectively maintaining a Gross Alpha level of less than **15 pCi/L**, a Gross Beta level of less than **50 pCi/L**, and a Radium 226/228 level of less than **5 pCi/L**.

**Furthermore, it will be necessary for you to comply with the following conditions:**

1. The system must be properly operated and maintained continuously in accordance with the service contract for the life of the residence.
2. It is recommended that a Maryland certified water laboratory certified for radionuclide analysis perform a yearly radionuclide analysis.
3. If you decide to sell or rent your home in the future, you must make any potential buyer/tenant aware of this deviation. **A person who fails to make this disclosure is subject to the penalties set out in COMAR 26.04.04.12F Enforcement and Environment Article 9-1311, Annotated Code of Maryland.**

This Temporary Interim Certificate of Potability will expire 45 days from the date of issuance. **Failure to submit the required radium sample results and obtain an Interim Certificate of Potability before the expiration date 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.**

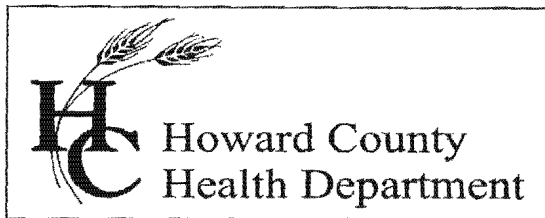
Please contact (410) 313-1773 to schedule a water sample appointment or contact a Maryland certified water quality laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website:  
<http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf>

Approving Authority,



Robert Bricker, REHS/R.S., L.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: 410-313-6300 | 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**  
**PERMANENT DEVIATION FOR RADIUM**  
Expiration Date – June 16, 2015

December 16, 2014

Homeowner  
6255 Heather Glen Way  
Clarksville, Maryland 21029

**RE: Clarksville Preserve, Lot #21**  
**6255 Heather Glen Way**  
**Building Permit: B13004595**  
**Well Permit: HO-95-0264**

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 **9/12/2014**. Final approval of the well line connection to the dwelling was granted on **7/3/2014**. The well construction was completed on **4/03/2006**. Water samples were collected on **9/03/2014**.

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.

Gross Alpha and Beta samples were also collected on **4/3/2006**. Results showed a Gross Alpha level of **21.1 ± 3.0 pCi/L** and Gross Beta level of **17.7 ± 2.0 pCi/L**. **This exceeds the maximum contaminant level (MCL) of 15 pCi/L and/or 50 pCi/L, respectively.**

After installation of a radionuclide removal device(kitchen tap reverse osmosis system), post-treatment water samples were collected on **9/19/2014** and indicated a Gross Alpha level of **2.0 ± 0.0 pCi/L**, a Gross Beta level of **3.1 ± 0.0 pCi/L**, and a Radium 226/228 level of **0.3 ± <1.0 pCi/L**.

This Department will grant a **permanent deviation** to the Interim Certificate of Potability on condition that the radionuclide removal system effectively maintains a Gross Alpha level of less than **15 pCi/L**, a Gross Beta level of less than **50 pCi/L**, and a Radium 226/228 level of less than **5 pCi/L**.

**Furthermore, it will be necessary for you to comply with the following conditions:**

1. The system must be properly operated and maintained continuously in accordance with the service contract for the life of the residence.

2. It is recommended that a Maryland certified water laboratory certified for radionuclide analysis perform a yearly radionuclide analysis.
3. If you decide to sell or rent your home in the future, you must make any potential buyer/tenant aware of this permanent deviation. **A person who fails to make this disclosure is subject to the penalties set out in COMAR 26.04.04.12F Enforcement and Environment Article 9-1311, Annotated Code of Maryland.**

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-95-0264. 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.**

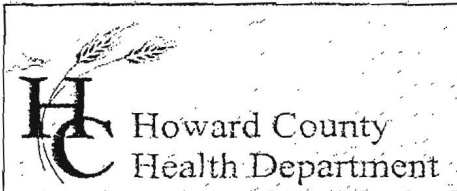
Please contact (410) 313-1773 to schedule a final water sample appointment or contact a Maryland certified water quality laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website:  
<http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf>

Approving Authority,



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  
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TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

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

May 17, 2006

D.R. Horton  
1370 Piccard Drive  
Rockville, MD 20850

RE: Turnbury Grove Subdivision, Lot 20

Lot 21

Well Tag: HO-95-0264

To Whom It May Concern:

A sample was collected from a yield test on April 3, 2006 and submitted to Florida Radiochemistry Services to assess the possible presence of Gross Alpha and Gross Beta in the future well water supply. Gross Alpha and Gross Beta measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which exists in your area of development within the County.

Results from this screening revealed a Gross Alpha of  $21.1 \pm 3.0$  picocuries/liter (pCi/L); while the Gross Beta level was  $17.7 \pm 2.0$  pCi/L. The Gross Alpha result was above its maximum contaminant level (MCL) of 15 pCi/L, while the Gross Beta level was below its MCL of 50 pCi/L.

Since the Gross Alpha finding exceeded its MCL, additional testing for Radium will be necessary prior to occupancy to verify existing levels. Alternatively, you may install treatment designed to reduce Gross Alpha, Gross Beta and Radium, plus provide post treated results confirming that levels are in conformance with existing standards. Treatment devices such as Reverse Osmosis and "softners" are generally effective in addressing this type of contaminant.

A copy of the test results is enclosed for your information. Please call this office at 410-313-1773 if you have any further questions or to discuss additional testing requirements.

Sincerely,

  
Bert Nixon, Deputy Director  
Bureau of Environmental Health

BN/bn

cc: Eric Dougherty, MDE Water Mgmt., Groundwater  
Well & Septic property file

# 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 #: 96327 Account #: 4470  
Reference: Clarksville Preserve Lot 21 Company: Williamsburg Homes LLC  
Location: 6255 Heather Glen Way Requested By: Bob Corbett  
Clarksville, MD 21029 Source: Well Water  
Date/ Time Collected: 9/19/2014 1155 Site: Kitchen Island Sink  
Date/Time Rec'd: 9/19/2014 1500 Treatment: Softener  
Chlorine ppm: Free: ND Total: ND pH: 6.6  
Collected By: C. Holland 0547CH Well #: HO-95-0264

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Radium-226	0.3	pCi/L	****	903.1	9/30/2014 / 1057 / MJN
Radium-228	<1.0	pCi/L	****	Ra-05	9/30/2014 / 1228 / SN
Gross Alpha, Long Term	2.0	pCi/L	15	900.0	9/24/2014 / 1013 / MJN
Gross Beta, Long Term	3.1	pCi/L	50	900.0	9/24/2014 / 1013 / MJN

*Radium  
OK  
12-16-14*

### NOTES

- \*\*\*\*Radium 226 and Radium 228 combined have a reference of 5 pCi/L
- Gross Alpha Detection Limit: 1.1 pCi/L; Gross Beta Detection Limit: 1.7 pCi/L
- pCi/L = picocuries per liter
- Radium 226 Detection Limit: 0.2 pCi/L; Radium 228 Detection Limit: 1.0 pCi/L
- Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- Sub-contracted to Reference Lab #278
- ND:None Detected
- Visual well check: Sealed, vented cap
- pH & Chlorine level tested on site

Reason for Test : Use & Occupancy

Building Permit # : B13004595

Date Reported: 10/10/2014

# 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 #: 95985 Account #: 4470  
Reference: Clarksville Preserves Lot 21 Company: Williamsburg Homes LLC  
Location: 6255 Heather Glen Way Requested By: Bob Corbett  
Clarksville, MD 21029 Source: Well Water  
Date/ Time Collected: 9/3/2014 1120 Site: Powder Room  
Date/Time Rec'd: 9/3/2014 1235 Treatment: None  
Chlorine ppm: Free: ND Total: ND pH: 6.3  
Collected By: J. Yeager 6176JY Well #: HO-95-0264

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/100 ml	<1.0	SM18 9223	9/4/2014 / 0930 / CCH
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	9/4/2014 / 0930 / CCH

OK  
reb. 9/2/2014

### 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 Visual well check: Sealed, vented cap
- 5 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy  
Building Permit # : B13004595

Date Reported: 9/4/2014

# 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 #: 95570 Account #: 4470  
Reference: Clarksville Preserves Lot 21 Company: Williamsburg Homes LLC  
Location: 6255 Heather Glen Way Requested By: Bob Corbett  
Clarksville, MD 21029 Source: Well Water  
Date/ Time Collected: 8/8/2014 1250 Site: Pressure Tank  
Date/Time Rec'd: 8/8/2014 1435 Treatment: None  
Chlorine ppm: Free: ND Total: ND pH: 6.8  
Collected By: C. Mooshian 7268CM Well #: HO-95-0264

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	15.0	MPN/ 100 ml	<1.0	SM18 9223	8/9/2014 / 1600 / BCD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	8/9/2014 / 1600 / BCD
Nitrate	4.71	mg/L	10	601	8/8/2014 / 1600 / CRS
Turbidity	3.17	NTU	<10	SM18 2130B	8/8/2014 / 1630 / CRS
Sand	NS	mg/L	5	Visual/Gravimetric	8/8/2014 / 1630 / CRS

*Bacteria FAIL  
others OK. vcd. 9/12/2014*

### 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 Visual well check: Sealed, vented cap
- 8 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy

Building Permit # : B13004595

Date Reported: 8/11/2014