

C1 16619

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)

FILL IN THIS FORM COMPLETELY PLEASE TYPE

COUNTY NUMBER 13

ST/CO USE ONLY DATE RECEIVED MM DD YY 06 05 12

DATE WELL COMPLETED MM DD YY 5 27 12

Depth of Well 22 293 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-95-2256

OWNER Group Williamsburg
WELL SITE ADDRESS 11986 Hall Shop Rd. TOWN Clarksville
SUBDIVISION BLEVINS PLO. SECTION LOT 3

WELL LOG Not required for driven wells

GROUTING RECORD WELL HAS BEEN GROUDED (Y) (N) 44 44

C3 PUMPING TEST

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

TYPE OF GROUTING MATERIAL (Circle one) CEMENT (CM) BENTONITE CLAY (BC)

HOURS PUMPED (nearest hour) 03

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Rows include: Yel-red soil-Lomady (0-28), red Brown mica (28-33), Yel-Brown mica (33-59), gray mica Brown (59-85), Gneiss (85-278), quartzite (278-293).

NO. OF BAGS 35 NO. OF POUNDS 3290
GALLONS OF WATER 210
DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 85 ft.

PUMPING RATE (gal. per min.) 8
METHOD USED TO MEASURE PUMPING RATE 190L

CASING RECORD casing types insert appropriate code below (ST) (CO) (PL) (OT)

WATER LEVEL (distance from land surface) BEFORE PUMPING 65 ft. WHEN PUMPING 154 ft.

MAIN CASING TYPE Nominal diameter top (main) casing (nearest inch)! Total depth of main casing (nearest foot) ST 06 87

TYPE OF PUMP USED (for test) (A) air (P) piston (T) turbine (C) centrifugal (R) rotary (O) other (J) jet (S) submersible

OTHER CASING (if used) diameter inch depth (feet) from to

PUMP INSTALLED DRILLER INSTALLED PUMP (CIRCLE) (YES) (NO)

NUMBER OF UNSUCCESSFUL WELLS: 0

C2 DEPTH (nearest ft.) 293

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. CAPACITY: GALLONS PER MINUTE (to nearest gallon) 34

WELL HYDROFRACTURED (Y) (N)

SCREEN RECORD screen type or open hole (ST) (BR) (HO) (PL) (OT)

PUMP HORSE POWER 37 41

CIRCLE APPROPRIATE LETTER A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED

SLOT SIZE 1 2 3

PUMP COLUMN LENGTH (nearest ft.) 43 47

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 28.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT...

DIAMETER OF SCREEN (NEAREST INCH) 56 60

CASING HEIGHT (circle appropriate box and enter casing height) (+) above () below 02 (nearest foot)

DRILLERS LIC. NO. M SD 0019
DRILLERS SIGNATURE
LIC. NO. D

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68
MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) (E.R.O.S.) W Q

LATITUDE 3 9.111209
LONGITUDE 7 6.555557
(DEFAULT COORD. WGS 84)
NOTES:

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

TELESCOPE CASING LOG INDICATOR OTHER DATA

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: Fogle's Well Drilling LLC Telephone #: 410 795 9070
Address: J PO Box 702
Wileysville, 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 # MSD2226
*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 #: 410-977-3345
Subdivision: ESTATES @ CLARKSVILLE Lot #: 3 Well Tag #: HO-95-2274
Site Address: 11017 Blevins Dr 2256
CLARKSVILLE, MD 21029

<u>Submersible Pump Data</u>	<u>Pitless Adapter</u>	<u>Well Cap and Electric Conduit</u>
Make: <u>Grundfos</u>	Make: <u>Clayco #11</u>	Two piece watertight cap: <u>YES</u>
Model #: <u>155AEDT-180</u>	Model #: <u>N/A</u>	Screened, vented well cap: <u>YES</u>
Pump Capacity <u>15</u> GPM	Depth: <u>36"</u> (36" min)	Cap secured to casing: <u>YES</u>
Well Yield: <u>4.6</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>245</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 adaptor or other acceptable method inside of well casing N/A

<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>200</u> (160 psi min)	Length of sleeve (5' minimum from foundation): <u>6'</u>
Depth of supply line: <u>36"</u> (36" min)	Sleeve sealed properly: <u>YES</u>

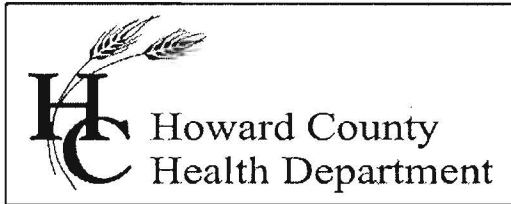
The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Signature of company representative responsible for installation: David Fogle date: 7/16/16

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

Date Insp. Requested: <u>7/7/16</u>	Date Insp. Approved: <u>7/7/16</u>	Inspector: <u>SC</u>
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 18" 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"/>

3'
well line
electric for house
runs between
well line + driveway
- crosses over near
house
sleeve under driveway



Bureau of Environmental Health

8930 Stanford Blvd., Columbia, MD 21046-2147

Main: 410-313-1774 | 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

INTERIM CERTIFICATE OF POTABILITY

Expiration Date – MARCH 13, 2017

September 13, 2016

Homeowner
11017 Blevins Drive
Clarksville, MD 21029

**RE: Blevins Property, Lot 3
11017 Blevins Drive
Building Permit: B15005310
Well Permit: HO-95-2256**

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 **9/9/2016**. Final approval of the well line connection to the dwelling was granted on **7/7/2016**. The well construction was completed on **5/3/2012**. Water samples were collected on **5/16/2016 & 8/8/2016**.

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 **3/5/2011**. Results showed a Radium 226 of **23.7 ± 3.5 pCi/L** and Radium 228 of **13.7 ± 2.5 pCi/L**. Radium 226 and Radium 228 results have a combined reference level of 5 pCi/L respectively which is below the targeted level. At the time of testing and with respect to these parameters, the well water is safe for all uses.

After installation of a radionuclide removal device (Reverse Osmosis), post-treatment water samples were collected on **5/16/2016** and indicated a combined Radium 226/228 level of **0.9 ± 0.0 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 26.04.04.33G Enforcement and Environment Article 9-1311, Annotated Code of Maryland.**

Volatile organic compound (VOC) sample was collected on **5/21/2012** respectively. This testing was performed to establish a baseline evaluation of the well water supply in the area due to known VOC ground water contamination concerns. Results from this sampling did not show any presence of VOC contamination. With respect to the parameters and guidelines of the EPA National Primary Drinking Water Regulations, the future well water supply is currently safe for all uses.

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-95-2256. 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 as well as a post-treated iron 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 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>

In closing, please refer to our "Homeowner Fact Sheet" for understanding your Best Available Technology (BAT) for your onsite sewage disposal. You will also find a link to Maryland Department of the Environments website which elaborates in further detail operation and maintenance of your BAT.

Approving Authority,



Kevin M Wolf, L.E.H.S., REHS/RS, Supervisor
Groundwater Management Section
Well & Septic Program

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

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. • Westminster, MD 21158 • MD State Certification #133

(410) 848-1014 • (410) 876-4554 • FAX (410) 848-0298

VOLATILE ORGANIC WATER ANALYSIS REPORT

LAB ID # 109605

Location:	Estates at Clarksville Lot 3 11017 Blevins Drive Clarksville, MD 21029	Work Order #	72468
Date & Time Collected:	8/26/16 1107	Requested by	Bob Corbett
Collected by:	R. Ott 4269RO	Source:	Well, HO-95-2256
		Site:	Test Port after Treatment
		Treatment:	Carbon/Softener

CONTAMINANT	EPA CONT ID	MCL (PPB)	ACTUAL LEVEL	CONTAMINANT	EPA CONT ID	ACTUAL LEVEL
REGULATED				UNREGULATED		
Benzene	2990	5	ND	Bromobenzene	2993	ND
Carbon Tetrachloride	2982	5	ND	Bromochloromethane	2430	ND
o-Dichlorobenzene	2968	600	ND	Bromomethane	2214	ND
p-Dichlorobenzene	2969	75	ND	n-Butylbenzene	2422	ND
1,2-Dichloroethane	2980	5	ND	Sec-butylbenzene	2428	ND
1, 1-Dichloroethene	2977	7	ND	Tert-butylbenzene	2426	ND
cis-1,2-Dichloroethene	2380	70	ND	Chloroethane	2216	ND
trans-1,2-Dichloroethene	2979	100	ND	o-Chlorotoluene	2965	ND
Dichloromethane	2964	5	ND	p-Chlorotoluene	2966	ND
1,2-Dichloropropane	2983	5	ND	m-Dichlorobenzene	2967	ND
Ethylbenzene	2992	700	ND	1,1 -Dichloroethane	2978	ND
Monochlorobenzene	2989	100	ND	1,3-Dichloropropane	2412	ND
Styrene	2996	100	ND	2,2-Dichloropropane	2416	ND
Tetrachloroethene (PCE)	2987	5	ND	1,1 -Dichloropropene	2410	ND
Toluene	2991	1000	ND	cis-1,3-Dichloropropene	2413	ND
1,2,4-Trichlorobenzene	2378	70	ND	trans-1,3-Dichloropropene	2413	ND
1,1,1-Trichloroethane	2981	200	ND	Dichlorodifluoromethane	2212	ND
1,1,2-Trichloroethane	2985	5	ND	Hexachlorobutadiene	2246	ND
Trichloroethene (TCE)	2984	5	ND	Isopropylbenzene	2994	ND
Vinyl Chloride	2976	2	ND	p-Isopropyltoluene	2030	ND
Xylenes (Total)	2955	10000	ND	MTBE	2251	ND
				Naphthalene	2248	ND
				n-Propylbenzene	2998	ND
TRIHALOMETHANES				1,1,1,2-Tetrachloroethane	2986	ND
Bromodichloromethane	2943		ND	1,1 2,2-Tetrachloroethane	2988	ND
Bromoform	2942		ND	1,2,3-Trichlorobenzene	2420	ND
Chloroform	2941		ND	Trichlorofluoromethane	2218	ND
Dibromochloromethane	2944		ND	1 2,3-Trichloropropane	2414	ND
				1,2,4-Trimethylbenzene	2418	ND
ADDITIONAL COMPOUNDS				1,3,5-Trimethylbenzene	2424	ND
TAME			ND	m, p-xylene	2995	ND
Chloromethane			ND	o-xylene	2997	ND
Dibromomethane			ND			

NOTES:

- 1) MCL: Maximum Contaminant Level
- 2) Detection limit: 0.50 PPB
- 3) ND: None Detected
- 4) PPB: Parts Per Billion (micrograms per liter)
- 5) Sub-contracted to Lab #128, method EPA 524.2, Date Analyzed: 9/1/16, Tech: CPK

Date Reported: 9/9/16

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 #: 107384 Account #: 1930
Reference: Toll Brothers Lot 46 Company: Fogle's Well Drilling
Location: 11211 Independence Way Requested By: Dave Fogle
Ellicott City, MD 21042 Source: Well Water
Date/ Time Collected: 5/16/2016 1433 Site: R/O Tap ✓
Date/Time Rec'd: 5/16/2016 1500 Treatment: Reverse Osmosis
Chlorine ppm: Free: ND Total: ND pH: 6.0 ✓
Collected By: J. Fogle 1974JF Well #: N/A

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Long Term	<1.3	pCi/L	15	900.0	5/19/2016 / 0638 / MJN
Gross Beta, Long Term	3.8	pCi/L	50	900.0	5/19/2016 / 0638 / MJN
Gross Alpha, Short Term	<0.8	pCi/L	15	900.0	5/26/2016 / 0616 / MJN
Gross Beta, Short Term	4.6	pCi/L	50	900.0	5/26/2016 / 0616 / MJN
Radium-226	<0.2	pCi/L	****	903.1	5/25/2016 / 1104 / MJN
Radium-228	<0.7	pCi/L	****	Ra-05	5/22/2016 / 1142 / SN

OK

NOTES

- ****Radium 226 and Radium 228 combined have a reference of 5 pCi/L
- Long Term Gross Alpha Detection Limit: 0.8 pCi/L; Long Term Gross Beta Detection Limit: 1.6 pCi/L
- pCi/L = picocuries per liter
- Radium 226 Detection Limit: 0.2 pCi/L; Radium 228 Detection Limit: 0.7 pCi/L
- Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- Short Term Gross Alpha Detection Limit: 1.3 pCi/L; Short Term Gross Beta Detection Limit: 1.7 pCi/L
- Subcontracted to Reference Lab
- ND = None Detected; N/A: Not Available
- Sample collected by client, analyzed as received
- pH and Chlorine level tested in lab

Reason for Test : Use & Occupancy
Building Permit # : B15002174

Date Reported: 5/31/2016

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 #: 109384 Account #: 4470
Reference: Estates at Clarksville Lot 3 Company: Williamsburg Homes LLC
Location: 11017 Blevins Drive Requested By: Bob Corbett
Clarksville, MD 21029 Source: Well Water
Date/ Time Collected: 8/16/2016 1400 Site: Test Port
Date/Time Rec'd: 8/16/2016 1535 Treatment: Neutralizer/Softener
Chlorine ppm: Free: ND Total: ND pH: 8.1
Collected By: T. Frazier 3126TF Well #: HO-95-2256

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Short Term	3.5	pCi/L	15	900.0	8/19/2016 / 1001 / MJN
Gross Beta, Short Term	3.7	pCi/L	50	900.0	8/19/2016 / 1001 / MJN

NOTES

- 1 Gross Alpha Detection Limit: 2.0 pCi/L; Gross Beta Detection Limit: 2.5 pCi/L
- 2 pCi/L = picocuries per liter
- 3 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 4 Sample collected by client, analyzed as received
- 5 Sub-contracted to Reference Lab #278
- 6 ND:None Detected
- 7 pH & Chlorine level tested on site
- 8 Visual well check: Sealed, vented cap

Reason for Test : Use & Occupancy

Building Permit # : B15005310

Date Reported: 8/22/2016

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 #: 109173 Account #: 4470
Reference: Estates at Clarksville Lot 3 Company: Williamsburg Homes LLC
Location: 11017 Blevins Drive Requested By: Bob Corbett
Clarksville, MD 21029 Source: Well Water
Date/ Time Collected: 8/8/2016 — 1200 Site: Pressure Tank
Date/Time Rec'd: 8/8/2016 1300 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.9
Collected By: J. Yeager 6176JY Well #: HO-95-2256

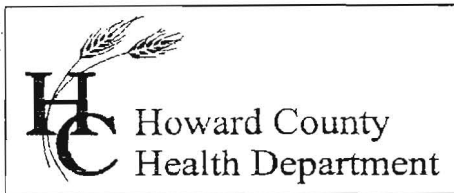
PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	8/9/2016 / 0800 / CCH
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	8/9/2016 / 0800 / CCH
Nitrate	<1.0	mg/L	10	601	8/9/2016 / 0930 / CRS
Turbidity	4.25	NTU	<10	SM18 2130B	8/9/2016 / 1000 / CRS
Sand	NS	mg/L	5	Visual/Gravimetric	8/9/2016 / 1000 / CRS

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

Reason for Test : Use & Occupancy
Building Permit # : B15005310

Date Reported: 8/9/2016



Bureau of Environmental Health
7178 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

Peter L. Beilenson, M.D., M.P.H., Health Officer

April 24, 2012

Williamsburg Homes
Attn. Bob Corbett
5485 Harpers Farm Road, Suite 200
Columbia, Maryland 21044

RE: Blevin's Property Lot 4/3
Hall Shop Road
Well Tag: HO - 95 - 2256

Dear Mr. Corbett:

A sample was collected during a yield test on March 15, 2011 and submitted to the Department of Health & Mental Hygiene Laboratories 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 23.7 ± 3.5 picocuries/liter (pCi/L), while the **Gross Beta** level was 13.7 ± 2.5 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 targeted value of 50 pCi/L (roughly equivalent to the **annual dose rate** of 4 millirems/year).

At the time of testing and with respect to these parameters, the future well water supply **does not** meet EPA regulatory standards. Additional testing for these parameters, plus Radium 226 and Radium 228 will be required to secure the future Use & Occupancy. Given the elevated finding for both **Gross Alpha** and marginally higher than typical **Gross Beta**, the installation of a water softener system and / or a reverse osmosis system may be necessary. **Post short and long term Gross Alpha and Beta, plus a post Radium 226 / 228** will be needed to properly evaluate the effectiveness of the installed treatment. Given that it typically takes up to one month to perform and receive back the **Radium** analyses, plan accordingly. However, please note that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

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.

Sincerely,

Bert Nixon, Director
Bureau of Environmental Health

Enclosure
cc: Barry Glotfelty, MDE Water Mgmt.
Well & Septic property file

Send Report To:

Howard County Health Dept.
7179 Columbia Gateway Dr.
Columbia, MD 21046

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

E002331 16

LABORATORY ANALYSIS REQUEST

Sample Bottle No. A: HO-95-2256 No. B: _____ Field Blank Bottle No. 1: _____ No B: _____

Plant/Site Name: Hall Shop Rd Blevins Prop. lot 4 County: Howard

Sample Source: HO-95-2256 yield test Location: yield test / well HO-95-2256
Test well (well no, lab sink, sample tap, etc.)

County: Plant No.

CHECK (one per box)

Drinking Water
Landfill
Stream
Other

Community
Non-community
Private
Other

Source (raw water)
Distribution (treated)
MCL

Emergency
Routine
Recheck
Special

Collector: R. Bricker

Telephone No.: 410-313-1771

Date Collected: 3/15/12

Time Collected: _____ a.m. 1:30 p.m.

Nitric Acid Preserved: Yes No

Iced: Yes No

Submitters Code:

Federal Project:

Field Data: _____ pH _____ Chlorine _____

Remarks: Sample preserved w/ HCl3
Duplicate 2 25.5 ± 3.6 β 15.0 ± 2.5

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Analyzed	Date Reported
✓	Gross Alpha	4000	2331	23.7 ± 3.5	3/20/12	3/21/12
✓	Gross Beta	4100	2331	13.7 ± 2.5	1	"
	Radon-222 Bottle A	4004				
	Radon-222 Bottle B	4004				
	Field Blank #A	4004				
	Field Blank #B	4004				
	Tritium					
	Ra - 226	4020				
	Ra - 228	4030				
	Total Uranium	4006				

Date Received: 3/16/12

Supervisor: [Signature]

Tel. No.: (410) 767 - 5537 Fax No.: (410) 333- 5373

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. • Westminster, MD 21158 • MD State Certification #133

(410) 848-1014 • (410) 876-4554 • FAX (410) 848-0298

VOLATILE ORGANIC WATER ANALYSIS REPORT

LAB ID # 83429

Location:	Williamsburg Group LLC 11986 Hall Shop Road Clarksville, MD 21029	Work Order #	45186
Date & Time Collected:	03/01/12 0925	Requested by	Bob Corbett
Collected by:	C. Mooshian 7268CM	Source:	Well, HO-95-2256, Lot 4
		Site:	Raw Well/ Bailer
		Treatment:	None

CONTAMINANT	EPA CONT ID	MCL (PPB)	ACTUAL LEVEL	CONTAMINANT	EPA CONT ID	ACTUAL LEVEL
REGULATED				UNREGULATED		
Benzene	2990	5	ND	Bromobenzene	2993	ND
Carbon Tetrachloride	2982	5	ND	Bromochloromethane	2430	ND
o-Dichlorobenzene	2968	600	ND	Bromomethane	2214	ND
p-Dichlorobenzene	2969	75	ND	n-Butylbenzene	2422	ND
1,2-Dichloroethane	2980	5	ND	Sec-butylbenzene	2428	ND
1, 1-Dichloroethene	2977	7	ND	Tert-butylbenzene	2426	ND
cis-1,2-Dichloroethene	2380	70	ND	Chloroethane	2216	ND
trans-1,2-Dichloroethene	2979	100	ND	o-Chlorotoluene	2965	ND
Dichloromethane	2964	5	ND	p-Chlorotoluene	2966	ND
1,2-Dichloropropane	2983	5	ND	m-Dichlorobenzene	2967	ND
Ethylbenzene	2992	700	ND	1,1 -Dichloroethane	2978	ND
Monochlorobenzene	2989	100	ND	1,3-Dichloropropane	2412	ND
Styrene	2996	100	ND	2,2-Dichloropropane	2416	ND
Tetrachloroethene (PCE)	2987	5	ND	1,1 -Dichloropropene	2410	ND
Toluene	2991	1000	ND	cis-1,3-Dichloropropene	2413	ND
1,2,4-Trichlorobenzene	2378	70	ND	trans-1,3-Dichloropropene	2413	ND
1,1,1-Trichloroethane	2981	200	ND	Dichlorodifluoromethane	2212	ND
1,1,2-Trichloroethane	2985	5	ND	Hexachlorobutadiene	2246	ND
Trichloroethene (TCE)	2984	5	ND	Isopropylbenzene	2994	ND
Vinyl Chloride	2976	2	ND	p-Isopropyltoluene	2030	ND
Xylenes (Total)	2955	10000	ND	MTBE	2251	ND
				Naphthalene	2248	ND
				n-Propylbenzene	2998	ND
TRihalOMETHANES				1,1,1,2-Tetrachloroethane	2986	ND
Bromodichloromethane	2943		ND	1,1 2,2-Tetrachloroethane	2988	ND
Bromoform	2942		ND	1,2,3-Trichlorobenzene	2420	ND
Chloroform	2941		ND	Trichlorofluoromethane	2218	ND
Dibromochloromethane	2944		ND	1 2,3-Trichloropropane	2414	ND
				1,2,4-Trimethylbenzene	2418	ND
ADDITIONAL COMPOUNDS				1,3,5-Trimethylbenzene	2424	ND
TAME			ND	m, p-xylene	2995	ND
Chloromethane			ND	o-xylene	2997	ND

NOTES:

- 1) MCL: Maximum Contaminant Level
- 2) Detection limit: 0.50 PPB (except for Xylenes, meta/para:1.0 PPB; and Xylenes total:1.5 PPB)
- 3) ND: None Detected
- 4) PPB: Parts Per Billion (micrograms per liter)
- 5) Sub-contracted to Lab #128, method EPA 524.2, Date Analyzed: 02/10/12, Time Analyzed: 1947, Tech: MES
- 6) The Method Blank for method EPA 524.2 reported a value greater than the reporting level for the analyte 1,2,3-Trichlorobenzene.

Date Reported: 03/13/12

Reviewed by: 

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 #: 98902 Account #: 4470
 Reference: Williamsburg Group LLC Company: Williamsburg Homes LLC
 Location: 11986 Hall Shop Road Requested By: Bob Corbett
 Clarksville, MD 21029 Source: Well Water
 Date/ Time Collected: 2/10/2015 1201 Site: Pump Hose Lot 4
 Date/Time Rec'd: 2/11/2015 1032 Treatment: None
 Chlorine ppm: Free: ND Total: ND pH: 6.4
 Collected By: J. Yeager 6176JY Well #: HO-95-2256

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Long Term	34.0	pCi/L	15	900.0	2/17/2015 / 0640 / MJN
Gross Beta, Long Term	14.2	pCi/L	50	900.0	2/17/2015 / 0640 / MJN
Radium-226	3.7	pCi/L	****	903.1	2/23/2015 / 1003 / MJN
Radium-228	1.9	pCi/L	****	Ra-05	2/23/2015 / 1030 / SN

NOTES

- 1 ****Radium 226 and Radium 228 combined have a reference of 5 pCi/L
- 2 Gross Alpha Detection Limit: 1.1 pCi/L; Gross Beta Detection Limit: 1.9 pCi/L
- 3 pCi/L = picocuries per liter
- 4 Radium 226 Detection Limit: 0.2 pCi/L; Radium 228 Detection Limit: 0.9 pCi/L
- 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 Subcontracted to Reference Lab #278
- 8 pH & Chlorine level tested on site

Reason for Test : Client's InformationDate Reported: 2/25/2015*MD State Certification # 133*

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. • Westminster, MD 21158 • MD State Certification #133

(410) 848-1014 • (410) 876-4554 • FAX (410) 848-0298

VOLATILE ORGANIC WATER ANALYSIS REPORT

LAB ID # 83429

Location: Williamsburg Group LLC
11986 Hall Shop Road
Clarksville, MD 21029

Date & Time Collected: 03/01/12 0925

Collected by: C. Mooshian 7268CM

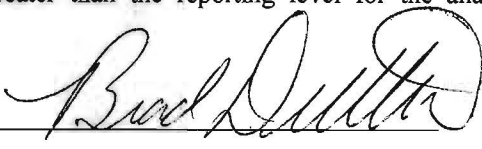
Work Order # 45186
Requested by: Bob Corbett
Source: Well, HO-95-2256, Lot 4 *Regolith*
Site: Raw Well/ Bailer
Treatment: None

CONTAMINANT	EPA CONT ID	MCL (PPB)	ACTUAL LEVEL	CONTAMINANT	EPA CONT ID	ACTUAL LEVEL
REGULATED				UNREGULATED		
Benzene	2990	5	ND	Bromobenzene	2993	ND
Carbon Tetrachloride	2982	5	ND	Bromochloromethane	2430	ND
o-Dichlorobenzene	2968	600	ND	Bromomethane	2214	ND
p-Dichlorobenzene	2969	75	ND	n-Butylbenzene	2422	ND
1,2-Dichloroethane	2980	5	ND	Sec-butylbenzene	2428	ND
1, 1-Dichloroethene	2977	7	ND	Tert-butylbenzene	2426	ND
cis-1,2-Dichloroethene	2380	70	ND	Chloroethane	2216	ND
trans-1,2-Dichloroethene	2979	100	ND	o-Chlorotoluene	2965	ND
Dichloromethane	2964	5	ND	p-Chlorotoluene	2966	ND
1,2-Dichloropropane	2983	5	ND	m-Dichlorobenzene	2967	ND
Ethylbenzene	2992	700	ND	1,1 -Dichloroethane	2978	ND
Monochlorobenzene	2989	100	ND	1,3-Dichloropropane	2412	ND
Styrene	2996	100	ND	2,2-Dichloropropane	2416	ND
Tetrachloroethene (PCE)	2987	5	ND	1,1 -Dichloropropene	2410	ND
Toluene	2991	1000	ND	cis-1,3-Dichloropropene	2413	ND
1,2,4-Trichlorobenzene	2378	70	ND	trans-1,3-Dichloropropene	2413	ND
1,1,1-Trichloroethane	2981	200	ND	Dichlorodifluoromethane	2212	ND
1,1,2-Trichloroethane	2985	5	ND	Hexachlorobutadiene	2246	ND
Trichloroethene (TCE)	2984	5	ND	Isopropylbenzene	2994	ND
Vinyl Chloride	2976	2	ND	p-Isopropyltoluene	2030	ND
Xylenes (Total)	2955	10000	ND	MTBE	2251	ND
TRIHALOMETHANES				Naphthalene	2248	ND
Bromodichloromethane	2943		ND	n-Propylbenzene	2998	ND
Bromoform	2942		ND	1,1,1,2-Tetrachloroethane	2986	ND
Chloroform	2941		ND	1,1 2,2-Tetrachloroethane	2988	ND
Dibromochloromethane	2944		ND	1,2,3-Trichlorobenzene	2420	ND
ADDITIONAL COMPOUNDS				Trichlorofluoromethane	2218	ND
TAME			ND	1 2,3-Trichloropropane	2414	ND
Chloromethane			ND	1,2,4-Trimethylbenzene	2418	ND
				1,3,5-Trimethylbenzene	2424	ND
				m, p-xylene	2995	ND
				o-xylene	2997	ND

NOTES:

- 1) MCL: Maximum Contaminant Level
- 2) Detection limit: 0.50 PPB (except for Xylenes, meta/para:1.0 PPB; and Xylenes total:1.5 PPB)
- 3) ND: None Detected
- 4) PPB: Parts Per Billion (micrograms per liter)
- 5) Sub-contracted to Lab #128, method EPA 524.2, Date Analyzed: 02/10/12, Time Analyzed: 1947, Tech: MES
- 6) The Method Blank for method EPA 524.2 reported a value greater than the reporting level for the analyte 1,2,3-Trichlorobenzene.

Date Reported: 03/13/12

Reviewed by: 

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. • Westminster, MD 21158 • MD State Certification #133

(410) 848-1014 • (410) 876-4554 • FAX (410) 848-0298

VOLATILE ORGANIC WATER ANALYSIS REPORT

LAB ID # **83482**

Location: Williamsburg Group LLC
11986 Hall Shop Road
Clarksville, MD 21029

Date & Time Collected: 03/05/12 0950

Collected by: J. Yeager 6176JY

Work Order # 45335
Requested by Bob Corbett
Source: Well, HO-95-2256, Lot 4
Site: Raw Well/ Bailer
Treatment: None

Bedrock Fracture

CONTAMINANT	EPA CONT ID	MCL (PPB)	ACTUAL LEVEL	CONTAMINANT	EPA CONT ID	ACTUAL LEVEL
REGULATED				UNREGULATED		
Benzene	2990	5	ND	Bromobenzene	2993	ND
Carbon Tetrachloride	2982	5	ND	Bromochloromethane	2430	ND
o-Dichlorobenzene	2968	600	ND	Bromomethane	2214	ND
p-Dichlorobenzene	2969	75	ND	n-Butylbenzene	2422	ND
1,2-Dichloroethane	2980	5	ND	Sec-butylbenzene	2428	ND
1, 1-Dichloroethene	2977	7	ND	Tert-butylbenzene	2426	ND
cis-1,2-Dichloroethene	2380	70	ND	Chloroethane	2216	ND
trans-1,2-Dichloroethene	2979	100	ND	o-Chlorotoluene	2965	ND
Dichloromethane	2964	5	ND	p-Chlorotoluene	2966	ND
1,2-Dichloropropane	2983	5	ND	m-Dichlorobenzene	2967	ND
Ethylbenzene	2992	700	ND	1,1 -Dichloroethane	2978	ND
Monochlorobenzene	2989	100	ND	1,3-Dichloropropane	2412	ND
Styrene	2996	100	ND	2,2-Dichloropropane	2416	ND
Tetrachloroethene (PCE)	2987	5	ND	1,1 -Dichloropropene	2410	ND
Toluene	2991	1000	ND	cis-1,3-Dichloropropene	2413	ND
1,2,4-Trichlorobenzene	2378	70	ND	trans-1,3-Dichloropropene	2413	ND
1,1,1-Trichloroethane	2981	200	ND	Dichlorodifluoromethane	2212	ND
1,1,2-Trichloroethane	2985	5	ND	Hexachlorobutadiene	2246	ND
Trichloroethene (TCE)	2984	5	ND	Isopropylbenzene	2994	ND
Vinyl Chloride	2976	2	ND	p-Isopropyltoluene	2030	ND
Xylenes (Total)	2955	10000	ND	MTBE	2251	ND
TRIHALOMETHANES				Naphthalene	2248	2.6
Bromodichloromethane	2943		ND	n-Propylbenzene	2998	ND
Bromoform	2942		ND	1,1,1,2-Tetrachloroethane	2986	ND
Chloroform	2941		ND	1,1 2,2-Tetrachloroethane	2988	ND
Dibromochloromethane	2944		ND	1,2,3-Trichlorobenzene	2420	ND
ADDITIONAL COMPOUNDS				Trichlorofluoromethane	2218	ND
TAME			ND	1 2,3-Trichloropropane	2414	ND
Chloromethane			ND	1,2,4-Trimethylbenzene	2418	ND
				1,3,5-Trimethylbenzene	2424	ND
				m, p-xylene	2995	ND
				o-xylene	2997	ND

NOTES:

- 1) MCL: Maximum Contaminant Level
- 2) Detection limit: 0.50 PPB (except for Xylenes, meta/para:1.0 PPB; and Xylenes total:1.5 PPB)
- 3) ND: None Detected
- 4) PPB: Parts Per Billion (micrograms per liter)
- 5) Sub-contracted to Lab #128, method EPA 524.2, Date Analyzed: 03/09/12, Time Analyzed: 2040, Tech: MES

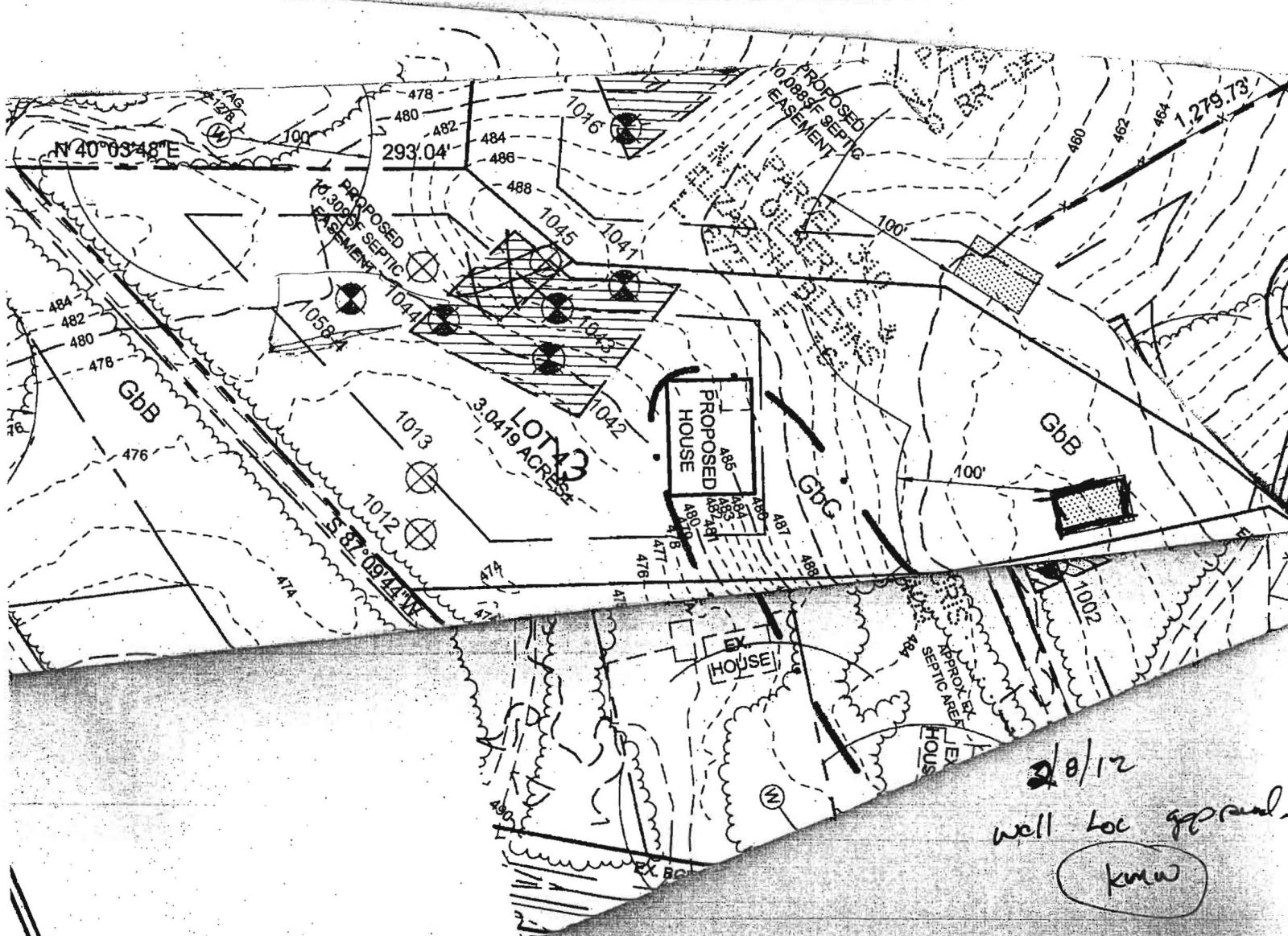
Date Reported: 03/13/12

Reviewed by: 

DO NOT REMOVE THIS TAG
DEPARTMENT OF THE ENVIRONMENT
WELL PERMIT NUMBER

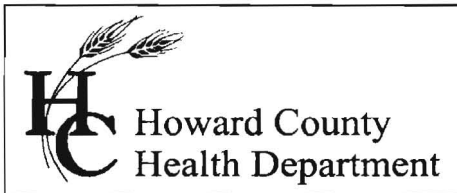
HO-95-2256

INFORMATION-GIVE NUMBER AND WRITE
1800 WASHINGTON BLVD.
BALTIMORE, MARYLAND 21230



2/8/12
well loc ground.

kmw



Bureau of Environmental Health
7178 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

Peter L. Beilenson, M.D., M.P.H., Health Officer

IMPORTANT

MEMORANDUM

TO: Fogle's Well Drilling
Attn: Allen Compton MSD009
FILE

FROM: Kevin M Wolf, R.S., R.E.H.S. *KMW*
Well and Septic Program
Groundwater Mgmt. Sec.

DATE: February 8th, 2012

RE: **Monitoring Wells**
Blevins Property, 11986 Hall Shop Rd.

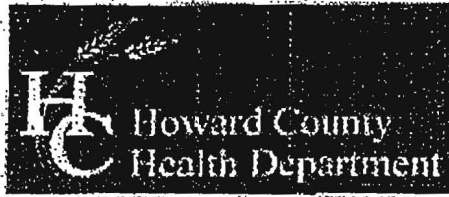
The following comments apply the above aforementioned monitoring well applications:

In order to preserve the quality of ground drinking water, a special condition has been set for these two monitoring wells. Health Department must be on site during drilling. The Health Department will be working with the Well Driller to determine where the depths of the fractures are encountered, type of rock encountered, depths to bedrock etc... These determinations may require upper strata to be sealed off temporary or for life of well. The final observations for these wells may include sampling from that particular water bearing fracture(s). Any deviations to this condition are to be prior approved by the Health Department.

Remember, pursuant to *COMAR 26.04.04.06 F. Procedure for Authorizing Conversions of Test Wells*, the Permittee of these test wells will have 60 days after completion to convert these two test wells into production wells. Applicant will need to provide written request to the Health Department for approval. After the 60 day period, if not converted to production wells, the test wells shall be sealed in accordance with Regulation *26.04.04.11*.

KMW

Cc: Bob Corbett, bobcorbett@williamsburgllc.com
file



Bureau of Environmental Health
 7178 Columbia Gateway Drive, Columbia, MD 21046-2147
 (410) 313-2640 Fax (410) 313-2648
 TDD (410) 313-2323 Toll Free 1-866-313-6360
 website: www.hchealth.org

Peter L. Beilenson, 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:

Well Site Location:
Blevins Property #4 Hall Shop Rd
 Subdivision/Property Name Lot# Road Name

- The well site has been staked by Sill-Adcock + Assoc.
 (professional land surveyor or company employing professional land surveyors)
 on 2-6-12 (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 3/11/05