

C 1 16677 SEQUENCE NO. (MDE USE ONLY) **STATE OF MARYLAND WELL COMPLETION REPORT** THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED. COUNTY NUMBER H 530034

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

MM DD YY MM DD YY 22 285 26 H0-75-2274

8 13 15 20 (TO NEAREST FOOT) 28 29 30 31 32 33 34 35 36 37

OWNER Williamsburg Homes WELL SITE ADDRESS Hall Ship rd. TOWN Clarksville SUBDIVISION BLUAINS PRO. SECTION 3 LOT 3

WELL LOG
Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed)	FEET		check if water bearing
	FROM	TO	
Red y Brown Loamy	0	55	
Gray GNCISS	55	278	
White Quartz	278	280	
Gray GNCISS	280	285	

GROUTING RECORD yes no
WELL HAS BEEN GROUTED (Circle Appropriate Box) **Y** **N**

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

NO. OF BAGS 20 NO. OF POUNDS 1800

GALLONS OF WATER 120

DEPTH OF GROUT SEAL (to nearest foot)
from 0 ft. to 38 ft.
48 TOP 52 ft. to 54 BOTTOM 58 ft.
(enter 0 if from surface)

CASING RECORD

main casing TYPE **PL** Nominal diameter top (main) casing (nearest inch) 06 Total depth of main casing (nearest foot) 60

60 61 63 64 66 67 70

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

SCREEN RECORD

screen type or open hole **HO** (insert appropriate code below)

STEEL **BR** BRASS **PL** PLASTIC **OT** OTHER

BRONZE **OT** OTHER

C 2 DEPTH (nearest ft.)

1 40 60 285

8 9 11 15 17 21

23 24 26 30 32 36

38 39 41 45 47 51

SLOT SIZE 1 _____ 2 _____ 3 _____

DIAMETER OF SCREEN _____ (NEAREST INCH) _____

56 60

from to

C 3 **PUMPING TEST**

HOURS PUMPED (nearest hour) 03

PUMPING RATE (gal. per min.) 4.6

METHOD USED TO MEASURE PUMPING RATE 199L

WATER LEVEL (distance from land surface)

BEFORE PUMPING 55 ft.

WHEN PUMPING 198 ft.

TYPE OF PUMP USED (for test)

A air **P** piston **T** turbine
C centrifugal **R** rotary **O** other (describe below)
J jet **S** submersible

PUMP INSTALLED

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

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. 29

CAPACITY: GALLONS PER MINUTE (to nearest gallon) _____ 31 _____ 35

PUMP HORSE POWER _____ 37 _____ 41

PUMP COLUMN LENGTH (nearest ft.) _____ 43 _____ 47

CASING HEIGHT (circle appropriate box and enter casing height)

+ above } LAND SURFACE
- below } 01 (nearest foot)

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED **Y** **N**

CIRCLE APPROPRIATE LETTER

A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED

E ELECTRIC LOG OBTAINED

P TEST WELL CONVERTED TO PRODUCTION WELL

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, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M 3 D 009

DRILLERS SIGNATURE Allen Compton

LIC. NO. D

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 88 _____ 88

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

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

B 1	0643	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type 53.792	STATE PERMIT NUMBER HO-95-2274 <small>fill in this form completely</small>
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OWNER INFORMATION

Date Received (APA) 04 05 12

8 MM DD YY 13

15 Last Name Williamsburg Owner First Name Homes 34

36 Street or RFD 5485 Harpers Farm rd. 55

57 Town Columbia MD 70 State MD 72 Zip 21044 76

B 3 LOCATION OF WELL

8 COUNTY Howard 21

23 SUBDIVISION BLEVINS PRO. 42

SECTION 44 46 LOT 3 50

52 NEAREST TOWN Clarksville 71

DRILLER INFORMATION

Driller's Name Allen Compton 76 License No. MSD 009 81

Firm Name Fogles Well Drilling

Address 580 Obrecht rd. Sykesville

Signature Allen Compton Date 4-3-12

B 4 SOURCES OF DRILLING WATER

11 STREET ADDRESS Hall shop rd 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

NORTH
 WEST EAST
 SOUTH

34 DISTANCE FROM ROAD 500 37

ENTER FT OR MI FT 38 39

TAX MAP: 35 BLK: 19 PARCEL 310

B 2 WELL INFORMATION

1 APPROX. PUMPING RATE 5 2

(GAL. PER MIN.) 8 500 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 500 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)

DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION

FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)

22 INDUSTRIAL, COMMERCIAL, DEWATERING

PUBLIC WATER SUPPLY WELL

TEST, OBSERVATION, MONITORING

OPEN LOOP GEOTHERMAL

CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard (13) A536034

COUNTY NAME COUNTY NO.

STATE SIGNATURE _____ INSERT S → 41

DATE ISSUED 4/12/12 4/12/12

43 MM DD YY 48 CO SIGNATURE EXP. DATE

APPROXIMATE DEPTH OF WELL 300 FEET 24 28

APPROXIMATE DIAMETER OF WELL 6 NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN

30 AIR-ROTary AIR-PERCussion ROTARY (Hydraulic Rotary)

37 CABLE REVerse-ROTary DRive-POINT

other _____

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

THIS WELL WILL NOT REPLACE AN EXISTING WELL

THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED

39 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 DEEPEM AN EXISTING WELL

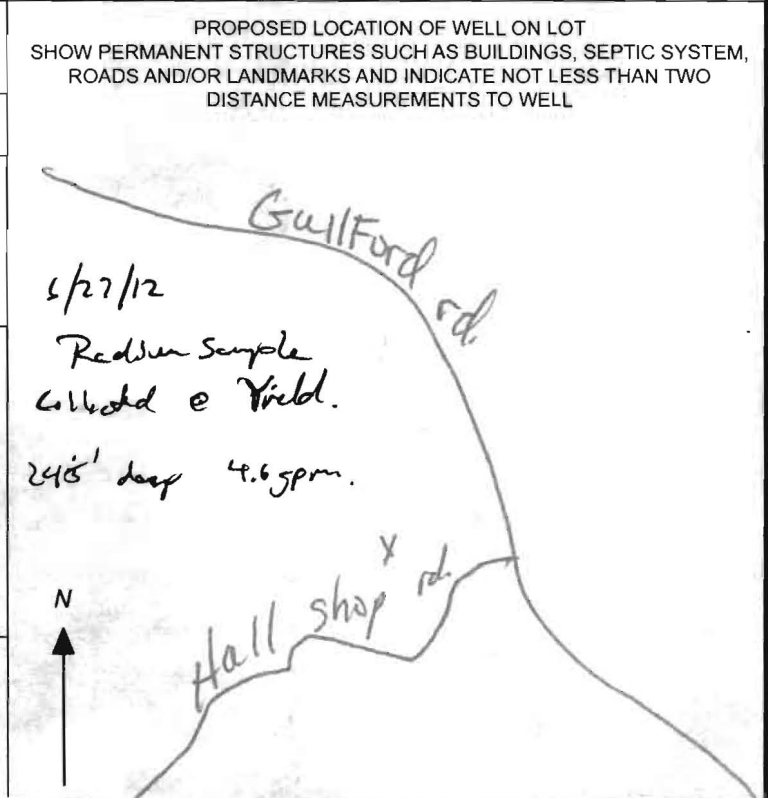
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 _____ 52

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

APPROP. PERMIT NUMBER _____ G _____

PERMIT No. HO-95-2274

70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS Radius Sample Needed.

NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED.

FIELD DATA SHEET
HOWARD COUNTY WELL YIELD TEST

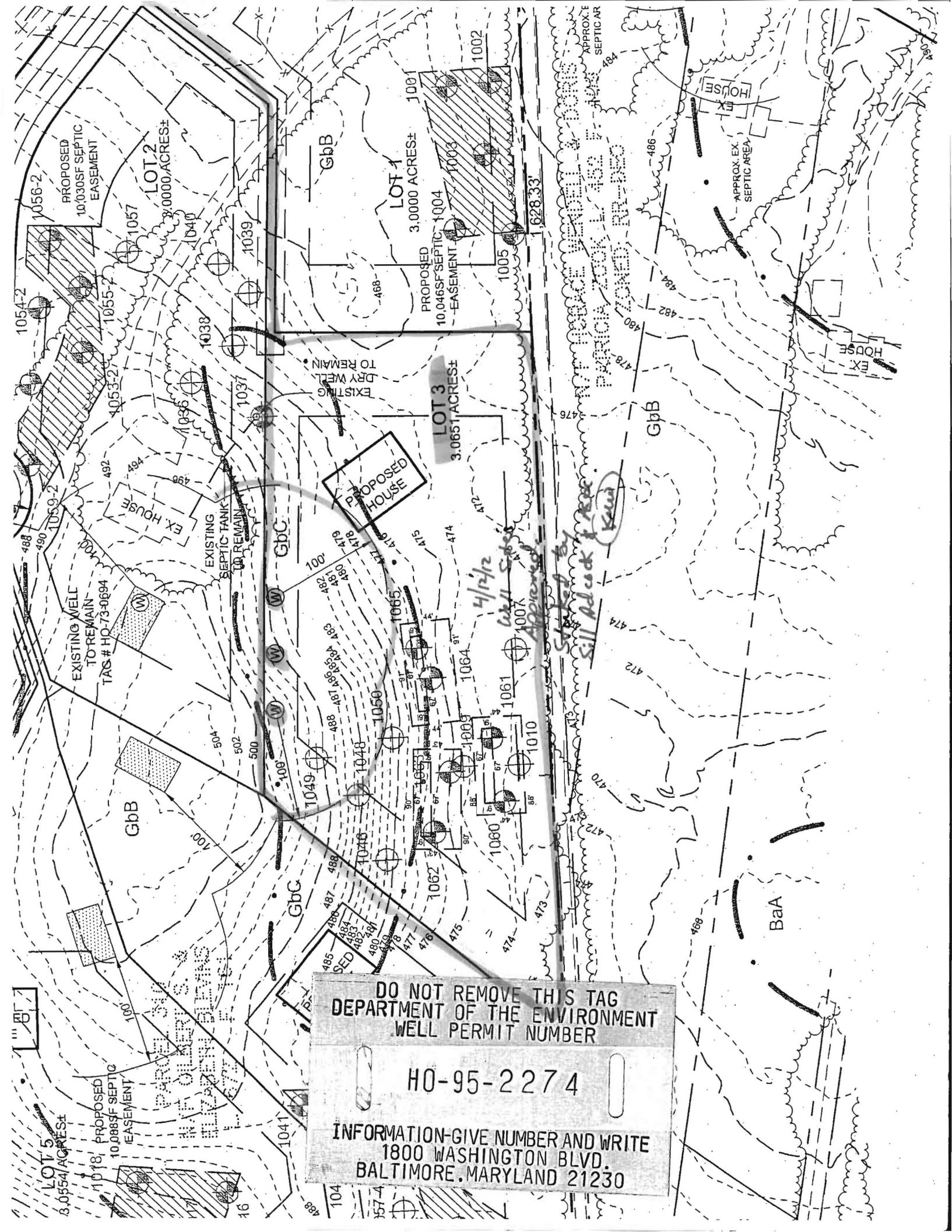
Well Permit No. HO - 95-2274
 Location of property (road) Hall Shop RD
 Subdivision Blevins Property Lot 3 Block _____ Plat _____ Sec. _____
 Well Driller Fogles - Allen Crompton Owner Williamsburg Homes
 Depth of well 285'
 Distance of measuring point (M.P.) above ground 1'
 Static water level (S.W.L.) below M.P. 55'

I. High rate pumping -- reservoir drawdown

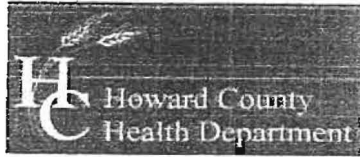
Time pump started 8:00 Pumping rate 12
 Total time 30 MIN. to reach pumping water level 198' ft. below M.P.

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 1 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
8:00	55'	5 seconds		12gpm
8:15	141'	6		10
8:30	198'	13		4.6
8:45	198'	13		4.6
9:00	198'	13		4.6
9:15	198'	13		4.6
9:30	198'	13		4.6
9:45	198'	13		4.6
10:00	198'	13		4.6
10:15	198'	13		4.6
10:30	198'	13		4.6
10:45	198'	13		4.6
11:00	198'	13		4.6
11:15	198'	13		4.6
11:30	198'	13		4.6



DO NOT REMOVE THIS TAG
 DEPARTMENT OF THE ENVIRONMENT
 WELL PERMIT NUMBER
 HO-95-2274
 INFORMATION-GIVE NUMBER AND WRITE
 1800 WASHINGTON BLVD.
 BALTIMORE, MARYLAND 21230



Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
(410) 313-2640 Fax (410) 313-2645
TDD (410) 313-2323 Toll Free 1-866-313-6300
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:

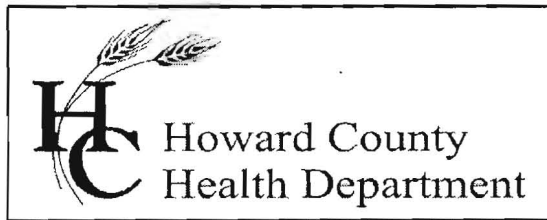
Well Site Location: Blevins 1-3-5-6-7
Subdivision/Property Name Lot# Road Name

The well site has been staked by Bill Adcock + Assoc.
(professional land surveyor or company employing professional (and surveyors))
on 4-4-12 (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



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](https://twitter.com/HowardCoHealthDep)

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

INTERIM CERTIFICATE OF POTABILITY

Expiration Date – May 10, 2017

November 10, 2016

Homeowner
11011 Blevins Drive
Clarksville, MD 21029

RE: Blevins Property, Lot 2
11011 Blevins Drive
Building Permit: B15004443
Well Permit: HO-95-2274

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 **11/9/2016**. Final approval of the well line connection to the dwelling was granted on **7/18/2016**. The well construction was completed on **6/27/2012**. Water samples were collected on **9/20/2016**.

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 collected on **6/27/2012**. Results showed a Gross Alpha level of **61.9 ± 6.1 pCi/L** and Gross Beta level of **26.7 ± 2.8 pCi/L**. **This exceeds the maximum contaminant limit (MCL) of 15 pCi/L and/or 50 pCi/L, respectively.**

After installation of a radionuclide removal device (Reverse Osmosis), post-treatment water samples were collected on **10/13/2016** and indicated a combined Radium 226/228 level of **1.0 ± 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 **10/13/2016** 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.

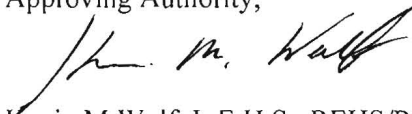
This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-95-2274. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

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

REPORT OF ANALYSIS

Laboratory ID #: 110694 Account #: 4470
Reference: Estates @ Clarksville Lot 2 Company: Williamsburg Homes LLC
Location: 11011 Blevins Drive Requested By: Bob Corbett
Ellicott City, MD 21042 Source: Well Water
Date/ Time Collected: 10/13/2016 1238 Site: Test Port
Date/Time Rec'd: 10/13/2016 1615 Treatment: Softener/Carbon Filter
Chlorine ppm: Free: ND Total: ND pH: 7.0
Collected By: T. Frazier 3126TF Well #: HO-95-2274

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Short Term	<0.7	pCi/L	15	900.0	10/18/2016 / 1350 / MJN
Gross Beta, Short Term	2.2	pCi/L	50	900.0	10/18/2016 / 1350 / MJN
Gross Alpha, Long Term	<1.1	pCi/L	15	900.0	11/2/2016 / 0657 / MJN
Gross Beta, Short Term	3.9	pCi/L	50	900.0	11/2/2016 / 0657 / MJN
Radium-226	0.2	pCi/L	****	903.1	11/3/2016 / 1132 / MJN
Radium-228	<0.9	pCi/L	****	Ra-05	11/3/2016 / 1127 / SN

NOTES

- 1 Report Revised to show addition of Short Term Gross Beta, Long Term Gross Alpha/Beta & Radium 226/228. 11/4/16 BCD
- 2 ****Radium 226 and Radium 228 combined have a reference of 5 pCi/L
- 3 Long Term Gross Alpha Detection Limit: 1.1 pCi/L; Long Term Gross Beta Detection Limit: 1.8 pCi/L
- 4 pCi/L = picocuries per liter
- 5 Radium 226 Detection Limit: 0.2 pCi/L; Radium 228 Detection Limit: 0.9 pCi/L
- 6 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 7 Short Term Gross Alpha Detection Limit: 0.7 pCi/L; Short Term Gross Beta Detection Limit: 1.3 pCi/L
- 8 Sub-contracted to Reference Lab #278
- 9 ND:None Detected
- 10 Visual well check: Sealed, vented cap: Cap Appeared Satisfactory
- 11 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B15004443

Date Reported: 11/4/2016

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 # 110693**

Work Order #: 73493

Location:

Estates @ Clarksville Lot 2
11011 Blevins Drive
Ellicott City, MD 21042

Acct. Number: 4470

Requested by Williamsburg Homes, LLC

Source: Well

Date & Time Collected:

10/13/16 1240

Site: Test Port

Collected by:

T. Frazier 3126TF

Treatment: Softener/Carbon Filter

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		3.3	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
Dibromomethane			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: 0.5 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: 10/24/16, Tech: TMP

Date Reported: 10/31/16

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 #:	110694	Account #:	4470
Reference:	Estates @ Clarksville Lot 2	Company:	Williamsburg Homes LLC
Location:	11011 Blevins Drive	Requested By:	Bob Corbett
	Ellicott City, MD 21042	Source:	Well Water
Date/ Time Collected:	10/13/2016 1238	Site:	Test Port
Date/Time Rec'd:	10/13/2016 1615	Treatment:	Softener/Carbon Filter
Chlorine ppm:	Free: ND Total: ND	pH:	7.0
Collected By:	T. Frazier 3126TF	Well #:	HO-95-2274

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Short Term	<0.7	pCi/L	15	900.0	10/18/2016 / 1350 / MJN

NOTES

- 1 Gross Alpha Detection Limit: 0.7 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 Sub-contracted to Reference Lab #278
- 5 ND:None Detected
- 6 Visual well check: Sealed, vented cap
- 7 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B15004443

Date Reported: 10/20/2016

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 #: 110103 Account #: 4470
Reference: Estates @ Clarksville Lot 2 Company: Williamsburg Homes LLC
Location: 11011 Blevins Drive Requested By: Bob Corbett
Ellicott City, MD 21042 Source: Well Water
Date/ Time Collected: 9/20/2016 1046 Site: Pressure Tank
Date/Time Rec'd: 9/20/2016 1213 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.7
Collected By: J. Yeager 6176JY Well #: HO-95-2274

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	9/21/2016 / 0815 / CRS
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	9/21/2016 / 0815 / CRS
Nitrate	<1.0	mg/L	10	601	9/21/2016 / 0830 / CCH
Turbidity	0.92	NTU	<10	SM18 2130B	9/21/2016 / 0900 / CCH
Sand	NS	mg/L	5	Visual/Gravimetric	9/21/2016 / 0900 / CCH

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 # : B15004443

Date Reported: 9/21/2016

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 2021
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 #: MS507226
*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: ESTATE @ CLARKVILLE Lot #: 2 Well Tag #: EO-95-2274 ✓
Site Address: 1101 BREVINS DR
Clarksville, MD 21031

Submersible Pump Data Pitless Adapter Well Cap and Electric Conduit
Make: GRUNDFOSS Make: PRIMO II Two piece watertight cap: YES
Model #: 5500CT-140 Model #: N/A Screened, vented well cap: YES
Pump Capacity: 15 GPM Depth: 36" (36" min) Cap secured to casing: YES
Well Yield: 4.0 GPM NSF/WSC approved: YES Conduit min 18" B.G.: YES
Depth of well encountered at time of pump installation: 925 (feet) Conduit secured to well cap: YES
If pump capacity exceeds well yield, a low water cutoff 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 lass rope adapter or other acceptable method inside of well casing: N/A

Piping to house House Connection
Type: 1" BLACK POLY PIPE PVC recve to undisturbed soil at wall penetration: YES
PSI: 200/160 psi min Length of sleeves, minimum from foundation: 6'
Depth of supply line: 36" (36" min) 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: 7/15/16

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

Date Insp. Requested: 7/13/16 Date Insp. Approved: 7/15/16 Inspector: RE
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 ✓

⊕ observed the beginning of the sleeve under the downspout called fogles and found out it's 30 ft. of sleeve - already back filled at time of inspection. (RE) 7/15/16

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 # 85064

Location: Lot 3
11986 Hall Shop Road
Clarksville, MD 21029

Date & Time Collected: 06/27/12 0850
Collected by: C. Mooshian 7268CM

Work Order # 47075
Company Williamsburg Group LLC
Requested by Bob Corbett
Source: Well, HO-95-2274
Site: Raw Pump Hose
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	0.60	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: 07/05/12, Time Analyzed: 1723, Tech: TMP

Date Reported: 07/06/12

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 #: 85063 Account #: 4470
Reference: Williamsburg Group LLC Company: Williamsburg Group LLC
Location: 11986 Hall Shop Road Requested By: Bob Corbett
Clarksville, MD 21029 Source: Test Well Water Lot 3
Date/ Time Collected: 6/27/2012 0850 Site: Pump Hose
Date/Time Rec'd: 6/27/2012 1240 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.6
Collected By: J. Yeager 6176JY Well #: HO-95-2274

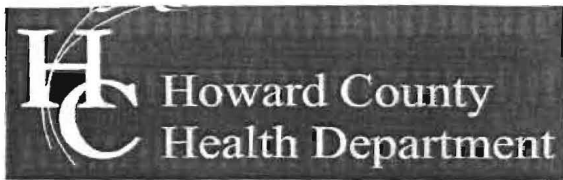
PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	7.5	MPN/ 100 ml	<1.0	SM18 9223	6/28/2012 / 0800 / CCH
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	6/28/2012 / 0800 / CCH
Nitrate	<1.0	mg/L	10	601	6/27/2012 / 1600 / CCH
Turbidity	7.70	NTU	<10	SM18 2130B	6/27/2012 / 1330 / JKW
Sand	NS	mg/L	5	Visual/Gravimetric	6/27/2012 / 1330 / JKW

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 and Chlorine level tested on site

Reason for Test : Client's Information

Date Reported: 6/28/2012



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

August 22, 2012

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

RE: Blevin's Property Lot 3
Hall Shop Road
Well Tag: HO - 95 - 2274

Dear Mr. Corbett:

A sample was collected during a yield test on June 27, 2012 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 61.9 ± 6.1 picocuries/liter (pCi/L), while the **Gross Beta** level was 26.7 ± 2.8 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 **Gross Alpha** and higher than normal finding for **Gross Beta, at a minimum**, the installation of a water softener system and / or a reverse osmosis system will be necessary. **Pre and 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(s). Given that it typically takes up to one month to perform and receive back the **Radium** analyses, plan accordingly. Please also 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:

Rest Nixon
Howard County Health Department
Bureau of Environmental Health
7178 Columbia Gateway Drive
Columbia, Maryland 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

E003067 328

LABORATORY ANALYSIS REQUEST

Sample Bottle No. A: HOKW 95 2274 No. B: Field Blank Bottle No. 1: FBKW 62711 No B:

Plant/Site Name: Blevins Prop - Lot 3 County: Howard

Sample Source: Hall Shop Rd. Location: HO-95-2274
(well no, lab sink, sample tap, etc.)

County: 1 3 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: K. Wolf

Telephone No.: 410-313-2645

Date Collected: 6/27/12

Time Collected: 10:45 a.m. p.m.

Nitric Acid Preserved: Yes No

Iced: Yes No

Submitters Code:

Federal Project:

Field Data: pH Chlorine

Remarks:

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Analyzed	Date Reported
✓	Gross Alpha	4000	3067	61.9 ± 6.1	6/29/12	7/2/12
✓	Gross Beta	4100	3067	26.7 ± 2.8	↓	↓
	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: 6/28/12

Supervisor: [Signature]

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

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 #: 85065 Account #: 4470
Reference: Williamsburg Group LLC Company: Williamsburg Group LLC
Location: 11986 Hall Shop Road Requested By: Bob Corbett
Clarksville, MD 21029 Source: Test Well Water Lot 3
Date/ Time Collected: 6/27/2012 0850 Site: Pump Hose
Date/Time Rec'd: 6/27/2012 1240 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.6
Collected By: J. Yeager 6176JY Well #: HO-95-2274

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Short Term	37.5	pCi/L	15	900.0	6/29/2012 / 0613 / MJN
Gross Beta, Short Term	20.6	pCi/L	50	900.0	6/29/2012 / 0613 / MJN
Radium-226	6.7	pCi/L	****	903.1	7/12/2012 / 1000 / MJN
Radium-228	4.6	pCi/L	****	Ra-05	7/12/2012 / 1112 / SN

NOTES

- ****Radium 226 and Radium 228 combined have a reference of 5 pCi/L
- Gross Alpha Detection Limit: 0.8 pCi/L; 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: 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.
- ND = None Detected
- Visual well check: Sealed, vented cap
- pH and Chlorine level tested on site

Reason for Test : Client's Information

Date Reported: 7/16/2012

MD State Certification # 133