

B 1 20784  
1 2 3 6

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND  
APPLICATION FOR PERMIT TO DRILL WELL  
546306-L please type

STATE PERMIT NUMBER  
HO - 14 - 0006  
70 fill in this form completely 79

Date Received (APA) 04/10/14  
OWNER INFORMATION  
8 MM DD YY 13  
15 Last Name Owner First Name 34  
1686 E Gude Dr  
36 Street or RFD 55  
Rockville MD 20850  
57 Town 70 State 72 Zip 76

B 3 LOCATION OF WELL  
Howard  
8 COUNTY 21  
Reagan Property  
23 SUBDIVISION 42  
SECTION 44 46 LOT 14 48 50  
Highland  
52 NEAREST TOWN 71

DRILLER INFORMATION  
Allen Compton MS D 009  
76 Driller's Name 81 License No.  
Fogle's Well Drilling, LLC  
Firm Name  
PO Box 202 Woodbine, MD 21797  
Address  
Signature Date 4-10-14

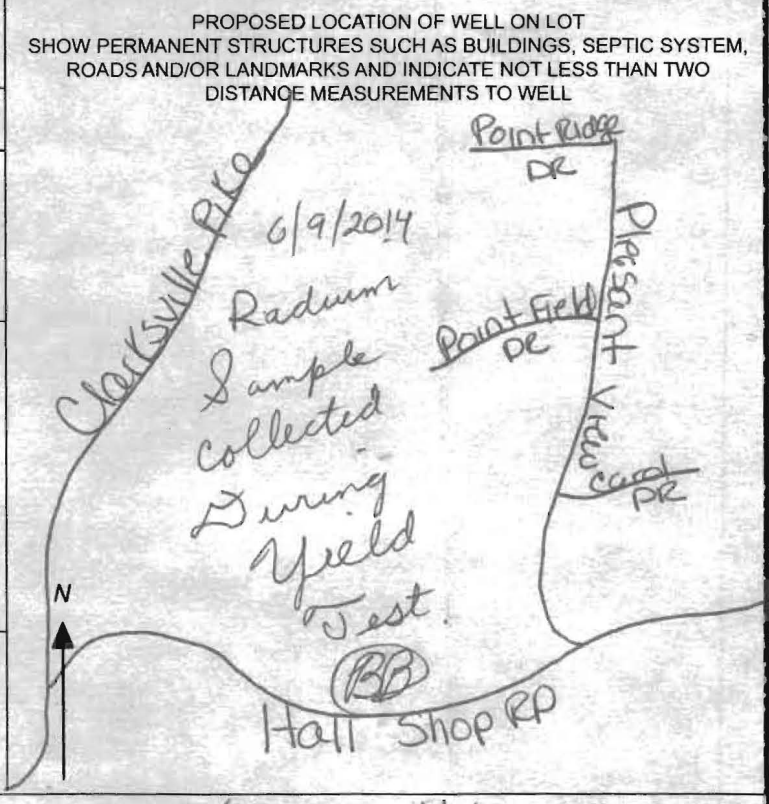
B 4 SOURCES OF DRILLING WATER  
1. Pleasant Spring Ct  
2. Point Ridge Dr  
3.  
11 STREET ADDRESS 30  
ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)  
NORTH N  
WEST W EAST E  
SOUTH S  
34 200 37  
DISTANCE FROM ROAD FT  
ENTER FT OR MI 38 39  
TAX MAP: BLK: PARCEL

B 2 WELL INFORMATION  
1 2 APPROX. PUMPING RATE 5  
(GAL. PER MIN.) 8 12  
AVERAGE DAILY QUANTITY NEEDED 500  
(GAL. PER DAY) 14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)  
 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 AS30307 13  
COUNTY NAME COUNTY NO.  
STATE SIGNATURE INSERT S 41  
DATE ISSUED 05/27/2014 RLT 5/27/15  
43 MM DD Y 48 CO SIGNATURE EXP. DATE

APPROXIMATE DEPTH OF WELL 300 FEET  
24 28  
APPROXIMATE DIAMETER OF WELL 6 INCH  
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 HO 2014 G 002  
PERMIT No. HO - 14 - 0006  
70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS  
NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED.  
Radium sample required @ the yield test

C1 16623

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

ST/CO USE ONLY DATE RECEIVED MM DD YY 07 17 14

DATE WELL COMPLETED MM DD YY 09 09 14

Depth of Well 225 (TO NEAREST FOOT)

09/09/14 OK KW

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-14-0006

OWNER: MBS Highland Reserve LLC; WELL SITE ADDRESS: Pleasant View Ct; TOWN: Highland; SUBDIVISION: Highland Reserve; SECTION: ; LOT: 14

WELL LOG Not required for driven wells

Table with columns: DESCRIPTION (Use additional sheets if needed), FEET (FROM, TO), check if water bearing. Rows: Brown Shale (0-19), Grey Limestone (19-180), Grey White (180-225)

GROUTING RECORD

WELL HAS BEEN GROUTED (Y) (N); TYPE OF GROUTING MATERIAL: CEMENT (CM), BENTONITE CLAY (BC); NO. OF BAGS: 10; NO. OF POUNDS: 450; GALLONS OF WATER: 60; DEPTH OF GROUT SEAL: 0 to 26 ft.

CASING RECORD: casing types insert appropriate code below; MAIN CASING TYPE: ST (STEEL); Nominal diameter: 06; Total depth: 27

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

SCREEN RECORD: screen type or open hole insert appropriate code below; SCREEN TYPE: HO (OPEN HOLE); DIAMETER OF SCREEN: 40; DEPTH (nearest ft.): 27, 225

PUMPING TEST

HOURS PUMPED (nearest hour): 03; PUMPING RATE (gal. per min.): 4; METHOD USED TO MEASURE PUMPING RATE: 1 gal; WATER LEVEL (distance from land surface) BEFORE PUMPING: 16 ft; WHEN PUMPING: 120 ft; TYPE OF PUMP USED (for test): S (submersible)

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...

DRILLERS LIC. NO.: M SD 009; DRILLERS SIGNATURE: [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) T (E.R.O.S.) W Q

PUMP INSTALLED

DRILLER INSTALLED PUMP: 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/below LAND SURFACE: 01 (nearest foot)

LATITUDE 39.1858777; LONGITUDE 76.9413834 (DEFAULT COORD. WGS 84)

NOTES:



**HOWARD COUNTY HEALTH DEPARTMENT  
BUREAU OF ENVIRONMENTAL HEALTH  
WATER AND SEWERAGE PROGRAM  
TEL: (410)313-2640 FAX: (410)313-2648**

FA  
11-25-15

**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: NATIONAL WATER SVC Telephone #: 301-854-1323  
Address: P.O. Box 138  
ASHTON MD 20861

(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 RYCKE      License# PI 0145

\*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: Mitchell + Best Telephone #: \_\_\_\_\_  
Subdivision: HIGHLAND RESERVE Lot #: 14 Well Tag #: HO-14-0006  
Site Address: 12210 PLEASANT SPRINGS CT  
FULTON MD 20757

<b>Submersible Pump Data</b>	<b>Pitless Adapter</b>	<b>Well Cap and Electric Conduit</b>
Make: <u>Grundfos</u>	Make: <u>Campbell</u>	Two piece watertight cap: <input checked="" type="checkbox"/>
Model #: <u>3/4 HP</u>	Model#: <u>PA 800</u>	Screened, vented well cap: <input checked="" type="checkbox"/>
Pump Capacity <u>7</u> GPM	Depth: <u>58</u> (36" min)	Cap secured to casing: <input checked="" type="checkbox"/>
Well Yield: <u>4</u> GPM	NSF approved: <input checked="" type="checkbox"/>	Conduit min 18" B.G.: <input checked="" type="checkbox"/>
Depth of well encountered at time of pump installation: <u>225</u> (feet)		Conduit secured to well cap: <input checked="" type="checkbox"/>

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 CRS  
Safety rope, if used, attached to inside of well casing with eye bolt N/A

<b>Piping to house</b>	<b>House Connection</b>
Type: <u>POLY</u>	PVC sleeved to undisturbed soil at wall penetration: <u>YES</u>
PSI: <u>160</u> (160 psi min)	Approximate length of sleeve: <u>5'</u>
Depth of supply line: <u>4'</u> (36" min)	Sleeve caulked and 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 \_\_\_\_\_ date 11-25-15

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

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

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: \_\_\_\_\_ 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 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: \_\_\_\_\_ Telephone #: \_\_\_\_\_  
 Subdivision: \_\_\_\_\_ Lot #: 14 Well Tag #: HO - 14 - 0006  
 Site Address: 12210 Pleasant Springs Ct.

<u>Submersible Pump Data</u>	<u>Pitless Adapter</u>	<u>Well Cap and Electric Conduit</u>
Make: _____	Make: _____	Two piece watertight cap: _____
Model #: _____	Model#: _____	Screened, vented well cap: _____
Pump Capacity _____ GPM	Depth: _____ (36" min)	Cap secured to casing: _____
Well Yield: _____ GPM	NSF/WSC approved: _____	Conduit min 18" B.G.: _____
Depth of well encountered at time of pump installation: _____ (feet)		Conduit secured to well cap: _____
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>		

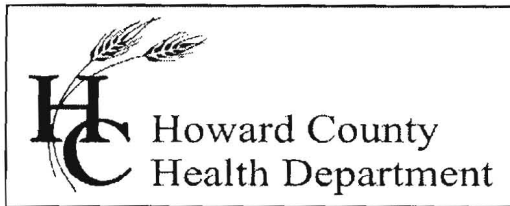
<u>Piping to house</u>	<u>House Connection</u>
Type: _____	PVC sleeve to undisturbed soil at wall penetration: _____
PSI: _____ (160 psi min)	Length of sleeve(5' minimum from foundation): _____
Depth of supply line: _____ (36" min)	Sleeve sealed properly: _____

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: 12/4/2015 Inspector: BBB  
 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   
Under Foster



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](http://www.hchealth.org)  
Facebook: [www.facebook.com/hocohealth](http://www.facebook.com/hocohealth)  
Twitter: HowardCoHealthDep

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

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

Expiration Date – September 3, 2016

March 3, 2016

Homeowner  
12210 Pleasant Springs Court  
Fulton, MD 20759

**RE: Highland Reserve, Lot 14**  
**12210 Pleasant Springs Court**  
**Building Permit: B15002953**  
**Well Permit: HO-14-0006**

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 **3/2/2016**. Final approval of the well line connection to the dwelling was granted on **12/4/2015**. The well construction was completed on **6/9/2014**. Water samples were collected on **1/15/2016**.

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 **6/9/2014**. Results showed a Radium 226 level of **4302 ± 4.4 pCi/L** and Radium 228 level of **12.5 ± 2.5 pCi/L**. **This exceeds the maximum contaminant level (MCL) combined Radium 226 and 228 of 5.0 pCi/L.**

After installation of a radionuclide removal device (Reverse Osmosis), post-treatment water samples were collected on **1/21/2016** and indicated a Radium 226 of **<0.2 pCi/L**, a Radium 228 of **<0.9 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.

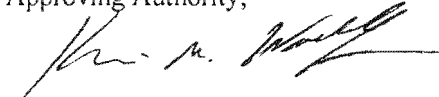
2. It is recommended that a Maryland certified water laboratory certified for radionuclide analysis perform a yearly radionuclide analysis.
3. If you decide to sell or rent your home in the future, you must make any potential buyer/tenant aware of this permanent deviation. **A person who fails to make 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-14-0006. 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,

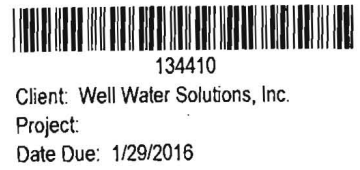


Kevin M Wolf, L.E.H.S., Supervisor.  
Groundwater Management Section  
Well & Septic Program

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



**ENVIRONMENTAL TESTING LAB, INC - CHAIN OF C**  
**ANNAPOLIS** **WALDO**  
 410-224-4304 FAX 443-926-0586 410-224-4304



Company Name, Address Phone & Fax

Testing Address

WWS

12200 PLEASANT SPRINGS CT  
 STREET  
 FULTON MO 20738  
 CITY STATE ZIP

Send Report By:  Fax  Postal Service  Email

THIS FORM WILL BE ATTACHED AS A PERMANENT PART OF YOUR FINAL REPORT

**FIELD COLLECTION INFORMATION**

Collected: Date 1/21 Time 11:00 Well Tag #: \_\_\_\_\_  
 Collectors Name: JOHN MOSEMAN Certification # 0130JIM Expires 3/16  
 Collectors Signature: [Signature] Circle One:  PRIVATE WELL or CITY WATER  
 pH: 7 Chlorine, Total mg/L: 1 Results for U & O Permit?  YES NO Sample Clear when drawn?  YES NO  
 Sand present? YES  NO If "YES" submit one liter of sample to lab for testing  
 Sample Tap Bacteria: \_\_\_\_\_ Chemicals: Water Treated Lead: \_\_\_\_\_

Bacteriological Test  Next Day 11:30  Next Day 3:30  2 Day  
 FULL Chemical Analysis  Next Day  2 Day  3 Day  
 (Iron, Nitrite, Nitrite/Nitrate, Nitrate, Turbidity, Lead)  
 BASIC Chemical Analysis  Next Day  2 Day  3 Day  
 (Iron, Nitrite, Nitrite/Nitrate, Nitrate, Turbidity)  
 Lead  Arsenic  Next Day  2 Day  3 Day  
 Cadmium  2 Day  4 Day  6 Day  
 Radium Gross Alpha 2 SAMPLES  One Week  2 Week

Special Instructions: RADIUM SHORT TEAM AND LONG TEAM 226/228  
WATER WAS TREATED.

Released By: [Signature] Date: 1/21/16 Time: 11:15 Received By: [Signature]  
 Released By: [Signature] Date: 1/21/16 Time: \_\_\_\_\_ Received By: \_\_\_\_\_

(\* TAT: is by Close of Business; Samples for chemical analysis received at 1:30 or later cannot be guaranteed "Next Day" results.  
 TAT's are a good faith estimate and are not guaranteed. ALL SAMPLES FOR BACTERIOLOGICAL TESTING MUST BE  
 DELIVERED BY 2:30 pm ON FRIDAY'S & HOLIDAY'S.

**LABORATORY SAMPLE RECEIPT INFORMATION**

Samples Delivered on ICE: YES NO N/A Add Qualifiers:  Non-Certified  Holding Time  Sample Volume  Frozen  
 Received in LAB By: [Signature] Date: 1/21/16 Time: 12:00

# Environmental Testing Lab Inc.

108 Old Solomons Island Rd  
Annapolis, MD 21401



3430 Rockefeller Ct  
Waldorf, MD 20602

State Certified Water Quality  
Laboratory # 106

State Certified Water Quality  
Laboratory # 139

## Certificate of Analysis

Well Water Solutions, Inc.  
5163 Darting Bird Lane  
Columbia, MD 20144


Project  
Date Received 1/15/2016  
Date Reported 2/10/2016

Sample No: 134294-01      Sampled: 1/15/2016 10:30:0      Sampler: JWalker9006JW (Exp. 8/6/2018)  
Location: 12210 Pleasant Springs Court      Preservation: Ice  
Fulton, MD 20759      Sample Point: Kitchen

Parameter	Method	Result	Qualifiers	Units	RL	Test Date	Analyst
Bacteria-Total Coliform	Colitag Test	Absent/Pass		Per/100ml		01/15/2016	LC-106
Bacteria-E.coli	Colitag Test	Absent/Pass		Per/100ml		01/15/2016	LC-106
Nitrate + Nitrite as N	EPA 353.2	Not Detected		mg/l	< 1	01/19/2016	DB-139
Turbidity	EPA 180.1	0.6		NTU	0.5	01/18/2016	RM-139

Field Test for chlorine are reported on the attached COC form. "NT" means Not Tested.

*Send?  
Treatment?*

Approved By   
Daniel J. Brumsted, Laboratory Director

# Environmental Testing Lab Inc.

108 Old Solomons Island Rd  
Annapolis, MD 21401



3430 Rockefeller Ct  
Waldorf, MD 20602

State Certified Water Quality  
Laboratory # 106

State Certified Water Quality  
Laboratory # 139

## Certificate of Analysis

Well Water Solutions, Inc.  
5163 Darting Bird Lane  
Columbia, MD 20144

Project  
Date Received 1/21/2016  
Date Reported 2/3/2016

Sample No: 134410-01

Sampled: 1/21/2016 11:00:0

Sampler: JMoseman0130J (Exp. 3/12/2016)  
M

Location: 12210 Pleasant Springs Court  
Fulton, MD 20738

Preservation: HNO<sub>3</sub>, pH  $\leq$  2

Sample Point: Kitchen/Treated

Parameter	Method	Result	Qualifiers	Units	RL	Test Date	Analyst
Radium 226	EPA 903.1	Not Detected	✓ OK	pCi/l	< 0.2	01/26/2016	FRC-
Radium 228	EPA Ra-05	Not Detected	✓ OK	pCi/l	< 0.9	01/26/2016	FRC-
Gross Alpha-Radium	EPA 900.0	13.2		pCi/l	1.9	01/26/2016	FRC-

If Gross Alpha Radium results are below 5 pCi/L no further action is recommended. If between 5-15 pCi/L further testing for Radium 226 and 228 is recommended. If Gross Alpha Radium result exceeds 15 pCi/L consider a water treatment system. The combined MCL for R-226 and R-228 is 5 pCi/L

Approved By

Daniel J. Brumsted, Laboratory Director

Annapolis

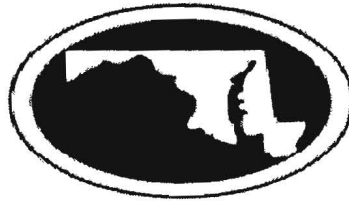
Ph 410-224-4304 Fax 443-926-0586

Waldorf

Ph 410-224-4304 Fax 443-926-0586

# Environmental Testing Lab Inc.

108 Old Solomons Island Rd  
Annapolis, MD 21401



3430 Rockefeller Ct  
Waldorf, MD 20602

State Certified Water Quality  
Laboratory # 106

State Certified Water Quality  
Laboratory # 139

## Certificate of Analysis

Well Water Solutions, Inc.  
5163 Darting Bird Lane  
Columbia, MD 20144

Project  
Date Received 1/21/2016  
Date Reported 2/3/2016

Sample No: 134410-01      Sampled: 1/21/2016 11:00:0      Sampler: JMoseman0130J (Exp. 3/12/2016)  
M  
Location: 12210 Pleasant Springs Court      Preservation: HNO<sub>3</sub>, pH < 2  
Fulton, MD 20738      Sample Point: Kitchen/Treated

Parameter	Method	Result	Qualifiers	Units	RL	Test Date	Analyst
Radium 226	EPA 903.1	Not Detected		pCi/l	0.2	01/26/2016	FRC-
Radium 228	EPA Ra-05	Not Detected		pCi/l	0.9	01/26/2016	FRC-
Gross Alpha-Radium	EPA 900.0	13.2		pCi/l	1.9	01/26/2016	FRC-

If Gross Alpha Radium results are below 5 pCi/L no further action is recommended. If between 5-15 pCi/L further testing for Radium 226 and 228 is recommended. If Gross Alpha Radium result exceeds 15 pCi/L consider a water treatment system. The combined MCL for R-226 and R-228 is 5 pCi/L

"OK"  
- KMW  
2/9/16

Approved By

Daniel J. Brumsted, Laboratory Director

Annapolis

Ph 410-224-4304 Fax 443-926-0586

Waldorf

Ph 410-224-4304 Fax 443-926-0586



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

[www.hchealth.org](http://www.hchealth.org)

Facebook: [www.facebook.com/hocohealth](https://www.facebook.com/hocohealth)

Maura Rossman, M.D., Health Officer

February 12, 2015

MB Highland Reserve, LLC  
1686 Gude Drive  
Rockville, Maryland 20850

RE: Regan Property Lot 14  
Pleasant Springs Court  
Well Tag: HO - 14 - 0006

To Whom it May Concern:

A sample was collected during a yield test on June 9, 2014 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  $43.2 \pm 4.4$  picocuries/liter (pCi/L), while the **Gross Beta** level was  $12.5 \pm 2.5$  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. Given the elevated readings (both initial and confirmatory) for **Gross Alpha**, additional testing for these parameters will be required to secure the future Use & Occupancy. The installation of a water softener system and / or a reverse osmosis system may likely be necessary. If treatment is installed, **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). Alternatively, you may collect raw water samples for **short and long term Gross Alpha and Beta, plus Radium 226 / 228** to see if all values are below existing standards. Given that it typically takes up to one month to perform and receive back the **Radium** analyses, plan accordingly. **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,

A handwritten signature in black ink that reads 'Bert Nixon'.

Bert Nixon, Director

Bureau of Environmental Health

Enclosure

✓ cc: Property file

SEND REPORT TO: Bert Nixon DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston St., Baltimore, MD 21201  
 Robert A. Myers, Ph.D., Director

Lab No.  
0002772 #10

RADIATION ANALYSIS REQUEST FORM

Plant/Site Name: Regan Property - Lot 14 County: Howard  
 Sample Source: Pleasant Springs Ct. Location: HO-14-0006  
 (Well no., lab sink, sample tap, etc.)  
 Radon-222 Bottle A Lot 14 Radon-222 Field Blank Bottle A Radium Blank  
 Bottle B \_\_\_\_\_ Bottle B \_\_\_\_\_

County 13 Plant No. \_\_\_\_\_

CHECK (one per Box)

Type  
 Drinking Water   
 Landfill   
 Stream   
 Other

Service  
 Community   
 Non-Community   
 Private   
 Other

Point of Collection  
 Source (Raw)   
 Distribution (treated)   
 MCL

Testing  
 Emergency   
 Routine   
 Recheck   
 Special

Submitters Code: \_\_\_\_\_ Federal Project: \_\_\_\_\_  
 Collector: Brian Telephone No.: (410) 313-2643  
 Date Collected: 6/9/2014 Time Collected: \_\_\_\_\_ a.m. 2:00 p.m.  
 Field pH: \_\_\_\_\_ Field Chlorine: \_\_\_\_\_  
 Nitric Acid Preserved: Yes  No  Iced: Yes  No

Remarks: Sample Collected During Yield Test

✓	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input checked="" type="checkbox"/>	Gross Alpha	4000	2772	EPA 900.0	43.2 ± 4.4	6/11/14	CWB	6/13/14
<input checked="" type="checkbox"/>	Gross Beta	4100	2772	"	12.5 ± 2.5	↓	↓	↓
<input type="checkbox"/>	Radium-226	4020						
<input type="checkbox"/>	Radium-228	4030						
<input type="checkbox"/>	Total Uranium	4006						
<input type="checkbox"/>	Radon-222 (Bottle A)	4004						
<input type="checkbox"/>	Radon-222 (Bottle B)	4004						
<input type="checkbox"/>	Radon Field Blank A	4004						
<input type="checkbox"/>	Radon Field Blank B	4004						
<input type="checkbox"/>	Tritium							
<input checked="" type="checkbox"/>	Gross Alpha - Confirmation		2772	EPA 900.0	42.8 ± 4.5	6/12/14	CWB	6/13/14
<input checked="" type="checkbox"/>	Gross Beta - Confirmation		2772	↓	14.3 ± 2.6	↓	↓	↓

Date Received: 06/10/14 Received By: C. Watty - Boyd  
 Data Release Signature: Radon Museum Date: 6/13/14

Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample pH < 2.0?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

SEND REPORT TO:

DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St., Baltimore, MD 21201  
Robert A. Myers, Ph.D., Director

Lab No.

2002770 10

RADIATION ANALYSIS REQUEST FORM

Plant/Site Name: \_\_\_\_\_

County: HOWARD

Sample Source: FIELD BLANK

Location: \_\_\_\_\_

(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A \_\_\_\_\_  
Bottle B \_\_\_\_\_

Radon-222 Field Blank Bottle A \_\_\_\_\_  
Bottle B \_\_\_\_\_

County

Plant No.

CHECK (one per Box)

Type	
Drinking Water	<input checked="" type="checkbox"/>
Landfill	<input type="checkbox"/>
Stream	<input type="checkbox"/>
Other	<input type="checkbox"/>

Service	
Community	<input type="checkbox"/>
Non-Community	<input type="checkbox"/>
Private	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

Point of Collection	
Source (Raw)	<input type="checkbox"/>
Distribution (treated)	<input type="checkbox"/>
MCL	<input type="checkbox"/>

Testing	
Emergency	<input type="checkbox"/>
Routine	<input checked="" type="checkbox"/>
Recheck	<input type="checkbox"/>
Special	<input type="checkbox"/>

Submitters Code:

Federal Project:

Collector: BRIAN

Telephone No.: \_\_\_\_\_

Date Collected: 06/09/14

Time Collected: 10:30 a.m. \_\_\_\_\_ p.m.

Field pH: \_\_\_\_\_

Field Chlorine: \_\_\_\_\_

Nitric Acid Preserved: Yes  No

Iced: Yes  No

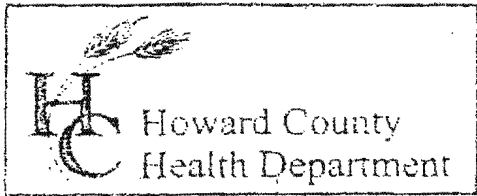
Remarks: \_\_\_\_\_

<input checked="" type="checkbox"/>	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input type="checkbox"/>	Gross Alpha	4000	2770	EPA 900.0	220	6/11/14	CWB	6/13/14
<input type="checkbox"/>	Gross Beta	4100	2770	"	24.0			
<input type="checkbox"/>	Radium-226	4020						
<input type="checkbox"/>	Radium-228	4030						
<input type="checkbox"/>	Total Uranium	4006						
<input type="checkbox"/>	Radon-222 (Bottle A)	4004						
<input type="checkbox"/>	Radon-222 (Bottle B)	4004						
<input type="checkbox"/>	Radon Field Blank A	4004						
<input type="checkbox"/>	Radon Field Blank B	4004						
<input type="checkbox"/>	Tritium							
<input type="checkbox"/>								

Date Received: 06/10/14 Received By: C Watty-Boyd  
Data Release Signature: Sadia Khuseen Date: 6/13/14

Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	<input checked="" type="checkbox"/>		
Sample pH <2.0?	<input checked="" type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>		

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



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 4-4-14 (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