



B 1 20783

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

HO-95-2699

546366-E please type

fill in this form completely

OWNER INFORMATION: Date Received (APA) 04-10-14, MB Highland Reserve LLC, 1686 E Gude Dr, Rockville MD 20850

LOCATION OF WELL: Howard County, Reagin Property, Highland

DRILLER INFORMATION: Allen Compton, MS D 009, Eagle's Well Drilling LLC, PO Box 202 Woodburne, MD 21797, Signature: Allen Compton, Date: 4-10-14

SOURCES OF DRILLING WATER: Point Ridge Dr, 150 feet from road, DISTANCE FROM ROAD 150

WELL INFORMATION: APPROX. PUMPING RATE 5 GAL. PER MIN., AVERAGE DAILY QUANTITY NEEDED 500 GAL. PER DAY

USE FOR WATER: DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION (D)

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL: Howard County, A530307, DATE ISSUED 05/27/2014, EXP. DATE 5/27/15

APPROXIMATE DEPTH OF WELL 300 FEET

PROPOSED LOCATION OF WELL ON LOT SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL

APPROXIMATE DIAMETER OF WELL 6 INCH

METHOD OF DRILLING: AIR-ROTARY



REPLACEMENT OR DEEPEMED WELLS: THIS WELL WILL NOT REPLACE AN EXISTING WELL (N)

Not to be filled in by driller (MDE OR COUNTY USE ONLY): APPROP. PERMIT NUMBER HO 2014G002, PERMIT No. HO-95-2699

SPECIAL CONDITIONS: Radium Sample required @ the yield test



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

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

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

Company Name: NATIONAL WATER SVC Telephone #: 301-854-1333  
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 #: 7 Well Tag #: HO-95-2699  
Site Address: 12345 POINT RIDGE DR  
FULTON, MD 20759

<u>Submersible Pump Data</u>	<u>Pitless Adapter</u>	<u>Well Cap and Electric Conduit</u>
Make: <u>GRUNDfos</u>	Make: <u>GREEN Campbell</u>	Two piece watertight cap: <input checked="" type="checkbox"/>
Model #: <u>1HP</u>	Model #: <u>AA80</u>	Screened, vented well cap: <input checked="" type="checkbox"/>
Pump Capacity <u>7</u> GPM	Depth: <u>36</u> (36" min)	Cap secured to casing: <input checked="" type="checkbox"/>
Well Yield: <u>4.6</u> GPM	NSF approved: <u>YES</u>	Conduit min 18" B.G.: <input checked="" type="checkbox"/>
Depth of well encountered at time of pump installation: <u>400</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 <u>CPS</u>		
Safety rope, if used, attached to inside of well casing with eye bolt <u>N/A</u>		

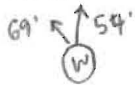
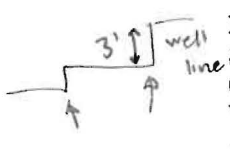
<u>Piping to house</u>	<u>House Connection</u>
Type: <u>Poly</u>	PVC sleeved to undisturbed soil at wall penetration: <u>YES</u>
PSI: <u>160</u> (160 psi min)	Approximate length of sleeve: <u>5'</u>
Depth of supply line: <u>36</u> (36" min)	Sleeve caulked and sealed properly: <u>YES</u>

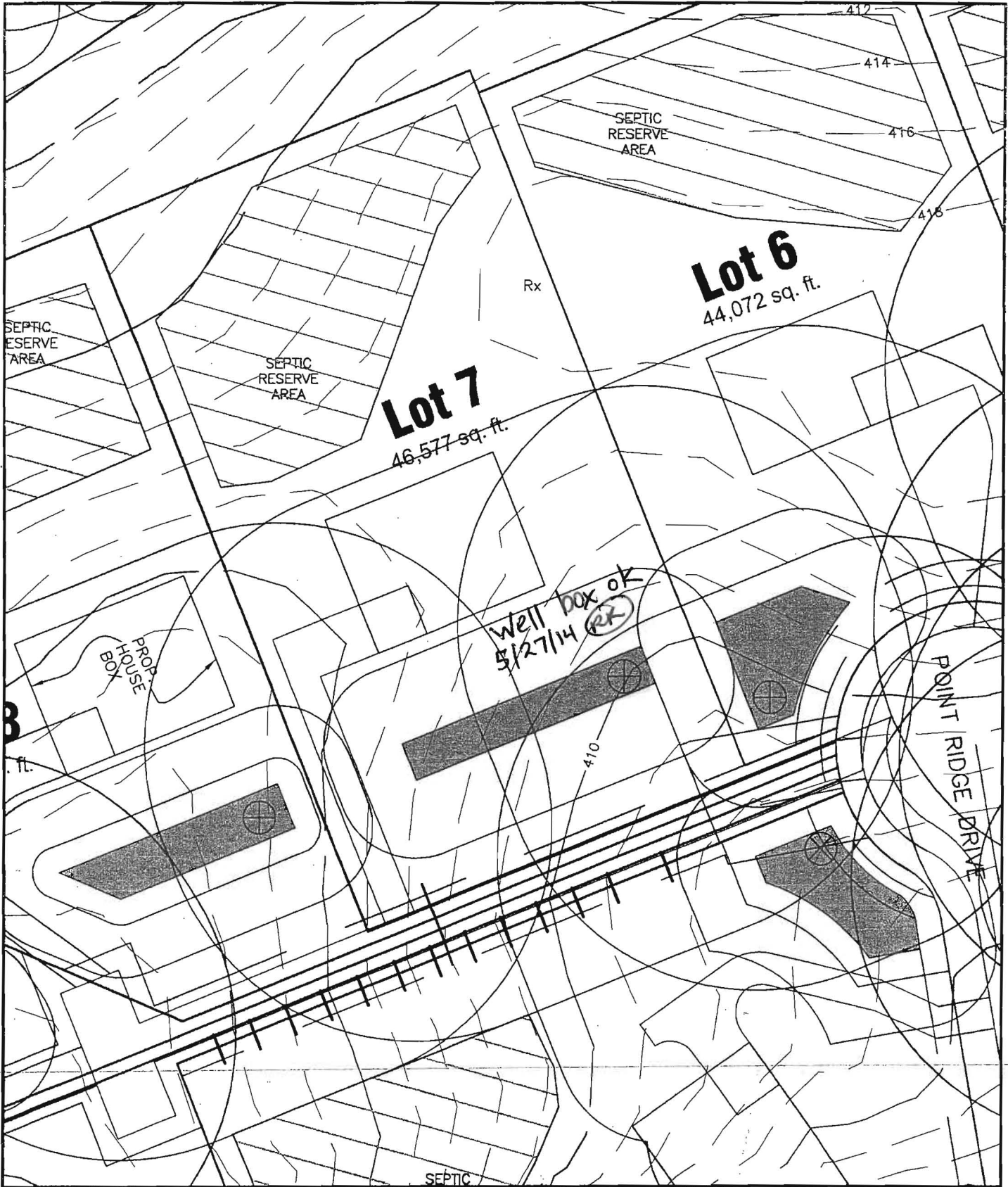
The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Signature of company representative responsible for installation \_\_\_\_\_ date 11-10-16

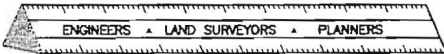
**For Health Department Use Only - Not to be completed by Installer**

Date Insp. Requested: 11/9/16 Date Insp. Approved: 11/20/16 KW  
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





**BENCHMARK**



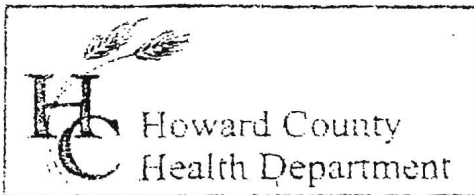
**ENGINEERING, INC.**

8480 BALTIMORE NATIONAL PIKE • SUITE 315 • ELLICOTT CITY, MD 21043  
 PHONE: 410-465-6105 FAX: 410-465-6644

**WELL EXHIBIT  
 REGAN PROPERTY  
 LOT 7**

FIFTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE: 1" = 50' DATE: 3/11/2014



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

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

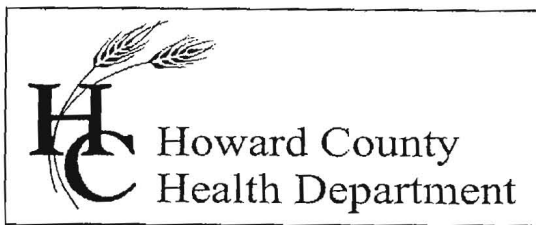
### TO ALL INTERESTED PARTIES

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



Bureau of Environmental Health  
7178 Columbia Gateway Drive, Columbia, MD 21046-2147  
Main: 410-313-6300 | Fax: 410-313-6303  
TDD 410-313-2323 | Toll Free 1-866-313-6300  
www.hchealth.org  
Facebook: www.facebook.com/hocohealth  
Twitter: HowardCoHealthDep

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

**INTERIM CERTIFICATE OF POTABILITY**  
**PERMANENT DEVIATION FOR RADIUM**  
Expiration Date – NOVEMBER 1, 2017

May 1, 2017

Homeowner  
12345 Point Ridge Drive  
Fulton, MD 20759

**RE: Highland Reserve, Lot 7**  
**12345 Point Ridge Drive**  
**Building Permit: B16003427**  
**Well Permit: HO-95-2699**

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 **1/23/2017**. Final approval of the well line connection to the dwelling was granted on **1/26/2017**. The well construction was completed on **7/18/2014**. Water samples were collected on **2/15/2016**.

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 **7/18/2014**. Results showed a Radium 226 level of **12.2 ± 2.3 pCi/L** and Radium 228 level of **7.0 ± 2.0 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 (Water Softener), post-treatment water samples were collected on **3/31/2017** and indicated a Radium 226 of **.30 pCi/L**, a Radium 228 of **not detected pCi/L**.

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

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

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

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

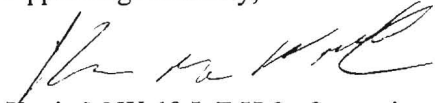
This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-95-2699. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

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>

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

Approving Authority,

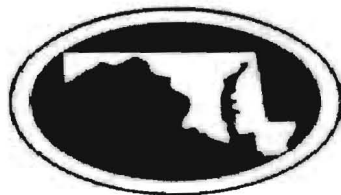


Kevin M Wolf, L.E.H.S., Supervisor.  
Groundwater Management Section  
Well & Septic Program

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

# Environmental Testing Lab Inc.

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 3/31/2017  
Date Reported 4/11/2017

*This report is the sole property of Well Water Solutions, Inc.. Any questions about the report MUST be directed to Well Water Solutions, Inc. at (410) 935-7185.*

*Environmental Testing Lab is not at liberty to discuss this report without written consent from Well Water Solutions, Inc..*

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**Sample No:** 148194-01                      **Sampled:** 3/31/2017 12:00:0                      **Sampler:** JWalker9006JW (Exp. 8/6/2018)  
**Location:** 12345 Point Ridge Drive Lot                      **Preservation:** HNO<sub>3</sub>, pH < 2  
7                      **Sample Point:** Kitchen  
Fulton, MD 20759

Parameter	Method	Result	Qualifiers	Units	RL	Test Date	Analyst
Radium 226	EPA 903.1	0.30		pCi/l	0.2	04/10/2017	FRC-
Radium 228	EPA Ra-05	Not Detected		pCi/l	0.8	04/10/2017	FRC-
Gross Alpha-Radium	EPA 900.0	11.8		pCi/l	1.2	04/05/2017	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

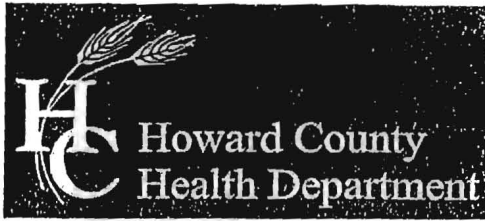
Daniel J. Brumsted, Laboratory Director

Annapolis

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

Waldorf

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



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

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

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

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Twitter: HowardCoHealthDep

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

**AGREEMENT FOR APPROVAL OF AN INDIVIDUAL DRINKING WELL WITH AN ON-SITE TREATMENT SYSTEM**

This agreement is entered into by and between the Howard County Health Department ("the Health Department") and MB Highland Reserve LLC ("the Owner").

WHEREAS, the Owner owns a tract of land at street address 12345 Point Ridge Drive, Fulton, MD 20759 and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 34, Block # 24, Parcel # 200, Deed Reference # \_\_\_\_\_ and Tax Account # 05-597440 ("the Property").

WHEREAS, the Property lacks an available public drinking water source and is required to have and individual well as the source of drinking water for the residence of the property.

WHEREAS, the Owner has installed a residential drinking well under well permit HO95-2699 that has been tested by the Health Department (or a private laboratory certified to perform testing) for radionuclide particles. The results of the tests have shown that the gross alpha particle content and/or the gross beta particle content and/or the combined radium 226/228 levels exceeds the standards of 15 picocuries per liter (pCi /L), 4 millirems per year (mrem/yr) and/or 5pCi/L respectively.

WHEREAS, The Maryland Department of the Environment (MDE) has promulgated rules and regulations under which a Certificate of Potability may be issued and has delegated the authority to issue such Certificate to the Health Department.

WHEREAS, MDE regulations permit the Health Department to issue as a special condition, a permanent deviation to the Certificate of Potability for individual wells where treatment has been installed to meet the maximum contaminate levels (MCL's) for radionuclides.

WHEREAS, MDE has determined that radium can be effectively removed from the drinking water by the use of treatment devices (e.g., ion exchange or reverse osmosis).

WHEREAS, the Owner is requesting that the Health Department issue a Certificate of Potability contingent upon installation and maintenance of a water treatment device to reduce radionuclides.

WHEREAS, neither the Owner nor the Health Department has knowledge of an alternative safe source of water for the Property.

NOW THEREFORE, the parties have agreed to the following terms and conditions:

1. The Owner will record this Agreement among the Land Records of Howard County, Maryland and provide confirmation to the Health Dept.
2. The Owner agrees to install and maintain a water treatment device, which effectively reduces the gross alpha, gross beta and radium levels to below their respective MCL. The Health Department

shall verify that the treatment device is operating effectively and the Owner agrees to allow access to the Health Department to collect a follow-up sample(s).

3. The Health Department shall issue a Certificate of Potability for the well once follow-up sampling shows acceptable gross alpha, gross beta (short and long term) and radium 226 / 228 levels.
4. The Owner agrees that there shall be no liability on part of the Health Department for any immediate or long term impacts to health or property, under any circumstance or including, but not limited to, treatment device failure, improper maintenance or installation, or defect. The Health Department does not warranty or guarantee that the device will adequately or properly function and the Owner agrees to implement and pay for any necessary changes or corrections.
5. The Owner acknowledges and agrees that neither the Health Department nor any of its agents or employees, either officially or individually, underwrites the operation of any system or treatment device.
6. This Agreement shall not be construed to limit any authority of the Health Department to protect the public health, safety or enjoyment of property or to issue any other orders to take any other action, which is now or may hereafter be within its authority.
7. This agreement contains the entire agreement and understanding between the Health Department and the Owner. There are no additional terms other than as contained in this Agreement. This Agreement may not be modified except in writing signed by each of the parties or their authorized representatives.
8. The Agreement shall run with the land and binds the Owner, his heirs, successors, and assigns. The owner agrees to provide a copy of this agreement to any purchaser or lessee of the property.
9. The laws of the State of Maryland govern the provisions of all transactions.

The parties have signed and sealed this Agreement on the dates set forth below.

x <u>Martin J. Mitchell</u>	x <u>WQA</u>	<u>4/28/17</u>
Owner	Witness	Date
<u>Martin J. Mitchell</u>	_____	_____
Owner	Witness	Date
<u>Bert Wilson</u>	<u>4/28/2017</u>	
Howard County Health Department	Date	

ENVIRONMENTAL TESTING LAB, INC - CHAIR

ANNAPOLIS

410-224-4304

FAX 443-926-0586

410-224



148194

Client: Well Water Solutions, Inc.

Project:

Date Due: 4/7/2017

Company Name, Address Phone & Fax

Well Water Solutions  
5163 Darling bird Lane  
Columbia, MD 21044

Lot 7 Testing Address

12345 Point Ridge Drive  
STREET  
Fulton, MD 20759  
CITY STATE ZIP

Send Report By: Fax Postal Service  Email jemoseman@wellwatersolutions.net/  
jbieber@wellwatersolutions.net

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

FIELD COLLECTION INFORMATION

Collected: Date 3/31/17 Time 12:00 Well Tag #: H095-2699

Collectors Name: Janet Walker Certification # 9006JW Expires 08/7/18

Collectors Signature: [Signature] Circle One: PRIVATE WELL or CITY WATER

pH: NT Chlorine, Total mg/L: 0 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: NT Chemicals: Kitchen sink Post-treatment Lead: NT

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

Special Instructions: 1 Radium Short term Gross Alpha  
2 Radium Long term 226 & 228

Released By: [Signature] Date: 3/31/17 Time 1:20 Received By: \_\_\_\_\_  
Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time \_\_\_\_\_ Received By: \_\_\_\_\_

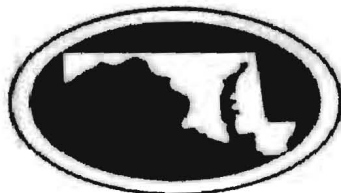
(\* TAT: is by Close of Business; Samples for chemical analysis received at 1:30 or later cannot be guaranteed "Next Day" results.  
TAT's are a good faith estimate and are not guaranteed. ALL SAMPLES FOR BACTERIOLOGICAL TESTING MUST BE DELIVERED BY 2:30 pm ON FRIDAY'S & HOLIDAY'S.

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: 3/31/17 Time 4:00

# 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 4/14/2017  
Date Reported 4/21/2017  
Well Permit No. HO-95-2699

*This report is the sole property of Well Water Solutions, Inc.. Any questions about the report MUST be directed to Well Water Solutions, Inc. at (410) 935-7185.*

*Environmental Testing Lab is not at liberty to discuss this report without written consent from Well Water Solutions, Inc..*

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**Sample No:** 148803-01                      **Sampled:** 4/14/2017 11:30:0                      **Sampler:** JWalker9006JW (Exp. 8/6/2018)  
**Location:** 12345 Point Ridg Drive                      **Preservation:** Ice  
                    Fulton, MD 20759                      **Sample Point:** Kitchen

Parameter	Method	Result	Qualifiers	Units	RL	Test Date	Analyst
Gross Alpha-Radium	EPA 900.0	4.7		pCi/l	0.697	04/19/2017	EMSL-331

Field Test(s) such as chlorine and pH are reported on the attached COC form. "NT" means Not Tested

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.

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 - CHAIN OF CU

ANNAPOLIS

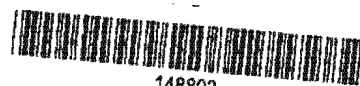
410-224-4304

FAX 443-926-0586

WALDORF

410-224-4304

F/



148803

Client: Well Water Solutions, Inc.

Project:

Date Due: 4/19/2017

Company Name, Address Phone & Fax

Well Water Solutions  
5163 Darting Bird Lane  
Columbia, MD 21044

Lot 7

Testing Address

12345 Point Ridge Drive  
STREET  
Fulton, MD 20759  
CITY STATE ZIP

Send Report By: Fax Postal Service  Email jemoseman@wellwatersolutions.net/  
jbieber@wellwatersolutions.net

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

FIELD COLLECTION INFORMATION

Collected: Date 4/14/17 Time 11:30 Well Tag #: HO-95-2699

Collectors Name: Janet Walker Certification # 9006JW Expires 08/7/18

Collectors Signature: [Signature] Circle One PRIVATE WELL CITY WATER

pH: NT Chlorine Total mg/L: 0 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: NT Chemicals: Kitchen sink Lead: NT

Bacteriological Test Next Day 11:30 Next Day 3:30 2 Day

FULL Chemical Analysis (Iron, Nitrite, Nitrite/Nitrate, Nitrate, Turbidity, Lead) Next Day 3:30 2 Day 3 Day

BASIC Chemical Analysis (Iron, Nitrite, Nitrite/Nitrate, Nitrate, Turbidity) Next Day 3:30 2 Day 3 Day

Lead Arsenic Next Day 3:30 2 Day 3 Day

Cadmium 2 Day 4 Day 6 Day

Radium Gross Alpha X One Week 2 Week

Special Instructions: Radium short term Gross Alpha

Released By: [Signature] Date: 4/14/17 Time 1:15 Received By:

Released By: Date: 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.

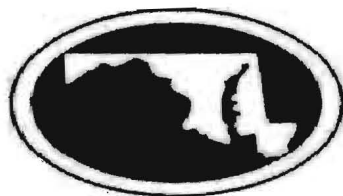
LABORATORY SAMPLE RECEIPT INFORMATION

Samples Delivered on ICE: YES NO N/A Add Qualifiers: Non-Certified Holding Time Sample Volume Frozen

Received in LAB By: [Signature] Date: 4/14/17 Time 1:15 pm

# 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 2/15/2017  
Date Reported 2/17/2017  
Well Permit No. HO 95 2699

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*Environmental Testing Lab is not at liberty to discuss this report without written consent from Well Water Solutions, Inc..*

Sample No: 146796-01      Sampled: 2/15/2017 8:00:00      Sampler: JWalker9006JW (Exp. 8/6/2018)  
Location: 12345 Point Ridge Drive Lot 7      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		02/15/2017	LC-106
Bacteria-E.coli	Colitag Test	Absent/Pass		Per/100ml		02/15/2017	LC-106
Nitrate + Nitrite as N	EPA 353.2	Not Detected		mg/l	1	02/16/2017	DB-139
Turbidity	EPA 180.1	0.7		NTU	0.5	02/16/2017	RM-139

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

OK  
3/30/17

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 - CHAIN OF C

ANNAPOLIS

410-224-4304

FAX 443-926-0586

WALDO

410-224-4304



146796

Client: Well Water Solutions, Inc.

Project:

Date Due: 2/20/2017

Company Name, Address Phone & Fax

Well Water Solutions  
5163 Darling bird Lane  
Columbia, MD 21044

Lot 7 Testing Address.

12345 Point Ridge Drive  
STREET  
Fulton, MD 20759  
CITY STATE ZIP

Send Report By: Fax Postal Service  Email jemoseman@wellwatersolutions.net / jbieber@wellwatersolutions.net

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

FIELD COLLECTION INFORMATION

Collected: Date 2/15/17 Time 8:00 Well Tag #: HO-95-2699

Collectors Name: Janet Walker Certification # 9006JW Expires 08/7/18

Collectors Signature: [Signature] Circle One: PRIVATE WELL or CITY WATER

pH: 6.5 Chlorine, Total mg/L: 0 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: Kitchen sink Chemicals: Kitchen sink Lead: NT

Bacteriological Test Next Day 11:30 Next Day 3:30 2 Day

FULL Chemical Analysis (Iron, Nitrite, Nitrite/Nitrate, Nitrate, Turbidity, Lead) Next Day 3:30 2 Day 3 Day

BASIC Chemical Analysis (Iron, Nitrite, Nitrite/Nitrate, Nitrate, Turbidity) Next Day 3:30 2 Day X 3 Day well set

Lead Arsenic Next Day 3:30 2 Day 3 Day

Cadmium 2 Day 4 Day 6 Day

Radium Gross Alpha One Week 2 Week

Special Instructions: First test - NO treatment

Released By: [Signature] Date: 2/15/17 Time 11:40 Received By: [Signature]

Released By: [Signature] Date: 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

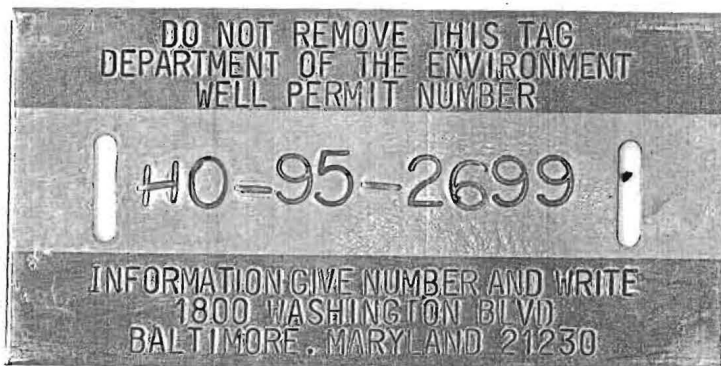
Samples Delivered on ICE YES NO N/A Add Qualifiers: Non-Certified Holding Time Sample Volume Frozen

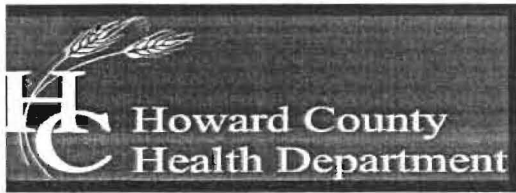
Received in LAB By: [Signature] Date: 2/15/17 Time 11:40 AM

2/23/17

Fogle's Well Drilling  
P.O. Box 202  
Woodbine, MD 21797

Attached is a replacement well tag for the well at 12345 Point Ridge Drive, #HO-95-2699.





## 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

August 21, 2014

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

**RE: Regan Property Lot 7  
Point Ridge Drive  
Well Tag: HO - 95 - 2699**

To Whom it May Concern:

A sample was collected during a yield test on July 18, 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  $12.2 \pm 2.3$  picocuries/liter (pCi/L), while the **Gross Beta** level was  $7.0 \pm 2.0$  pCi/L. With the margin of error, the **Gross Alpha** result was barely below 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 **may not meet** EPA regulatory standards. Given some of the elevated readings on other nearby lots, 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 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 cursive script 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. 0000169-213

**Howard County Health Department**  
**Bureau of Environmental Health**  
**8930 Stanford Blvd.**  
**Columbia, Maryland 21045**

**RADIATION ANALYSIS REQUEST FORM**

Plant/Site Name: Regan Property - Lot 7 County: Howard  
 Sample Source: Well - "Point Ridge Dr." (HC 2699) Location: HO-95-2699  
(Well no., lab sink, sample tap, etc.)  
 Radon-222 Bottle A \_\_\_\_\_ Radon-222 Field Blank Bottle A \_\_\_\_\_  
 Bottle B \_\_\_\_\_ Bottle B \_\_\_\_\_  
 County 13 Plant No. \_\_\_\_\_

CHECK (one per Box)

Type	Service	Point of Collection	Testing
Drinking Water <input checked="" type="checkbox"/>	Community <input type="checkbox"/>	Source (Raw) <input checked="" type="checkbox"/>	Emergency <input type="checkbox"/>
Landfill <input type="checkbox"/>	Non-Community <input type="checkbox"/>	Distribution (treated) <input type="checkbox"/>	Routine <input checked="" type="checkbox"/>
Stream <input type="checkbox"/>	Private <input checked="" type="checkbox"/>	MCL <input type="checkbox"/>	Recheck <input type="checkbox"/>
Other <input type="checkbox"/>	Other <input type="checkbox"/>		Special <input type="checkbox"/>

Submitters Code: \_\_\_\_\_ Federal Project: 5  
 Collector: R. Reppert Telephone No.: 410-313-1781  
 Date Collected: 7/18/14 Time Collected: 10 a.m. \_\_\_\_\_ p.m.  
 Field pH: \_\_\_\_\_ Field Chlorine: \_\_\_\_\_  
 Nitric Acid Preserved: Yes  No  Iced: Yes  No   
 Remarks: Sample taken during yield test.

<input type="checkbox"/>	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input checked="" type="checkbox"/>	Gross Alpha	4000	0169	EPA 900.0	12.2 ± 2.3	7/25/14	CWB	7/29/14
<input checked="" type="checkbox"/>	Gross Beta	4100	0169	↓	7.0 ± 2.0	↓	↓	↓
<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 checked="" type="checkbox"/>	Gross Alpha - Conf		0169	EPA 900.0	11.3 ± 2.3	7/26/14	CWB	7/29/14
<input checked="" type="checkbox"/>	Gross Beta - Conf		0169	↓	9.3 ± 2.1	↓	↓	↓

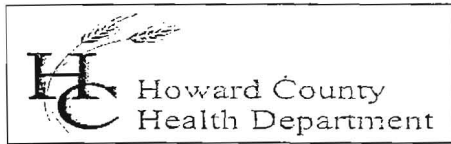
Date Received: 7/21/14 Received By: Kathy Jones  
 Data Release Signature: Deborah Miller - JWB Date: 7/29/14

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

ORIG MAILED 8/10/14

# Invoice



Bureau of Environmental Health  
 Attn: Bert Nixon, Director

DATE: AUGUST 6, 2014  
 DATES OF SERVICE: JULY 9, 10, 15, 16 & 18, 2014  
 INVOICE #: 2014-016

8930 Stanford Boulevard, Columbia, MD 21045  
 Phone 410-313-2640 Fax 410-313-2648  
 www.hchealth.org

DATE	DESCRIPTION	BALANCE	AMOUNT
07/09/14	Gross alpha/beta testing performed for Reagan Property Lot 6 HO - 95 - 2698		\$45.00
07/10/14	Gross alpha/beta testing performed for Reagan Property, Lot 5 HO - 95 - 2697		\$45.00
07/15/14	Gross alpha/beta testing performed for Reagan Property, Lots 3 and 4 HO - 95 - 2695 HO - 95 - 2696		\$90.00
07/16/14	Gross alpha/beta testing performed for Reagan Property, Lot 9 HO - 14 - 0001		\$45.00
07/18/14	Gross alpha/beta testing performed for Reagan Property, Lots 7, 10 and 11 HO - 95 - 2699 HO - 14 - 0002 HO - 14 - 0003		\$135.00
			<b>AMOUNT DUE</b>
			\$360.00

Please detach and return with payment.

REMITTANCE	
Invoice #	2014-016
Site Information	Reagan Property Lots 3,4,5,6,7,9,10 and 11
Amount Due	\$360.00

Receipt # 54589  
 8/22/2014

Make Checks Payable to: **Director of Finance** Mail Payments to: **Bureau of Env. Health**