

C1 3150

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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

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

FILL IN THIS FORM COMPLETELY PLEASE TYPE

COUNTY NUMBER A 520449-A

ST/CO USE ONLY DATE RECEIVED MM DD YY

DATE WELL COMPLETED 10 29 2007

Depth of Well 22 400' 26 (TO NEAREST FOOT)

11/20/07 OK/SO

PERMIT NO. FROM "PERMIT TO DRILL WELL" No. 95-1316

OWNER Demmitt Richard STREET OR RFD All Daughters Lane TOWN Fulton SUBDIVISION Orchard Estates SECTION Parcel A LOT

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

GROUTING RECORD form including: WELL HAS BEEN GROUTED (Y), TYPE OF GROUTING MATERIAL (CM, BC), NO. OF BAGS (25), NO. OF POUNDS (2350), GALLONS OF WATER (150), DEPTH OF GROUT SEAL (0 to 70 ft).

CASING RECORD form including: casing types insert appropriate code below (ST, CO, PL, OT), MAIN CASING TYPE (St), Nominal diameter (6), Total depth (80).

OTHER CASING (if used) form including: diameter, depth (feet) from to.

SCREEN RECORD form including: screen type or open hole (ST, BR, HO, PL, OT), DEPTH (nearest ft.) (78, 400).

NUMBER OF UNSUCCESSFUL WELLS: 0; WELL HYDROFRACTURED (Y, N)

CIRCLE APPROPRIATE LETTER: A (well abandoned), E (electric log obtained), P (test well converted to production well).

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

DRILLERS LIC. NO.: MSD024; DRILLERS SIGNATURE: Paul L. Mayne; LIC. NO.: MSD027

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

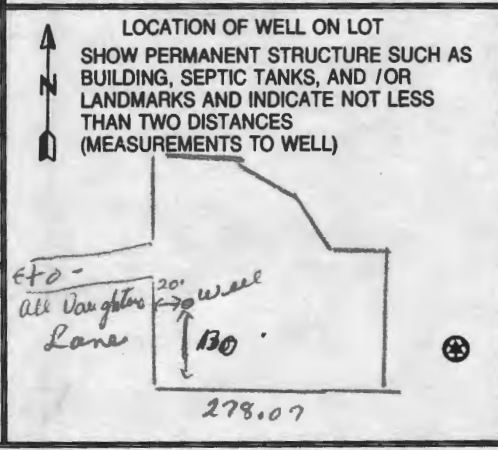
DEPTH (nearest ft.) table with rows 1-3 and columns 8, 9, 11, 15, 17, 21, 23, 24, 26, 30, 32, 36, 38, 39, 41, 45, 47, 51.

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) (E.R.O.S.) W Q 70 72 74 75 78 TELESCOPE CASING LOG INDICATOR OTHER DATA

PUMPING TEST form including: HOURS PUMPED (3), PUMPING RATE (6), METHOD USED TO MEASURE PUMPING RATE (Bucket), WATER LEVEL (28 ft before, 150 ft when pumping), TYPE OF PUMP USED (S submersible).

PUMP INSTALLED form including: DRILLER INSTALLED PUMP (NO), TYPE OF PUMP INSTALLED (29), CAPACITY: GALLONS PER MINUTE (31, 35), PUMP HORSE POWER (37, 41), PUMP COLUMN LENGTH (43, 47), CASING HEIGHT (+ above, - below), LAND SURFACE (2 nearest foot).



B 1 1041

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

HO-95-1316

527836 please type

fill in this form completely

Date Received (APA)

OWNER INFORMATION

8 MM DD YY 13

Demmitt Richard

P.O. Box 228

Clarksville Md 21029

B 3 LOCATION OF WELL

Howard

Orchard Estates

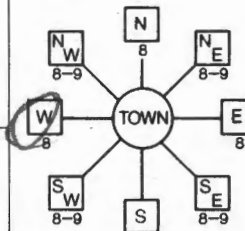
Parcel A

Fulton

MILES FROM TOWN (enter 0 if in town) 2 MI

B 4

DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



all Daughters Lane

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)



DISTANCE FROM ROAD 240 FT

TAX MAP: 40 BLK: 12 PARCEL 178

DRILLER INFORMATION

Joseph L Mayne MS D 024

Joseph L Mayne well Drilling

5512 Ridge Rd Mt. Airy Md 21771

Joseph L Mayne 9-27-2007

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) 5 500

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

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- [D] DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
[F] FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
[I] INDUSTRIAL, COMMERCIAL, DEWATERING
[P] PUBLIC WATER SUPPLY WELL
[T] TEST, OBSERVATION, MONITORING
[G] GEO-THERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard HS20449-A

COUNTY NAME COUNTY NO.

STATE SIGNATURE INSERT S

DATE ISSUED 10/11/07 CO SIGNATURE EXP. DATE 10/11/08

NORTH GRID 484 000 EAST GRID 816 000

APPROXIMATE DEPTH OF WELL 300 FEET

APPROXIMATE DIAMETER OF WELL 6 INCH

METHOD OF DRILLING (circle one)

- BORED (or Augered) JETTED Jetted & DRIVEN
AIR-ROTary AIR-Percussion ROTARY (Hydraulic Rotary)
CABLE REVERSE-ROTary DRIVE-POINT
other

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

- [N] THIS WELL WILL NOT REPLACE AN EXISTING WELL
[Y] THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
[S] THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
[D] 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)

APPROX. PERMIT NUMBER HO-95-1316

SPECIAL CONDITIONS

NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED.

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER

- 1. well
2.
3.

WRITE THE BOX NUMBER FROM THE MAP HERE

E 816 N 484

DRAW A SKETCH BELOW SHOWING LOCATION OF WELL RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION





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

INSPECTION  
4/22/18 1pm

**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 #: 301-252-0125  
Subdivision: OBB Lot # Parcel Well Tag #: HO-95-1316  
Site Address: 12419 ALL DAUGHTERS LN      A  
HIGHLAND

<b><u>Submersible Pump Data</u></b>	<b><u>Pitless Adapter</u></b>	<b><u>Well Cap and Electric Conduit</u></b>
Make: <u>Schaefer</u>	Make: <u>CAMPBELL</u>	Two piece watertight cap: <u>✓</u>
Model #: <u>1 HP</u>	Model #: <u>PA 500</u>	Screened, vented well cap: <u>✓</u>
Pump Capacity <u>15</u> GPM	Depth: <u>48"</u> (36" min)	Cap secured to casing: <u>✓</u>
Well Yield: <u>6</u> GPM	NSF approved: <u>✓</u>	Conduit min 18" B.G.: <u>✓</u>
Depth of well encountered at time of pump installation: <u>40</u> (feet)		Conduit secured to well cap: <u>✓</u>
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>N/A</u>		
Safety rope, if used, attached to inside of well casing with eye bolt <u>      </u>		

**Piping to house**  
Type: Poly  
PSI: 200 (160 psi min)  
Depth of supply line: 4' (36" min)

**House Connection**  
PVC sleeved to undisturbed soil at wall penetration: YES  
Approximate length of sleeve: 5'  
Sleeve caulked and 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 \_\_\_\_\_ date 4/18/19

**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 \_\_\_\_\_

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

**INTERIM CERTIFICATE OF POTABILITY**  
**PERMANENT DEVIATION FOR RADIUM**  
Expiration Date – JANUARY 31, 2019

July 31, 2019

Homeowner  
12419 All Daughters Lane  
Highland, MD 20777

**RE: Orchard Estates, Lot P. A**  
**12419 All Daughters Lane**  
**Building Permit: B19000030**  
**Well Permit: HO-95-1316**

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 **4/23/2019**. Final approval of the well line connection to the dwelling was granted on **4/23/2019**. The well construction was completed on **10/29/2007**. Water samples were collected on **6/20/2019**.

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 **10/29/2007**. Results showed a Radium 226 level of **40.0 ± 4.0 pCi/L** and Radium 228 level of **25.0 ± 3.0 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 **6/25/2019** and indicated a Radium 226 of **0.3 pCi/L**, a Radium 228 of **0.8 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.**

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

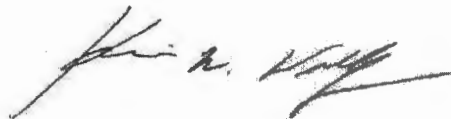
This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-95-1313. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

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 onsite sewage disposal system. You will also find a link to Maryland Department of the Environments website which describes in further detail operation and maintenance of your septic system.

Approving Authority,



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

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

# HOME LAND LABS

"Healthy Homes Start Here"  
State Certified Water Quality Laboratory #353

## Certificate of Analysis

Report Date: 7/8/2019

Client: Well Water Solutions, Inc.

Property Address: OBB ParA  
12419 All Daughters Ln  
Fulton, MD 20777

Report No: 172659

Date & Time Sampled: 06/25/2019 12:05 pm

Date & Time Received: 06/26/2019 11:15 am

Sampled By: Janet Walker 9006JW (Exp. 9/5/2021)

Preservation: Ice

Sample Point(s): Post treatment after the water softener from kitchen sink

Water Conditioning Appears to be: Water Softener

Chlorine Residual: 0.0

Field pH: 5.6

Well Type: Drilled

Well Height: 18"

Cap Type: Sanitary

Casing: Steel

Conduit: PVC

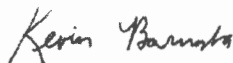
Clarity: Clear

Sand: None Observed

Well Tag Number: HO-95-1316

Primary Contaminants								
Parameter	Method	Result	Pass/Fail	Units	MCL	RL	Analyst	Date of Analysis
Radium 226	EPA 903.1	0.3	Pass	pCi/l	5.0	0.3	FRC-	07/08/2019
Radium 228	EPA Ra-05	<0.8	Pass	pCi/l	5.0	0.8	FRC-	07/08/2019
Radium Gross Alpha	EPA 900.0	<1.4	Pass	pCi/l	15	1.4	FRC-	07/01/2019

Approved By



Kevin Barnaba, Lab Director



# HOME LAND ENVIRONMENTAL HEALTH LABS



443-505-8375 172659 Date Due: 6/28/20  
 9106 Philadelp Client: Well Water Solutions, Inc.  
 Rosedale MD 21 Project:  
 www.homelandhealthyhomes.com  
 lab@homelandhealthyhomes.com

## Chain Of Custody Form

Client Name Well Water Solutions, Inc.

Site Address: OBB Par A

Address 5163 Darting Bird Lane, Columbia, MD 21044

12419 All Daughters Lane

Phone 410-935-7185 &/or 301-674-3137

Fulton, MD 20777

Email jbieber@wellwatersolutions.net & jemoseman@wellwatersolutions.net

### Field Collection Information

Collector's Name:	Janet Walker
Sampler's ID #:	8006JW Exp: 9/5/21
Collected Date and	6/25/2019 @ 12:05
Well Tag Number:	HO-95-1316

Field pH:	5.6
Field Chlorine:	Present <input checked="" type="checkbox"/> Absent <input type="checkbox"/>
Sand:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Clear At Time of Sample?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Was Well Chlorinated?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Well Casing and Cap Condition \* Bldg Permitt # B19000030

Height Above Grade: 18"	Cap Type: Sanitary	Casing: Steel	Conduit: PVC
----------------------------	-----------------------	------------------	-----------------

Requested Testing: (Please Circle All That Apply)

FHA/VA (Potability +Nitrites, Lead and Iron)  Potability (Bacteria, Nitrates, pH, Turbidity)

Arsenic	Bacteria	Cadmium	Chlorides	Gross Alpha & Beta Spent term <input checked="" type="checkbox"/>	Iron
Lead	MTBE	Nitrates	Nitrites	Pesticides	Radium 226/228 Long Term <input checked="" type="checkbox"/>
Total Hardness	VOC's	Other:	Other:	Other:	Other:

Source: <input checked="" type="checkbox"/> Radium collected Post Treatment after the Water Softener from the Kitchen sink	Water Conditioning: <input checked="" type="checkbox"/> Water Softener NOTE: Radium Collected Post Treatment from a tap after the Water Treatment. The only Water Treatment on the property & in use at the time of collection noted on this COC was a Water Softener
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### Release Signatures

\* Note: Please return COC with Lab Results

Released By: [Signature]  
Janet Walker

Date/Time: 6/25/2019 @ 1:30

Released By: [Signature]

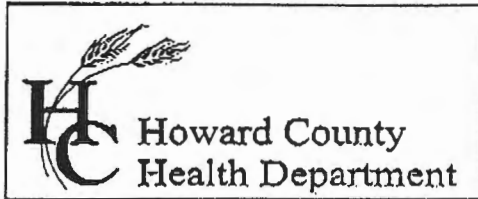
Date/Time: 6/26/19 11:15AM

Released By: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Received in lab by: A. Mathis

Date/Time: 6/26/19 11:15AM



7178 Columbia Gateway Drive, Columbia, MD 21046  
 (410) 313-2640 Fax (410) 313-2648  
 TDD (410) 313-2323 Toll Free 1-866-313-6300  
 website: www.hchealth.org

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:

Well Site Location:

<u>Orchard Est -</u>	<u>Parcel A</u> <u>1, 2, 3, 4</u>	<u>all Daughters Lane</u>
Subdivision/Property Name	Lot#	Road Name

The well site has been staked by Patten Harris Rust + Ass -  
 (professional land surveyor or company employing professional land surveyors)  
 on Sept 2007 (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

*Richard Demmitt*

Ch B2

100.43'

89.93'  
475.62'  
B-43

477.25  
B-18

AREA = 10,023 SF.

104.20'

474.84  
B-46

479.35  
B-45

478.42  
B-44

25.75'

483.34  
B-19

PRIVATE SEPTIC  
EASEMENT AREA

312.13'

480.75  
B-21

AREA = 10,039 SF.

479.25  
B-22

477.17  
B-23

480.90  
B-24

PRIVATE SEPTIC  
EASEMENT AREA

LOT 4  
49,746 S.F.

PROP. WELL

R=100'

R=100'

P-1 PAVEMENT

PRESERVATION  
PARCEL A  
BUILDABLE  
(EASEMENT HOLDERS ARE  
HOWARD COUNTY AND HOA)  
140,111 S.F.

10/11/07 Well

Site of



PROP. WELL

R=100'

PRIVATE SEPTIC  
EASEMENT AREA

CERTIFICA  
I CERTIF  
PERFORM  
BEST C

Ch C2

# HOME LAND

## L A B S

"Healthy Homes Start Here"  
 State Certified Water Quality Laboratory #353

### Certificate of Analysis

Report Date: 6/24/2019

Client: Well Water Solutions, Inc.  
 Property Address: 12419 All Daughters Ln  
 Fulton, MD 20777 OBB Par A

Report No: 172441

Date & Time Sampled: 06/20/2019 1:30 pm

Date & Time Received: 06/21/2019 10:50 am

Sampled By: Janet Walker 9006JW (Exp. 9/5/2021)

Preservation: Ice

Sample Point(s): Bacteria-Raw from first floor bathroom sink, All others-Raw from kitchen sink

Water Conditioning Appears to be: None

Chlorine Residual: 0.0

Field pH: 5.7

Well Type: Drilled

Well Height: 18"

Cap Type: Sanitary ✓

Casing: Steel ✓

Conduit: PVC

Clarity: Clear

Sand: None Observed ✓

Well Tag Number: HO-95-1316

Primary Contaminants								
Parameter	Method	Result	Pass/Fail	Units	MCL	RL	Analyst	Date of Analysis
Bacteria-Total Coliform	Colitag Test	Absent	Pass	Per/100ml	Present	1	ADM-353	06/21/2019
Bacteria-E.coli	Colitag Test	Absent	Pass	Per/100ml	Present	1	ADM-353	06/21/2019
Nitrate + Nitrite as N	EPA 353.2	3.3	Pass	mg/l	10	0.5	AND-353	06/21/2019
Secondary Contaminants								
Parameter	Method	Result	Acceptable /High	Units	SMCL	RL	Analyst	Date of Analysis
Turbidity	EPA 180.1	1.8	Acceptable	NTU	10	0.5	AND-353	06/21/2019

Approved By Kevin Barnaba Kevin Barnaba, Lab Director



**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**

**Lot - Parcel A**

This agreement is entered into by and between the Howard County Health Department ("the Health Department") and MB Browns Bridge Court LLC *Matthew Brooke* ("the Owner").  
*J Mindy Ehrenfried*

WHEREAS, the Owner owns a tract of land at street address 12419 All Daughters Lane, Highland, MD 20777 and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 40, Block #     , Parcel # 178, Deed Reference # Liber 03395-Folio 00074 and Tax Account # 05-353289 ("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 HO95-1316 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.

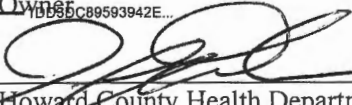
NOW THEREFORE, the parties have agreed to the following terms and conditions:

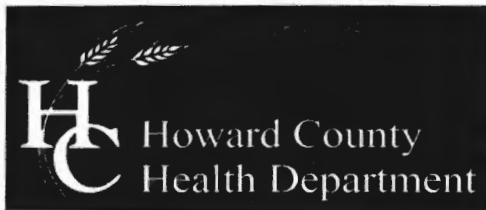
1. The Owner will record this Agreement among the Land Records of Howard County, Maryland and provide confirmation to the Health Dept.
2. The Owner agrees to install and maintain a water treatment device which effectively reduces the

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.

<small>DocuSigned by:</small>			
<u>Matthew Jason Brooke</u>	10/5/2018 3:43:19 PM EDT		
<small>3BA591F04C1D449...</small>	Date	Witness	Date
<small>Owner</small>			
<small>DocuSigned by:</small>			
<u>Mindy Lenore Ehrenfried</u>	10/5/2018 2:39:07 PM EDT		
<small>YB55C89593942E...</small>	Date	Witness	Date
<small>Owner</small>			
	5/17/19		
Howard County Health Department	Date		



Bureau of Environmental Health  
7178 Columbia Gateway Drive, Columbia, MD 21046-2147  
(410) 313-2640 Fax (410) 313-2648  
TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

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

November 30, 2007

Mr. Richard Demitt  
P.O. Box 228  
Clarksville, Maryland 21029

RE: Orchard Estates PPA  
All Daughter's Lane  
Well Tag: HO - 95 - 1316

Dear Mr. Demitt:

A sample was collected during a yield test on October 29, 2007 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  $40.0 \pm 4.0$  picocuries/liter (pCi/L); while the **Gross Beta** level was  $25.0 \pm 3.0$  pCi/L. With the margin of error, the **Gross Alpha** result exceeded 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**).

Since the **Gross Alpha** finding exceeded its **MCL**, additional testing for **Gross Alpha** and **Gross Beta** (both short and long term components), plus **Radium** will be necessary prior to occupancy to verify existing levels and assess the need for appropriate treatment. Alternatively, you may install treatment designed to reduce **Gross Alpha**, **Gross Beta** and **Radium**, plus provide post treated results (**for all 3 parameters**) confirming that levels are in conformance with existing standards. These tests are **in addition** to the standard parameters required for Use & Occupancy.

**Additionally**, the owners will be required to sign an "AGREEMENT FOR APPROVAL OF AN INDIVIDUAL DRINKING WELL WITH AN ON-SITE TREATMENT SYSTEM" as part of the Use and Occupancy process.

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

Sincerely,

A handwritten signature in cursive script that reads 'Bert Nixon'.

Bert Nixon, Director  
Bureau of Environmental Health

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

Send Report To:

Best Alexen

State of Maryland  
DHMH - Laboratories Administration  
Division of Environmental Chemistry  
**RADIATION LABORATORY**

*(initials)*

201 W. Preston Street, Baltimore, Maryland 21201

John M. DeBoy, Dr. P.H., Director

**LABORATORY ANALYSIS REQUEST**

Sample Bottle No. A: 40-95-1316 No. B: \_\_\_\_\_ Field Blank Bottle No. A: \_\_\_\_\_ No. B: \_\_\_\_\_

Plant/Site Name: Orchards Est. P.P.A County: Howard

Sample Source: All Daughters Ln. Location: 40-95-1316  
(well no., lab sink, sample tap, etc.)

County:  1  3 Plant No.

CHECK (one per box)

Drinking Water <input checked="" type="checkbox"/>	Community <input type="checkbox"/>	Source (raw water) <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"/>

Collector: K. Walt Telephone No: 411-313-2645

Date Collected: 10/29/07 Time Collected: 10:20 a.m. \_\_\_\_\_ p.m.

Nitric Acid Preserved: Yes  No  Iced: Yes  No

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

Remarks: sample collected @ end of yield pH \_\_\_\_\_ Chlorine \_\_\_\_\_

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Reported
✓	Gross Alpha	4000			
✓	Gross Beta	4100			
	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: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Supervisor: \_\_\_\_\_



Bureau of Environmental Health  
7178 Columbia Gateway Drive, Columbia, MD 21046-2147  
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TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer  
January 30, 2008

Mr. Richard Demitt  
P.O. Box 228  
Clarksville, Maryland 21029

RE: Orchard Estates PPA  
All Daughter's Lane  
Well Tag: HO - 95 - 1316

Dear Mr. Demitt:

A follow-up sample was collected during a pump test on December 27, 2007 and submitted to the GPL Laboratories to further assess levels of **Gross Alpha**, **Gross Beta**, as well as **radium** in the future well water supply. Prior yield test results revealed an elevated level for **Gross Alpha** particle activity in a water supply.

Short term follow-up results from this screening revealed a **Gross Alpha** of  $23.4 \pm 8.1$  picocuries/liter (pCi/L); while the **Gross Beta** level was  $12.3 \pm 2.5$  pCi/L. The **Gross Alpha** result exceeded 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).

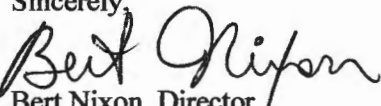
Long term follow-up results from this screening revealed a **Gross Alpha** of  $11.8 \pm 4.6$  picocuries/liter (pCi/L); while the **Gross Beta** level was  $10.0 \pm 2.2$  pCi/L. The **Gross Alpha** result was below its **maximum contaminant level (MCL)** of 15 pCi/L, while the **Gross Beta** level was remained below its targeted value of 50 pCi/L (roughly equivalent to the **annual dose rate** of 4 millirems/year).

Additionally, a **Radium** sample was taken to assess the presence of **Radium 226** or **Radium 228**. These naturally occurring isotopes of radium are considered the most important due to their longer half-lives and health significance.

Results revealed a **Radium 226** level of  $3.9 \pm 0.7$  pCi/L, while the **Radium 228** level was  $4.2 \pm 0.5$  pCi/L. Here the **combined Radium 226 / 228** was above the MCL of 5 pCi/L.

Since the **Gross Alpha** and combined **Radium** findings exceeded their respective **MCL's**, you will need to install treatment designed to reduce **Gross Alpha**, **Gross Beta** and **Radium**, plus provide post treated results (**for all 3 parameters**) confirming that levels are in conformance with existing standards. These tests are **in addition** to the standard parameters required for Use & Occupancy. **Additionally**, the owners will be required to sign an "AGREEMENT FOR APPROVAL OF AN INDIVIDUAL DRINKING WELL WITH AN ON-SITE TREATMENT SYSTEM" as part of the Use and Occupancy process.

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

Sincerely,  
  
Bert Nixon, Director  
Bureau of Environmental Health

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

Send Report To:

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

**LABORATORY ANALYSIS REQUEST**

Sample Bottle No. A: 140-95-1316<sup>ST</sup> No. B: \_\_\_\_\_ Field Blank Bottle No. A: \_\_\_\_\_ No. B: \_\_\_\_\_

Plant/Site Name: Orchards Est. P.P.A County: Howard

Sample Source: \_\_\_\_\_ Location: 140-95-1316  
(well no., lab sink, sample tap, etc.)

County:   Plant No.

CHECK (one per box)

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

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

Source (raw water)	<input type="checkbox"/>
Distribution (treated)	<input type="checkbox"/>
MCL	<input type="checkbox"/>

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

Collector: K. Wolf

Telephone No: 410-313-2615

Date Collected: 12/27/08

Time Collected: \_\_\_\_\_ a.m. 12:08 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 Reported
✓	Gross Alpha	4000	<u>712101-105</u>	<u>234 ± 8.1</u>	<u>1/2/09</u>
✓	Gross Beta	4100		<u>123 ± 2.5</u>	
	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: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Supervisor: \_\_\_\_\_

Send Report To:

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

**LABORATORY ANALYSIS REQUEST**

Sample Bottle No. A: 40-95-1316 LT No. B: \_\_\_\_\_ Field Blank Bottle No. A: \_\_\_\_\_ No. B: \_\_\_\_\_

Plant/Site Name: ordb... E-4 P.P.A County: Howard

Sample Source: \_\_\_\_\_ Location: 40-95-1316  
(well no., lab sink, sample tap, etc.)

County:   Plant No.

CHECK (one per box)

Drinking Water   
Landfill   
Stream   
Other

Community   
Non-community   
Private   
Other

Source (raw water)   
Distribution (treated)   
MCL

Emergency   
Routine   
Recheck   
Special

Collector: K. Wolf

Telephone No: 410-713-2645

Date Collected: 12/27/07

Time Collected: \_\_\_\_\_ a.m. 12:08 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 Reported
✓	Gross Alpha ( <u>LOW</u> )	4000	<u>712101-005</u>	<u>11.8 ± 4.6</u>	<u>1/8/08</u>
✓	Gross Beta ( <u>TSPM</u> )	4100		<u>10.0 ± 2.2</u>	
	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: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Supervisor: \_\_\_\_\_

Send Report To:

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

**LABORATORY ANALYSIS REQUEST**

Sample Bottle No. A: HU-95-1316R No. B:      Field Blank Bottle No. A:      No. B:     

Plant/Site Name: Orchards Est. P.P. A. County: Hennick

Sample Source: P11 Dugwites Ln. Location: HU-95-1316  
(well no., lab sink, sample tap, etc.)

County:   Plant No.

CHECK (one per box)

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

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

Source (raw water)	<input checked="" type="checkbox"/>
Distribution (treated)	<input type="checkbox"/>
MCL	<input type="checkbox"/>

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

Collector: K. Wolf Telephone No:     

Date Collected: 12/27/08 Time Collected: 12:08 am. p.m.

Nitric Acid Preserved: Yes  No  Iced: Yes  No

Submitters Code:   Federal Project:  Field Data:          

Remarks: Sample collected @ pump for 1 hr pH Chlorine

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Reported
	Gross Alpha	4000			
	Gross Beta	4100			
	Radon-222 Bottle A	4004			
	Radon-222 Bottle B	4004			
	Field Blank A	4004			
	Field Blank B	4004			
	Tritium				
✓	Ra - 226	4020	<u>712107-003</u>	<u>3.9 ± 0.7</u>	<u>1/30/08</u>
✓	Ra - 228	4030		<u>4.2 ± 0.5</u>	
	Total Uranium	4006			

Date Received:      /      /     

Supervisor:

**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 #: \_\_\_\_\_ Well Tag #: HO-95-1316  
Site Address: \_\_\_\_\_

<u><b>Submersible Pump Data</b></u>	<u><b>Pitless Adapter</b></u>	<u><b>Well Cap and Electric Conduit</b></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> _____		

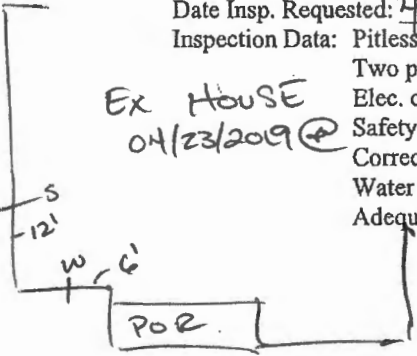
<u><b>Piping to house</b></u>	<u><b>House Connection</b></u>
Type: _____	PVC sleeve to undisturbed soil at wall penetration: _____
PSI: _____ (160 psi min)	Length of sleeve (5' minimum from foundation): _____
Depth of supply line: _____ (36" min)	Sleeve sealed properly: _____

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: 4/23/2019 Date Insp. Approved: 4/23/2019 Inspector: [Signature]  
 Inspection Data: Pitless adapter watertight & water supply line at least 36" below grade ✓ 39" 04/23/2019 [Signature]  
 Two piece cap installed and attached to casing securely ✓ 36" 04/23/2019 [Signature]  
 Elec. conduit extends at least 18" below grade/attached to cap properly ✓ 29" 04/23/2019 [Signature]  
 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 ✓



4/23/2019 [Signature]  
 WL UNDER FOOTER.  
 SLEEVED UNDER DRIVE  
 WAY.