

C 1 36482

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 A520395

ST/CO USE ONLY DATE Received MM DD

DATE WELL COMPLETED MM DD YY

Depth of Well (TO NEAREST FOOT)

OK 11/5/15 SC

PERMIT NO. FROM "PERMIT TO DRILL WELL"

OWNER, WELL SITE ADDRESS, SUBDIVISION, SECTION, TOWN, LOT

WELL LOG table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes entries for Clay, Sand, Mica rock, Water.

GROUTING RECORD: WELL HAS BEEN GROUTED, TYPE OF GROUTING MATERIAL, CEMENT, BENTONITE CLAY, NO. OF BAGS, NO. OF POUNDS, GALLONS OF WATER, DEPTH OF GROUT SEAL.

CASING RECORD: casing types insert appropriate code below, MAIN CASING TYPE, Nominal diameter, Total depth.

OTHER CASING (if used) diameter, depth (feet)

SCREEN RECORD: screen type or open hole, insert appropriate code below, STEEL, BRASS, BRONZE, PLASTIC, OPEN HOLE, OTHER.

DEPTH (nearest ft.) table with columns 1-21 and rows A-C, S-F, E-N.

PUMPING TEST: HOURS PUMPED, PUMPING RATE, METHOD USED TO MEASURE PUMPING RATE, WATER LEVEL, BEFORE PUMPING, WHEN PUMPING, TYPE OF PUMP USED.

PUMP INSTALLED: DRILLER INSTALLED PUMP, IF DRILLER INSTALLS PUMP, TYPE OF PUMP INSTALLED, CAPACITY, PUMP HORSE POWER, PUMP COLUMN LENGTH, CASING HEIGHT.

NUMBER OF UNSUCCESSFUL WELLS, WELL HYDROFRACTURED

CIRCLE APPROPRIATE LETTER: A WELL WAS ABANDONED AND SEALED, ELECTRIC LOG OBTAINED, 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., DRILLERS SIGNATURE, LIC. NO., SITE SUPERVISOR

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL, MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER), DIAMETER OF SCREEN, TELESCOPE CASING, LOG INDICATOR, OTHER DATA.

LATITUDE, LONGITUDE, (DEFAULT COORD. WGS 84), Pursuant to §10-624 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04.

B 1 1 2 3 4 5 6 28694	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type	STATE PERMIT NUMBER HO-15-0149 <small>fill in this form completely</small>
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OWNER INFORMATION

Date Received (APA) _____

8 MM DD YY 13
BASSLER Venture LLC

15 Last Name Owner First Name 34
NO BOX 482

36 Street or RFD 55
Lis Bow MD, 21765

57 Town 70 State 72 Zip 76
CLARKSVILLE

LOCATION OF WELL

B 3
 8 COUNTY Howard 21
Walnut Creek Phase 4
 23 SUBDIVISION 42
 SECTION 4 LOT 124
 44 46 48 50
 52 NEAREST TOWN CLARKSVILLE 71

DRILLER INFORMATION

RALPH MAYNE M S D 117
 Driller's Name 76 License No. 81

Ralph Mayne Well Drilling
 Firm Name

17024 Handy Rd Mt Airy MD 21971
 Address

[Signature] 9/18/15
 Signature Date

SOURCES OF DRILLING WATER

B 4
 1 well
 2
 3

LINDERA Ct.
 11 STREET ADDRESS 30

ON WHICH SIDE OF ROAD
 (CIRCLE APPROPRIATE BOX)

NORTH
 WEST
 EAST
 SOUTH

34 225 37
 DISTANCE FROM ROAD
 ENTER FT OR MI 38 39

TAX MAP: 28 BLK: _____ PARCEL 49

WELL INFORMATION

1 2
 APPROX. PUMPING RATE
 (GAL. PER MIN.) 5

8 500 12
 AVERAGE DAILY QUANTITY NEEDED
 (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 (13) A520385
 COUNTY NAME COUNTY NO.

STATE SIGNATURE _____ INSERT S → 41

DATE ISSUED 9/25/15 [Signature] 9/25/16
 43 MM DD YY 48 CO SIGNATURE EXP. DATE

APPROXIMATE DEPTH OF WELL 150 FEET
 24 28

APPROXIMATE DIAMETER OF WELL 6" NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN

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

37 CABLE REVERSE-ROTARY DRIVE-POINT

other _____

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

THIS WELL WILL NOT REPLACE AN EXISTING WELL

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

39 THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS

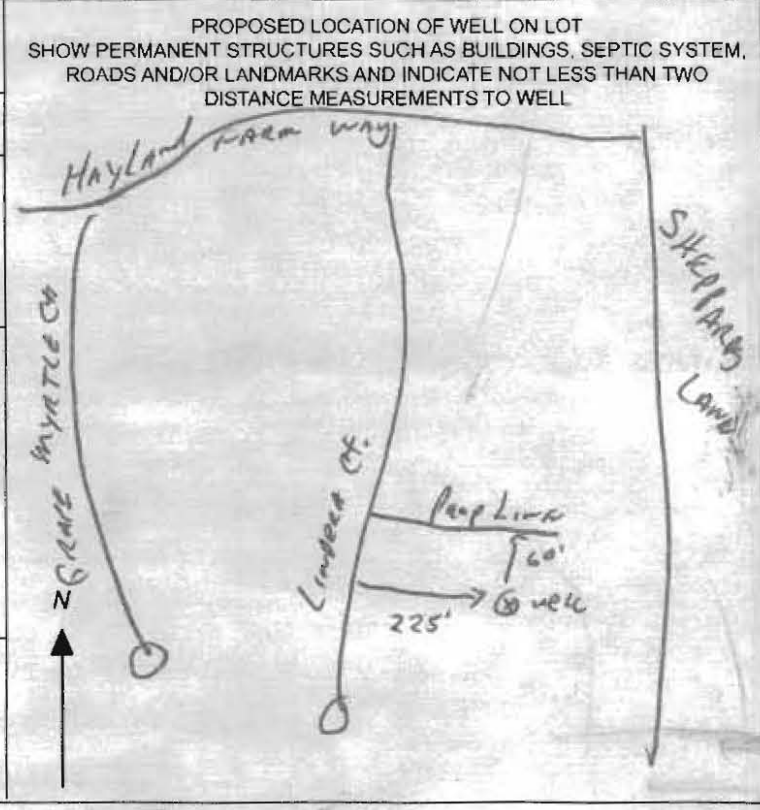
THIS WELL WILL DEEPEAN AN EXISTING WELL

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 HO2006G020

PERMIT No. HO-15-0149
 70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS
 NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED. Wells must be 100' apart. Radium sample req'd at yield.

**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: Robert L. Feezer Co. Telephone #: 410-781-4655
Address: 6321 Barnett Avenue
Sykesville, MD 21784

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer
License # and name of individual responsible for the field installation:

Name (Print): Joshua Henricks License# PI0173

***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: NV Homes Telephone #: 410-379-5956
Subdivision: Walnut Creek Lot #: 124 Well Tag #: HO - 15 - 0149
Site Address: 8049 Lindera Court
Ellicott City, MD 21042

Submersible Pump Data

Make: Berkeley
Model #: B7P4MS07221
Pump Capacity 7 GPM
Well Yield: 15.0 GPM

Pitless Adapter

Make: Boshart
Model#: P-100-SS
Depth: 42" (36" min)
NSF/WSC approved: Yes

Well Cap and Electric Conduit

Two piece watertight cap: Yes
Screened, vented well cap: Yes
Cap secured to casing: Yes
Conduit min 18" B.G.: Yes
Conduit secured to well cap: Yes

Depth of well encountered at time of pump installation: 200 (feet)
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 inside of well casing N/A

Piping to house

Type: Poly
PSI: 200 (160 psi min)
Depth of supply line: 42" (36" min)

House Connection

PVC sleeve to undisturbed soil at wall penetration: Yes
Length of sleeve (5' minimum from foundation): 10'
Sleeve sealed properly: Yes

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

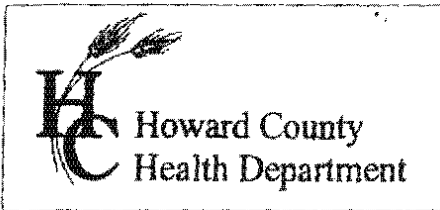
Joshua Henricks March 9, 2017
Signature of company representative responsible for installation date

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

Date Insp. Requested: 04/11/2017 Date Insp. Approved: 04/11/2017 Inspector: (Signature)
Inspection Data: Pitless adapter watertight & water supply line at least 36" below grade ✓ 48" @ 4/11/2017
Two piece cap installed and attached to casing securely ✓
Elec. conduit extends at least 18" below grade/attached to cap properly ✓ 30" @ 4/11/2017
Safety rope not outside of well cap/casing ✓
Correct well tag attached properly and casing 8" above finished grade ✓ 26" @ 4/11/2017
Water supply line sleeved adequately at house connection ✓ 9' @ 4/11/2017
Adequate grout observed below pitless adapter ✓

Charlotte Dpe

** Dent in casing 36" from cap near conduit*



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

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

TO ALL INTERESTED PARTIES

When submitting a well application for a proposed well for new construction, please indicate one of the following:

Well Site Location:

<u>Subdivision/Property Name</u>	<u>Lot #</u>	<u>Road Name</u>
Walnut Creek	124	Lindera Court

The well site has been staked by Fisher, Collins and Carter, Inc.,
(professional land surveyor or company employing professional land surveyors)
on 09/17/15 (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.

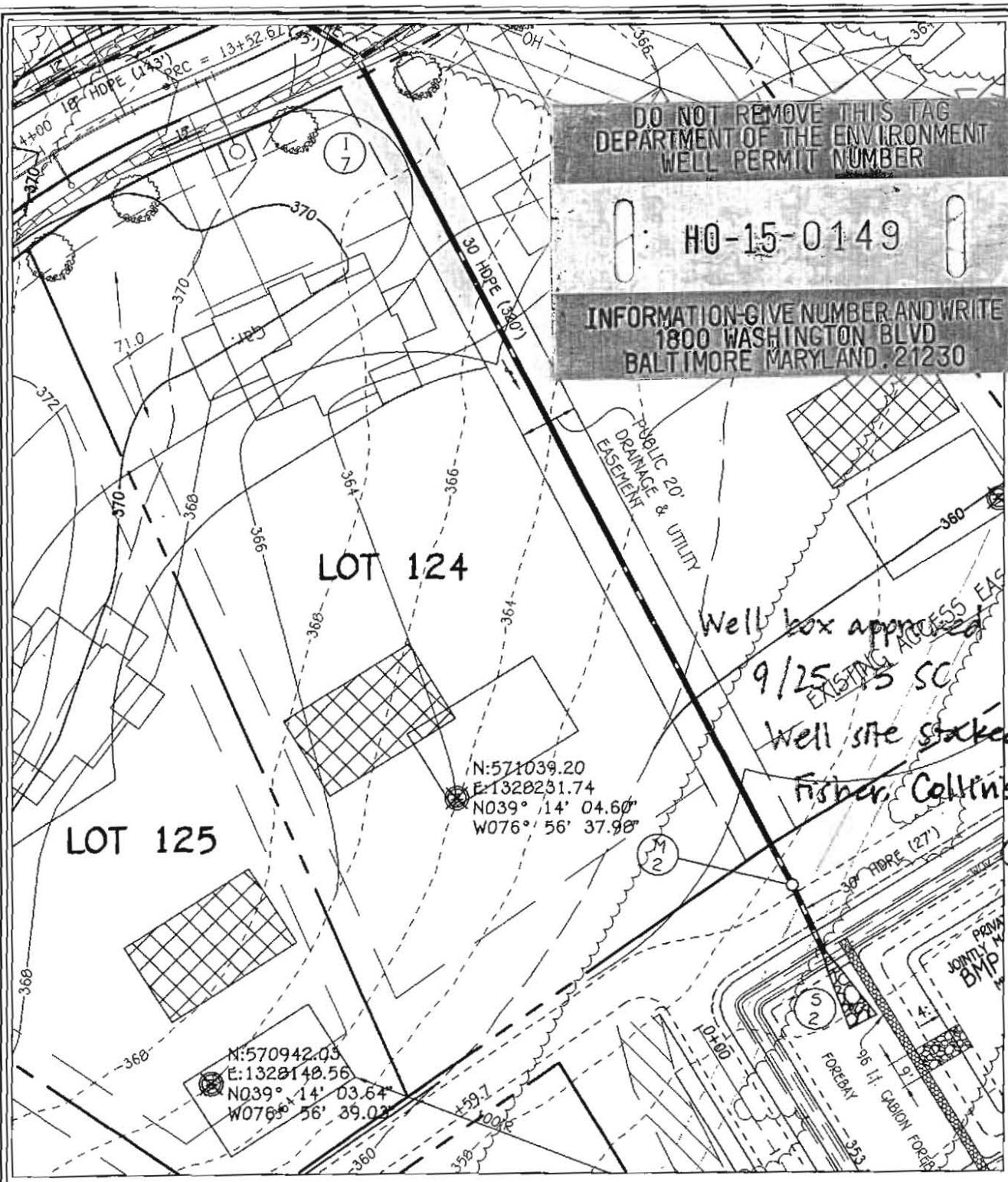
Revised 3/11/07

I:\2004\04001\dwg\PHASE FOUR FINALS\04001 Phase Four FINAL WELL MAPS.dwg, 9/1/2015 2:38:31 PM, 1:1

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

HO-15-0149

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



LOT 125

LOT 124

N:571039.20
E:1328231.74
N039° 14' 04.60"
W076° 56' 37.98"

N:570942.05
E:1328148.56
N039° 14' 03.64"
W076° 56' 39.02"

Well box approach
9/25
EXISTING SC
Well site stacked by
Fisher, Collins, &
Carter

WELL LOCATION INFORMATION:
NORTHING = 571042.74 EASTING = 1328249.94
LATITUDE = N 39° 14' 05" LONGITUDE = W 76° 56' 38"

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461-2895

LOT 124 WELL MAP WALNUT CREEK PHASE FOUR

Lots 23 - 68, Non-Buildable Preservation Parcels
'C', 'G', 'I', 'K', 'L' And 'M', Buildable Bulk Parcels 'E' And 'H'
& Non-Buildable Parcel 'J'
ZONED: RC-DEO & RR-DEO
TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: SEPTEMBER 1, 2015 SCALE: 1"=50'

5049 Linder Ct.

Clerk of the Circuit Court for
Howard County
Land Records/Licensing

The Thomas Dorsey Building
9250 Bendix Road
Columbia, MD 21045
410-313-5850

=====
LR - Agreement Recording Fee
1x 20.00 20.00

Name: nv homes
Ref: 73

LR - Agreement Surcharge
1x 40.00 40.00

=====
SubTotal: 60.00
Total: 60.00
=====

CRO-Credit 0.00 60.00
Credit Card Confirmation : 05191c

06/06/2017 09:55 CC13-MH
#8506768 /497/109
***** DUPLICATE #001 *****

06/06/2017 09:57 CC13-MH
Thank you for visiting us today



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 NV Homes ("the Owner").

WHEREAS, the Owner owns a tract of land at street address 5049 Lindera Court and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 28, Block # 4, Parcel # 49, Deed Reference # _____ and Tax Account # _____ ("the Property").

WHEREAS, the Property lacks an available public drinking water source and is required to have an 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 HO-15-0149 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.

<u>Clara Cagle</u>	<u>6/5/17</u>	<u>John M. Matarich</u>	<u>06/05/2017</u>
Owner	Date	Buyer	Date

_____	_____	_____	_____
Owner	Date	Buyer	Date

<u>Michael J. Davis</u>	<u>6/6/2017</u>
Howard County Health Department	Date

INTERIM CERTIFICATE OF POTABILITY
PERMANENT DEVIATION FOR RADIUM

Expiration Date – APRIL 31, 2019

October 31, 2018

Homeowner
5049 Lindera Court
Ellicott City, MD 21042

RE: Walnut Creek, Lot 124
5049 Lindera Court
Building Permit: B17000055
Well Permit: HO-15-0149

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 **6/5/2017**. Final approval of the well line connection to the dwelling was granted on **11/27/2017**. The well construction was completed on **10/26/2015**. Water samples were collected on **4/26/2017**.

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 **11/21/2016**. Results showed a Gross Alpha level of **35.1 ± 437 pCi/L** and a Gross Beta level of **21.0 ± 1.9 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 **6/5/2017** and indicated a combined Radium 226/228 level of **1.1 pCi/L** which is below the MCL of **5 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.

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

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.**

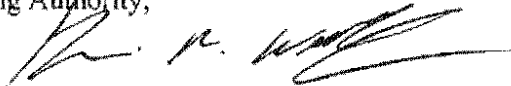
This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-15-0149. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

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 certified water quality laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website: <http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf>

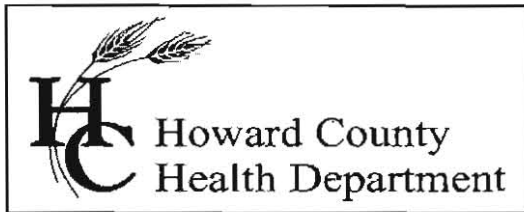
In closing, please refer to our "Homeowner Fact Sheet" for understanding your onsite sewage disposal system. You will also find a link to Maryland Department of the Environment's website which elaborates in further detail operation and maintenance of your Septic System.

Approving Authority,



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

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



Bureau of Environmental Health

8930 Stanford Blvd., Columbia, MD 21045

Main: 410-313-1771 | 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

TEMPORARY INTERIM CERTIFICATE OF POTABILITY
TEMPORARY DEVIATION FOR RADIUM

Expiration Date – JANUARY 27, 2017

December 13, 2016

Homeowner
5049 Lindera Court
Ellicott City, MD 21042

**RE: Walnut Creek, Lot 124
5049 Lindera Court
Building Permit: B17000055
Well Permit: HO-15-0149**

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 **6/5/2017**. Final approval of the well line connection to the dwelling was granted on **4/11/2017**. The well construction was completed on **10/26/2015**. Water samples were collected on **4/26/2017**.

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 **11/21/2016**. Results showed a Gross Alpha level of **35.1 ± 4.7 pCi/L** and Gross Beta level of **21.0 ± 1.9 pCi/L**. The Gross Alpha and Beta results were well above its maximum contaminant level (MCL) of 15 pCi/L.

This is a temporary deviation to allow additional time for testing your well water system for Radium. Submission of water sample results must be obtained by the Health Department within the allowed 45 day period for the Interim Certificate of Potability.

This Department will grant a **temporary deviation** to the Interim Certificate of Potability on condition that water sample results for short term gross alpha/beta are submitted to this Department **within 45 days**. Those results must indicate that the radionuclide levels meet a Gross Alpha level of less than **15 pCi/L**, and a Gross Beta level of less than **50 pCi/L**.

SEND REPORT TO: Bert Nixon
 Howard Co. Health Dept.
 Bureau of Environmental Health
 8932 Stanford Blvd
 Columbia, MD 21045

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
RADIATION LABORATORY
 1770 Ashland Avenue
 Baltimore, Maryland 21205

Lab No.
 E000694-027#

LABORATORY ANALYSIS REQUEST FORM

Plant/Site Name: Walnut Creek - Lot 12th County: Howard

Sample Source: Underground Location: 110-15-0149

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

Radon-222 Bottle A _____ Radon-222 Field Blank Bottle A _____
 Bottle B _____ Bottle B _____

County: 113 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 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: 5

Collector: S. Collins Telephone No.: 410-313-6287

Date Collected: 10/26/15 Time Collected: _____ a.m. 1:15 p.m.

Field pH: _____ Field Chlorine: _____

Nitric Acid Preserved: Yes No Iced: Yes No

Remarks: Sample taken during yield

✓	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input checked="" type="checkbox"/>	Gross Alpha	4000	0694	EPA 900.0	29.7 ± 4.2	10/29/15	JJ	11/6/15
<input checked="" type="checkbox"/>	Gross Beta	4100	0694	EPA 900.0	8.5 ± 2.2	10/29/15	JJ	11/6/15
<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		0694	EPA 900.0	21.6 ± 3.2	10/30/15	JJ	11/6/15
<input checked="" type="checkbox"/>	Gross Beta - Conf		0694	EPA 900.0	16.8 ± 2.2	10/30/15	JJ	11/6/15

Date Received: 10/27/15 Received By: In Ji

Data Release Signature: Delinda Miller - Juch Date: 11/6/15

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.: (443) 681-3766 •Fax No.: (443) 681-4507

SEND REPORT TO: Bert Nixon
 Howard Co. Health Dept.
 Bureau of Environmental Health
 8930 Cleford Blvd.
 Columbia, MD 21045

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
RADIATION LABORATORY
 1770 Ashland Avenue
 Baltimore, Maryland 21205

Lab No. _____

LABORATORY ANALYSIS REQUEST FORM

Plant/Site Name: Field Blank County: Howard

Sample Source: dH₂O Location: 11115 Lab

(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: S Collins Telephone No.: 410-313-6287
 Date Collected: 10/26/15 Time Collected: _____ a.m. 3:30 p.m.
 Field pH: _____ Field Chlorine: _____
 Nitric Acid Preserved: Yes No Iced: Yes No

Remarks: _____

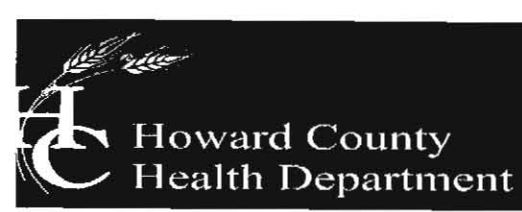
TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input checked="" type="checkbox"/> Gross Alpha	4000	0693	EPA 900.0	2.0	10/29/15	IJ	11/6/15
<input checked="" type="checkbox"/> Gross Beta	4100	0693	EPA 900.0	2.0	10/29/15	IJ	11/6/15
<input type="checkbox"/> Radium-226	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"/>							
<input type="checkbox"/>							

Date Received: 10/27/15 Received By: In JI
 Data Release Signature: [Signature] Date: 11/6/15

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.: (443) 681-3766 •Fax No.: (443) 681-4507

FORM REVISED 05/15
 DHMH 4540 01/13



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

Maura Rossman, M.D., Health Officer

January 11, 2016

* Need Results

Bassler Venture
Attn. Tim Feaga
15950 North Avenue, P.O. Box 482
Lisbon, Maryland 21765

RE: Walnut Creek Lot 124
Lindera Court
Well Tag: HO - 15 - 0149

Dear Mr. Feaga:

A sample was collected during a yield test on October 26, 2015 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 29.7 ± 4.2 picocuries/liter (pCi/L), while the **Gross Beta** level was 8.5 ± 2.2 pCi/L. The **Gross Alpha** result was above its maximum contaminant level (MCL) of 15 pCi/L, while the **Gross Beta** level was below its targeted value of 50 pCi/L (roughly equivalent to the annual dose rate of 4 millirems/year).

At the time of testing and with respect to these parameters, the future well water supply does not meet EPA regulatory standards. Additional testing for these parameters will be required to secure the future Use & Occupancy. Additional raw water samples for short and long term **Gross Alpha** and **Gross Beta**, plus **Radium 226 / 228** will be needed to assess any future treatment needs. Please note that other standard testing parameters (bacteria, nitrate, turbidity and sand) will also be required to help secure Use & Occupancy.

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

Sincerely,

Bert Nixon, Director
Bureau of Environmental Health

✓ Enclosure
cc: Property file

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Walnutcreek Phase 4 *Lindera ct.* *HO-15-0149*
Pace Project No.: 30174956

Sample: Lot 124 Lab ID: 30174956005 Collected: 03/01/16 11:30 Received: 03/02/16 22:15 Matrix: Drinking Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	35.1 ± 4.73 (2.25) C:NA T:NA	pCi/L	04/05/16 07:41	12587-46-1	
Gross Beta	EPA 900.0	21.0 ± 1.90 (1.42) C:NA T:NA	pCi/L	04/05/16 07:41	12587-47-2	
Radium-226	EPA 903.1	9.16 ± 1.68 (0.968) C:NA T:89%	pCi/L	04/12/16 10:04	13982-63-3	
Radium-228	EPA 904.0	2.70 ± 0.502 (0.697) C:82% T:91%	pCi/L	03/25/16 15:55	15262-20-1	
Total Uranium	ASTM D5174-97	20.1 ± 0.380 (0.771) C:NA T:NA	ug/L	04/11/16 18:26	7440-61-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.,

Water Testing Laboratories

P.O. Box 712
Stevensville, MD 21666
410-643-7711

of Maryland, Inc.

Nv Homes
C/O Robert Feezer Co
6321 Barnett Ave
Sykesville Md 21784

Reporting Date: 5/2/2017
Report #: M5032

Submitted Sample Address: Lot 124, 5049 Lindera court, Ellicott City MD 21042
Submitted Sample Source: Holding tank
Date / Time Collected: 4/26/2017 11:10 AM
Sample Type: Drinking Water
Sampler/Company: K. Lee 4827KL, WTL of MD
Field Record: Chlorine residual: Absent ----- pH: 7.0
Well Tag #: HO-15-0149

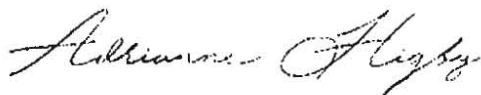
Analytical Results

Parameter	Result	Units	Report Limit	Standard	Standard Type
Total Coliform Bacteria	Absent	Coliforms/100 ml	Present/Absent	Absent	EPA Primary MCL
<i>E. Coli</i> Bacteria	Absent	Coliforms/100 ml	Present/Absent	Absent	EPA Primary MCL
Nitrate as N	ND	mg/L	0.5	10	EPA Primary MCL
Sand	Absent	mg/L or Absent	mg/L or Absent	< 5 mg/L*	MD Well Reg.
Turbidity	1.3	NTU	0.5	< 10 NTU*	MD Well Reg.


Notes:

1. Bacteriological analysis of this sample indicates this water is safe for human consumption.
2. Results in **BOLD** exceed the MCL, Action Level or MD well regulation.
3. Samples received and examined within EPA's recommended holding times.
4. MCL - Maximum Contaminant Level
5. ND - Not Detected.
6. * Sand and turbidity standard for new wells - See Code of Maryland Regulations (COMAR) 26.04.04.16E(5). If sand is present, it is analyzed to determine amount of sand in mg/L.
7. MCL Type -
EPA Primary: The maximum contaminant level which is the highest level of contaminant that is allowed in drinking water. Primary MCLs are enforceable standards.
EPA Secondary: Non enforceable guidelines regulating contaminants that cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste or odor) in drinking water.
Action Level: Defined in treatment techniques which are required processes intended to reduce the level of a contaminant in drinking water.
8. We certify that the analyses performed for this report are accurate, and that the laboratory tests were conducted by methods approved by the US Environmental Protection Agency and the Maryland Department of the Environment.

Reported by,



A. Higby, Customer Service Representative

Reviewed by: 

Water Testing Laboratories

P.O. Box 712
Stevensville, MD 21666
410-643-7711

of Maryland, Inc.

N V Homes
c/o Robert Feezer Co.
6321 Barnett Avenue
Sykesville, MD 21784

Reporting Date: 6/19/2017
Report #: M5210

Submitted Sample Address: Walnut Creek, Lot 124
5049 Lindera Court, Ellicott City, MD 21042
Submitted Sample Source: Reverse Osmosis System in kitchen
Date / Time Collected: 6/5/2017 3:10 PM
Sample Type: Drinking Water
Sampler/Company: K. Lee 4827KL, WTL of MD
Field Record: Chlorine residual: Absent Clear when drawn
Well #: HO-15-0149

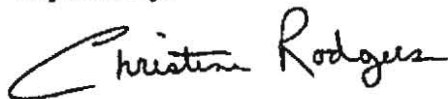
Analytical Results

Parameter	Result	Units	Report Limit	MCL	Analytical Method	Analysis
Long-Term Gross Alpha	ND	pCi/L	0.9	15	EPA 900.0	MJN
Long-Term Rapid Beta	2.3	pCi/L	2.0	50	EPA 900.0	MJN


Notes:

1. MCL is EPA's maximum contaminant level under primary drinking water regulations. SMCL is secondary maximum contaminant level and is the aesthetic quality only. If your result is above any MCL or SMCL, you may want to consider a water treatment system or a new well. Please check your local regulations for any restrictions or additional limits.
2. ND - Not Detected.
3. Sample received and examined within EPA's recommended holding time.
4. Analyzed by lab 278. Prep Date 06/14/17 @ 07:39 and Analysis Date @ 06/15/17.
5. SM - Greenberg, Clesceri and Eaton, *Standard Methods for the Examination of Water and Wastewater*, 21st Ed.

Reported by,



C. Rodgers, Assistant Lab Manager, Microbiology

Reviewed by: 

Water Testing Laboratories

P.O. Box 712
Stevensville, MD 21666
410-643-7711

of Maryland, Inc.

N V Homes
c/o Robert Feezer Co.
6321 Barnett Avenue
Sykesville, MD 21784

Reporting Date: 6/19/2017
Report #: M5210

Submitted Sample Address: Walnut Creek, Lot 124
5049 Lindera Court, Ellicott City, MD 21042
Submitted Sample Source: Reverse Osmosis System in kitchen
Date / Time Collected: 6/5/2017 3:10 PM
Sample Type: Drinking Water
Sampler/Company: K. Lee 4827KL, WTL of MD
Field Record: Chlorine residual: Absent Clear when drawn
Well #: HO-15-0149

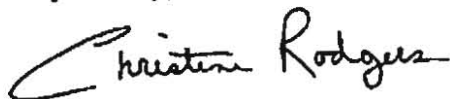
Analytical Results

Parameter	Result	Units	Report Limit	MCL	Analytical Method	Analysis
Short-Term Gross Alpha	ND	pCi/L	0.7	15	EPA 900.0	MJN
Short-Term Rapid Beta	2.1	pCi/L	1.7	50	EPA 900.0	MJN

Notes:

1. MCL is EPA's maximum contaminant level under primary drinking water regulations. SMCL is secondary maximum contaminant level and is the aesthetic quality only. If your result is above any MCL or SMCL, you may want to consider a water treatment system or a new well. Please check your local regulations for any restrictions or additional limits.
2. ND – Not Detected.
3. Sample received and examined within EPA's recommended holding time.
4. Analyzed by lab 278. Prep Date 06/08/17 @ 07:28 and Analysis Date @ 06/09/17.
5. SM – Greenberg, Clesceri and Eaton, *Standard Methods for the Examination of Water and Wastewater*, 21st Ed.

Reported by,



C. Rodgers, Assistant Lab Manager, Microbiology

Reviewed by: 

Water Testing Laboratories

P.O. Box 712
Stevensville, MD 21666
410-643-7711

of Maryland, Inc.

N V Homes
C/O Robert Feezer Co.
6321 Barnett Avenue
Sykesville, Md 21784

Reporting Date: 6/19/2017
Report #: M5210

Submitted Sample Address: Walnut Creek, Lot 124
5049 Lindera Court
Ellicott City, Md 21042
Submitted Sample Source: Reverse Osmosis System in kitchen
Date / Time Collected: 6/5/2017 03:10 PM
Sample Type: Drinking Water
Sampler/Company: K. Lee 4827kl, Wtl Of Md
Field Record: Chlorine residual: Absent
Well #: HO-15-0149

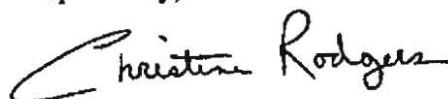
Analytical Results

Parameter	Result	Units	Report Limit	MCL	Analytical Method
Radium 226	0.2	pCi/L	0.2	---	EPA 903.1
Radium 228	0.9	pCi/L	0.8	---	Ra-05
Radium 226+228	1.1	pCi/L	see above	5.0	----

Notes:

1. MCL is EPA's maximum contaminant level under primary drinking water regulations.
2. ND - Not Detected.
3. Analyzed by lab 278 .
4. Sample received and examined within EPA's recommended holding time

Reported by,



C. Rodgers, Assistant Lab Manager, Microbiology

Reviewed by: _____



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

Maura Rossman, M.D., Health Officer

November 21, 2016

Bassler Venture
Attn. Tim Feaga
15950 North Avenue, P.O. Box 482
Lisbon, Maryland 21765

RE: Walnut Creek Lot 124
Lindera Court
Well Tag: HO - 15 - 0149

Dear Mr. Feaga:

Additional follow-up testing was performed on the well serving Lot 124 on March 1, 2016. Samples were submitted to Pace Analytical Services, Inc. to further assess the extent of Gross Alpha, Gross Beta, Radium 226/228 and Total Uranium in the future well water supply. Prior testing confirmed a level of presence sufficient enough to evaluate whether treatment to address these naturally occurring radioactive nuclides should be considered.

Results from this long term particle screening (based upon the date of analysis) revealed a Gross Alpha of 35.1 ± 4.7 picocuries/liter (pCi/L), while the Gross Beta level was 21.0 ± 1.9 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).

Additionally, a Radium 226 / 228 sample was collected and submitted to Pace. 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 9.16 ± 1.68 pCi/L, while the Radium 228 level was 2.70 ± 0.5 pCi/L. Here the combined Radium 226 / 228 was well above the MCL of 5 pCi/L.

Finally, an analysis for Uranium was performed. Results from this screening revealed a Uranium level of 20.1 ± 0.38 micrograms per liter (ug/L). This finding is right at the current MCL of 30 ug/L for this parameter (roughly equivalent to 20 pCi/L).

At the time of testing and with respect to these parameters, the future well water supply does not meet EPA regulatory standards. Given these findings, treatment (water softener and likely R/O) will be required prior to future occupancy. Additional post-treatment testing for Radium and Uranium will be required to secure the future Use & Occupancy. Additionally, a Radium Treatment Agreement will need to be signed by the future owner and recorded in Land Records. Finally, please note that other standard testing parameters (bacteria, nitrate, turbidity and sand) will also 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 or to schedule additional testing.

Sincerely,

Bert Nixon (handwritten signature)

Bert Nixon, Director
Bureau of Environmental Health

Enclosure
cc: Property file

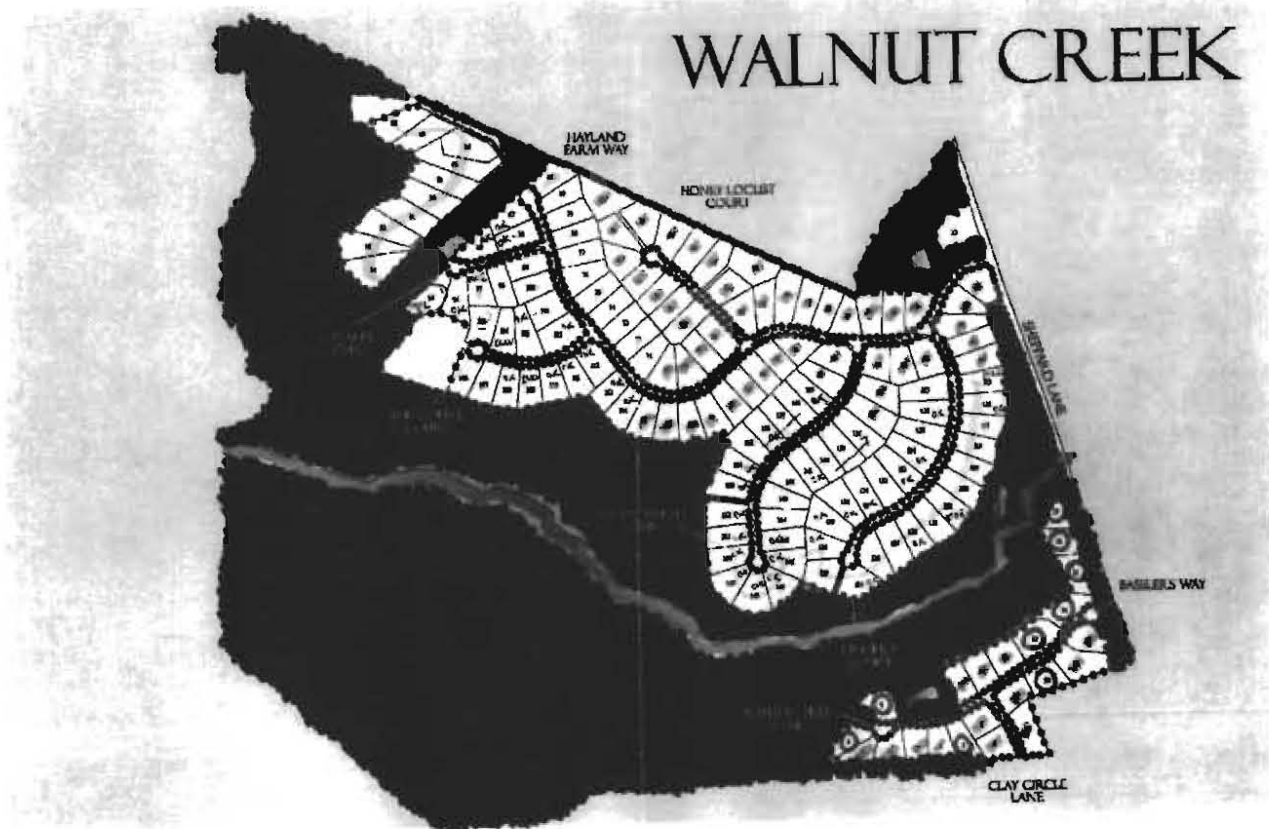
Williams, Jeffrey

From: Williams, Jeffrey
Sent: Friday, May 16, 2014 12:16 PM
To: Tim Feaga
Subject: Walnut Creek Radium testing
Attachments: Walnut Creek radium.pdf; Walnut Creek radium_2.pdf

Hi Tim. I met with Bert regarding possible easement of radium testing at all lots in Walnut Creek. I've attached a map showing the additional lots that we would like to still be tested to ensure that there is not an area of concern in the remaining lots. The lots in the green cloud have been tested and passed. The lots in the red cloud are lots that we would like to be tested. The lots at the top corner (82-86, 90-94) fall within the radium testing boundary. We want the lots near the river tested to prove whether the stream is in fact acting as a natural buffer from the positive tests on the other side and the passing lots above them. Furthermore, we'd like some representative lots tested in the other section near the upper testing boundary to prove that there are no hot spots. If these are also passing, then we would likely be comfortable waiving the remaining.

We'd be happy to meet with you to discuss if you prefer. Thanks.

Jeff Williams
Program Supervisor, Well & Septic Program
Bureau of Environmental Health
Howard County Health Dept.
410-313-4261
jewilliams@howardcountymd.gov



Williams, Jeffrey

From: Williams, Jeffrey
Sent: Friday, May 16, 2014 12:16 PM
To: Tim Feaga
Subject: Walnut Creek Radium testing
Attachments: Walnut Creek radium.pdf; Walnut Creek radium_2.pdf

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We'd be happy to meet with you to discuss if you prefer. Thanks.

Jeff Williams
Program Supervisor, Well & Septic Program
Bureau of Environmental Health
Howard County Health Dept.
410-313-4261
jewilliams@howardcountymd.gov

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