C 1 1301 — SEQUENCE NO. (MDE USE ONLY)

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

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

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

COUNTY NUMBER

ST/CO USE ONLY
DATE Received MM DD YY 11 17 11

DATE WELL COMPLETED MM DD YY 11-9-11

Depth of Well 360 (TO NEAREST FOOT) — 12/6/2011 O.K. BB

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-95-2208

OWNER CHAPEL RISE LTD
STREET OR RFD Bradon Woods TOWN CLARKSVILLE
SUBDIVISION CHAPEL RISE SECTION LOT 8

WELL LOG
Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Topsoil	0	2	
Brown Mica	2	13	
Sandstone	13	25	
Brown Mica	25	30	
Sandstone	30	46	
Gray Mica	46	190	190 ✓
Brown Mica w/Quartz	190	195	
Gray Mica	195	335	335 ✓
Brown Mica w/Quartz	335	340	
Gray Mica	340	360	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED — yes [Y] no [N]

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. MD 040
Bernie F. Ehrlenbach
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. WR 0046

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

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) — yes [Y] no [N]

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT [CM] BENTONITE CLAY [BC]
NO. OF BAGS 18 NO. OF POUNDS 800
GALLONS OF WATER 108
DEPTH OF GROUT SEAL (to nearest foot)
from 0 ft. (TOP) to 38 ft. (BOTTOM)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
[ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
ST	6	40

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	depth (feet) to

SCREEN RECORD
screen type or open hole — insert appropriate code below
[ST] STEEL [BR] BRASS BRONZE [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

EACH SCREEN	DEPTH (nearest ft.)	
1	340	360
2		
3		

SLOT SIZE 1 _____ 2 _____ 3 _____
DIAMETER OF SCREEN _____ (NEAREST INCH)

from	to

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

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (E.R.O.S.) W Q
TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3 — PUMPING TEST
HOURS PUMPED (nearest hour) 3
PUMPING RATE (gal. per min.) 15
METHOD USED TO MEASURE PUMPING RATE Bucket

WATER LEVEL (distance from land surface)
BEFORE PUMPING 99 ft.
WHEN PUMPING 146 ft.

TYPE OF PUMP USED (for test)
[A] air [P] piston [T] turbine
[C] centrifugal [R] rotary [O] other (describe below)
[J] jet [S] submersible

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

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

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.
CAPACITY: GALLONS PER MINUTE (to nearest gallon)
PUMP HORSE POWER
PUMP COLUMN LENGTH (nearest ft.) 0
CASING HEIGHT (circle appropriate box and enter casing height) [+] above [−] below LAND SURFACE 2 (nearest foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N

Long -76.92120552

Lat -39.234430789

DENV-CR00

COUNTY

EMERGENCY/TEMP NO. IF ANY

B 1 | 2310 | SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

please type

535997

STATE PERMIT NUMBER: Ho - 95 - 2208

fill in this form completely

Date Received (APA): 10 07 11

OWNER INFORMATION

12026

Chapel Rise Ltd (Last Name / First Name)

11795 Bragdon Wood (Street or RFD)

Clarksville Md 21029 (Town / State / Zip)

DRILLER INFORMATION

George F. Easterday M W D 040 (Driller's Name / License No.)

L. Franklin Easterday, Inc. (Firm Name)

9265 Brown Church Rd., MT. Airy, Md. 21771 (Address)

George F. Easterday 10/4/2011 (Signature / Date)

B 3 LOCATION OF WELL

Howard (COUNTY) CC#

Chapel Rise (SUBDIVISION)

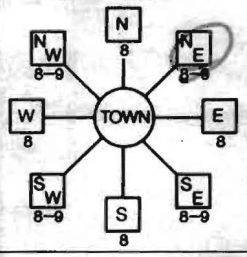
SECTION LOT 8

Clarksville (NEAREST TOWN)

MILES FROM TOWN (enter 0 if in town) 1 M I

B 4

DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



Bragdon Wood (NEAR WHAT ROAD)

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 2037

DISTANCE FROM ROAD Ft.

ENTER FT OR MI 38 39

TAX MAP: ____ BLK: ____ PARCEL ____

B 2 WELL INFORMATION

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

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 500

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

Howard (13) A530 542 (COUNTY NAME / COUNTY NO.)

STATE SIGNATURE _____ INSERT S

DATE ISSUED 10/21/11 (CO SIGNATURE) EXP. DATE 10/21/12

NORTH GRID N/A 000 EAST GRID N/A 000

APPROXIMATE DEPTH OF WELL 300 FEET

APPROXIMATE DIAMETER OF WELL 6 NEAREST 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 _____

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER

1. wells
2.
3.

WRITE THE BOX NUMBER FROM THE MAP HERE

E _____

N _____

000 000

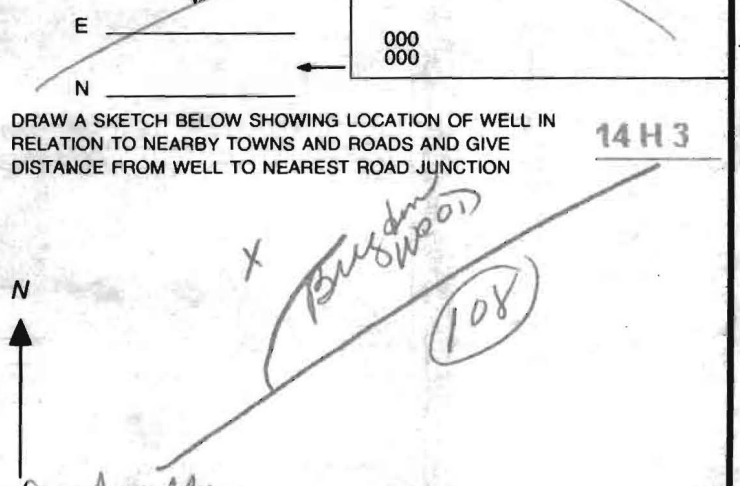
REPLACEMENT OR DEEPENED WELLS
(CIRCLE APPROPRIATE BOX)

- 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 DEEPEN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENED (IF AVAILABLE) ____ - ____ - ____

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

14 H 3



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

APPROP. PERMIT NUMBER - - - - - G - - -

PERMIT No. Ho - 95 - 2208

SPECIAL CONDITIONS Need Radium Sample Clarksville

NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED.

DENV-Permit 97

② COUNTY

Yield Test Data Sheet

County File #: _____
District _____

MD Well Permit #: 10-95-2208

Date of Test: 11-7-11

Subdivision Name: Chapel Rise

Section _____ Lot # 8

Street Address: Brayden Wood

Measuring Point (MP) Description: _____
(for ex. "Top of casing")

Distance from MP to ground surface _____ ft.

Well Depth ~~340~~ 360 ft. 100gpm

Well Driller: EASTERDAY

Must be submitted with the State of Maryland Well Completion Report

Submit to:

Pump Start Time	Static Water level	Pumping Rate	Calculated Flow (gallons per minute)
9:45	99 ft.	(X) Time to fill 1 1 gal. bucket ( ) Flow meter reading (if used)	
TIME	WATER LEVEL BELOW M.P.		

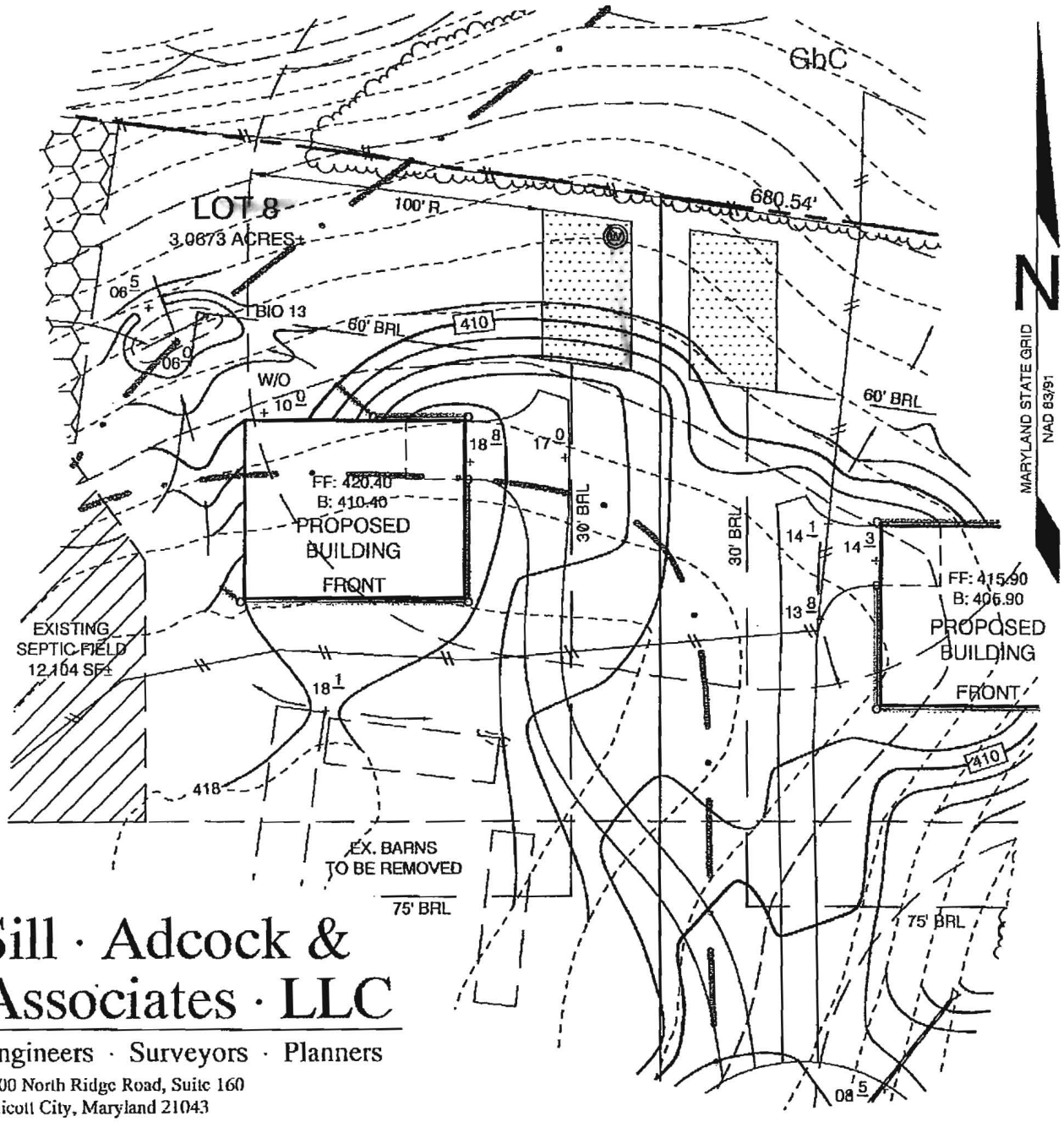
Water level and pumping rate must be recorded every 15 minutes

1	945	99 ft.	4 sec	15 GPM
2	1000	128 ft.	4"	15 GPM
3	1015	131 ft.	4"	15 GPM
4	1030	135 ft.	4"	15 GPM
5	1045	139 ft.	4"	15 GPM
6	1100	142 ft.	4"	15 GPM
7	1115	143 ft.	4"	15 GPM
8	1130	144 ft.	4"	15 GPM
9	1145	145 ft.	4"	15 GPM
10	1200	145 ft.	4"	15 GPM
11	1215	145 ft.	4"	15 GPM
12	1230	145 ft.	4"	15 GPM
13	1245	146 ft.	4"	15 GPM
14		ft.		GPM
15		ft.		GPM
16		ft.		GPM
17		ft.		GPM
18		ft.		GPM
19		ft.		GPM
20		ft.		GPM
21		ft.		GPM
22		ft.		GPM
23		ft.		GPM
24		ft.		GPM
25		ft.		GPM
26		ft.		GPM
27		ft.		GPM
28		ft.		GPM
29		ft.		GPM
30		ft.		GPM

NOTES:
2' casing height above ground level
- pump set 300'

* Plan not to scale *
well be O/C

10/24/11
well box o/c
Staked by Sill Adcock (RW)



Sill · Adcock & Associates · LLC

Engineers · Surveyors · Planners

3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@saaland.com

DESIGN BY:	PS
DRAWN BY:	PS
CHECKED BY:	PS
SCALE:	1"=50'
DATE:	SEPT. 26, 2011
PROJECT #:	09-073
SHEET #:	1 OF 1

WELL PERMIT PLAN

CHAPEL RISE

LOT 8

TAX MAP 29 GRID 13
5TH ELECTION DISTRICT

PARCEL 26, 282 & 353
HOWARD COUNTY, MARYLAND

Howard County Health Department

3525 H Ellicott Mills Drive, Ellicott City, MD 21043
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

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

TO ALL INTERESTED PARTIES

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

☑ The well site has been staked by Sill, Adcock & Assoc,
(professional land surveyor or company employing professional land surveyors)
on 9/30/11 (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

LOT 8 Chapel Rise

Bragdon Wood

Wolf, Kevin

From: Wolf, Kevin
Sent: Wednesday, February 01, 2017 12:17 PM
To: 'csgcullen@gmail.com'
Subject: 11590 Chapel Rise
Attachments: Radium Agreement revised 6.19.15.pdf; O&M agreement_revision 2.22.16.pdf

Sophie,
I am in review of your property file that is ready for Interim Certificate of Potability (ICOP). We are missing two very important pieces of information that I need for you to complete and get back to us. The two items are agreements: 1. Operation and Maintenance (O & M) agreement 2. Radium agreement.

I have attached copies of each that needs to be completed and brought back to us to sign off. You will then take both agreements over to Land Records Office and submit for recordation of the property. They will receipt you from your submission, please email or drop these receipts off with us for completion. The O & M agreement is for the BAT or advanced pre-treatment system you currently have for your septic system. The Radium agreement explains the need for treatment of your well water to reduce the elevated radionucleotides. Please do not hesitate to contact me with questions.

Thanks,

Kevin M. Wolf, LEHS, REHS/RS
Groundwater Mgmt. Sec. Supervisor
Well & Septic Program
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, MD 21045
(o) 410-313-2645
(f) 410-313-2648

Howard County
Health Department

kwolf@howardcountymd.gov

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: Fogle's Well Drilling LLC Telephone #: 410 795 5670
Address: PO Box 202
Woodbine, MD 21797

(Must circle one) Licensed Plumber (Licensed Well Driller) Licensed Well Pump Installer
License # and name of individual responsible for the field installation:
Name (Print): David L. Fogle License# MBD726

*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: Vahid Seyed Telephone #: 703 953-5742
Subdivision: Chapel Rise Lot #: 8 Well Tag #: HO - 05-22046
Site Address: 11590 Chapel Rise Rd
Clarksville, MD 21029

Submersible Pump Data
Make: Grundfos
Model #: 15SQE07-180
Pump Capacity 15 GPM
Well Yield: 15 GPM

Pitless Adapter
Make: Simple II
Model #: N/A
Depth: 36" (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: 360 (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: 1" poly pipe
PSI: 260 (160 psi min)
Depth of supply line: 36" (36" min)

House Connection
PVC sleeve to undisturbed soil at wall penetration: YES
Length of sleeve (5' minimum from foundation): 6'
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.

Dave Fogle 6/18/16
Signature of company representative responsible for installation date

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

Date Insp. Requested: _____ Date Insp. Approved: _____ Inspector: _____

Inspection Data:
- Pitless adapter watertight & water supply line at least 36" below grade _____
- Two piece cap installed and attached to casing securely _____
- Elec. conduit extends at least 18" below grade/attached to cap properly _____
- Safety rope not outside of well cap/casing _____
- Correct well tag attached properly and casing 8" above finished grade _____
- Water supply line sleeved adequately at house connection _____
- Adequate grout observed below pitless adapter _____

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 #: 8 Well Tag #: **HO** - 95 - 2208
Site Address: 11990 Chapel Estates Dr.
_____

Submersible Pump Data	**Pitless Adapter**	**Well Cap and Electric Conduit**
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 inside of well casing ____

Piping to house	**House Connection**
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.

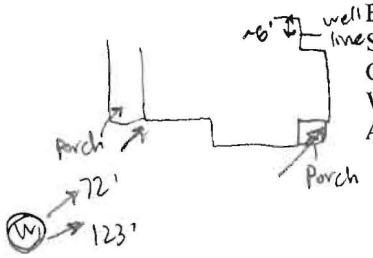
_____ _____
Signature of company representative responsible for installation date

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

Date Insp. Requested: 6/9/16 Date Insp. Approved: 6/9/16 Inspector: SC

Inspection Data:

Pitless adapter watertight & water supply line at least 36" below grade	✓
Two piece cap installed and attached to casing securely	✓
Elec. conduit extends at least 18" below grade/attached to cap properly	✓
Safety rope not outside of well cap/casing	✓
Correct well tag attached properly and casing 8" above finished grade	✓
Water supply line sleeved adequately at house connection	✓
Adequate grout observed below pitless adapter	✓



Howard County Health Department

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

December 1, 2016

Mr. and Mrs. Charles Cullen
6624 Towering Oak Path
Columbia, Maryland 21044

RE: Chapel Rise Lot 8
11590 Chapel Rise
Clarksville, Maryland 21029
Well Tag: HO – 95- 2208

Dear Mr. and Mrs. Cullen:

A sample was collected on November 16, 2016 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 (sample taken from the water pressure tank) revealed a **Gross Alpha** of **15.8 ± 2.5 picocuries/liter (pCi/L)**, while the **Gross Beta** level was **13.8 ± 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 meets** EPA regulatory standards. Additional testing **for these parameters** will be required to secure the future Use & Occupancy. Given these initial readings, treatment to address these naturally occurring contaminants should be considered. Both a water softener and R/O system, have been shown to be effective in reducing levels of these contaminants. If treatment is installed, post treatment levels for **Gross Alpha**, **Gross Beta** and **Radium 226/228** shall be collected to ensure that the treatment is effective. I understand that other standard testing parameters (bacteria, nitrate, turbidity and sand) have **not** been collected to help secure Use & Occupancy. Those will be addressed under separate correspondence once our office receives those results.

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

05 594207

SEND REPORT TO:

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

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

Lab No. F001007 16

LABORATORY ANALYSIS REQUEST FORM

LOT 8 CHAPEL RISE
H095 2208

Plant/Site Name: Sophie Cull (CHARLES PATRICK) County: Howard

Sample Source: 11590 Chapel Rise CLARKSVILLE 21029 Location: 6624 TOWERING OAK PATH COLUMBIA MD 21044

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

Radon-222 Bottle A HC11590 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	☐	Community	☐	Source (Raw)	☑	Emergency	☐
Landfill	☐	Non-Community	☐	Distribution (treated)	☐	Routine	☑
Stream	☐	Private	☑	MCL	☐	Recheck	☐
Other _____	☐	Other _____	☐			Special	☐

Submitters Code: Federal Project: S

Collector: Boleslav Shklyar Telephone No.: 410-313-1787

Date Collected: 11/16/16 Time Collected: 11:00 a.m. _____ p.m.

Field pH: Field Chlorine:

Nitric Acid Preserved: Yes ✓ No Iced: Yes No

Remarks: Samples taken from Water Tank

☑	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
☑	Gross Alpha	4000	1007	EPA 900.0	15.8 ± 2.5	11/17/16	JT	11/28/16
☑	Gross Beta	4100	1007	EPA 900.0	13.8 ± 2.2	11/17/16	JT	11/28/16
☐	Radium-226	4020						
☐	Radium-228	4030						
☐	Total Uranium	4006						
☐	Radon-222 (Bottle A)	4004						
☐	Radon-222 (Bottle B)	4004						
☐	Radon Field Blank A	4004						
☐	Radon Field Blank B	4004						
☐	Tritium							
☑	Gross Alpha-Conf		1007	EPA 900.0	11.8 ± 2.2	11/18/16	JT	11/28/16
☑	Gross Beta-Conf		1007	EPA 900.0	15.2 ± 2.3	11/18/16	JT	11/28/16

Date Received: 11/18/16 Received By: JT JT

Data Release Signature: Date: 11-28-16

Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	✓		
Sample pH <2.0?	✓		
Received within holding time?	✓		

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

FORM REVISED 05/15
DHMH 4540 01/13

PROGRAM COPY

SEND REPORT TO:

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

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

Lab No. B001006 B16

LABORATORY ANALYSIS REQUEST FORM

Plant/Site Name: Field Blank County: Howard

Sample Source: 11590 Chapel Rise Location: (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	☐	Community	☐	Source (Raw)	☐	Emergency	☐
Landfill	☐	Non-Community	☐	Distribution (treated)	☐	Routine	☐
Stream	☐	Private	☐	MCL	☐	Recheck	☐
Other ____	☐	Other ____	☐			Special	☐

Submitters Code: Federal Project: S

Collector: Boleslav Shklyar Telephone No.: 410-313-1787

Date Collected: 11/16/16 Time Collected: ____ a.m. ____ 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
☑	Gross Alpha	4000	1006	EPA 900.0	< 2.0	11/17/16	JJ	11/28/16
☑	Gross Beta	4100	11206	EPA 900.0	< 4.0	11/17/16	JJ	11/28/16
☐	Radium-226	4020						
☐	Radium-228	4030						
☐	Total Uranium	4006						
☐	Radon-222 (Bottle A)	4004						
☐	Radon-222 (Bottle B)	4004						
☐	Radon Field Blank A	4004						
☐	Radon Field Blank B	4004						
☐	Tritium							
☐								
☐								

Date Received: 11/16/16 Received By: J. J.

Data Release Signature: Date: 11-28-16

Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	✓		
Sample pH <2.0?	✓		
Received within holding time?	✓		

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

FORM REVISED 05/15
DHMH 4540 01/13

PROGRAM COPY

Howard County
Health Department

Bureau of Environmental Health
8930 Stanford Blvd
Columbia, MD 21045
(410) 313-2640Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

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

January 13, 2017

Sophie Cullen
6624 Towering Oak Path
Columbia, MD 21044

RE: Water Sample Results
11590 CHAPEL RISE

Dear Ms. Cullen,

We have received the results from the testing of the water sample(s) taken from the above referenced property on January 12, 2017. A description of the results and the established standards for each test is included below. Standards such as maximum contaminant levels (MCL), secondary maximum contaminant levels (SMCL), and drinking water equivalency levels (DWEL) are established by the EPA and other agencies to provide a reference for determining when action should be taken. These standards help to improve the overall quality of your water or ensure that steps are taken to treat the water to prevent you and your family from getting sick. Typically, no water is completely free of contamination but you should be concerned if the level of contamination for a particular test exceeds the standard.

The results from the **Bacteria** testing found that bacteria was present in the sample taken from the powder room faucet and at this time is not considered safe for all uses. According to drinking water standards there should be no bacteria present.

Please contact the Health Department at (410) 313-1773 between 8:30 a.m. and 4:30 p.m., Monday through Friday if you have any questions regarding these test results.

Sincerely,

Kathleen Cook, R.S.
Community Hygiene Program

Enclosures

SEND REPORT TO:
~~Howard County Health Department~~
~~Bureau of Environmental Health~~
~~8930 Stanford Blvd.~~
~~Columbia, Maryland 21045~~

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
LABORATORIES ADMINISTARTION
1770 Ashland Avenue, Baltimore MD 21205
Robert A. Myers, Ph.D., Director

006600

MICROBIOLOGICAL ANALYSIS OF DRINKING WATER

Category Code: 4F Invoice No.: ICOP Lab No.:

FIELD RECORD

Sample Type:
Community ☐
Transient ☐
Non-Transient ☐
Private ☑
Repeat Sample ☐
C.O.P. ☐
Bottled Water ☐
OTHER:

Source Address: Sophie Cullen, 11590 Chapel Rise
Sampling Site: Powder Room Bottle No.: HC11590
Iced: Yes ☑ No ☐ Treated: Yes ☐ No ☐ County: Howard
Date Collected: 1/12/17 Time Collected: 9:00 ☑ am ☐ pm
Collector Name: Boleslav Shklyar Collector ID No.: 3179 BS
Collector Tel. No.: 410-313-1787 PWS ID No.:

Test Requested:
Quantitative: Colilert®-QT ☑ Enterolert® ☐
P/A: Colilert® ☐ Enterolert® ☐
Multiple Tube Fermentation: MTF ☐ MTF (A1 Method-Source Waters Only) ☐
Heterotrophic Plate Count (HPC-Pour Plate Method) ☐
OTHER: * Sand present not flowing
REMARKS:

County	Plant No.	Sampling Station
13		

pH	Res. Cl:	Free	Total
6.6	0.0	0.0	0.0

LABORATORY RECORD (DHMH Use Only)

Test Method(s): (Check all that apply)
☐ SM 9223 Colilert® ☐ SM 9223 Colilert®QT ☐ SM 9223 Colilert®-18
☐ SM 9221 B (MTF) ☐ SM 9221 B, E (MTF) ☐ SM 9221 E (A1)
☐ SM 9215B (HPC) ☐ Enterolert® ASTM D6503-99
☐ OTHER:

Temperature Control: ☑ 2.2 °C

Thiosulfate:
☐ Present
☐ Absent
☐ Undetermined

P/A TEST (Colilert®/Enterolert®)

100 mL sample	(+/-)
Total coliforms	
E. coli	
Enterococci	

Dilution
☐ 1:10
☐ 1:100
☐ 1:1000

QUANTITATIVE TEST (Colilert®-QT/Enterolert®)

100 mL sample	# Positive wells	MPN/100 mL
Total coliforms	29	43
E. coli	0	<1
Enterococci		

KJ

HETEROTROPHIC PLATE COUNT
(Pour Plate Method, Plate Count Agar)

Plate A: Plate B:
Incubate 24,48,72 hrs @ 35°C (CFU/ml) =
Average:

JAN 12'17 PM 2:08
RECEIVED
JAN 12'17 PM 3:52
~~JAN 13'17 AM 9:58~~
RESULTS READ/REPORTED

KJ

PRESUMPTIVE MTF TEST

mL of Sample	10
Gas/24h	
Gas/48h	

CONFIRMED MTF TEST (MTF/A1 Method)

mL of Sample	10	1	0.1
Total Coliforms			
Fecal Coliforms			

RESULTS

No. of Positives (+)	MPN/100 mL	Recorded Value

SAMPLE INVALIDATION:
☐ Sample Rejection
☐ Laboratory Accident
☐ Other:
RESAMPLE REQUIRED:
YES ☐ NO ☐
DATE:

BACTERIOLOGIST: K. Jones REVIEWED BY/DATE: E Hayes 1-13-17
REMARKS: Re-incubated for 2 hours
☐ FAX ☐ EMAIL ☐ PHONE
LABORATORY: ☑ CENTRAL (443) 681-3960 ☐ ES REGIONAL (410) 219-9005 ☐ WMD REGIONAL (301) 759-5115

Howard County
Health Department

Bureau of Environmental Health
8930 Stanford Blvd
Columbia, MD 21045
(410) 313-2640Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

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

January 23, 2017

Sophie Cullen
6624 Towering Oak Path
Columbia, MD 21044

RE: Water Sample Results
11590 CHAPEL RISE

Dear Ms. Cullen,

We have received the results from the testing of the water sample(s) taken from the above referenced property on January 12, 2017. A description of the results and the established standards for each test is included below. Standards such as maximum contaminant levels (MCL), secondary maximum contaminant levels (SMCL), and drinking water equivalency levels (DWEL) are established by the EPA and other agencies to provide a reference for determining when action should be taken. These standards help to improve the overall quality of your water or ensure that steps are taken to treat the water to prevent you and your family from getting sick. Typically, no water is completely free of contamination but you should be concerned if the level of contamination for a particular test exceeds the standard.

A sample was collected to determine the **Nitrate** level in your water supply. The nitrate level was <0.2 parts per million. The MCL for nitrate is 10.0 parts per million.

A **Turbidity** sample was collected to determine the amount of suspended particulates in your water supply. The turbidity level was 3.7 nephelometric turbidity units (NTU's). The MCL for turbidity is 10.0 NTU's.

In addition, the presence of **Sand** was not visible.

Please contact the Health Department at (410) 313-1773 between 8:30 a.m. and 4:30 p.m., Monday through Friday if you have any questions regarding these test results.

Sincerely,

R. Martin

Ramar Martin, R.S.
Community Hygiene Program

Enclosures

Send Report To:
Howard County Health Department
~~Bureau of Environmental Health~~
8930 Stanford Blvd.
Columbia, Maryland 21045

State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
INORGANICS ANALYTICAL LABORATORY
1770 Ashland Ave
Baltimore, Maryland 21205

WATER ANALYSIS

E17002723001
Received: 01/12/2017
Inorganic HC 11590

SAMPLE ID

Bottle Number HC11590 Name Sophie Cullen County Howard County Code 13
Location 11590 Chapel Rise, Clarksville Data Category Code 4F
Collected: Date 1/12/17 Time 9:00 am Collector & Phone Boleslav Shklyar 410-313-1787 Submitter Code
CHECK (one per box)

Drinking Water ☑	Community ☐	Source (raw water) ☐	Emergency ☐
Landfill ☐	Non-community ☐	Distribution (treated) ☑	Routine ☑
Stream ☐	Private ☑	MCL ☐	Recheck ☐
Other ☐	Other ☐		Special ☐

Federal Project 5

FIELD

Plant No. Sampling Station Preservation: Iced Y Acid X Type of Acid H_2SO_4
pH 66 Chlorine: Free 00 Total 00 Specific Conductance pH<2 488
Notes to Lab/Remarks: Samples taken from: Nitrate from kitchen sink after R/O, Turbidity from powder room

CHECK TESTS	TESTS	Error Code	RESULTS
	Alkalinity (Total)		
	Ammonia - N		
	Chloride		
	Conductance*, Spec.		
	Dissolved Solids (Total)		
	Hardness		
	Fluoride		
✓	Nitrite, N		
✓	Nitrate - Nitrite, N		
	Sulfate		
✓	Total Solids		
✓	Turbidity*		
	Other:		

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JAN 23 2017
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COMMUNITY HYGIENE PROGRAM

* Results reported in Units, all others in milligrams per liter (ppm)

Number of Tests Requested

Section Chief

Date Reported

DHMH 90-A 6/15

SUBMITTER'S COPY

State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
INORGANICS ANALYTICAL LABORATORY
1770 Ashland Avenue, Baltimore, Maryland 21205
Robert Myers, Ph.D., Director

ACCREDITED
Certificate # 3525.02

Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project NoE17002723 Date Coll. 01/12/2017 Date Received 01/12/2017 Submitted By: B. Shklyar

Field ID: HC 11590
Lab No.: E17002723001

Analyte	Method	Result	Units	Date Analyzed
Nitrate + Nitrite, as N	EPA 353.2	<0.2	mg N/L	01/18/2017
Turbidity	EPA 180.1	3.7	NTU	01/13/2017

Comments:

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JAN 23 2017
HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

Approved by: [signature] Approval date: 01/19/2017

*The following methods are included in our A2LA Scope of Accreditation: EPA150.1, EPA 353.2, EPA 375.2, SM4500F C, SM 4500-CN G & QCM-CN, QCM-CN.

Howard County
Health Department

Bureau of Environmental Health
8930 Stanford Blvd
Columbia, MD 21045
(410) 313-2640Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

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

January 24, 2017

Sophie Cullen
6624 Towering Oak Path
Columbia, MD 21044

RE: Water Sample Results
11590 CHAPEL RISE

Dear Ms. Cullen,

We have received the results from the testing of the water sample(s) taken from the above referenced property on January 19, 2017. A description of the results and the established standards for each test is included below. Standards such as maximum contaminant levels (MCL), secondary maximum contaminant levels (SMCL), and drinking water equivalency levels (DWEL) are established by the EPA and other agencies to provide a reference for determining when action should be taken. These standards help to improve the overall quality of your water or ensure that steps are taken to treat the water to prevent you and your family from getting sick. Typically, no water is completely free of contamination but you should be concerned if the level of contamination for a particular test exceeds the standard.

The results from the **Bacteria** testing found that your well water sampled from the powder room faucet contains no bacteria at this time and is considered safe for all uses. According to drinking water standards there should be no bacteria present.

Please contact the Health Department at (410) 313-1773 between 8:30 a.m. and 4:30 p.m., Monday through Friday if you have any questions regarding these test results.

Sincerely,

Kathleen Cook, R.S.
Community Hygiene Program

Enclosures

SEND REPORT TO:

~~Howard County Health Department~~
~~Bureau of Environmental Health~~
~~8930 Stanford Blvd.~~
~~Columbia, Maryland 21045~~
PHONE:

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
LABORATORIES ADMINISTARTION
1770 Ashland Avenue, Baltimore MD 21205
Robert A. Myers, Ph.D., Director

006744

MICROBIOLOGICAL ANALYSIS OF DRINKING WATER

Category Code: 4F **Invoice No.:** Retest **Lab No.:**

FIELD RECORD

Sample Type:
Community ☐
Transient ☐
Non-Transient ☐
Private ☒
Repeat Sample ☐
C.O.P. ☐
Bottled Water ☐
OTHER:

Source Address: Sopic Cullen, 11590 Chapel Rise
Sampling Site: Powder Room Bottle No.: HC 11590
Iced: Yes ☒ No ☐ Treated: Yes ☐ No ☐ County: Howard
Date Collected: 1/19/17 Time Collected: 9:00 ☐ am ☐ pm
Collector Name: Boleslav Shklyar Collector ID No.: 3179 BS
Collector Tel. No.: 410-313-1787 PWS ID No.:

Test Requested:
Quantitative: Colilert®-QT ☒ Enterolert® ☐
P/A: Colilert® ☐ Enterolert® ☐
Multiple Tube Fermentation: MTF ☐ MTF (A1 Method-Source Waters Only) ☐
Heterotrophic Plate Count (HPC-Pour Plate Method) ☐
OTHER:
REMARKS:

County	Plant No.	Sampling Station
13		

pH	Res. Cl:	Free	Total
6.6	0.0	0.0	0.0

LABORATORY RECORD (DHMH Use Only)

Test Method(s): (Check all that apply)
☐ SM 9223 Colilert® ☒ SM 9223 Colilert®QT ☐ SM 9223 Colilert®-18 (DHMH-9-16)
☐ SM 9221 B (MTF) ☐ SM 9221 B, E (MTF) ☐ SM 9221 E (A1)
☐ SM 9215B (HPC) ☐ Enterolert® ASTM D6503-99
☐ OTHER:

Temperature Control: 3.1 °C

Thiosulfate:
☒ Present
☐ Absent
☐ Undetermined

P/A TEST (Colilert®/Enterolert®)

100 mL sample	(+/-)
Total coliforms	
E. coli	
Enterococci	

QUANTITATIVE TEST (Colilert®-QT/Enterolert®)

Dilution
☐ 1:10
☐ 1:100
☐ 1:1000

100 mL sample	# Positive wells	MPN/100 mL
Total coliforms	0	<1
E. coli	0	<1
Enterococci		

HETEROTROPHIC PLATE COUNT
(Pour Plate Method, Plate Count Agar)

Plate A: Plate B:
Incubate 24.48.72 hrs @ 35°C (CFU/ml) =
Average:

JAN 19'17 PM 1:57
RECEIVED
JAN 19'17 PM 3:49
PLACED IN INCUBATOR
JAN 20'17 AM 10:01
RESULTS READ/REPORTED

PRESUMPTIVE MTF TEST

mL of Sample										
Gas/24h										
Gas/48h										

RECEIVED
JAN 24 2017
HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

CONFIRMED MTF TEST (MTF/A1 Method)

mL of Sample										
Total Coliforms										
Fecal Coliforms										

RESULTS

No. of Positives (+)	MPN/ 100 mL	Recorded Value

SAMPLE INVALIDATION:
☐ Sample Rejection
☐ Laboratory Accident
☐ Other:
RESAMPLE REQUIRED:
YES ☐ NO ☐
DATE:

BACTERIOLOGIST: L Player 1-20-17 **REVIEWED BY/DATE:** K. Jones 1/20/17
REMARKS: ☐ FAX ☐ EMAIL ☐ PHONE
LABORATORY: ☒ CENTRAL (443) 681-3960 ☐ ES REGIONAL (410) 219-9005 ☐ WMD REGIONAL (301) 759-5115

DHMH-86 02/2016

Program Copy

Howard County Health Department

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 – August 6, 2017

February 6, 2017

Homeowner
11590 Chapel Rise
Clarksville, MD 21029

RE: Chapel Rise, Lot 8
11590 Chapel Rise
Building Permit: B16000249
Well Permit: HO-95-2208

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 **10/26/2016.** Final approval of the well line connection to the dwelling was granted on **6/9/2016.** The well construction was completed on **11/4/2011.** Water samples were collected on **1/12/2017 & /19/2017.**

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 Gross Beta samples were also collected on **11/16/2016**. Results showed gross alpha of **15.8 pCi/L** and a gross beta level of **13.8 pCi/L. The gross alpha result was above its maximum contaminant level (MCL) of 15 pCi/L.**

After installation of a radionuclide removal device(Reverse Osmosis), post-treatment water samples were collected on **1/12/2017** and indicated a Gross Alpha level of **8.7 ± 2.0 pCi/L**, a Gross Beta level of **14.0 ± 2.3 pCi/L**, and a combined Radium 226/228 level of **1.0 ± 0.0 pCi/L**.

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

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

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

2. It is recommended that a Maryland certified water laboratory certified for radionuclide analysis perform a yearly radionuclide analysis.

3. If you decide to sell or rent your home in the future, you must make any potential buyer/tenant aware of this permanent deviation. **A person who fails to make this disclosure is subject to the penalties set out in COMAR 26.04.04.12F *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-95-2208. 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" for understanding your Best Available Technology (BAT) for your onsite sewage disposal. You will also find a link to Maryland Department of the Environments website which elaborates in further detail operation and maintenance of your BAT.

Approving Authority,

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

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

Howard County Health Department

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 31, 2017

Mr. and Mrs. Charles Cullen
6624 Towering Oak Path
Columbia, Maryland 21044

RE: Chapel Rise Lot 8
11590 Chapel Rise
Clarksville, Maryland 21029
Well Tag: HO – 95- 2208

Dear Mr. and Mrs. Cullen:

Follow-up testing was conducted on January 12, 2017 and submitted to the Department of Health & Mental Hygiene Laboratories (DHMH) and Florida Radiochemistry (FRC) to assess the effectiveness of treatment to address the presence of **Gross Alpha, Gross Beta** and possible **Radium 226 / 228** in the future well 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.

Pre-treatment short-term results from this screening (sample collected from the water tank and submitted to DHMH) revealed a **Gross Alpha** of **8.7 ± 2.0 pCi/L**; while the **Gross Beta** level was **14.0 ± 2.3 pCi/L.** The **Gross Alpha** result was below the maximum contaminant level (**MCL**) of **15 pCi/L**, while the **Gross Beta** level was below the targeted value of **50 pCi/L** (roughly equivalent to 4 millirems/year).

Post-treatment long-term results (sample collected from the kitchen sink and after the R/O system) revealed a **Gross Alpha** of **0.7 ± 0.5 pCi/L,** while the **Gross Beta** level was **1.9 ± 1.1 pCi/L.** Here the **Gross Alpha** result was below its **MCL** of 15 pCi/L, while the **Gross Beta** level was again below its targeted value of **50 pCi/L.**

Additionally, a post-treated **Radium 226 / 228** sample was collected and also submitted to FRC. These naturally occurring isotopes of radium are considered the most important due to their longer half-lives and health significance. Results from the post-treatment sample revealed a **Radium 226** level of **0.2 ± 0.1 pCi/L**, while the **Radium 228** level was **< 0.8 ± 0.5 pCi/L.** Here the **combined Radium 226 / 228** for both the post-treatment sample was **below** the MCL of **5 pCi/L.**

At the time of testing and with respect to these parameters, the future **treated** well water supply **meets** EPA regulatory standards. **For these parameters**, findings from this testing will satisfy that portion of the future Certificate of Potability. Given the initial readings (from November 2016), treatment to address these naturally occurring contaminants should be used and maintained. In this case, the R/O treatment appears effective in reducing levels of these contaminants. Given these findings, your existing treatment system is able to reduce /remove these naturally occurring radionuclides to a safe level.

Please note that the other standard testing parameters (bacteria, nitrate, turbidity and sand) have passed (see enclosed letter); allowing for the issuance of the Certificate of Potability.

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

Sincerely,

Bert Nixon

Bert Nixon, Director
Bureau of Environmental Health

Enclosure
cc: Property file

SEND REPORT TO:

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

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

Lab No. E0G1328 & 12E

LABORATORY ANALYSIS REQUEST FORM

Plant/Site Name: Field Blank County: Howard

Sample Source: 11590 Chapel Rise Location: _____
(Well no., lab sink, sample tap, etc.)

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

County 1 3 Plant No. _____

CHECK (one per Box)

Type		Service		Point of Collection		Testing	
Drinking Water	☐	Community	☐	Source (Raw)	☐	Emergency	☐
Landfill	☐	Non-Community	☐	Distribution (treated)	☐	Routine	☐
Stream	☐	Private	☐	MCL	☐	Recheck	☐
Other _____	☐	Other _____	☐			Special	☐

Submitters Code: _____ Federal Project: 5

Collector: Boleslav Shklyar Telephone No.: 410-313-1787

Date Collected: 1/12/17 Time Collected: _____ a.m. _____ 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
☑	Gross Alpha	4000	1328	EPA 900.0	<2.3	01/18/17	JJ	01/23/17
☑	Gross Beta	4100	1328	EPA 900.0	<4.0	01/18/17	JJ	01/23/17
☐	Radium-226	4020						
☐	Radium-228	4030						
☐	Total Uranium	4006						
☐	Radon-222 (Bottle A)	4004						
☐	Radon-222 (Bottle B)	4004						
☐	Radon Field Blank A	4004						
☐	Radon Field Blank B	4004						
☐	Tritium							
☐								
☐								

Date Received: 01/12/17 Received By: JJ JJ

Data Release Signature: [signature] Date: 1-25-17

Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	✓		
Sample pH <2.0?	✓		
Received within holding time?	✓		

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

FORM REVISED 05/15
DHMH 4540 01/13

CUSTOMER COPY II

Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D.	1701107-01	1701107-02
Client I.D.	HC11590 - Post L	HC11590 - 226/228
Gross Alpha	0.7	
Error +/-	0.5	
MDL	0.6	
EPA Method	900.0	
Prep Date / Time	01/24/17 08:13	
Analysis Date / Time	01/25/17 06:42	
Analyst	MJN	
Gross Beta	1.9	
Error +/-	1.1	
MDL	1.7	
EPA Method	900.0	
Prep Date / Time	01/24/17 08:13	
Analysis Date / Time	01/25/17 06:42	
Analyst	MJN	
Radium 226		0.2
Error +/-		0.2
MDL		0.1
EPA Method		903.1
Prep Date / Time		01/20/17 08:25
Analysis Date / Time		01/27/17 10:15
Analyst		MJN
Radium 228		<0.8
Error +/-		0.5
MDL		0.8
EPA Method		Ra-05
Prep Date / Time		01/20/17 08:25
Analysis Date / Time		01/27/17 10:15
Analyst		SN
Units	pCi/l	pCi/l

Florida Radiochemistry Services, Inc.

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Certification I. D. # 278

Work Order #: 1701107
Report Date: 01/31/17

Report to:

Howard County Health Department
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, MD 21045
Attention: Bert Nixon

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and NELAC Standards. The test results in this report relate only to the samples received.

Signed Michael J. Naumann Date 1-31-17
Michael J. Naumann – President
Shawn M. Naumann – Laboratory Director