

C1 14175 SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED. COUNTY NUMBER 5128733672

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

ST/CO USE ONLY DATE RECEIVED 04 11 03 DATE WELL COMPLETED 06 17 03 DEPTH OF WELL 340 PERMIT NO. H0-94-3672

OWNER Thompson STREET OR RFD Green Hollow Way TOWN Highland SUBDIVISION Quings Property SECTION LOT 6

WELL LOG Not required for driven wells

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

Table with columns: DESCRIPTION (Use additional sheets if needed), FEET (FROM, TO), check if water bearing. Rows include Top Soil, Sandy, Sand Stone, MICKA B, Sand Stone, MICKA B, Flint Rock, MICKA B.

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 15 NO. OF POUNDS 5360

CASING RECORD

MAIN CASING TYPE PL Nominal diameter top (main) casing (nearest inch)! 6 Total depth of main casing (nearest foot) 45

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

SCREEN RECORD

screen type or open hole (insert appropriate code below) [ST] [BR] [HO] [PL] [OT]

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED YES [Y] NO [N]

CIRCLE APPROPRIATE LETTER 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. 1 M S D 112 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 1 D 1 SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

C2 DEPTH (nearest ft.)

Table with columns: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. Values: 170, 43, 340.

DIAMETER OF SCREEN (NEAREST INCH) 56 from 60 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 70/ 36722

TELESCOPE CASING LOG INDICATOR OTHER DATA

C3 PUMPING TEST

HOURS PUMPED (nearest hour) 3 PUMPING RATE (gal. per min.) 4 METHOD USED TO MEASURE PUMPING RATE Bucket WATER LEVEL (distance from land surface) BEFORE PUMPING 35 ft. WHEN PUMPING 80 ft. TYPE OF PUMP USED (for test) [A] air [P] piston [T] turbine [C] centrifugal [R] rotary [O] other [J] jet [S] submersible

PUMP INSTALLED

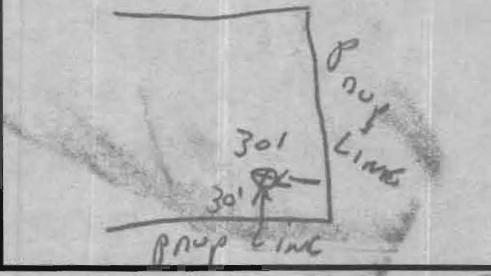
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES [ ] NO [X] IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 35

PUMP HORSE POWER 37 41 PUMP COLUMN LENGTH (nearest ft.) 43 47

CASING HEIGHT (circle appropriate box and enter casing height) [+ ] above [- ] below LAND SURFACE 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)



B 1 8995

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND PERMIT TO DRILL WELL please print or type

STATE PERMIT NUMBER

HO - 94 - 3672 fill in this form completely

Date Received (APA) 04/11/03

8 MM DD YY 13

OWNER INFORMATION

Thompson DALE INC 6300 WOODSIDE CT. Columbia MD 21043

B 3 HOWARD LOCATION OF WELL

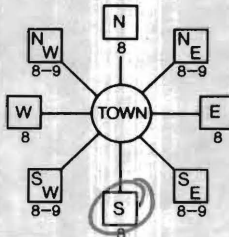
owings Prop SECTION 44 46 LOT 48 50 HIGHLAND

MILES FROM TOWN (enter 0 if in town) I MI 73 76 77 78

DRILLER INFORMATION

Ralph E MAYNE M SD 112 Driller's Name License No. 81 Ralph E. Mayne Well Drilling Firm Name 12024 Hardy Rd Mt Airy MD 21771 Address 7th E Mayne 6-4-02 Signature Date

B 4 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



Green Hollow Way HIGHLAND Ad. NEAR WHAT ROAD

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) NORTH SOUTH WEST EAST DISTANCE FROM ROAD 250 ENTER FT OR MI 38 39 TAX MAP: 40 BLK: 4 PARCEL 44

B 2 WELL INFORMATION

APPROX. PUMPING RATE 5 (GAL. PER MIN.) AVERAGE DAILY QUANTITY NEEDED 500 (GAL. PER DAY)

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION (circled) FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) INDUSTRIAL, COMMERCIAL, DEWATERING PUBLIC WATER SUPPLY WELL TEST, OBSERVATION, MONITORING GEO-THERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard 512673 (13) COUNTY NAME COUNTY NO. STATE SIGNATURE DATE ISSUED 04/21/03 CO SIGNATURE EXP. DATE 04/21/05 NORTH GRID 491 000 EAST GRID 810 000

APPROXIMATE DEPTH OF WELL 150 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

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 THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS THIS WELL WILL DEEPEM AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE)

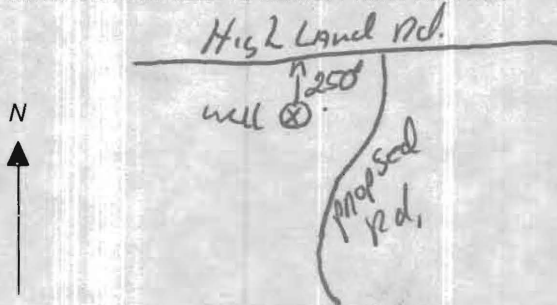
SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER 1. well 2. 3.

WRITE THE BOX NUMBER FROM THE MAP HERE

E 810 N 490491

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



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

APPROX. PERMIT NUMBER HO2002G003 PERMIT No. HO - 94 - 3672

SPECIAL CONDITIONS

NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

**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: R+G Water Systems, Inc. Telephone #: 410-239-0700  
Address: 4322 OPALS CHOICE DRIVE  
MANCHESTER, MD 21102

(Must circle one) Licensed Plumber      Licensed Well Driller      Licensed Well Pump Installer

License # and name of individual responsible for the field installation:

Name (Print): Rickey L. Ross, Sr. License# PT 0141

**\*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: Compass Homes Telephone #: 301-596-1280  
Subdivision: Highland Overlook Lot #: 6 Well Tag #: HO-94-3672  
Site Address: 6804 Green Hollow Way  
Highland, MD 20777

<b><u>Submersible Pump Data</u></b>	<b><u>Pitless Adapter</u></b>	<b><u>Well Cap and Electric Conduit</u></b>
Make: <u>Goulds</u>	Make: <u>HARVAZ</u>	Two piece watertight cap: <input checked="" type="checkbox"/>
Model #: <u>7LS10422C</u>	Model#: <u>PT800</u>	Screened, vented well cap: <input checked="" type="checkbox"/>
Pump Capacity <u>7</u> GPM	Depth: <u>42</u> (36" min)	Cap secured to casing: <input checked="" type="checkbox"/>
Well Yield: <u>4</u> GPM	NSF/WSC approved: <u>YES</u>	Conduit min 18" B.G.: <input checked="" type="checkbox"/>
Depth of well encountered at time of pump installation: <u>340</u> (feet)		Conduit secured to well cap: <input checked="" type="checkbox"/>

If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4

Torque arrestors, 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**

Type: Poly  
PSI: 160 (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: FERNCO'S

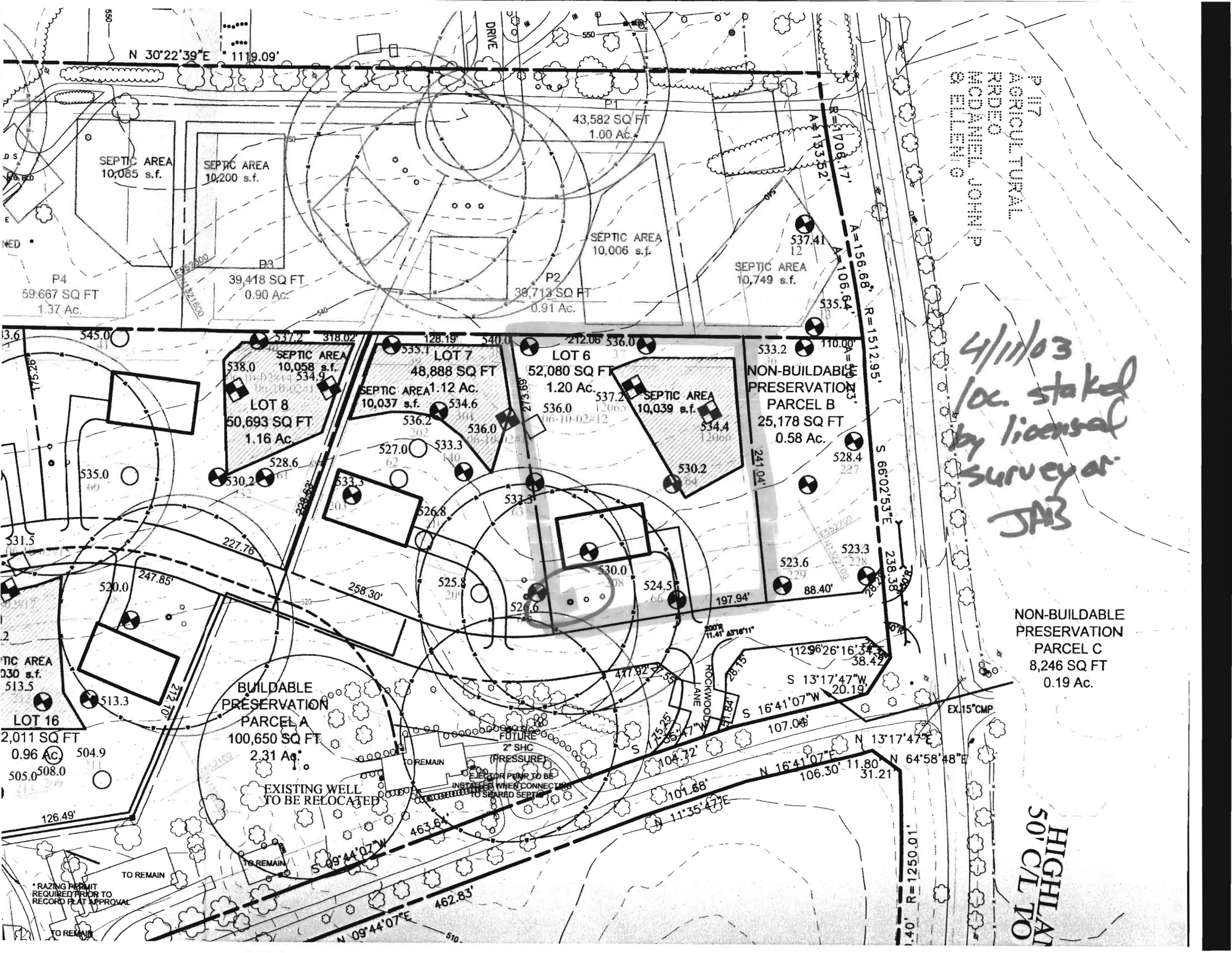
**The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.**

Signature of company representative responsible for installation: Rickey L. Ross, Sr. date: 2/15/11

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

Date Insp. Requested: \_\_\_\_\_ Date Insp. Approved: 10/7/10 Inspector: KW

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



P 17  
 AGRICULTURAL  
 RDEO  
 MODANIEL JOHN P  
 S ELLENG

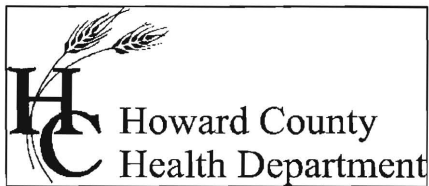
4/11/03  
 loc. staked  
 by licensed  
 surveyor  
 JAB

NON-BUILDABLE  
 PRESERVATION  
 PARCEL C  
 8,246 SQ FT  
 0.19 Ac.

HIGHWAY  
 50' C/L TO

\* RAZING PERMIT  
 REQUIRED PRIOR TO  
 RECORD PLAT APPROVAL





Bureau of Environmental Health  
7178 Columbia Gateway Drive Columbia, Maryland 21046-2132  
(410) 313-2640 Fax (410) 313-2648  
TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

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

February 16, 2011

Homeowner  
6804 Green Hollow Way  
Highland, MD 20777

RE: Highland Overlook, Lot 6  
6804 Green Hollow Way  
Highland, MD 20777  
BP# B09000131  
Well Tag #: HO-94-3672

Dear Sir:

This is to advise you that the septic system for the above referenced property has been installed and inspected. **Final approval of the septic system was granted on 01/07/2011. Final approval of the well line connection to the dwelling was approved on 10/07/2010.**

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. The water sample results were found to be in compliance with COMAR water quality standards.

Gross Alpha and Beta samples were also collected on 06/14/2007. Both findings were below the maximum limit suggested by the EPA. At the time of the testing and with respect to these parameters, the future well water supply appears safe for all uses. No addition testing **for these parameters** will be required to secure the future Use and Occupancy.

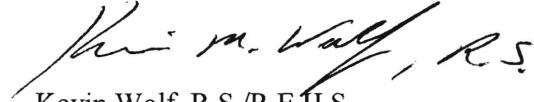
#### **INTERIM CERTIFICATE OF POTABILITY**

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-94-3672. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies. Based upon satisfactory investigation and evaluation, the Howard County Health Department as authorized by the Maryland Department of the Environment accepts this well system as required by COMAR 26.04.04.

This certificate may become final upon completion of the second bacteriological test, which is to be taken by the county health department within six months of receipt of this letter. **Please contact (410) 313-1773 to schedule a final water sample appointment. Currently, there is no charge for this final sampling.**

Date of Water Samples: 01/06/2011  
Date of Samples for Gross Alpha & Gross Beta: 02/10/2011  
Date of Well Completion: 06/17/2003

Approving Authority,



Kevin Wolf, R.S./R.E.H.S.  
Environmental Sanitarian  
Well & Septic Program

cc: Building Inspector's Office  
Community Health Services  
File



## TRACE LABORATORIES, INC

5 North Park Drive  
 Hunt Valley, MD 21030 USA  
 Telephone: 410/584-9099 / Fax: 410/584-9117  
 Website: www.tracelabs.com / Email: info@tracelabs.com

Maryland State Certified Laboratory #318

## CERTIFICATE OF ANALYSIS

## Requester:

Amy Ferrer  
 Compass Homes  
 6206 Heather Glen Way  
 Clarksville, Maryland 21029

S/O Number: 80020

Report Date: January 7, 2011

Property Sampled: 6804 Green Hollow Way, 20777  
 Sample Location: Pressure Tank  
 Residual Chlorine: <0.1 mg/L

Building Permit #: B09000131  
 Sampler ID #: 9813AM  
 Samples Iced: Yes

County: Howard  
 Map: 40

Subdivision: Harwood W Owings Prop Rs  
 Parcel: 44 Lot #: 6

Date/Time Collected in Field: January 6, 2011 @ 11:05 am

Date/Time Received in Lab: January 6, 2011 @ 3:15 pm

Well Tag #: HO-94-3672

Well Condition: 2-Piece Cap, Satisfactory Condition

Water Treatment/Conditioning: Sediment Filter

PARAMETER	METHOD	MCL/*SMCL	RESULT	PASS/FAIL
Total Coliform	SM 9223B	Absent	Absent	Pass
<i>E. coli</i>	SM 9223B	Absent	Absent	Pass
Nitrate	SM 4500D	10 mg/L as N	8.4 mg/L as N	Pass
Turbidity	EPA 180.1	10 NTU	<1.0 NTU	Pass
pH	EPA 150.1	*6.5-8.5 Units	6.5 Units	***
Sand		Negative	Negative	

Katherine C. Higgs  
 Administrative Assistant

MCL: Maximum Contamination Level, an enforceable level established by the EPA

\*SMCL: Secondary Maximum Contamination Level, a level recommended by the EPA

\*\*\*A non-enforceable parameter that may cause cosmetic effects or aesthetic effects (such as taste, color or odor) in drinking water.



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 Website: www.tracelabs.com / Email: info@tracelabs.com

Maryland State Certified Laboratory #318

CERTIFICATE OF ANALYSIS

Requester:

S/O Number: 80096

Amy Ferrer  
 Compass Homes  
 6206 Heather Glen Way  
 Clarksville, Maryland 21029

Report Date: January 17, 2011

Property Sampled: 6804 Green Hollow Way, 20777  
 Sample Location: Kitchen Sink  
 Residual Chlorine: <0.1 mg/L

Building Permit #: B09000131  
 Sampler ID #: 9813AM  
 Samples Iced: Yes

County: Howard  
 Map: 40

Subdivision: Harwood W Owings Prop Rs  
 Parcel: 44 Lot #: 6

Date/Time Collected in Field: January 13, 2011 @ 11:45 am  
 Date/Time Received in Lab: January 13, 2011 @ 12:45 pm

Well Tag #: HO-94-3672  
 Well Condition: 2-Piece Cap, Satisfactory Condition

Water Treatment/Conditioning: Sediment Filter

PARAMETER	METHOD	DETECTION LIMIT	MCL*	RESULT	ACCEPTABILITY
Gross Alpha	EPA 900.0	0.9 pCi/L	15 pCi/L	16.4 ± 1.8 pCi/L	HIGH
Gross Beta	EPA 900.0	1.4 pCi/L	50 pCi/L	15.2 ± 1.2 pCi/L	Acceptable

\*Note: There are no established limits set forth by the EPA for radionuclide particles in private well water. The limits for public water are instead provided as MCLs in this report. The acceptability of this sample is based on these requirements.

*Katherine C. Higgs*  
 Katherine C. Higgs  
 Administrative Assistant

MCL: Maximum Contamination Level, an enforceable level established by the EPA  
 Analysis completed by Laboratory #278



TRACE LABORATORIES, INC  
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 Hunt Valley, MD 21030 USA  
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Maryland State Certified Laboratory #318

### CERTIFICATE OF ANALYSIS

**Requester:**

Amy Ferrer  
 Compass Homes  
 6206 Heather Glen Way  
 Clarksville, Maryland 21029

**S/O Number:** 80299

Report Date: February 11, 2011

**Property Sampled:** 6804 Green Hollow Way, 20777  
**Sample Location:** Kitchen Reverse Osmosis (R/O) Tap  
**Residual Chlorine:** <0.1 mg/L

**Building Permit #:** B09000131  
**Sampler ID #:** 9813AM  
**Samples Iced:** Yes

**County:** Howard  
**Map:** 40

**Subdivision:** Harwood W Owings Prop Rs  
**Parcel:** 44 **Lot #:** 6

**Date/Time Collected in Field:** February 10, 2011 @ 11:50 am  
**Date/Time Received in Lab:** February 10, 2011 @ 3:30 pm

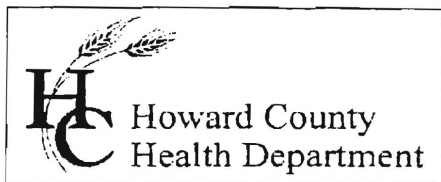
**Well Tag #:** HO-94-3672  
**Well Condition:** 2-Piece Cap, Satisfactory Condition

**Water Treatment/Conditioning:** Sediment Filter, Reverse Osmosis (R/O)

PARAMETER	METHOD	DETECTION LIMIT	MCL*	RESULT	ACCEPTABILITY
Gross Alpha	EPA 900.0	0.7 pCi/L	15 pCi/L	<0.7 ± 0.5 pCi/L	Acceptable
Gross Beta	EPA 900.0	1.2 pCi/L	50 pCi/L	3.1 ± 0.8 pCi/L	Acceptable

\*Note: There are no established limits set forth by the EPA for radionuclide particles in private well water. The limits for public water are instead provided as MCLs in this report. The acceptability of this sample is based on these requirements.

*Katherine C. Higgs*  
 Katherine C. Higgs  
 Administrative Assistant



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TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

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

October 4, 2011

Mr. and Mrs. Stanley Macklin  
6804 Green Hollow Way  
Highland, Maryland 20777

RE: 6804 Green Hollow Way  
Lot 6, Harwood W. Owings Prop.  
Highland, MD. 20777

Dear Mr. and Mrs. Macklin:

Follow-up testing was performed on August 31, 2011 and samples submitted to Florida Radiochemistry (FRC) to assess the possible presence of **Gross Alpha** and **Gross Beta** in your well water supply. Long term **Gross Alpha** and **Gross Beta** along with **Radium 226 / 228** samples were collected to assess the effectiveness of existing treatment and / or the need for additional treatment.

Results from this pre-long term screening (sample collected from pressure tank) revealed a **Gross Alpha** of  $4.9 \pm 1.5$  picocuries/liter (pCi/L); while the **Gross Beta** level was  $13.0 \pm 1.5$  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 the **annual dose rate** of **4 millirems per year**).

Post-long term results (sample collected from first floor bathroom sink) revealed a **Gross Alpha** of  $1.1 \pm 0.7$  pCi/L; while the **Gross Beta** level was  $2.1 \pm 1.0$  pCi/L. The **Gross Alpha** result was below the **MCL** of **15 pCi/L**, while the **Gross Beta** level was below the targeted value of **50 pCi/L** (roughly equivalent to the **annual dose rate** of **4 millirems per year**).

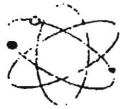
Results from the post-**Radium 226 / 228** (sample also collected from the first floor bathroom sink) revealed a **Radium 226** level of  $0.1 \pm 0.1$  pCi/L; while the **Radium 228** level was  $< 0.9 \pm 0.6$  pCi/L. These naturally occurring isotopes of radium are considered the most important due to their longer half-lives and health significance. Here the **combined Radium 226 / 228** was below the **MCL** of **5 pCi/L**.

At the time of testing and based upon the reported results, with respect to these parameters, your treated well water supply is safe for all uses. Since post-long term levels are clearly lower, as well as, at or below detection level findings for **Radium 226 / 228**, current treatment (softener) appears to be effectively removing **Gross Alpha**, **Gross Beta** and more importantly, **Radium 226 / 228**. To help ensure continued safe levels, regular maintenance of your treatment is recommended.

A copy of the test report 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: Barry Glotfelty, MDE, Water Mgmt.



Analysis Report

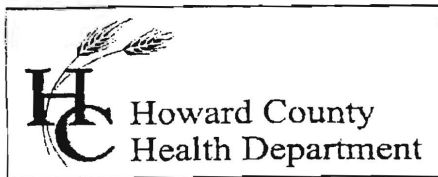
Lab Sample I.D.	1109016-01	1109016-02
Client I.D.	HC6804 POST	HC6804 PRE
Gross Alpha	1.1	4.9
Error +/-	0.7	1.5
MDL	0.8	1.1
EPA Method	900.0	900.0
Prep Date	09/06/11	09/08/11
Prep Time	06:25	06:19
Analysis Date	09/07/11	09/09/11
Analysis Time	05:22	08:22
Analyst	MJN	MJN
Gross Beta	2.1	13.0
Error +/-	1.0	1.5
MDL	1.5	1.3
EPA Method	900.0	900.0
Prep Date	09/06/11	09/08/11
Prep Time	06:25	06:19
Analysis Date	09/07/11	09/09/11
Analysis Time	05:22	08:22
Analyst	MJN	MJN
Radium 226	0.1	
Error +/-	0.1	
MDL	0.1	
EPA Method	903.1	
Prep Date	09/07/11	
Prep Time	08:43	
Analysis Date	09/15/11	
Analysis Time	11:11	
Analyst	MJN	
Radium 228	<0.9	
Error +/-	0.6	
MDL	0.9	
EPA Method	Ra-05	
Prep Date	09/07/11	
Prep Time	08:43	
Analysis Date	09/15/11	
Analysis Time	11:11	
Analyst	SN	
Units	pCi/l	pCi/l

Chain of Custody

		Florida Radiochemistry Services, Inc. 5456 Hoffner Ave., Suite 201 Orlando, FL 32812 Ph.(407)382-7733 Fax(407)382-7744 Email: flradiochemistry@cfl.rr.com				FL Certification E83033		
	<b>Company Name:</b>	<b>Howard County Health Dept</b>				<b>Phone #</b>	<b>( 410) 313-1773</b>	
	<b>Address:</b>	<b>7178 Columbia Gateway Dr</b>				<b>Fax #</b>	<b>( 410) 313-2648</b>	
	<b>City / State / Zip</b>	<b>Columbia, MD 20146</b>						
	<b>Send Report to:</b>	<b>Bert Nixon, bnixon@howardcountymd.gov</b>						
	<b>Additional Report:</b>							
	<b>Invoice to:</b>	<b>Bert Nixon</b>						
	<b>Project I.D.</b>							
	<b>P.O. #</b>							
	<b>Sample I. D.</b>	<b>Date / Time Sampled</b>	<b>Sample # of</b>	<b>Pres.</b>	<b>Analysis</b>	<b>Remarks</b>		
	<b>(Sample Location)</b>		<b>Type</b>	<b>Btls</b>	<b>Requested</b>			
1	<b>HC6804</b>	08/31/2011 - 10:00AM	TREAT	1	HNO3	Alpha/Beta Long	Post/ H2O Softner	
2	<b>HC6804</b>	08/31/2011 - 10:00AM	TREAT	1	HNO3	Radium 226/228	Post / H2O Softner	
3	<b>HC6804</b>	09/01/2011 - 8:30AM	RAW	1	HNO3	Alpha/Beta Long	Pre Treat	
4	<b>HC6243</b>	09/01/2011 - 10:00AM	RAW	1	HNO3	Alpha/Beta Long	Pre Treat	
5	<b>HC6243</b>	09/01/2011 - 10:00AM	TREAT	1	HNO3	Alpha/Beta Long	Post / H2O Softner	
6	<b>HC6243</b>	09/01/2011 - 10:00AM	TREAT	1	HNO3	Radium 226/228	Post / H2O Softner	
7								
8								
9								
10								
	<b>Relinquished by:</b>	<b>Date/Time</b>				<b>Sampled By:</b>		
						Boleslav Shklyar	410-313-1787	
	<b>Received by:</b>	<b>Date/Time</b>				Idowu Oresanya	410-313-4259	







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

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

July 12, 2011

Mr. and Mrs. Stanley Macklin  
6804 Green Hollow Way  
Laurel, Maryland 20723-1087

RE: 6804 Green Hollow Way  
Lot 6  
Harwood W. Owings Property

Dear Mr. and Mrs. Macklin:

Pre and post-treatment testing was performed on June 14, 2011 and samples submitted to the Department of Health & Mental Hygiene Laboratories to assess the possible presence of **Gross Alpha**, **Gross Beta** and **Radium** in your well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta 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 the County. In turn, this information can be used to determine if additional testing and/or the need for treatment to address this concern is necessary.

Results from this screening (sample collected from pressure tank) revealed a **Gross Alpha** of  $16.9 \pm 2.9$  picocuries/liter (pCi/L); while the **Gross Beta** level was  $11.7 \pm 2.2$  pCi/L. The **Gross Alpha** result was above 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 the annual dose rate of 4 millirems per year).

Given the slightly elevated level for **Gross Alpha**, the Health Department would recommend additional testing to see if **Radium 226 / 228** is present in your well water supply and based upon those findings whether or not treatment should be considered. Typically, these types of contaminants are readily treated with the use of a water softener or reverse osmosis (R/O) system.

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

Sincerely,  
  
Bert Nixon, Director  
Bureau of Environmental Health

Enclosure  
cc: Barry Glotfelty, MDE, Water Mgmt.

Send Report To:

Howard County Health Department  
Bureau of Environmental Health  
7178 Columbia Gateway Drive  
Columbia, Maryland 21046

State of Maryland  
DHMH - Laboratories Administration  
Division of Environmental Chemistry  
**RADIATION LABORATORY**  
201 W. Preston Street, Baltimore, Maryland 21201  
John M. DeBoy, Dr. P. H., Director

E002673 314 9

05 440394

LOT 6

HARWOOD W. OWINGS  
PROP

**LABORATORY ANALYSIS REQUEST**

Sample Bottle No. A: HC 6804 No. B: \_\_\_\_\_ Field Blank Bottle No. 1: HC 6804 (FB) No B: \_\_\_\_\_

Plant/Site Name: ALICE MACKLIN County: HOWARD

Sample Source: 6804 GREEN HOLLOW WAY Location: FAUCET FROM THE WELL  
LAUREL 20723-1087 (well no, lab sink, sample tap, etc.)

County:  1  3 Plant No.

CHECK (one per box)

Drinking Water   
Landfill   
Stream   
Other

Community   
Non-community   
Private   
Other

Source (raw water)   
Distribution (treated)   
MCL

Emergency   
Routine   
Recheck   
Special

Collector: DOWU ORESANYA

Telephone No.: 410-313-4259

Date Collected: 06/14/2011

Time Collected: 09:00 a.m. p.m.

Nitric Acid Preserved: Yes  No

Iced: Yes  No

Submitters Code:  Federal Project:

Field Data: 6.6 CHLORINE PRESENT.  
pH Chlorine

Remarks: CONFIRMED 06/16/11 A 8.3 ± 2.3 B 8.5 ± 2.1

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Analyzed	Date Reported
✓	Gross Alpha	4000	2673	16.9 ± 2.9	06/15/11	06/16/11
✓	Gross Beta	4100	2673	11.7 ± 2.2	"	"
	Radon-222 Bottle A	4004				
	Radon-222 Bottle B	4004				
	Field Blank #A	4004				
	Field Blank #B	4004				
	Tritium					
	Ra - 226	4020				
	Ra - 228	4030				
	Total Uranium	4006				

Date Received: 06/14/11

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

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

Send Report To:

E002672 314 10

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

201 W. Preston Street, Baltimore, Maryland 21201  
John M. DeBoy, Dr. P. H., Director

**LABORATORY ANALYSIS REQUEST**

Sample Bottle No. A: \_\_\_\_\_ No. B: \_\_\_\_\_ Field Blank Bottle No. 1: \_\_\_\_\_ No B: \_\_\_\_\_

Plant/Site Name: HC 6804 (FB) County: HOWARD

Sample Source: FIELD BLANK Location: \_\_\_\_\_  
(well no, lab sink, sample tap, etc.)

County:   Plant No.

CHECK (one per box)

Drinking Water   
Landfill   
Stream   
Other

Community   
Non-community   
Private   
Other

Source (raw water)   
Distribution (treated)   
MCL

Emergency   
Routine   
Recheck   
Special

Collector: LOWU ORESANYA

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

Date Collected: 06/14/11 <sup>cont</sup>

Time Collected: 9.00 a.m. \_\_\_\_\_ p.m.

Nitric Acid Preserved: Yes  No

Iced: Yes  No

Submitters Code:

Federal Project:

Field Data: \_\_\_\_\_  
pH Chlorine

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

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Analyzed	Date Reported
	Gross Alpha	4000	2672	< 2.0	06/15/11	06/16/11
	Gross Beta	4100	2672	< 4.0	"	"
	Radon-222 Bottle A	4004				
	Radon-222 Bottle B	4004				
	Field Blank #A	4004				
	Field Blank #B	4004				
	Tritium					
	Ra - 226	4020				
	Ra - 228	4030				
	Total Uranium	4006				

Date Received: 06/14/11

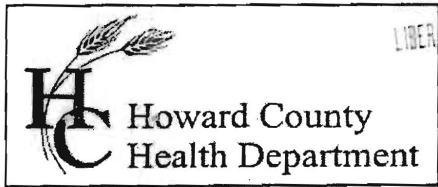
Supervisor: [Signature]

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

Circuit Court for  
HOWARD COUNTY  
Clerk of the Court,  
MARGARET D. RAPPAPORT  
8360 COURT AVENUE  
ELLCOTT CITY, MD 21043-  
(410) 313-2111

Transaction Block: 3706  
Ref: 208  
ISC AMOUNT  
IMP FD SURE \$5 40.00  
RECORDING FEE \$20.00 20.00  
SUBTOTAL: 60.00  
TOTAL CHARGES: 60.00  
PAYMENTS  
CASH 60.00  
TOTAL TENDERED: 60.00

Cashier: VLB Reg # H008  
Rcpt # 69114  
Date: May 30, 2012 Time: 10:02 am



LIBER 14040 FOLIO 472

000208

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

Peter L. Beilenson, M.D., M.P.H., 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 Stanley Macklin + Alice Macklin (the Owner).

WHEREAS, the Owner owns a tract of land at street address 6804 Green Hollow Way, Highland and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 40, Block # 4, Parcel # 44, Deed Reference # 11508-305 and Tax Account # 05440394 ("the Property").

40
20
70

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

WHEREAS, the Owner has installed a residential drinking well under well permit HO-94-3672 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.

40.00
RECORDING FEE 20.00
TOTAL 60.00
NOV 30, 2012
RPT # 68114
BLK # 3766
10:02 AM

LIBER 14040 FOLIO 473

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 warrant nor 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.

8/31/2011  
Date

11/22/2011  
Date

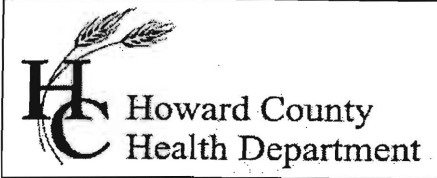
\_\_\_\_\_  
Witness

\_\_\_\_\_  
Witness

[Signature]  
Owner Stanley L. Macklin

[Signature]  
Owner  
Howard County Health Department

[Signature]  
Alice Y. Macklin



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

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

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

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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.

3/24/12  
Date

3/24/12  
Date

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Witness

[Signature]  
Owner

[Signature]  
Owner

\_\_\_\_\_  
Howard County Health Department