

C1 17410

SEQUENCE NO. (MDE USE ONLY)

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

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

ST/CO USE ONLY

DATE Received MM DD YY

DATE WELL COMPLETED

5 26 15

Depth of Well

22 480 26

(TO NEAREST FOOT)

OK 7/29/15

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-15-0046

OWNER Hunter David WELL SITE ADDRESS 7A Drivers Rd TOWN Marriottsville SUBDIVISION SECTION LOT

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, FEET (FROM, TO), check if water bearing. Includes entries for Orange Shisty clay, Brown Schist, Gray Schist, Black/Dark Gray Schist.

GROUTING RECORD WELL HAS BEEN GROUTED (Y) NO (N) TYPE OF GROUTING MATERIAL (Circle one) CEMENT (CM) BENTONITE CLAY (BC) NO. OF BAGS 11 NO. OF POUNDS 350 GALLONS OF WATER 275 DEPTH OF GROUT SEAL (to nearest foot) from 0 to 80 ft.

CASING RECORD casing types insert appropriate code below MAIN CASING TYPE PL Nominal diameter top (main) casing (nearest inch) 6 Total depth of main casing (nearest foot) 80

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

SCREEN RECORD screen type or open hole insert appropriate code below (ST) STEEL (BR) BRASS (HO) OPEN HOLE (PL) PLASTIC (OT) OTHER

PUMPING TEST HOURS PUMPED (nearest hour) 6 PUMPING RATE (gal. per min.) 2.8 METHOD USED TO MEASURE PUMPING RATE watch bucket WATER LEVEL (distance from land surface) BEFORE PUMPING 36 ft. WHEN PUMPING 380 ft. TYPE OF PUMP USED (for test) C centrifugal

PUMP INSTALLED DRILLER INSTALLED PUMP YES NO (CIRCLE) (YES OR 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) 31 35 PUMP HORSE POWER 37 41 PUMP COLUMN LENGTH (nearest ft.) 43 47 CASING HEIGHT (circle appropriate box and enter casing height) + above LAND SURFACE - below (nearest foot) 49 50 51

NUMBER OF UNSUCCESSFUL WELLS:

WELL HYDROFRACTURED (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 MW D 552 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. M D SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

DEPTH (nearest ft.) 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

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

LATITUDE 39.485276 LONGITUDE 76.902501 (DEFAULT COORD. WGS 84) NOTES:

Storage: 470' - 36' = 434' x 1.5 gal/ft = 651 gal



B 1 20742 SEQUENCE NO. (MDE USE ONLY) STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type STATE PERMIT NUMBER HO-15-0046  
 1 2 3 6 70 71 fill in this form completely

Date Received (APA) \_\_\_\_\_  
**OWNER INFORMATION**  
 8 MM DD YY 13  
Hunter David  
 15 Last Name Owner First Name 34  
1530 Key Blvd  
 36 Street or RFD 55  
Arlington VA 22209  
 57 Town 70 State 72 Zip 76

B 3 LOCATION OF WELL  
Howard  
 8 COUNTY 21  
 23 SUBDIVISION \_\_\_\_\_ 42  
 SECTION \_\_\_\_\_ LOT \_\_\_\_\_  
 44 46 48 50  
Marriottsville  
 52 NEAREST TOWN 71

**DRILLER INFORMATION**  
Kevin P Weigle MWD552  
 76 Driller's Name License No. 81  
Eichelberger's Inc  
 Firm Name  
107 Texaco Rd. Mechanicsburg Pa. 17050  
 Address  
Kevin P Weigle  
 Signature Date

B 4 SOURCES OF DRILLING WATER  
 1. well  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
1390  
7A Driver Road  
 11 STREET ADDRESS 30  
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)  
 NORTH N  
 WEST W 32 EAST E  
 SOUTH S  
 34 300 37  
 DISTANCE FROM ROAD FT  
 ENTER FT OR MI 38 39  
 TAX MAP: 10 BLK: 10 PARCEL 128

B 2 WELL INFORMATION  
 1 2 APPROX. PUMPING RATE (GAL. PER MIN.) 10  
 8 12  
 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 500  
 14 20

**USE FOR WATER (CIRCLE APPROPRIATE BOX)**  
 DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION  
 FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)  
 INDUSTRIAL, COMMERCIAL, DEWATERING  
 PUBLIC WATER SUPPLY WELL  
 TEST, OBSERVATION, MONITORING  
 OPEN LOOP GEOTHERMAL  
 CLOSED LOOP GEOTHERMAL

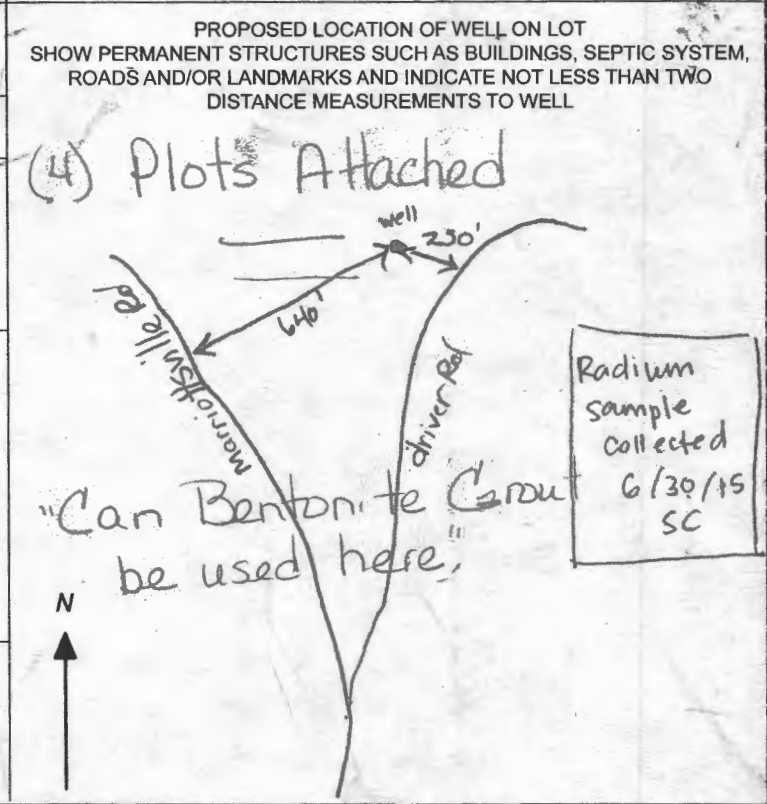
NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL  
Howard A531919 13  
 COUNTY NAME COUNTY NO.  
 STATE SIGNATURE \_\_\_\_\_ INSERT S → 41  
 DATE ISSUED 04/21/15 RPT 4/21/16  
 43 MM DD YY 48 CO SIGNATURE EXP. DATE

APPROXIMATE DEPTH OF WELL 250 FEET  
 24 28  
 APPROXIMATE DIAMETER OF WELL 6 INCH  
 NEAREST

**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  
 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 \_\_\_\_\_ G \_\_\_\_\_  
 PERMIT No. HO-15-0046  
 70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS \* Radium Sample required @ yield test.  
 NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED.

## Water Well Yield Test Report

(To Be Completed By Well Driller, Pump Installer or Master Plumber)

Dater Test Performed: 5-26-15 Well Driller/ Tester: Eichelber's Inc.  
 Well Permit No HO-15-0046 MK15002  
 Address: 7A Drivers Rd Marriottsville Election District: \_\_\_\_\_  
 Subdivision: \_\_\_\_\_ Lot: \_\_\_\_\_  
 Owner Name: David Hunter  
 Depth of Well: 480' Static Water Level Before Pumping: 36

Pump Test Data - Observation to be Recorded Every 15 Minutes

| Time  | Water Level<br>(ft below surface) | PSI<br>(existing pump) | Pumping Rate<br>(time to fill 1 gal<br>bucket) | Additional Data | Calculated Flow<br>(gal/minute) |
|-------|-----------------------------------|------------------------|--|-----------------|---------------------------------|
| 10:30 | 380'                              |                        | 28 sec   |                 | 2.1                             |
| 10:45 | 380'                              |                        | 28 "   |                 | 2.1                             |
| 11:00 | 380'                              |                        | 28 "   |                 | 2.1                             |
| 11:15 | 380'                              |                        | 28 "   |                 | 2.1                             |
| 11:30 | 380'                              |                        | 28 "   |                 | 2.1                             |
| 11:45 | 380'                              |                        | 28 "   |                 | 2.1                             |
| 12:00 | 380'                              |                        | 28 "   |                 | 2.1                             |
| 12:15 | 380'                              |                        | 28 "   |                 | 2.1                             |
| 12:30 | 380'                              |                        | 28 "   |                 | 2.1                             |
| 12:45 | 380'                              |                        | 28 "   |                 | 2.1                             |
| 1:00  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 1:15  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 1:30  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 1:45  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 2:00  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 2:15  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 2:30  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 2:45  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 3:00  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 3:15  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 3:30  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 3:45  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 4:00  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 4:15  | 380'                              |                        | 28 "   |                 | 2.1                             |
| 4:30  | 380'                              |                        | 28 "   |                 | 2.1                             |
|       |                                   |                        |  |                 |                                 |
|       |                                   |                        |  |                 |                                 |
|       |                                   |                        |  |                 |                                 |
|       |                                   |                        |  |                 |                                 |

SUBMIT THIS REPORT TO:

**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: Whitehall Plumb 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): OWEN'S SON License# \_\_\_\_\_

**\*A licensed individual must perform the actual installation. Apprentices must be under the supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification. Unlicensed individuals may be reported to the appropriate licensing agency.**

Name of Property Owner: \_\_\_\_\_ Telephone #: \_\_\_\_\_  
Subdivision: \_\_\_\_\_ Lot #: \_\_\_\_\_ Well Tag #: HO-15-0046  
Site Address: 1863 Drive

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

|                                       |   |
|---------------------------------------|---|
| <b><u>Piping to house</u></b>         | <b><u>House Connection</u></b>                            |
| 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: 5/10/2019 Date Insp. Approved: 5/10/2019 Inspector: (Signature)  
Inspection Data: Pitless adapter watertight & water supply line at least 36" below grade ✓ 36" 5/10/2019 (Signature)  
Two piece cap installed and attached to casing securely ✓  
Elec. conduit extends at least 18" below grade/attached to cap properly ✓ 18" 5/10/2019 (Signature)  
Safety rope not outside of well cap/casing ✓  
Correct well tag attached properly and casing 8" above finished grade ✓ 8" 5/10/2019 (Signature)  
Water supply line sleeved adequately at house connection ✓ 5' 5/10/2019 (Signature)  
Adequate grout observed below pitless adapter ✓

24.5

**INTERIM CERTIFICATE OF POTABILITY**  
**PERMANENT DEVIATION FOR RADIUM**

**Expiration Date – March 17, 2020**

September 17, 2019

Homeowner  
1386 Driver Road  
Marriottsville, MD 21104

**RE: Hunter Property, P. 128**  
1386 Driver Road  
**Building Permit: B18003791**  
**Well Permit: HO-15-0046**

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 **8/21/2019**. Final approval of the well line connection to the dwelling was granted on **5/10/2019**. The well construction was completed on **5/26/2015**. Water samples were collected on **8/1/2019, 8/28/2019**.

The water sample results indicate that the water samples submitted for testing were free of coliform and fecal coliform bacteria at the time of sampling and are bacteriologically safe for drinking.

Gross Alpha and Beta samples were also collected on **6/30/2015**. Results showed a Gross Alpha level of **38.1 ± 4.7 pCi/L** and a Gross Beta level of **33.3 ± 3.1 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 **8/28/2019** and indicated a combined Radium 226/228 level of **<1.0 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-15-0046. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

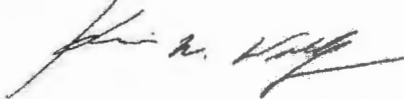
This Interim Certificate of Potability will expire **six months** from the date of issuance. Submission of a second bacteriological test indicating the water is free of coliform and fecal coliform bacteria is required prior to the expiration date, after which time a Final Certificate of Potability will be issued. **Failure to submit an additional sample and obtain a Final Certificate of Potability will result in a Notice of Violation and is punishable as a misdemeanor under the *Annotated Code of Maryland, Environment Article, 9-1311*, subject to a fine of up to \$500 or imprisonment not to exceed three months.**

Please contact (410) 313-1773 to schedule a final water sample appointment or contact a Maryland certified water quality laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website:

<http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf>

In closing, please refer to our "[Homeowner Fact Sheet](#)" which illustrates a better understanding for your onsite sewage disposal system. You will also find a link to Maryland Department of the Environments website which describes in further detail operation and maintenance of your septic system.

Approving Authority,



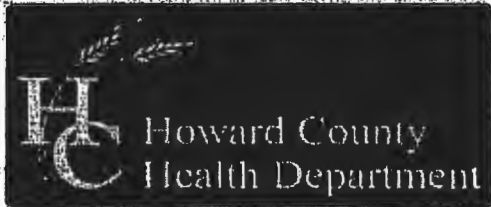
Kevin M Wolf, L.E.H.S., R.E.H.S./RS, Supervisor  
Groundwater Management Section  
Well & Septic Program

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

RECEIVED

APR 22 2015

HOWARD COUNTY HEALTH DEPT.  
COMMUNITY HYGIENE PROGRAM



Bureau of Environmental Health  
8930 Stanford Boulevard, Columbia, MD 21045 | Phone: 410-313-2640 | Fax: 410-313-2648 | TDD: 410-313-2323 | Toll Free: 1-866-813-6300 | www.hchealth.org

Facebook: www.facebook.com/hchealth  
Twitter: @HowardCoHealthDep

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

TO ALL INTERESTED PARTIES

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

Well Site Location:

DAVID R HUNTER PROPERTY DRIVER RD, MARRIOTSVILLE  
Subdivision/Property Name Lot# Road Name

The well site has been staked by CLOVERLEA LAND SURVEYS, INC \*  
(professional land surveyor or company employing professional land surveyors)  
on APRIL 13, 2015 (date) and does not require a site inspection.

\* Cloverlea Land Surveys, Inc  
900 Mago Vista Rd. Arnold, MD. 21012  
PH. 443-994-3157

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 ground well permit application.

ALTISDA

PLAT No. 5113  
S 49°47'16" W 1087.02'

FLAH No. 5113  
536

S 49°47'16" W 1087.02'

REMNANTS OF WIRE FENCE

REVISED  
Date: 1-9-18

Comments: Revised site plan to show accurate well location

LOT 7A  
F:00166  
AT F:06267 AC  
18396 Ft. OR  
5,100 Sq. Ft.

MATTIE OVERBY WEBB  
L. 9252 AT F. 507

N 48°33'14" E 962.72'

N 48°33'14" E 962.72' EX. 2

2-STORY DWELLING  
#1390

EX-WELL  
HO-15-0046

MODEL: NORWECO  
BIO-KINETIC WASTEWATER  
TREATMENT SYSTEM  
MODERN INTLP-600 GPD  
1,300 GALLONS

PROPOSED S.R.A.  
(10,000 S.F.)

DRIVER ROAD  
PUBLIC RIGHT OF WAY

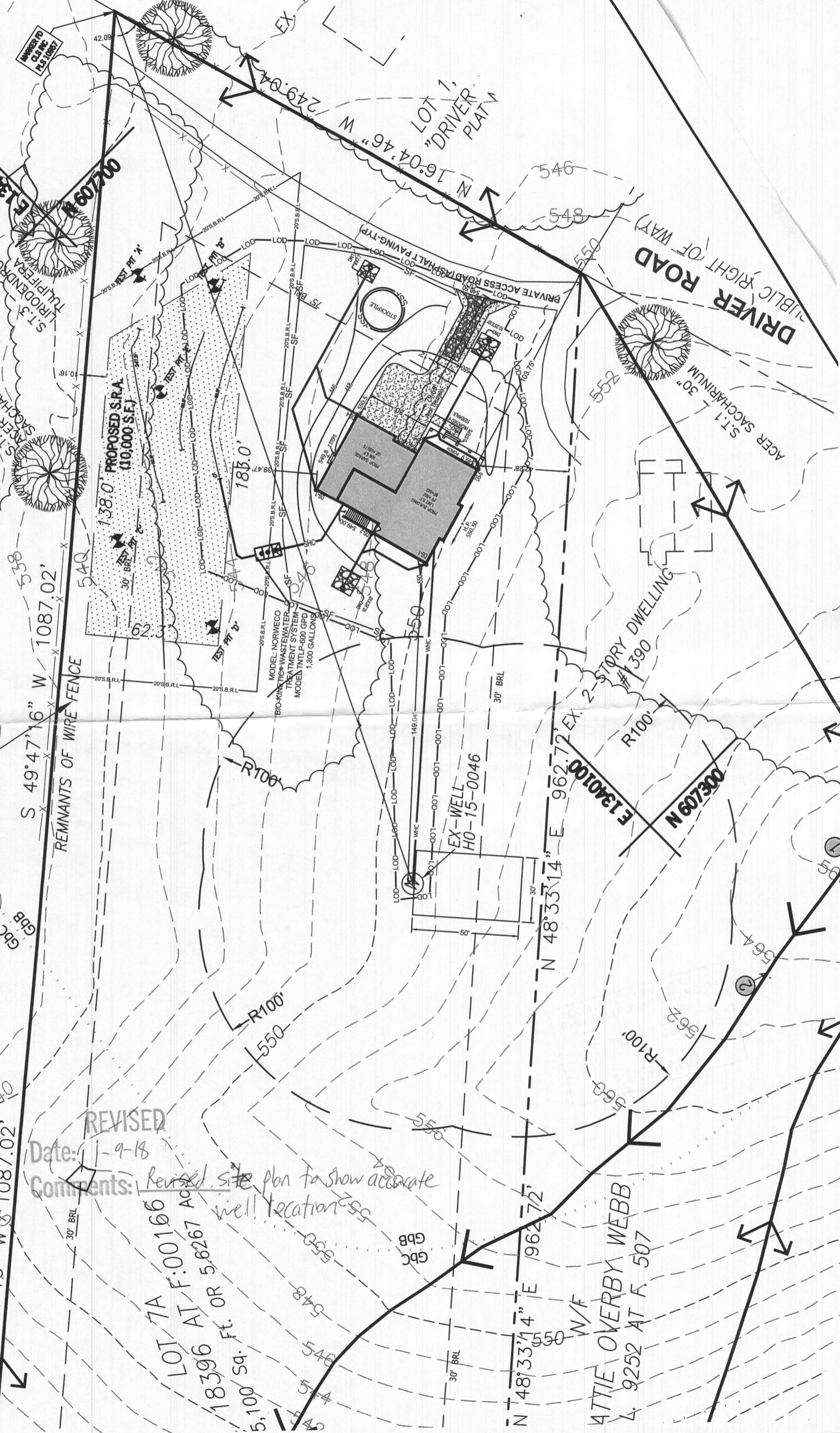
LOT 1,  
"DRIVER"  
PLAT

N 16°04'46" W 229.04'

E 13409 N  
E 13409 N

S.T.3  
TUPIFERA  
SACCHARINUM

S.T.1  
ACER SACCHARINUM



# HOME LAND

L A B S

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

## Certificate of Analysis

Report Date: 8/12/2019

Client: HLE: Jeff Wood  
Property Address: 1386 Driver Road  
Marriottsville, MD 21104

Report No: 174520

Date & Time Sampled: 08/01/2019 4:30 pm

Date & Time Received: 08/02/2019 7:00 am

Sampled By: Tyler Young 7211JY (Exp. 5/14/2021)

Preservation: Ice

Sample Point(s): First floor bedroom bathroom sink, Nitrate+Nitrite & Gross Alpha-R/O at kitchen sink

Water Conditioning Appears to be: Reverse Osmosis System, Water Softener, Acid Neutralizer, UV Light, Sediment Filter

Chlorine Residual: 0.0

Field pH: 8.45

Well Type: Drilled

Well Height: 30"

Cap Type: 2-piece metal/PVC

Casing: 6" PVC

Conduit: Secure

Clarity: Clear

Sand: None Observed

Well Tag Number: HO-15-0046

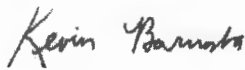
### Primary Contaminants

| Parameter                    | Method       | Result       | Pass/Fail | Units     | MCL     | RL  | Analyst | Date of Analysis |
|------------------------------|--------------|--------------|-----------|-----------|---------|-----|---------|------------------|
| Nitrate + Nitrite (Pre R/O)  | EPA 353.2    | Not Detected | Pass      | mg/l      | 10      | 0.5 | AND-353 | 08/02/2019       |
| Bacteria-Total Coliform      | Colitag Test | Absent       | Pass      | Per/100ml | Present | 1   | ADM-353 | 08/03/2019       |
| Bacteria-E.coli              | Colitag Test | Absent       | Pass      | Per/100ml | Present | 1   | ADM-353 | 08/03/2019       |
| Nitrate + Nitrite (Post R/O) | EPA 353.2    | Not Detected | Pass      | mg/l      | 10      | 0.5 | AND-353 | 08/02/2019       |
| Radium Gross Alpha           | EPA 900.0    | Not Detected | Pass      | pCi/l     | 15      | 0.7 | FRC-    | 08/07/2019       |

### Secondary Contaminants

| Parameter | Method    | Result | Acceptable /High | Units | SMCL | RL  | Analyst | Date of Analysis |
|-----------|-----------|--------|------------------|-------|------|-----|---------|------------------|
| Turbidity | EPA 180.1 | 1.0    | Acceptable       | NTU   | 10   | 0.5 | AND-353 | 08/02/2019       |

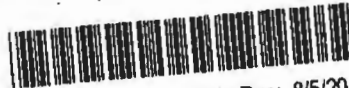
Approved By



Kevin Barnaba, Lab Director



# HOME LAND ENVIRONMENTAL HEALTH LABS



174520

Date Due: 8/5/201

Client: HLE: Jeff Wood

Project:

www.homes.com

## Chain Of Custody Form

Client Name \_\_\_\_\_

Site Address:

1386 Driver Rd

Address \_\_\_\_\_

Marrattsville, MD

Phone \_\_\_\_\_

21104

Email \_\_\_\_\_

### Field Collection Information

|                          |              |
|--------------------------|--------------|
| Collector's Name:        | Tyler Young  |
| Sampler's ID #:          | 72104        |
| Collected Date and Time: | 8/1/19 4:30  |
| Well Tag Number:         | HO-15 - 0016 |

|                          |      |
|--------------------------|------|
| Field pH:                | 8.45 |
| Field Chlorine:          | 0.0  |
| Sand:                    | None |
| Clear At Time of Sample? | Yes  |
| Was Well Chlorinated?    | No   |

### Well Casing and Cap Condition

|                            |                             |                   |                    |
|----------------------------|-----------------------------|-------------------|--------------------|
| Height Above Grade:<br>30" | Cap Type:<br>2 piece - uPVC | Casing:<br>6" PVC | Conduit:<br>severe |
|----------------------------|-----------------------------|-------------------|--------------------|

### Requested Testing: (Please Circle All That Apply)

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

|                |          |          |           |             |                |
|----------------|----------|----------|-----------|-------------|----------------|
| Arsenic        | Bacteria | Cadmium  | Chlorides | Gross Alpha | Iron           |
| Lead           | MTBE     | Nitrates | Nitrites  | Pesticides  | Radium 226/228 |
| Total Hardness | VOC's    | Other:   | Other:    | Other:      | Other:         |

|   |   |
|---|---|
| Source: 1st floor bedroom bathroom sink<br>Nitrates/Gross Alpha: Kitchen RO | Water Conditioning:<br>w/s Kitchen RO<br>A/N UV light<br>sed filter |
|---|---|

### Release Signatures

Released By: Date/Time: 8/1/19 6:15 pm

Released By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Released By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received in lab by: Date/Time: 8/2 7:00am

SAMPLES PLACED IN LOCKED LAB AFTER HOURS

# FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

## REPORT OF ANALYSIS

|                                      |                               |
|--------------------------------------|-------------------------------|
| Laboratory ID #: 132433              | Account #: 31579              |
| Reference: Collin Ferguson           | Company: CASH ACCOUNT         |
| Location: 1386 Driver Road           | Requested By: Collin Ferguson |
| Marriottsville, MD 21104             | Source: Well Water            |
| Date/ Time Collected: 8/28/2019 1230 | Site: <u>R/O Tap</u>          |
| Date/Time Rec'd: 8/28/2019 1437      | Treatment: **                 |
| Chlorine ppm: Free: ND Total: ND     | pH: 7.2                       |
| Collected By: J. Yeager 6176JY       | Well #: HO-15-0046            |

| PARAMETERS              | RESULTS | UNITS | REFERENCE | METHOD | DATE/TIME/ANALYST      |
|-------------------------|---------|-------|-----------|--------|------------------------|
| Gross Alpha, Short Term | 0.6     | pCi/L | 15        | 900.0  | 8/31/2019 / 1305 / MJN |
| Gross Beta, Short Term  | <1.2    | pCi/L | 50        | 900.0  | 8/31/2019 / 1305 / MJN |
| Gross Alpha, Long Term  | <0.8    | pCi/L | 15        | 900.0  | 9/12/2019 / 0949 / MJN |
| Gross Beta, Long Term   | <2.1    | pCi/L | 50        | 900.0  | 9/12/2019 / 0949 / MJN |
| Radium-226              | 0.3     | pCi/L | ****      | 903.1  | 9/11/2019 / 1417 / MJN |
| Radium-228              | <0.7    | pCi/L | ****      | Ra-05  | 9/10/2019 / 1132 / SN  |

{
}
 combined < 1.0

**NOTES**

- 1 \*\*\*\*Radium 226 and Radium 228 combined have a reference of 5 pCi/L
- 2 \*\*Neutralizer/Softener//UV Light/Reverse Osmosis \*
- 3 Long Term Gross Alpha Detection Limit: 0.8 pCi/L; Long Term Gross Beta Detection Limit: 2.1 pCi/L
- 4 pCi/L = picocuries per liter
- 5 Radium 226 Detection Limit: 0.1 pCi/L; Radium 228 Detection Limit: 0.7 pCi/L
- 6 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 7 Short Term Gross Alpha Detection Limit: 0.5 pCi/L; Short Term Gross Beta Detection Limit: 1.2 pCi/L
- 8 Sub-contracted to Reference Lab #278
- 9 ND:None Detected
- 10 pH & Chlorine level tested on site
- 11 Visual well check: Sealed, vented cap

Reason for Test : Use & Occupancy  
 Building Permit # : B18003791

Date Reported: 9/13/2019

# FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

## REPORT OF ANALYSIS

Laboratory ID #: 132432 Account #: 31579  
Reference: Collin Ferguson Company: CASH ACCOUNT  
Location: 1386 Driver Road Requested By: Collin Ferguson  
Marriottsville, MD 21104 Source: Well Water  
Date/ Time Collected: 8/28/2019 1220 Site: Pressure Tank  
Date/Time Rec'd: 8/28/2019 1437 Treatment: \*\*  
Chlorine ppm: Free: ND Total: ND pH: 6.5  
Collected By: J. Yeager 6176JY Well #: HO-15-0046

| PARAMETERS              | RESULTS | UNITS | REFERENCE | METHOD | DATE/TIME/ANALYST      |
|-------------------------|---------|-------|-----------|--------|------------------------|
| Gross Alpha, Short Term | 15.7    | pCi/L | 15        | 900.0  | 8/31/2019 / 1305 / MJN |
| Gross Beta, Short Term  | 27.7    | pCi/L | 50        | 900.0  | 8/31/2019 / 1305 / MJN |
| Gross Alpha, Long Term  | 14.7    | pCi/L | 15        | 900.0  | 9/12/2019 / 0949 / MJN |
| Gross Beta, Long Term   | 28.2    | pCi/L | 50        | 900.0  | 9/12/2019 / 0949 / MJN |

### NOTES

- \*\*Sample collected prior to Neutralizer/Softener/UV Light/Reverse Osmosis
- Long Term Gross Alpha Detection Limit: 1.6 pCi/L; Long Term Gross Beta Detection Limit: 2.5 pCi/L
- pCi/L = picocuries per liter
- Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- Short Term Gross Alpha Detection Limit: 1.3 pCi/L; Short Term Gross Beta Detection Limit: 2.2 pCi/L
- Sub-contracted to Reference Lab #278
- ND:None Detected
- pH & Chlorine level tested on site
- Visual well check: Sealed, vented cap

Reason for Test : Use & Occupancy  
Building Permit # : B18003791

Date Reported: 9/13/2019

# FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

## REPORT OF ANALYSIS

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Date/Time Rec'd: 8/28/2019 1437 Treatment: \*\*  
Chlorine ppm: Free: ND Total: ND pH: 6.5  
Collected By: J. Yeager 6176JY Well #: HO-15-0046

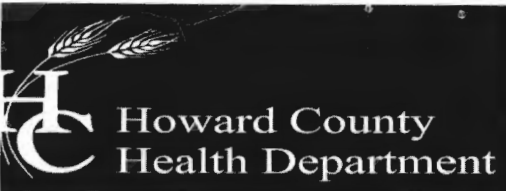
| PARAMETERS                     | RESULTS | UNITS       | REFERENCE | METHOD     | DATE/TIME/ANALYST      |
|--------------------------------|---------|-------------|-----------|------------|------------------------|
| Bacteria, Coliform, Total, MPN | <1.0    | MPN/ 100 ml | <1.0      | SM20 9223B | 8/29/2019 / 1000 / CRS |
| Bacteria, E. coli, MPN         | <1.0    | MPN/ 100 ml | <1.0      | SM20 9223B | 8/29/2019 / 1000 / CRS |

### NOTES

- 1 \*\*Sample collected prior to Neutralizer/Softener/UV Light
- 2 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 3 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 4 ND:None Detected
- 5 pH & Chlorine level tested on site
- 6 Visual well check: Sealed, vented cap

Reason for Test : Use & Occupancy  
Building Permit # : B18003791

Date Reported: 8/29/2019



**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](http://www.facebook.com/hocohealth)

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

August 17, 2015

**Mr. David Hunter**  
 1390 Driver road  
 Marriottsville, Maryland 21104

**RE: Well Tag: HO - 15 - 0046**  
 1390 Driver Road  
 Marriottsville, Maryland 21104

**Resend of results**

Dear Mr. Hunter:

A sample was collected following a 1 hour pumping of the well on June 30, 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 may exist in your area within the County.

Results from this screening revealed a **Gross Alpha** of  $38.1 \pm 4.7$  picocuries/liter (pCi/L), while the **Gross Beta** level was  $33.3 \pm 3.1$  pCi/L. The **Gross Alpha** result was above its **maximum contaminant level (MCL)** of 15 pCi/L, while the **Gross Beta** level was higher than typically observed, but 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 well water supply **does not meet** EPA regulatory standards. Given the elevated readings for **Gross Alpha**, and higher than normal **Gross Beta**, additional testing **for these parameters** will be recommended to help secure the future Use & Occupancy. The installation of a water softener system and / or a reverse osmosis system will be necessary. If treatment is installed, **pre and post short and long term Gross Alpha and Beta, plus a post Radium 226 / 228** will be needed to properly evaluate the effectiveness of the installed treatment(s). **Please note** that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

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

Sincerely,  
  
 Bert Nixon, Director  
 Bureau of Environmental Health

Enclosure  
 cc: Property file



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

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

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

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

Facebook: [www.facebook.com/hocohealth](https://www.facebook.com/hocohealth)

Maura Rossman, M.D., Health Officer

July 23, 2015

Mr. David Hunter  
1530 Key Boulevard  
Arlington, Virginia 22209

RE: Well Tag: HO - 15 - 0046  
1390 Driver Road  
Marriottsville, Maryland 21104

Dear Mr. Hunter:

A sample was collected following a 1 hour pumping of the well on June 30, 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 may exist in your area within the County.

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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 follow-up testing.

Sincerely,

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

Bert Nixon, Director

Bureau of Environmental Health

Enclosure  
cc: Property file



**Bureau of Environmental Health**

8930 Stanford Boulevard, Columbia, MD 21045

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

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Facebook: [www.facebook.com/hocohealth](https://www.facebook.com/hocohealth)

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

July 23, 2015

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1530 Key Boulevard  
Arlington, Virginia 22209

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Marriottsville, Maryland 21104

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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 follow-up testing.

Sincerely,

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

Bert Nixon, Director

Bureau of Environmental Health

Enclosure  
cc: Property file



SEND REPORT TO: Bert Nixon DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Howard County Health Dept. Laboratories Administration  
 Bureau of Environmental Health 201 W. Preston St., Baltimore, MD 21201  
 8930 Stanford Blvd. Robert A. Myers, Ph.D., Director  
 Columbia, MD 21045 1770 Ashland Ave., Baltimore, MD 21205  
**RADIATION ANALYSIS REQUEST FORM**

Lab No. 007 4-1

Plant/Site Name: Field Blank County: Howard  
 Sample Source: dtl<sub>2</sub>O Location: HCHD 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: 107115 5  
 Collector: S. Collins Telephone No.: 410-332-6287  
 Date Collected: 6/30/15 Time Collected: \_\_\_\_\_ a.m. 4 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     | <u>007</u> | <u>EPA900.0</u> | <u>&lt;2.0</u>  | <u>7/3/15</u> | <u>WT</u> | <u>7/6/15</u> |
| <input checked="" type="checkbox"/> Gross Beta  | 4100     | <u>007</u> | <u>EPA900.0</u> | <u>&lt;4.0</u>  | <u>7/3/15</u> | <u>WT</u> | <u>7/6/15</u> |
| <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"/>                        |          |            |                 |                 |               |           |               |

Date Received: 7/1/15 Received By: Kathy Jones  
 Data Release Signature: Robert Miller Date: 7/6/15

| Lab Use Only                  | Yes                                 | No                       | N/A                      |
|-------------------------------|-------------------------------------|--------------------------|--------------------------|
| Sample Intact upon arrival?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Sample pH <2.0?               | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Received within holding time? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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

03 293599

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

DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St. Baltimore, MD 21201  
Robert A. Myers, Ph.D., Director  
1770 Ashland Ave., Baltimore, MD 21205  
RADIATION ANALYSIS REQUEST FORM

Lab No.  
0008 - 15

Plant/Site Name: 1390 Driver Rd Marriatville County: Howard

Sample Source: Ho-15-0046 Location: Well (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   |
|--|
| 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 checked="" type="checkbox"/> |
| Other <input type="checkbox"/>              |

| Point of Collection                              |
|--|
| Source (Raw) <input checked="" 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: 6/30/15 Time Collected: a.m. 1 p.m.

Field pH: Field Chlorine:

Nitric Acid Preserved: Yes  No  Iced: Yes  No

Remarks: Sample taken after 1 hr. pumping of well

| TEST   | EPA Code | Lab No. | Method No. | Results (pCi/L) | Date Analyzed | Analyst | Date Reported |
|--|----------|---------|------------|-----------------|---------------|---------|---------------|
| <input checked="" type="checkbox"/> Gross Alpha        | 4000     | 008     | EPA 900.0  | 38.1 ± 4.7      | 7/3/15        | WT      | 7/6/15        |
| <input checked="" type="checkbox"/> Gross Beta         | 4100     | 008     | EPA 900.0  | 33.3 ± 3.1      | 7/3/15        | WT      | 7/6/15        |
| <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 |          | 008     | EPA 900.0  | 36.8 ± 4.7      | 7/3/15        | WT      | 7/6/15        |
| <input checked="" type="checkbox"/> Gross Beta - Conf  |          | 008     | EPA 900.0  | 30.0 ± 3.0      | 7/3/15        | WT      | 7/6/15        |

Date Received: 7/1/15 Received By: Kathryn Jones  
Data Release Signature: Deborah Miller Date: 7/6/15

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



# BENSEAL®

Sealing and Plugging Agent

## Description

BENSEAL® granular (8-mesh), natural Wyoming sodium bentonite is used in the sealing and grouting of well casings and earthen structures. BENSEAL is not recommended for use as a drilling mud.

## Applications/ Functions

*BENSEAL sealing and plugging agent assists or promotes the following:*

- Seal or grout plastic or steel casings in monitor and water well construction
- Seal or plug abandoned boreholes
- Seal leaking ponds, ditches and dams
- Soil stabilization
- Prepare BENSEAL and EZ-MUD® grouting system
- Aid in controlling loss of circulation

## Advantages

- High swelling capacity
- Uniform particle size
- No heat of hydration
- Prevents commingling of aquifers and contamination from surface
- Forms a flexible seal to protect casing from corrosive contaminants
- Allows for hole re-entry
- NSF/ANSI Standard 60 certified

## Typical Properties

|                                 |  |
|---------------------------------|--|
| • Appearance                    | Bluish to gray granules                              |
| • Dry screen analysis           | 85% as 8 mesh  |
| • Volume, ft <sup>3</sup> /sack | 0.7 (as packaged)                                    |
| • Specific gravity              | 2.6  |
| • Permeability                  | less than $1 \times 10^{-8}$ cm/sec (in fresh water) |

## Recommended Treatment

*As a casing drill and drive operation:*

1. Dig a cone-shaped depression around casing. Depression should be 6 - 8 inches (152-203 mm) larger than the outside diameter of the casing and 2 - 3 feet (60-75 cm) deep.
2. Keep cone-shaped depression filled with dry BENSEAL while driving the casing.

25 gal water + 1 50-lb bag

1386 Driver Rd

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

6095 Marshalee Drive  
Suite 120  
Elkridge, MD 21075  
410-313-5850

---

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

Name: ferguson  
Ref: 43

---

|                          |    |       |       |
|--------------------------|----|-------|-------|
| LR - Agreement Surcharge | 1x | 40.00 | 40.00 |
|--------------------------|----|-------|-------|

---

|           |  |  |       |
|-----------|--|--|-------|
| SubTotal: |  |  | 60.00 |
| Total:    |  |  | 60.00 |

---

|            |  |  |       |
|------------|--|--|-------|
| CRD-Credit |  |  | 60.00 |
|------------|--|--|-------|

Credit Card Confirmation : 01199d

08/22/2019 10:48 CC13-SB

#12604057/496/109

~ Thank you for visiting us today ~

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 Collin and Kim Ferguson ("the Owner").

WHEREAS, the Owner owns a tract of land at street address 1386 Driver Rd, Marriottsville, MD 21104 and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 010, Block # 0010, Parcel # 0128, Deed Reference # 18396/00160 and Tax Account # 03-298825 ("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 40-15-0046 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).

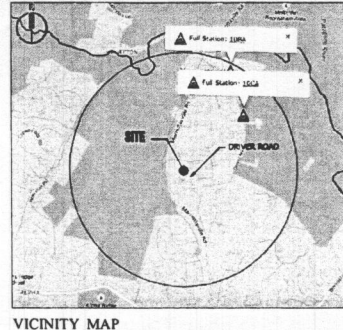


D.A. TO STUDY POINT A  
322,712 S.F. (7.41 ACRES.)  
(INCLUDING 1.78 ACRES OFFSITE  
DRAINAGE AREA)

- GENERAL NOTES:**
- SUBJECT PROPERTY ZONED R-C (DEO) PER 06/25/2015 COMPREHENSIVE ZONING PLAN.
  - COORDINATES REFERENCED TO THE VERTICAL DATUM OF THE NATIONAL GEODETIC SURVEY (NAVDS8) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NOS:  
NO.10CA NORTH 610473.234 FEET ELEV. 483.536  
EAST 1342330.924 FEET  
NO.10BA NORTH 612486.567 FEET ELEV. 435.258  
EAST 1341887.106 FEET
  - THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD-RUN SURVEY, BASED ON A GLOBAL POSITIONING SYSTEM (G.P.S.) SURVEY CONDUCTED IN JULY, 2009 BY CLOVERLEA LAND SURVEYS, INC.
  - EXISTING USE: VACANT
  - PROPOSED USE: RESIDENTIAL (SINGLE FAMILY)
  - STORMWATER MANAGEMENT IS IN ACCORDANCE WITH CHAPTER 5 OF THE MARYLAND STORMWATER MANAGEMENT MANUAL, VOLUME I & II REVISED 2009. WE ARE PROVIDING THREE DRY-WELLS (M-5) AND ONE NON-ROOFTOP DISCONNECTION TO ATTENUATE THE ESD REQUIRED FOR THE SITE.
  - THIS PROPERTY IS SERVED BY SEPTIC AND WELL.
  - FOREST CONSERVATION WILL NOT BE REQUIRED, SINCE THE AMOUNT OF FOREST REMOVED ON THIS PROPERTY WILL BE 8996 SQUARE FEET WHICH IS BELOW THE 20,000 SQUARE FEET THRESHOLD.
  - THIS PROJECT IS NOT SUBJECT TO THE REQUIREMENTS OF THE HOWARD COUNTY SUBDIVISION REQUIREMENTS, SINCE THIS PROPERTY WAS CREATED 1949, AND HAS NOT BEEN ALTERED SINCE.
  - A FOREST STAND DELINEATION PLAN AND DATED APRIL 21, 2015 AND PREPARED BY ANDREA MURTHA OF Wetland Studies and Solutions, Inc. AND BEEN PROVIDED AS PART OF THE SUBMISSION.
  - NO ENVIRONMENTAL FEATURE EXIST WITHIN THE L.O.D.

**LEGEND**

| EXISTING FEATURE   | SYMBOL |
|--|--------|
| SUBJECT SITE BOUNDARY  | ---    |
| ADJOINING PROPERTY BOUNDARY                                    | ---    |
| EXISTING ROAD CENTERLINE                                       | ---    |
| BUILDING RESTRICTION LINE                                      | ---    |
| EXISTING STRUCTURES  | ---    |
| EXISTING CONTOURS (MINOR)                                      | ---    |
| EXISTING CONTOURS (MAJOR)                                      | ---    |
| EXISTING SEWER LINE  | ---    |
| EXISTING WATER LINE  | ---    |
| EXISTING OVERHEAD WIRES  | ---    |
| EXISTING FENCE   | ---    |
| SOIL TYPE BOUNDARY   | ---    |
| EXISTING TREE LINE   | ---    |
| EXISTING TREE AREA/FREE LINE TO BE REMOVED DUE TO CONSTRUCTION | ---    |
| FOREST STAND BOUNDARY  | ---    |
| SPECIMEN TREE  | ---    |
| AREAS OF SLOPE ≥ 25%   | ---    |
| AREAS OF SLOPE 15% - 25%                                       | ---    |
| INTERMITTENT STREAM  | ---    |
| STREAM BUFFER BOUNDARY   | ---    |
| PROPOSED STRUCTURE   | ---    |
| LIMITS OF DISTURBANCE  | ---    |
| PROP. BUILDING   | ---    |
| PROP. PAVEMENT   | ---    |
| PROP. CONTOUR  | ---    |
| PROP. SPOT ELEVATION   | ---    |
| PROP. GRAVEL DRYWELL   | ---    |
| PROP. DOWNSPOUT LOCATION                                       | ---    |
| PROP. ROOF LEADER  | ---    |
| STABILIZED CONSTRUCTION ENTRANCE                               | ---    |
| PROP. SILT FENCE   | ---    |
| PROP. WATER HOUSE CONNECTION                                   | ---    |
| PROP. SEWER HOUSE CONNECTION                                   | ---    |
| SOIL BORING LOCATION   | ---    |



**SITE ANALYSIS DATA SHEET**

|                                 |             |
|---------------------------------|-------------|
| SITE AREA                       | 5.63 ACRES  |
| WETLAND AREA                    | 0.00 ACRES  |
| FLOODPLAIN AREA                 | 0.00 ACRES  |
| FOREST AREA                     | 4.73 ACRES  |
| STEEP SLOPES IN EXCESS OF 15%   | 2.32 ACRES  |
| ERODIBLE SOILS AREA             | 0.00 ACRES  |
| LIMIT OF DISTURBANCE (L.O.D.)   | 0.55 ACRES  |
| FOREST AREA WITHIN L.O.D.       | 0.21 ACRES  |
| AREA OF STEEP SLOPE DISTURBANCE | 0.00 ACRES  |
| GREEN OPEN AREA                 | 0.83 ACRES  |
| PROPOSED IMPERVIOUS AREA        | 0.076 ACRES |

**MAPPED SOILS TABLE**

| Symbol | Map Unit Name   | K-Factor | Hydr. | Hydr. Soil Group | Drainage Class |
|--------|---|----------|-------|------------------|----------------|
| GdR    | Gladstone loam, 3 to 8 percent slopes                       | 0.28     | 0     | A                | Well drained   |
| GdC    | Gladstone loam, 8 to 15 percent slopes                      | 0.28     | 0     | A                | Well drained   |
| MaD    | Minor loam, 15 to 25 percent slopes                         | 0.28     | 0     | B                | Well drained   |
| MpF    | Major-Bannerdown sandy loams, 25 to 45 percent slopes, mids | 0.20     | 0     | B                | Well drained   |

Source: <http://webdb.nrcs.usda.gov> (March 2015)

**STORMWATER MANAGEMENT REQUIREMENTS**

| AREA                         | PROPOSED PRACTICE (Length X Width X Height)   | SURFACE AREA PROVIDED (S.F.) | VOLUME PROVIDED-ESD <sub>v</sub> (C.F.) |
|------------------------------|---|------------------------------|---|
| FRONT ROOF-1000 S.F.         | DRY-WELL (10.25'x10'x5')  | 102.5 S.F.                   | 205 C.F.                                |
| BACK ROOF-1000 S.F.          | DRY-WELL (10.25'x10'x5')  | 102.5 S.F.                   | 205 C.F.                                |
| GARAGE ROOF-600 S.F.         | DRY-WELL (8'x7'x5')   | 61.6 S.F.                    | 123.2 C.F.                              |
| DRIVEWAY RUN-OFF-596 S.F.    | NON ROOF TOP DISCONNECTION Contributing Impervious Area Flow Length=27<br>Disconnection Flow Length=147 | ---                          | 47.18 C.F.                              |
| <b>TOTAL VOLUME PROVIDED</b> |   | <b>590.38 C.F.</b>           | <b>590.38 C.F.</b>                      |
| <b>TOTAL VOLUME NEEDED</b>   |   | <b>347.34 C.F.</b>           | <b>347.34 C.F.</b>                      |

**DESIGN NARRATIVE**

**Natural Resource Protection and Enhancement:**  
This site is entirely wooded, with relatively steep slopes in 40% of the site. The approach in achieving the goals of this project is to disturb a minimum amount of the existing wooded areas. As shown on this plan, approximately 80% of the site will remain undisturbed, therefore maintaining the existing characteristic of the site. The placement of the house and proposed appurtenances, such as the driveways, have been proposed in places that are least intrusive to the character of the site. The house itself has been placed in the flatter part of the site, which would result in the least amount of grading, and therefore fewer disturbances. The driveway is shown to cut through an area that is fairly clear, and mostly populated with brush and smaller trees, and would not require too much clearing.

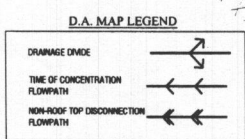
**Maintenance of Natural Flow Patterns:**  
The project has been designed to maintain the natural drainage patterns of the site. The proposed house will be situated very close to the ridge of the site, and the associated grading shows that there will be few changes in flow patterns. Furthermore, the placement of the proposed stormwater management practices have been placed to maintain these natural flow patterns. Runoff from impervious areas are naturally directed to the proposed practices.

**Reduction of Impervious Areas Through Better Site Design, Alternative Surfaces, Non-Structural Practices:**  
Since the site is mostly wooded any new development will create new impervious areas. However, we have used a site design that will allow a vast majority of the site to be maintained in its natural state. This has been achieved by strategically placing the house, so that there is minimal disturbance. Furthermore, we have explored the opportunity to meet ESD requirements by using stormwater management credits. However, due to site restrictions, such as steep slopes, it is difficult to satisfy the requirements through credits. Therefore, stormwater management practices have been proposed to meet stormwater management requirements for most impervious surfaces.

**Integration of Erosion and Sediment Controls into SWM Strategy:**  
The stormwater management strategy of the site is to use micro practices, and to naturally direct impervious runoff to these practices. The existing topography of the site and the approach to site design requires minimal erosion and sediment control measures, and therefore fewer disturbances. The use of silt fence will adequately handle runoff from disturbed areas. Implementation of ESD Planning Techniques and Practices To The MEP The site has been designed to limit the amount of disturbance to the site. The proposed design has an impervious area of 0.076 acres, approximately 1.35%. The actual disturbance is approximately 15%. The proposed driveway is strategically placed to limit the disturbance to the site. It should be noted that the placement of the driveway was actually sited in the field and then implemented in the proposed plan. All of the existing slope greater than 25% will remain in its existing state without disturbance. Impervious areas from garage roof is directed to proposed Drywell# 3 and impervious areas from the front rooftop is directed to proposed Drywell# 2, both, located in the front. Impervious areas from the back portion of the rooftop are directed to Drywell# 1. Also the driveway drainage has been attenuated by Non-roof top disconnection. These facilities are sized in accordance with Chapter 5 of the Maryland Stormwater Management Manual. In order to preserve the nature of the site, and to limit the amount of disturbance to the site especially in areas of steep slopes, no practice is proposed in those areas. The Total volume provided in proposed systems is 590.38 C.F. which is greater than the required target volume of 347.44 C.F. Therefore, the required ESD<sub>v</sub> to MEP has been satisfied.

**(OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1), DRY WELLS (M-5))**

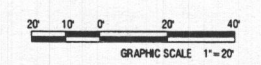
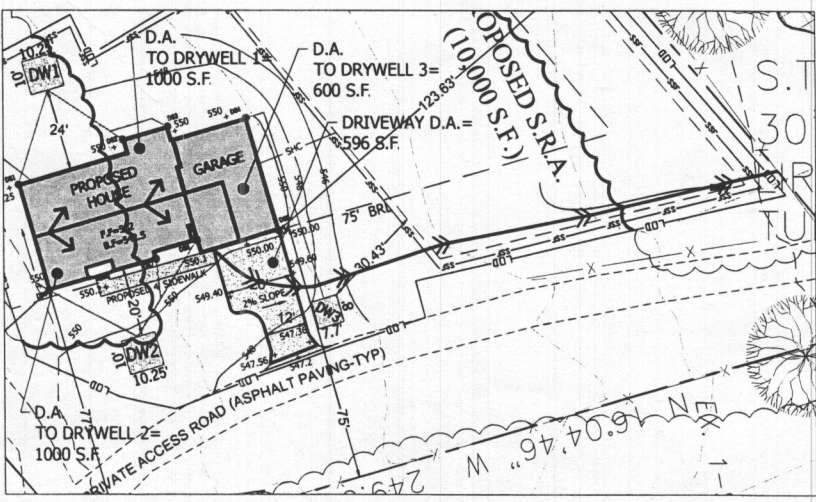
- The Owner shall inspect the monitoring wells and structures on a quarterly basis and after every heavy storm event.
- The Owner shall record the water levels and sediment build up in the monitoring wells over a period of several days to insure trench drainage.
- The Owner shall maintain a log book to determine the rate at which the facility drains.
- When the facility becomes clogged so that it does not drain down within a seven(7) hour time period, corrective action shall be taken.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration facility have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.



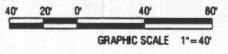
**PROPOSED CONDITIONS**

**STUDY POINT A:**  
D.A. 322,712 S.F. (7.41 AC.)  
CN = 48  
Tc = 0.405 H.C.  
1 - 2 : 75' Sheet Flow @ 4%  
2 - 3 : 771' Shallow Conc.Flow @ 19.2%

**NOTE:**  
PROPERTY IS LOCATED ON A-10 COORDINATES OF ADC'S STREET MAP OF HOWARD COUNTY, MARYLAND. (MAP6-PAGE 10)



**SITE PLAN**  
SHOWN WITH ALL PROPOSED SWM & SEC FEATURES



**PROFESSIONAL'S REVIEW STATEMENT:**  
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NUMBER: 22742 EPPWS: JUNE 13, 2015

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

Chief, Development Engineering Division \_\_\_\_\_ DATE \_\_\_\_\_  
Chief, Division of Land Development \_\_\_\_\_ DATE \_\_\_\_\_

**APPLICANT**

DAVID R. HUNTER  
1530 KEY BLVD. #1330  
ARLINGTON, VA 22209  
C/O :PHONE (410)-977-1244

**ENVIRONMENTAL CONCEPT PLAN**

DAVID R. HUNTER  
LIBER 1148 AT FOLIO 196  
DRIVER ROAD, HOWARD CO., MD

3-th DISTRICT  
GRID:10, PARCEL:128

ZONE: R-C(DEO)  
TAX MAP: 10

**RAZTEC ASSOCIATES, INC.**  
civil engineers & land planners

3280 Urbana Pike  
Ijamsville, Maryland 21754

Tel (301) 775-4394  
Fax (301) 831-8978  
email:raztecengr@comcast.net



**SCALE**  
1" = 40'

CHECKED BY: MR \_\_\_\_\_  
DRAWN BY: MP \_\_\_\_\_

**DATE**  
MAY 2015

**SHEET NUMBER**  
1 of 1