

STATE OF MARYLAND WELL COMPLETION REPORT

SEQUENCE NO. (MDE USE ONLY) 57240

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

COUNTY NUMBER XX

PERMIT NO. HO-17-0361

DATE RECEIVED 06/03/19 DATE WELL COMPLETED MM 5 DD 22 YY 19 DEPTH OF WELL 325 (TO NEAREST FOOT)

OWNER V. King, Just Homes WELL SITE ADDRESS 12510 Indelphia RD TOWN Ellicott City, MD

SUBDIVISION _____ SECTION _____ LOT _____

WELL LOG

Not required for driven wells

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

| DESCRIPTION (Use additional sheets if needed) | FEET | | check if water bearing |
|---|------|-----|------------------------|
| | FROM | TO | |
| Top Soil | 0 | 1 | |
| Orange Clay | 1 | 10 | |
| Bm Sand & Clay | 10 | 210 | |
| Red Clay | 210 | 230 | |
| Sandstone | 230 | 235 | |
| Bm Sand | 235 | 250 | |
| Weathered Rock | 250 | 270 | |
| Weathered Rock + Sand | 270 | 300 | ✓ |
| Grng Rock + Bm Sand | 300 | 325 | |

GROUTING RECORD

WELL HAS BEEN GROUTED (Circle Appropriate Box) Y N

TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC

NO. OF BAGS 27 NO. OF POUNDS 1350

GALLONS OF WATER 675

DEPTH OF GROUT SEAL (to nearest foot) from 0 TOP 52 ft. to 269 BOTTOM 58

(enter 0 if from surface)

CASING RECORD

casing types insert appropriate code below

| | |
|---------|----------|
| ST | CO |
| STEEL | CONCRETE |
| PL | OT |
| PLASTIC | OTHER |

MAIN CASING TYPE ST Nominal diameter top (main) casing (nearest inch)! 6 Total depth of main casing (nearest foot) 269

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

SCREEN RECORD

screen type or open hole ST BR HO

STEEL BRASS OPEN HOLE

PL OT

PLASTIC OTHER

PUMPING TEST

HOURS PUMPED (nearest hour) 4

PUMPING RATE (gal. per min.) 10

METHOD USED TO MEASURE PUMPING RATE Duck

WATER LEVEL (distance from land surface)

BEFORE PUMPING 50 ft.

WHEN PUMPING 93 ft.

TYPE OF PUMP USED (for test)

A air P piston T turbine

C centrifugal R rotary O other (describe below)

J jet S submersible

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED Y N

CIRCLE APPROPRIATE LETTER

A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED

E ELECTRIC LOG OBTAINED

P TEST WELL CONVERTED TO PRODUCTION WELL

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

DRILLERS LIC. NO. MSD 106

DRILLERS SIGNATURE [Signature]

(MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. D

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

DEPTH (nearest ft.) 269 325

EACH CASING

1 HO 269 325

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 _____

SLOT SIZE 1 _____ 2 _____ 3 _____

DIAMETER OF SCREEN _____ (NEAREST INCH)

from _____ to _____

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

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T _____ (E.R.O.S.) W Q _____

70 _____ 72 _____ 74 75 76 _____

TELESCOPE CASING LOG INDICATOR OTHER DATA

PUMP INSTALLED YES NO

DRILLER INSTALLED PUMP (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 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 49

LAND SURFACE 1 (nearest foot)

- below 49

LATITUDE 39.27801

LONGITUDE 76.94540

(DEFAULT COORD. WGS 84)

Pursuant to §10-624 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info. may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or state law.

| | | | |
|--|---|--|---|
| C 1 <u>57240</u> <small>(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)</small> | SEQUENCE NO. <small>(MDE USE ONLY)</small> | 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 <u>XLT</u> |
| ST/CO USE ONLY DATE RECEIVED MM <u>03</u> DD <u>19</u> | DATE WELL COMPLETED MM <u>05</u> DD <u>20</u> YY <u>19</u> | Depth of Well 22 <u>325</u> 26 <small>(TO NEAREST FOOT)</small> | PERMIT NO. FROM "PERMIT TO DRILL WELL" <u>HO-17-0361</u> |
| OWNER <u>J. King (not Haines)</u> WELL SITE ADDRESS <u>12510 Tadelpho Rd</u> first name <u>first name</u> TOWN <u>Ellicott City</u> MD SUBDIVISION _____ SECTION _____ LOT _____ | | | |

| WELL LOG | | |
|---|---------|------------------------|
| Not required for driven wells | | |
| STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING | | |
| DESCRIPTION (Use additional sheets if needed) | FEET | check if water bearing |
| | FROM TO | |
| Top Soil | 0 1 | |
| Orange Clay | 1 10 | |
| Bin Sand & Clay | 10 210 | |
| Red Clay | 210 230 | |
| Sandstone | 230 235 | |
| Bin Sand | 235 250 | |
| Weathered Rock | 250 270 | |
| Weathered Rock + Sand | 270 300 | ✓ |
| Gravel Rock + Bin Sand | 300 325 | |

| GROUTING RECORD | |
|--|--|
| WELL HAS BEEN GROUTED <small>(Circle Appropriate Box)</small> TYPE OF GROUTING MATERIAL (Circle one) CEMENT <input checked="" type="checkbox"/> CM BENTONITE CLAY <input checked="" type="checkbox"/> BC NO. OF BAGS <u>27</u> NO. OF POUNDS <u>350</u> GALLONS OF WATER <u>675</u> DEPTH OF GROUT SEAL (to nearest foot) from <u>0</u> TOP 52 ft. to <u>269</u> BOTTOM 58 ft. <small>(enter 0 if from surface)</small> | yes no <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N 44 44 |
| CASING RECORD | |
| casing types insert appropriate code below <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> ST STEEL <input checked="" type="checkbox"/> PL PLASTIC </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> CO CONCRETE <input checked="" type="checkbox"/> OT OTHER </div> </div> MAIN CASING TYPE <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> ST 60 61 </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> 6 63 64 </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> 269 66 70 </div> </div> | Nominal diameter top (main) casing (nearest inch) Total depth of main casing (nearest foot) |
| OTHER CASING (if used) | |
| EACH CASING diameter inch depth (feet) from to | |

| PUMPING TEST | |
|---|---|
| HOURS PUMPED (nearest hour) <u>4</u> | |
| PUMPING RATE (gal. per min.) <u>10</u> | |
| METHOD USED TO MEASURE PUMPING RATE _____ | |
| WATER LEVEL (distance from land surface) | |
| BEFORE PUMPING <u>50</u> ft. | |
| WHEN PUMPING <u>93</u> ft. | |
| TYPE OF PUMP USED (for test) | |
| <input checked="" type="checkbox"/> A air | <input type="checkbox"/> P piston |
| <input type="checkbox"/> C centrifugal | <input type="checkbox"/> T turbine |
| <input type="checkbox"/> J jet | <input type="checkbox"/> O other (describe below) |
| <input type="checkbox"/> R rotary | <input type="checkbox"/> S submersible |

| |
|---|
| NUMBER OF UNSUCCESSFUL WELLS: <u>2</u> |
| WELL HYDROFRACTURED <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| CIRCLE APPROPRIATE LETTER A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED E ELECTRIC LOG OBTAINED P TEST WELL CONVERTED TO PRODUCTION WELL |
| I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE. |
| DRILLERS LIC. NO. <u>MSD 1010</u> DRILLERS SIGNATURE _____ <small>(MUST MATCH SIGNATURE ON APPLICATION)</small> LIC. NO. <u>D</u> |
| SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee) |

| SCREEN RECORD | |
|--|--|
| screen type or open hole (insert appropriate code below) | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> ST STEEL <input checked="" type="checkbox"/> PL PLASTIC </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> BR BRASS BRONZE <input checked="" type="checkbox"/> OT OTHER </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> HO OPEN HOLE <input checked="" type="checkbox"/> OT OTHER </div> </div> |
| DEPTH (nearest ft.) | |
| 1 <u>HO</u> 2 <u>269</u> 3 <u>325</u> 8 9 11 15 17 21 23 24 26 30 32 36 38 39 41 45 47 51 | |
| SLOT SIZE 1 _____ 2 _____ 3 _____ | |
| DIAMETER OF SCREEN (NEAREST INCH) 56 60 | |
| from _____ to _____ | |
| GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 | |
| MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T _____ (E.R.O.S.) W Q _____ | |
| 70 _____ 72 _____ 74 75 76 _____ TELESCOPE CASING LOG INDICATOR OTHER DATA | |

| PUMP INSTALLED | |
|--|--|
| DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> | |
| 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) <u>31</u> <u>35</u> | |
| PUMP HORSE POWER <u>37</u> <u>41</u> | |
| PUMP COLUMN LENGTH (nearest ft.) <u>43</u> <u>47</u> | |
| CASING HEIGHT (circle appropriate box and enter casing height) <input checked="" type="checkbox"/> + above <input type="checkbox"/> - below | |
| LAND SURFACE (nearest foot) <u>1</u> | |
| LATITUDE <u>39.22801</u> LONGITUDE <u>76.94540</u> (DEFAULT COORD. WGS 84) | |
| Pursuant to §10-624 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info. may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or state law. | |

DRILLER: COMPLETE THIS APPLICATION AND RETURN ALL PARTS OF THIS FORM INTACT TO THE ENVIRONMENTAL AGENCY IN THE COUNTY IN WHICH THE WELL IS TO BE DRILLED. PRESS FIRMLY FOR FOURTH COPY.

EMERGENCY/TEMP NO. IF ANY

| | | | | | | | |
|---|--|--------------------------------|--|--|--|--|--|
| B 1 | | SEQUENCE NO. (MDE USE ONLY) | | STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type | | TAG - 01/29/2019 STATE PERMIT NUMBER GPS H0-17-0361 fill in this form completely | |
| 62741 | | | | | | | |
| Date Received (APA) 10/10/18 8 MM DD YY 13 OWNER INFORMATION VIKING Custom Homes 15 Last Name Owner First Name 34 815 Windriver Drive 36 Street or RFD 55 Sykesville MD 21784 57 Town 70 State 72 Zip 76 | | | | B 3 LOCATION OF WELL Howard 8 COUNTY 21 Woods At Trindellphia 23 SUBDIVISION 42 SECTION 44 46 LOT 48 50 Ellicott City 92 NEAREST TOWN 71 | | | |
| DRILLER INFORMATION Michael Barlow MW D355 Driller's Name 76 License No. 81 Barlow well Drilling Firm Name 522 Underwood Lane 21014 Address Signature 10/8/18 Date | | | | B 4 SOURCES OF DRILLING WATER 1. Well 2. Permit transferred to Allied 11/30/18 12510 Trindellphia Rd 11 STREET ADDRESS 30 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) NORTH WEST EAST SOUTH 34 50 37 DISTANCE FROM ROAD FT ENTER FT OR MI 38 39 TAX MAP: 22 BLK: 6 PARCEL 582 | | | |
| B 2 WELL INFORMATION APPROX. PUMPING RATE (GAL. PER MIN.) 5 8 12 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 750 14 20 | | | | NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL Howard COUNTY NAME 13 COUNTY NO. STATE SIGNATURE INSERT S 41 DATE ISSUED 10/11/18 Sch. Cll. 10/11/19 43 MM DD YY 48 CO SIGNATURE EXP. DATE DNL DON: 12/5/18 DOG: 12/7/18 (50) Day: 01/28/2019 | | | |
| USE FOR WATER (CIRCLE APPROPRIATE BOX) <input checked="" type="checkbox"/> DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION <input type="checkbox"/> FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) 22 <input type="checkbox"/> INDUSTRIAL, COMMERCIAL, DEWATERING <input type="checkbox"/> PUBLIC WATER SUPPLY WELL <input type="checkbox"/> TEST, OBSERVATION, MONITORING <input type="checkbox"/> OPEN LOOP GEOTHERMAL <input type="checkbox"/> CLOSED LOOP GEOTHERMAL | | | | PROPOSED LOCATION OF WELL ON LOT SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL 12/7 - well 325' - 6 bags cement so far - 40+ gpm - 270' steel casing 1/28/2019 - Sept 50' - pump @ 1230 - 10 gpm | | | |
| APPROXIMATE DEPTH OF WELL 300 FEET APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST INCH | | | | | | | |
| METHOD OF DRILLING (circle one) BORED (or Augered) JETTED Jetted & DRIVEN 30 AIR-ROTARY AIR-PERCUSION ROTARY (Hydraulic Rotary) 37 CABLE REVERSE ROTARY Drive-POINT other | | | | | | | |
| REPLACEMENT OR DEEPEENED WELLS (CIRCLE APPROPRIATE BOX) <input checked="" type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED 39 <input type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS <input type="checkbox"/> THIS WELL WILL DEEPEEN AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEENED (IF AVAILABLE) 41 H0-95-05492 Not to be filled in by driller (MDE OR COUNTY USE ONLY) APPROX. PERMIT NUMBER - - - - - G - - - - - PERMIT No. H0-17-0361 70 71 72 73 74 75 76 77 78 79 | | | | Pursuant to § 10-624 of the State Govt. Article of the Maryland Code, personal info requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or State Law. | | | |

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

February 21, 2019

Stephan Weinman & Laurie Driver
840 Oella Ave
#418
Ellicott City, MD 21043

Re: Water sample results for well #HO-17-0361 at 12510 Triadelphia Road

Dear Stephan & Laurie,

The Health Department received results from testing for sodium, chloride, and total dissolved solids (TDS) from the replacement well #HO-17-0361 at 12510 Triadelphia Road.

Elevated sodium levels in drinking water could affect individuals on low-salt diets. The action level for sodium is 20 milligrams per liter (mg/L); **sodium from the well measured 6.03 mg/L.**

Chloride and TDS are both considered secondary contaminants, meaning high concentrations can affect taste, color, odor, or corrosive properties of water but present no risk to health. The secondary maximum contaminant level for chloride is 250 mg/L; **chloride from the well measured <10 mg/ L.** The secondary maximum contaminant level for TDS is 500 mg/L; **TDS from the well measured 104 mg/ L.**

Please contact me at the number or email below with any questions regarding the results of water sampling.

Sincerely,



Sarah Collins, L.E.H.S.
Howard County Health Department
Well & Septic Program
SCollins@howardcountymd.gov
410-313-6287

Cc: File

Send Report To:

State of Maryland
DHMH - Laboratories Administration

Division of Environmental Sciences

TRACE METALS LABORATORY

1770 Ashland Avenue
Baltimore, Maryland 21205



E19002323001

Received: 01/29/2019

Metals

HOJCO36INA

SARAH COLLINS

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

LABORATORY ANALYSIS REQUEST

Do not write above this line

Please Print

HO-17-0361

Sample ID No: HOJCO36INA Site Name: THE WOODS LOT 1 County: HOWARD

Sample Source: 12510 TRIADELPHIA ROAD Collector: CABAHUG, J
Street Town or City Name

Date Collected: 01/28/2019 Time Collected: 11:30 a.m./p.m. Phone #: 410 313 2643

Sample Preserved By: ☒ Field ☐ ESRL ☐ WMRL ☐ Central Lab

Preservative Used: ☒ HNO₃ 2.0 mL pH: 7.0 Field

Sample Type: ☒ Drinking Water ☐ Landfill ☒ Source (Raw Water) ☒ Liquid
Data Category: ☐ Community ☐ Stream ☐ Distribution (Treated) ☐ Solid
Code: 115 ☐ Non-Community ☐ Sediment ☐ Other
☒ Private

Specify Program: ☒ SDWA ☐ NPDES ☐ CWA ☐ RCRA ☐ Consumer Products ☐ Other

Type of Sample Preparation: ☐ Total Metals ☐ Total Metals TCLP ☐ Dissolved Metals
(field preparation required)

Remarks: SAMPLED AT YIELD

| ✓ | Element | Lab Use | ✓ | Element | Lab Use | ✓ | Element | Lab Use |
|---|----------------|---------|---|-----------------|---------|---|--------------|---------|
| | Antimony (Sb) | | | Aluminum (Al) | | | Uranium (U) | |
| | Arsenic (As) | | | Calcium (Ca) | | | Vanadium (V) | |
| | Barium (Ba) | | | Cobalt (Co) | | | Zinc (Zn) | |
| | Beryllium (Be) | | | Copper (Cu) | | | | |
| | Cadmium (Cd) | | | Iron (Fe) | | | | |
| | Chromium (Cr) | | | Lead (Pb) | | | | |
| | Mercury (Hg) | | | Magnesium (Mg) | | | | |
| | Nickel (Ni) | | | Manganese (Mn) | | | | |
| | Selenium (Se) | | | Molybdenum (Mo) | | | | |
| ✓ | Sodium (Na) | SHS | | Potassium (K) | | | | |
| | Thallium (Tl) | | | Silver (Ag) | | | | |

RECEIVED

FEB 19, 2019

HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

Lab Supervisor: _____

Date Reported: _____

•Phone: (443) 681 - 4596

•Fax: (443) 681 - 4507

DHMH 4432 (05/17)

SUBMITTER'S COPY



State of Maryland
Department of Health
Laboratories Administration
Division of Environmental Sciences
TRACE METALS LABORATORY
1770 Ashland Avenue, Baltimore, Maryland 21205
Robert Myers, Ph.D., Director



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project No: E19002323 Date Coll.: 01/28/2019 Date Received: 01/29/2019 Submitted By: Cabahug

Field ID: HOJCO36INA
Lab No.: E19002323001

| <u>Method</u> | <u>Element</u> | <u>Result</u> | <u>Units</u> | <u>Date Analyzed</u> |
|---------------|----------------|---------------|--------------|----------------------|
| EPA 200.7 | Sodium | 6.03 | ppm | 02/07/2019 |

Comments:

Approved by: Sadia Muneeb

Approval date: 02/11/2019

**The following methods are included in our A2LA Scope of Accreditation: EPA 200.7, EPA 200.8, EPA 245.1. Samples are tested as received.

This document contains confidential health information that is privileged, confidential and exempt from disclosure under law. If you have received this information in error, please call (410) 767-6944 and arrange for return or destruction.



Howard County
Health Department

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

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

ATTENTION WELL DRILLERS!!!

When submitting a well application for a new or replacement well, please indicate one of the following:

- ☒ The well site has been staked by FSH Associates on 9-13-06 and is ready for site inspection.
- ☐ _____ will call the Health Department for a time to meet in the field to verify a well location.
- ☒ Site plan for new well is attached to well permit application.

Please attach this sheet when submitting your green application. This should help improve communication allowing a more timely service for our citizens.

KN

Lot 13 Truadelphia Estates

Greenfield Homes

410-781-6782

**MICHAEL BARLOW WELL DRILLING
522 UNDERWOOD LANE
BEL AIR, MD 21014
410-838-6910**

Howard County Health Department
7178 Columbia Gateway Drive
Columbia, MD 21046
Attn: Kevin Wolf

November 21, 2018

Re: 12510 Triadelphia Road - HO-17-0361

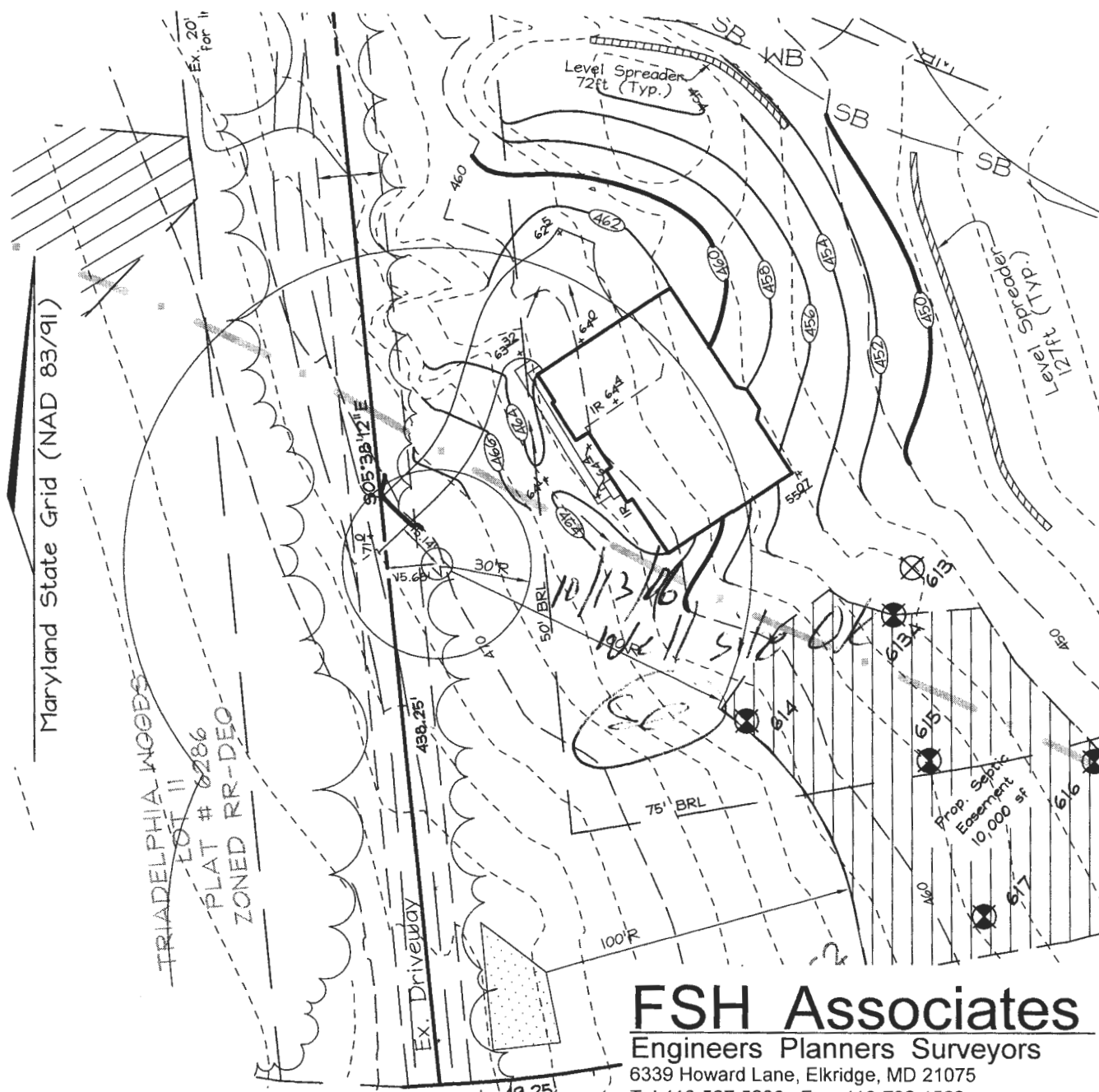
Per a request by the customer, we will be transferring the permit for the above property to Allied Well Drilling.

11/30/18

OK
-Kmw


Michael Barlow
MWD355

The proposed well shown on this plan will be staked out in the field by FSH Associates, Professional Surveyor prior to well drilling.



Engineers Planners Surveyors

6339 Howard Lane, Elkridge, MD 21075

Tel:410-567-5200 Fax: 410-796-1562

E-mail: info@fsheri.com

DRAWN BY: CD

CHECKED BY: ZYF

SCALE: 1"=50'

DATE: Sept. 14, 2006

W.O. No.: 3383

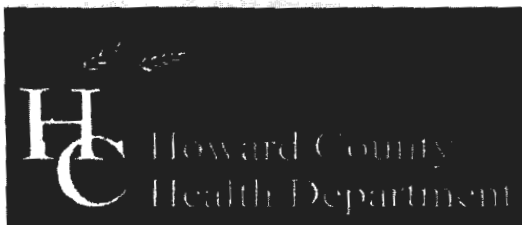
SHEET No.: 1 OF 1

WELL EXHIBIT PLAN TRIADELPHIA ESTATES

LOT 13

TAX MAP 22 GRIDS 5 & 6
3RD ELECTION DISTRICT

PARCEL 528
HOWARD COUNTY, MARYLAND



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

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

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

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Twitter: HowardCoHealthDep

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:

WOODS AT TRIABELPHIA
12510 TRIABELPHIA ROAD 1 12510 TRIABELPHIA RD
Subdivision/Property Name Lot # Road Name

☒ The well site has been staked by FSH ASSOC
(professional land surveyor or company employing professional land surveyors)
on 10/1/2018 (date) and does not require a site inspection.

☐ The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify the proposed well site location.

This sheet, along with two copies of an acceptable well site plan, must be attached to the green well permit application.

THE UNIVERSITY OF CHICAGO PRESS

17510 Triadelphia
Road

$$\frac{8}{11} = \frac{8}{11}$$

GRAPHIC SCALE



EXISTING CONDITIONS

TRIDELPHIA RD
LOT 1

FSH Associates
Engineers Planners Surveyors
3038 Harvard Lane, Elkinsburg, MD 21075
Tel: 410-567-4200 Fax: 410-796-1562
E-mail: info@fshad.com

Send Report To: JARAH COLLINS
Howard County Health Department
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, Maryland 21046

State of Maryland
MDH-Laboratories Administration
Division of Environmental Sciences
INORGANICS ANALYTICAL LABORATORY
1770 Ashland Avenue
Baltimore, Maryland 21205
WATER ANALYSIS



E19002321001

Received: 01/29/2019

Inorganic

HOJC0361TD

| | | | | | | | | | | | | |
|-----------|--|-------------------------------------|---------------|--------------------------|------------------------|-------------------------------------|-------------------|-------------------------------------|-----------------|--------------------------|--------------|--|
| SAMPLE ID | Bottle Number | HOJC 0361TD | | Name | Hb 17-0361 | | County | Howard | County Code | 13 | | |
| | Location | 12510 TRUDEL PHVA ROAD | | | | | | Data Category Code | 4F | | | |
| | Collected: Date | 01/28/2019 | | Time | 11:30 | | Collector & Phone | CABAHUG, J 410 313 2643 | | Submitter Code | | |
| | CHECK (one per box) | | | | | | | | | | | |
| | Drinking Water | <input checked="" type="checkbox"/> | Community | <input type="checkbox"/> | Source (raw water) | <input checked="" type="checkbox"/> | Emergency | <input type="checkbox"/> | Federal Project | | | |
| | Landfill | <input type="checkbox"/> | Non-community | <input type="checkbox"/> | Distribution (treated) | <input type="checkbox"/> | Routine | <input type="checkbox"/> | | | | |
| | Stream | <input type="checkbox"/> | Private | <input type="checkbox"/> | MCL | <input type="checkbox"/> | Recheck | <input type="checkbox"/> | | | | |
| | Other | <input type="checkbox"/> | Other | <input type="checkbox"/> | | <input type="checkbox"/> | Special | <input type="checkbox"/> | | | | |
| FIELD | Plant No. | | | Sampling Station | | | Preservation: Ice | <input checked="" type="checkbox"/> | Acid | <input type="checkbox"/> | Type of Acid | |
| | pH | 7.0 | | Chlorine: Free | 0.0 | | Total | 0.0 | | Specific Conductance | | |
| | Notes to Lab/Remarks: SAMPLED AT YIELD | | | | | | | | | | | |
| | | | | | | | | | | | | |

| CHECK TESTS | TESTS | Error Code | RESULTS |
|-------------|-------------------------------------|------------|---------|
| | Alkalinity (Total) | | |
| | Ammonia - N | | |
| | Chloride | | |
| | Conductance*, Spec. | | |
| ✓ | Dissolved Solids (Total) | | |
| | Hardness | | |
| | Fluoride | | |
| | Nitrite, N | | |
| | Nitrate + Nitrite, N | | |
| | Sulfate | | |
| | Total Solids | | |
| | Turbidity* | | |
| | Other: | | |
| | | | |
| | X TEMP. CONTROL TEMPERATURE = 9.7°C | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

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

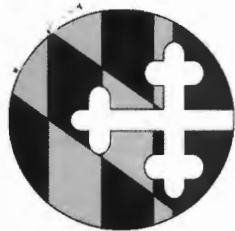
Number of Tests Requested

Section Chief

SUBMITTER'S COPY

SAMPLE TESTED AS RECEIVED

Date Reported



State of Maryland
Department of Health
Laboratories Administration
Division of Environmental Sciences
INORGANICS ANALYTICAL LABORATORY
1770 Ashland Avenue, Baltimore, Maryland 21205
Robert Myers, Ph.D., Director



HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Certificate of Analysis

Lab Project NoE19002321 Date Coll. 01/28/2019 Date Received 01/29/2019 Submitted By: J. Cabahug

Field ID: HOJC0361TD
Lab No.: E19002321001

| <u>Analyte</u> | <u>Method</u> | <u>Result</u> | <u>Units</u> | <u>Date Analyzed</u> |
|------------------------|---------------|---------------|--------------|----------------------|
| Chloride | SM 4500-Cl E | <10 | mg/L | 02/04/2019 |
| Total Dissolved Solids | SM 2540C | 104 | mg/L | 02/04/2019 |

Comments:

Approved by:

Approval date: 02/08/2019

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

This document contains confidential health information that is privileged, confidential and exempt from disclosure under law. If you have received this information in error, please call (410) 767-6190 and arrange for return or destruction.

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

INTERIM CERTIFICATE OF POTABILITY
[PERMANENT DEVIATION FOR BACTERIA]

Expiration Date – *JULY 10, 2020*

January 10, 2020

Homeowner
12510 Triadelphia Road
Ellicott City, MD 21042

RE: The Woods @ Triadelphia, Lot 1
12510 Triadelphia Road
Building Permit: B18003789
Well Permit: HO-17-0361

Dear Homeowner:

This is to advise you that the septic system installation and water well construction for the above referenced property have been inspected and approved. Final approval of the septic system was granted on **10/23/2019**. Final approval of the well line connection to the dwelling was granted on **10/23/2019**. The well construction was completed on **5/25/2019**. Water samples were collected on **12/6/2019, 12/13/2019, 12/16/2019, 12/19/2019**.

The untreated water sample results indicate that the raw water submitted for testing contained elevated levels of coliform bacteria at the time of sampling and the untreated water is NOT bacteriologically safe for drinking.

After installation of a water disinfection device (UV light), a post-treatment water sample was collected on **12/16/2019** indicated that the treated water was free from coliform bacteria and is bacteriologically safe for drinking.

This Department will grant a **permanent deviation** to the Interim Certificate of Potability on condition that the water disinfection system effectively maintains the water free from bacteria.

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 nitrates analysis perform a yearly nitrate analysis.
3. If you decide to sell or rent your home in the future, you must make any potential buyer/tenant aware of this permanent deviation. **A person who fails to make this disclosure is subject to the penalties set out in COMAR 26.04.04. Enforcement and Environment Article 9-1311, Annotated Code of Maryland.**

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

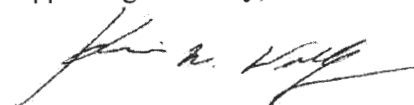
This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-17-0361. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

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

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 #: 134495 Account #: 4226
Reference: Viking Development Corporation Company: Viking Development Corporation
Location: 12510 Triadelphia Road Requested By: Cary Cumberland
Ellicott City, MD 21042 Source: Well Water
Date/ Time Collected: 12/6/2019 1224 Site: Pressure Tank
Date/Time Rec'd: 12/6/2019 1335 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.8
Collected By: J. Yeager 6176JY Well #: HO-17-0361

| PARAMETERS | RESULTS | UNITS | REFERENCE | METHOD | DATE/TIME/ANALYST |
|--------------------------------|---------|-------------|-----------|--------------------|------------------------|
| Bacteria, Coliform, Total, MPN | 20.7 | MPN/ 100 ml | <1.0 | SM20 9223B | 12/7/2019 / 0930 / LLO |
| Bacteria, E. coli, MPN | <1.0 | MPN/ 100 ml | <1.0 | SM20 9223B | 12/7/2019 / 0930 / LLO |
| Nitrate | <1.0 | mg/L | 10 | 601 | 12/6/2019 / 1515 / RER |
| Turbidity | 8.42 | NTU | <10 | SM20 2130B | 12/6/2019 / 1535 / RER |
| Sand | NS | mg/L | 5 | Visual/Gravimetric | 12/6/2019 / 1535 / RER |
| Iron | 1.21 | mg/L | 0.3* | FR, 45 (126) | 12/6/2019 / 1430 / CRS |

NOTES

- 1 *SMCL = Secondary Maximum Contaminant Level
- 2 mg/L = milligrams per liter (also, parts per million)
- 3 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 4 NS = None Seen (NS indicates less than 5 mg/L)
- 5 NTU = Nephelometric Turbidity Units
- 6 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 7 Visual well check: Sealed, vented cap
- 8 ND = None Detected
- 9 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy

Building Permit # : B18003789

Date Reported: 12/9/2019

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 #: | 134671 | Account #: | 4226 |
| Reference: | Viking Development Corporation | Company: | Viking Development Corporation |
| Location: | 12510 Triadelphia Road | Requested By: | Cary Cumberland |
| | Ellicott City, MD 21042 | Source: | Well Water |
| Date/ Time Collected: | 12/13/2019 1030 | Site: | Powder Room Tap |
| Date/Time Rec'd: | 12/13/2019 1344 | Treatment: | ** |
| Chlorine ppm: | Free: ND Total: ND | pH: | 10.1 |
| Collected By: | J. Yeager 0819JY | Well #: | HO-17-0361 |

| PARAMETERS | RESULTS | UNITS | REFERENCE | METHOD | DATE/TIME/ANALYST |
|------------|---------|-------|-----------|--------------|-------------------------|
| Iron | 0.06 | mg/L | 0.3* | FR, 45 (126) | 12/13/2019 / 1515 / RER |

NOTES

- 1 **Sample collected after Neutralizer/Softener/Iron Remover/UV Light
- 2 *SMCL = Secondary Maximum Contaminant Level
- 3 mg/L = milligrams per liter (also, parts per million)
- 4 Visual well check: Sealed, vented cap
- 5 ND = None Detected
- 6 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy

Building Permit # : B18003789

Date Reported: 12/16/2019

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 #: | 134669 | Account #: | 4226 |
| Reference: | Viking Development Corporation | Company: | Viking Development Corporation |
| Location: | 12510 Triadelphia Road | Requested By: | Cary Cumberland |
| | Ellicott City, MD 21042 | Source: | Well Water |
| Date/ Time Collected: | 12/13/2019 1010 | Site: | Pressure Tank |
| Date/Time Rec'd: | 12/13/2019 1344 | Treatment: | ** |
| Chlorine ppm: | Free: ND Total: ND | pH: | 6.6 |
| Collected By: | J. Yeager 0819JY | Well #: | HO-17-0361 |

| PARAMETERS | RESULTS | UNITS | REFERENCE | METHOD | DATE/TIME/ANALYST |
|--------------------------------|---------|-------------|-----------|------------|-------------------------|
| Bacteria, Coliform, Total, MPN | 1.0 | MPN/ 100 ml | <1.0 | SM20 9223B | 12/14/2019 / 0900 / CRS |
| Bacteria, E. coli, MPN | <1.0 | MPN/ 100 ml | <1.0 | SM20 9223B | 12/14/2019 / 0900 / CRS |

NOTES

- 1 **Sample collected prior to Neutralizer/Softener/Iron Remover/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 Visual well check: Sealed, vented cap
- 5 ND = None Detected
- 6 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B18003789

Date Reported: 12/16/2019

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 #: | 134670 | Account #: | 4226 |
| Reference: | Viking Development Corporation | Company: | Viking Development Corporation |
| Location: | 12510 Triadelphia Road | Requested By: | Cary Cumberland |
| | Ellicott City, MD 21042 | Source: | Well Water |
| Date/ Time Collected: | 12/13/2019 1010 | Site: | Pressure Tank |
| Date/Time Rec'd: | 12/13/2019 1344 | Treatment: | ** |
| Chlorine ppm: | Free: ND Total: ND | pH: | 6.6 |
| Collected By: | J. Yeager 0819JY | Well #: | HO-17-0361 |

| PARAMETERS | RESULTS | UNITS | REFERENCE | METHOD | DATE/TIME/ANALYST |
|------------|---------|-------|-----------|--------------|-------------------------|
| Iron | 2.81 | mg/L | 0.3* | FR, 45 (126) | 12/13/2019 / 1515 / RER |

NOTES

- 1 **Sample collected prior to Neutralizer/Softener/Iron Remover/UV Light
- 2 *SMCL = Secondary Maximum Contaminant Level
- 3 mg/L = milligrams per liter (also, parts per million)
- 4 Visual well check: Sealed, vented cap
- 5 ND = None Detected
- 6 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy

Building Permit # : B18003789

Date Reported: 12/16/2019

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 #: 134700 Account #: 4226
Reference: Viking Development Corporation Company: Viking Development Corporation
Location: 12510 Triadelphia Road Requested By: Cary Cumberland
Ellicott City, MD 21042 Source: Well Water
Date/ Time Collected: 12/16/2019 1215 Site: Powder Room Bathroom Tap
Date/Time Rec'd: 12/16/2019 1540 Treatment: **
Chlorine ppm: Free: ND Total: ND pH: 9.8
Collected By: J. Yeager 0819JY Well #: HO-17-0361

| PARAMETERS | RESULTS | UNITS | REFERENCE | METHOD | DATE/TIME/ANALYST |
|--------------------------------|---------|-------------|-----------|------------|-------------------------|
| Bacteria, Coliform, Total, MPN | <1.0 | MPN/ 100 ml | <1.0 | SM20 9223B | 12/17/2019 / 1030 / RER |
| Bacteria, E. coli, MPN | <1.0 | MPN/ 100 ml | <1.0 | SM20 9223B | 12/17/2019 / 1030 / RER |

Treated UV
Need un-Treated
Raw

NOTES

- 1 Sample collected after Neutralizer/Softener/Iron Remover/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 Visual well check: Sealed, vented cap
- 5 ND = None Detected
- 6 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B18003789

Date Reported: 12/17/2019

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 #: | 134784 | Account #: | 4226 |
| Reference: | Viking Development Corporation | Company: | Viking Development Corporation |
| Location: | 12510 Triadelphia Road | Requested By: | Cary Cumberland |
| | Ellicott City, MD 21042 | Source: | Well Water |
| Date/ Time Collected: | 12/19/2019 1455 | Site: | Pressure Tank |
| Date/Time Rec'd: | 12/19/2019 1550 | Treatment: | ** |
| Chlorine ppm: | Free: ND Total: ND | pH: | 7.0 |
| Collected By: | J. Yeager 0819JY | Well #: | HO-17-0361 |

| PARAMETERS | RESULTS | UNITS | REFERENCE | METHOD | DATE/TIME/ANALYST |
|--------------------------------|---------|-------------|-----------|------------|-------------------------|
| Bacteria, Coliform, Total, MPN | 1.0 | MPN/ 100 ml | <1.0 | SM20 9223B | 12/20/2019 / 1030 / RER |
| Bacteria, E. coli, MPN | <1.0 | MPN/ 100 ml | <1.0 | SM20 9223B | 12/20/2019 / 1030 / RER |

NOTES

- 1 **Sample collected prior to Neutralizer/Softener/Iron Remover/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 Visual well check: Sealed, vented cap
- 5 ND = None Detected
- 6 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy

Building Permit # : B18003789

Date Reported: 12/20/2019

12/30

w/ Viking Homes 443.250
5016

called about well w/ coliform
issue along w/ iron.

* The well has been
chlorinated 3 times.

* Forced chlorination has not
been done.

* Allied drilled well (not
Barlow) per Doh.

12510 Triadelphia Rd.

FILE INQUIRY NOTES

[illegible]