C 1 | 56563 | SEQUENCE NO. (MDE USE ONLY) 1

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

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

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

COUNTY NUMBER

ST/CO USE ONLY
DATE Received 12/18/18

DATE WELL COMPLETED 11-17-18

Depth of Well 275 (TO NEAREST FOOT)

OK 2/12/19 sc

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-17-0333

OWNER Trinity Homes (last name / first name)

WELL SITE ADDRESS Arbutus Lane TOWN Highland

SUBDIVISION The Estates @ River Hill SECTION LOT 9

WELL LOG
Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Clay	0	6	
Grey Ls	6	245	
Fracture	245	247	✓
Grey Ls	247	275	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y / no N

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

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

DRILLERS LIC. NO. M 5 D 2 3 4

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. ___ D ___

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

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y / no N

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT CM BENTONITE CLAY BC

NO. OF BAGS 8 NO. OF POUNDS 752

GALLONS OF WATER 48

DEPTH OF GROUT SEAL (to nearest foot)

from 0 ft. (TOP) to 20 ft. (BOTTOM)

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

ST STEEL, CO CONCRETE, PL PLASTIC, OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)	Total depth of main casing (nearest foot)
ST	06	22

OTHER CASING (if used)

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

SCREEN RECORD
screen type or open hole insert appropriate code below

ST STEEL, BR BRASS BRONZE, PL PLASTIC, HO OPEN HOLE, OT OTHER

C 2

EACH SCREEN		DEPTH (nearest ft.)	
1	HO	22	275
2			
3			

SLOT SIZE 1 ___ 2 ___ 3 ___

DIAMETER OF SCREEN ___ (NEAREST INCH)

from	to

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

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

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

TELESCOPE CASING ___ LOG INDICATOR ___ OTHER DATA ___

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) 3

PUMPING RATE (gal. per min.) 10

METHOD USED TO MEASURE PUMPING RATE log

WATER LEVEL (distance from land surface)

BEFORE PUMPING 29 ft.

WHEN PUMPING 38 ft.

TYPE OF PUMP USED (for test)

A air, P piston, T turbine, C centrifugal, R rotary, O other (describe below), J jet, S submersible

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

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

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.

CAPACITY: GALLONS PER MINUTE (to nearest gallon)

PUMP HORSE POWER

PUMP COLUMN LENGTH (nearest ft.)

CASING HEIGHT (circle appropriate box and enter casing height)

+ above / − below LAND SURFACE

1 (nearest) foot

LATITUDE 39.195830

LONGITUDE 76.958681

(DEFAULT COORD. WGS 84)

Pursuant to §10-624 of the State Govt. Article of the Maryand 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 pulic and other governmental agencies, if not protected by federal or state law.

EMERGENCY/TEMP NO. IF ANY

TAX = 11/16/18 (R)

B 1 | SEQUENCE NO. (MDE USE ONLY) 59731. | 1 2 3 6

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

5639671 H

GPS = 11/16/18 (R)

STATE PERMIT NUMBER: HO - 17 - 0333 (70 79)

fill in this form completely

Date Received (APA): 04/27/18 (8 MM DD YY 13)

OWNER INFORMATION

Trinity Homes (15 Last Name / Owner / First Name 34)

3675 Park Ave Suite 301 (36 Street or RFD 55)

Ellicott City Md 21043 (57 Town 70 State 72 Zip 76)

DRILLER INFORMATION

And new Homeowner - MSD 224

Allen Compton (Driller's Name 76) MSD009 (License No. 81)

Fogles Well Drilling, LLC (Firm Name)

P.O. Box 202 Woodbine Md 21797 (Address)

Signature 7-27-18 (Date)

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): 5 (8 12)

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): 500 (14 20)

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- (D) DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
- [F] FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
- [I] INDUSTRIAL, COMMERCIAL, DEWATERING (22)
- [P] PUBLIC WATER SUPPLY WELL
- [T] TEST, OBSERVATION, MONITORING
- [O] OPEN LOOP GEOTHERMAL
- [C] CLOSED LOOP GEOTHERMAL

APPROXIMATE DEPTH OF WELL: 300. FEET (24 28)

APPROXIMATE DIAMETER OF WELL: 6 NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered)	JETTED	Jetted & DRIVEN
(30) AIR-ROTary	AIR-PERcussion	ROTARY (Hydraulic Rotary)
(37) CABLE	REVerse-ROTary	DRive-POINT

other

REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX)

- (N) THIS WELL WILL NOT REPLACE AN EXISTING WELL
- [Y] THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- (39) [S] THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- [D] THIS WELL WILL DEEPEN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENED (IF AVAILABLE) (41 52)

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

APPROP. PERMIT NUMBER: H 0 2 0 1 8 G 0 0 5

PERMIT No. HO - 17 - 0333 (70 71 72 73 74 75 76 77 78 79)

B 3 LOCATION OF WELL

Howard (8 COUNTY 21)

The Estates at River Hill (23 SUBDIVISION 42)

SECTION (44 46) LOT 9 (48 50)

Highland (52 NEAREST TOWN 71)

B 4

SOURCES OF DRILLING WATER
1. Well water
2.
3.

Allnutt Lane (11 STREET ADDRESS 30)

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX): NORTH (N) WEST (W) (SE) EAST (E) SOUTH (S)

34 600 37 DISTANCE FROM ROAD FT (ENTER FT OR MI 38 39)

TAX MAP: 34 BLK: 23 PARCEL 389

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

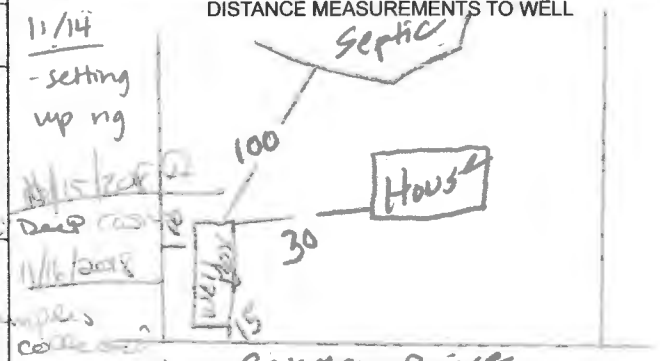
Howard (13) (COUNTY NAME / COUNTY NO.)

STATE SIGNATURE _____ INSERT S → (41)

DATE ISSUED 9/18/18 (43 MM DD YY 48) CO SIGNATURE EXP. DATE 9/18/19

DON: 11/14/18 (SC) DOC: 11/16/18 (R) Dog: 11/16/18

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



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.

SPECIAL CONDITIONS
NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED: SEE ATTACHED MEMO.

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: Do-It Plumbing & Heating LLC Telephone #: 240 882 0069
Address: 104 Estelle Ct
Sykesville md 21784

(Must circle one) ~~Licensed Plumber~~ Licensed Well Driller Licensed Well Pump Installer
License # and name of individual responsible for the field installation:
Name (Print): Duane G. Bost License# 21899
***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: Trinity Homes Inc Telephone #: 410-480-0023
Subdivision: Estate of River Hill Lot #: 9 Well Tag #: HO-17-0333
Site Address: 13601 Noble way
Highland md 20777

Submersible Pump Data		Pitless Adapter		Well Cap and Electric Conduit	
Make:	Myers	Make:	Bosh Art	Two piece watertight cap:	yes
Model #:	BE 07 10-122	Model#:	A-800 SS	Screened, vented well cap:	yes
Pump Capacity	7 GPM	Depth:	42 (36" min)	Cap secured to casing:	yes
Well Yield:	10 GPM	NSF/WSC approved:	yes	Conduit min 18" B.G.:	yes

Depth of well encountered at time of pump installation: 275 (feet) Conduit secured to well cap: yes
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 NO

Piping to house		House Connection	
Type:	Poly	PVC sleeve to undisturbed soil at wall penetration:	yes
PSI:	yes (160 psi min)	Length of sleeve(5' minimum from foundation):	10 ft
Depth of supply line:	yes (36" min)	Sleeve sealed properly:	yes

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

Signature of company representative responsible for installation — date: Apr 18 2023

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

Date Insp. Requested: 4/27 Date Insp. Approved: _____ Inspector: [illegible]

Inspection Data:

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

Date: November 17, 2018

FOGLE'S WELL DRILLING, LLC
P.O. Box 202
Woodbine, Md 21797
443-609-4195

FIELD DATA SHEET
HOWARD COUNTY WELL YIELD TEST

Well Permit No. HO-17-0333
Location of Property: Allnutt Lane Highland, Md
Subdivision: The Estates at River Hill Lot: 9
Well Driller: Fogles Andrew Houseman MSD224 Owner: Trinity Homes

Depth of Well: 275'
Distance of measuring point (M.P.) above ground: 1'
Static water level (S.W.L.) below M.P.: 19'
High rate pumping –reservoir Drawdown
Time pump started: 10:30 Pumping rate: 10
Total time 15 mins to reach pumping water level 38 ft. below M.P.

Recovery pump test data – observations to be recorded every 15 minutes

TIME (in 15 minute intervals)	WATER LEVEL Below M.P.	PUMPING RATE Time to fill 1 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
10:30	29'	6 Seconds		10 gpm
10:45	38'	6 Seconds		10 gpm
11:00	38'	6 Seconds		10 gpm
11:15	38'	6 Seconds		10 gpm
11:30	38'	6 Seconds		10 gpm
11:45	38'	6 Seconds		10 gpm
12:00	38'	6 Seconds		10 gpm
12:15	38'	6 Seconds		10 gpm
12:30	38'	6 Seconds		10 gpm
12:45	38'	6 Seconds		10 gpm
1:00	38'	6 Seconds		10 gpm
1:15	38'	6 Seconds		10 gpm
1:30	38'	6 Seconds		10 gpm
1:45	38'	6 Seconds		10 gpm

HOWARD COUNTY
HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

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

INTERIM CERTIFICATE OF POTABILITY

Expiration Date – August 28, 2024

February 28, 2024

Homeowner
13601 Noble Way
Highland, MD 21077

RE: Estates @ River Hill, Lot 9
13601 Noble Way
Building Permit: B 19003294
Well Permit: HO-17-0333

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 **2/28/2024.** Final approval of the well line connection to the dwelling was granted on **4/19/2024.** The well construction was completed on **11/17/2018.** Water samples were collected on **1/21/2024, 2/23/2024.**

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

Gross Alpha and Beta samples were also collected on **11/16/2018**. Results showed a Gross Alpha level of **3.2** ± 1.7 **pCi/L** and **Gross Beta** level of **5.3** ± **1.9 pCi/L**. The Gross Alpha was below the maximum contaminant level (MCL) of 15 pCi/L and the Gross Beta was below the target level of 50pCi/L (roughly equivalent to the annual dose rate of 4 millirems per year). At the time of testing and with respect to these parameters, the well water is safe for all uses.

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-17-0333. 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.**

HOWARD COUNTY HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

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

Please contact (410) 313-1773 to schedule a final water sample appointment or contact a certified water quality laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website: http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf

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

Approving Authority,

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

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

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #:	164081	Account #:	4035
Reference:	Estates @ River Hills Lot 9	Client:	Trinity Quality Homes, Inc.
Location:	13601 Noble Way	Requested By:	Michael Pfau
	Highland, MD 20777	Source:	Well Water
Date/ Time Collected:	1/31/2024 1130	Site:	Pressure Tank
Date/Time Rec'd:	1/31/2024 1357	Treatment:	Prior to Sediment Filter/Softener
Chlorine ppm:	Free: ND Total: ND	pH:	7.2
Collected By:	J. Yeager 0819JY	Well #:	HO-17-0333

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	1.0	MPN/ 100 ml	<1.0	SM20 9223B	2/1/2024 / 0950 / KDR
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	2/1/2024 / 0950 / KDR
Nitrate.	<0.40	mg/L (as N)	10	EPA 300.0	1/31/2024 / 1720 / CS/KR
Turbidity	<0.30	NTU	<10	SM2130B	2/1/2024 / 1020 / KDR
Sand	ND	mg/L	5	Visual/Gravimetric	2/1/2024 / 0935 / KDR

NOTES:

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

Reason for Test : Use & Occupancy
Building Permit # : B19003294

Date Reported: 2/1/2024 Reviewed By: Catherine C Holland

MD State Certification # 133

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #:	164636	Account #:	4035
Reference:	Estates @ River Hills Lot 9	Client:	Trinity Quality Homes, Inc.
Location:	13601 Noble Way	Requested By:	Michael Pfau
	Highland, MD 20777	Source:	Well Water
Date/ Time Collected:	2/23/2024 1159	Site:	Pressure Tank
Date/Time Rec'd:	2/23/2024 1412	Treatment:	Prior to Sediment Filter/Softener
Chlorine ppm:	Free: ND Total: ND	pH:	7.0
Collected By:	J. Yeager 0819JY	Well #:	HO-17-0333

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	2/24/2024 / 1600 / CCH
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	2/24/2024 / 1600 / CCH

NOTES:

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

Reason for Test : Use & Occupancy
Building Permit # : B19003294

Date Reported: 2/26/2024 Reviewed By: Lei Ob

MD State Certification # 133

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #:	164083	Account #:	4035
Reference:	Estates @ River Hills Lot 9	Client:	Trinity Quality Homes, Inc.
Location:	13601 Noble Way	Requested By:	Michael Pfau
	Highland, MD 20777	Source:	Well Water
Date/ Time Collected:	1/31/2024 1154	Site:	Kitchen Sink Tap
Date/Time Rec'd:	1/31/2024 1357	Treatment:	Sediment Filter/Softener
Chlorine ppm:	Free: ND Total: ND	pH:	7.8
Collected By:	J. Yeager 0819JY	Well #:	HO-17-0333

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Short Term	2.2	pCi/L	15	900.0	2/3/2024 / 0545 / MJN
Gross Beta, Short Term	1.5	pCi/L	50	900.0	2/3/2024 / 0545 / MJN
Gross Alpha, Long Term	4.4	pCi/L	15	900.0	2/9/2024 / 0651 / MJN
Gross Beta, Long Term	<1.1	pCi/L	50	900.0	2/9/2024 / 0651 / MJN
Radium-226	0.3	pCi/L	****	903.0	2/12/2024 / 0723 / MJN
Radium-228	<0.7	pCi/L	****	Ra-05	2/9/2024 / 1210 / MJN

NOTES:

1. ****Radium 226 and Radium 228 combined have a reference of 5 pCi/L
2. Long Term Gross Alpha Detection Limit: 1.1 pCi/L; Gross Alpha Error: +/- 0.8 pCi/L
3. Long Term Gross Beta Detection Limit: 1.1 pCi/L; Gross Beta Error: +/- 0.7 pCi/L
4. pCi/L = picocuries per liter
5. Radium 226 Detection Limit: 0.2 pCi/L; Radium 226 Error: +/- 0.3 pCi/L; Chemical Yield: 0.9441
6. Radium 228 Detection Limit: 0.7 pCi/L; Radium 228 Error: +/- 0.5 pCi/L
7. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
8. Short Term Gross Alpha Detection Limit: 0.7 pCi/L; Gross Alpha Error: +/- 0.7 pCi/L
9. Short Term Gross Beta Detection Limit: 1.0 pCi/L; Gross Beta Error: +/- 0.6 pCi/L
10. Sub-contracted to Reference Lab #278
11. ND:None Detected
12. Visual well check: Sealed, vented cap
13. pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B19003294

Date Reported: 2/13/2024 Reviewed By: Catherine C Holland

MD State Certification # 133

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #:	164082	Account #:	4035
Reference:	Estates @ River Hills Lot 9	Client:	Trinity Quality Homes, Inc.
Location:	13601 Noble Way	Requested By:	Michael Pfau
	Highland, MD 20777	Source:	Well Water
Date/ Time Collected:	1/31/2024 1130	Site:	Pressure Tank
Date/Time Rec'd:	1/31/2024 1357	Treatment:	Prior to Sediment Filter/Softener
Chlorine ppm:	Free: ND Total: ND	pH:	7.2
Collected By:	J. Yeager 0819JY	Well #:	HO-17-0333

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Short Term	4.4	pCi/L	15	900.0	2/3/2024 / 0545 / MJN
Gross Beta, Short Term	5.3	pCi/L	50	900.0	2/3/2024 / 0545 / MJN
Gross Alpha, Long Term	2.6	pCi/L	15	900.0	2/9/2024 / 0651 / MJN
Gross Beta, Long Term	4.4	pCi/L	50	900.0	2/9/2024 / 0651 / MJN
Radium-226	0.6	pCi/L	****	903.0	2/12/2024 / 0723 / MJN
Radium-228	1.5	pCi/L	****	Ra-05	2/9/2024 / 1210 / MJN

NOTES:

1 ****Radium 226 and Radium 228 combined have a reference of 5 pCi/L
2 Long Term Gross Alpha Detection Limit: 0.9 pCi/L; Gross Alpha Error: +/- 0.8 pCi/L
3 Long Term Gross Beta Detection Limit: 1.1 pCi/L; Gross Beta Error: +/- 0.8 pCi/L
4 pCi/L = picocuries per liter
5 Radium 226 Detection Limit: 0.2 pCi/L; Radium 226 Error: +/- 0.4 pCi/L; Chemical Yield: 0.9336
6 Radium 228 Detection Limit: 0.7 pCi/L; Radium 228 Error: +/- 0.6 pCi/L
7 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
8 Short Term Gross Alpha Detection Limit: 0.9 pCi/L; Gross Alpha Error: +/- 1.0 pCi/L
9 Short Term Gross Beta Detection Limit: 1.0 pCi/L; Gross Beta Error: +/- 0.7 pCi/L
10 Sub-contracted to Reference Lab #278
11 ND:None Detected
12 Visual well check: Sealed, vented cap
13 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B19003294

Date Reported: 2/13/2024 Reviewed By: Catherine C Holland

MD State Certification # 133

HOWARD COUNTY HEALTH DEPARTMENT

8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
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1.866.313.6300 - Toll Free

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

MEMORANDUM

TO: Allen Compton (MSD 009)

FROM: Sarah Collins, L.E.H.S. SEC
Howard County Health Department
Well and Septic Program

DATE: September 17, 2018

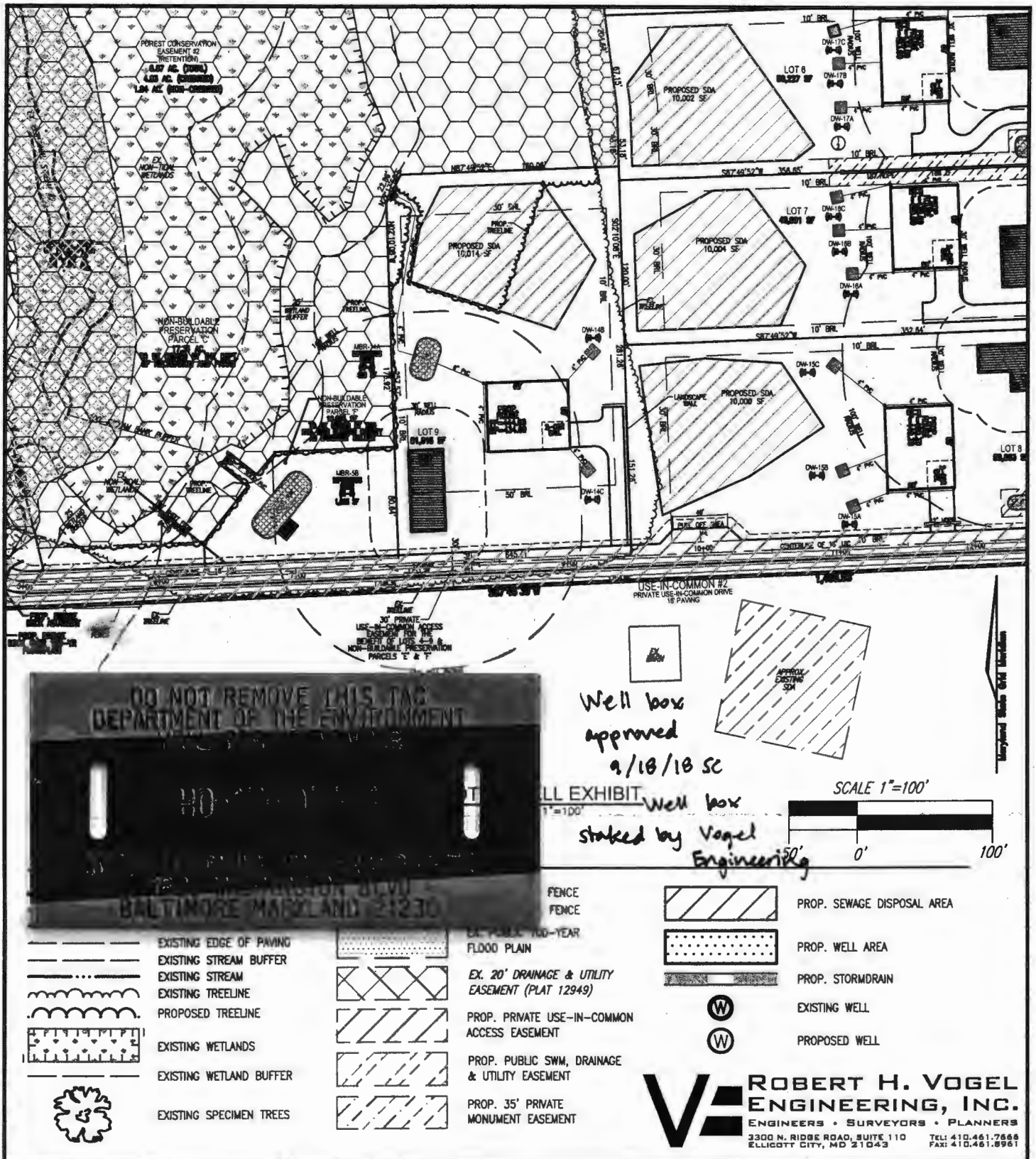
RE: **Well permits for the Estates at River Hill**

The following conditions apply to the well permits for the Estates at River Hill:

- A radium sample is required at the yield test for all lots.
- Sodium, chloride, and total dissolved solids samples are required at the yield test for Lots 1, 2, 3, 4, 10, and 11.
- Steel casing to 50' or 10' into competent bedrock, whichever is deeper, is required for Lots 5, 7, and 8.
- Per the Groundwater Appropriations Permit from Maryland Department of the Environment, any well less than 100' from another well AND on a lot less than one acre requires a simultaneous yield test. Lot 10 is the only lot less than one acre; any well less than 100' from Lot 10 requires a simultaneous yield test with the Lot 10 well.

Feel free to contact me at 410-313-6287 or SCollins@howardcountymd.gov with any questions.

Cc: Vogel Engingeering, Rob Vogel (rvogel@vogeleng.com)
File



ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

SCALE:	1"=100'
DRAWN BY:	JMR
CHECKED BY:	RHV
DATE:	JUNE 2018
W. O. #:	15-39
SHEET #	1 OF 1

WELL EXHIBIT - LOT 9

THE ESTATES AT RIVER HILL

LOTS 1-15, BUILDABLE PRESERVATION PARCEL 'A'
AND NON-BUILDABLE PRESERVATION PARCELS 'B-H'
A RE-SUBDIVISION OF THE "GREENE PROPERTY" LOT 1

PARCEL: 389
TAX MAP: 34 GRID: 23
5TH ELECTION DISTRICT

ZONED: RR-DEO
L 4772 / F. 265
HOWARD COUNTY, MARYLAND

Howard County Health Department

Bureau of Environmental Health
8930 Stanford Boulevard, Columbia, MD 21045 Main: 410-313-2640 | Fax: 410-313-2648 TDD 410-313-2323 | Toll Free 1-866-313-6300 www.hchealth.org
Facebook: www.facebook.com/hocohealth
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:

The Estates at River Hill 1-15 & Parcel A - Allnutt Lane
Subdivision/Property Name Lot # Road Name

☑ The well site has been staked by Robert H. Vogel Engineering, Inc.
(professional land surveyor or company employing professional land surveyors)
on _____ (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.

SEND REPORT TO:

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

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

Lab No. 1055 2019

LABORATORY ANALYSIS REQUEST FORM

Plant/Site Name: HCHD County: HOWARD

Sample Source: WEGMANS DISTILLED Location: LAB
(Well no., lab sink, sample tap, etc.)

~~Radon-222~~ RADIUM Bottle A FIELD BLANK Radon-222 Field Blank Bottle A _____
Bottle B _____ Bottle B _____

County 13 Plant No.

CHECK (one per Box)

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

Submitters Code: 4 F Federal Project: ☐

Collector: CABAUG, J Telephone No.: 410 313 2643

Date Collected: 11/16/2018 Time Collected: 09:30 a.m. _____ p.m.

Field pH: 6.5 Field Chlorine: NEG

Nitric Acid Preserved: Yes ☑ No ☐ Iced: Yes ☐ No ☐

Remarks:

☑	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
☑	Gross Alpha	4000	1055	EPA 900.0	< 2.0	11/20/18	WS	12/3/18
☑	Gross Beta	4100	1055	EPA 900.0	< 4.0	11/20/18	WS	12/3/18
☐	Radium-226	4020						
☐	Radium-228	4030						
☐	Total Uranium	4006						
☐	Radon-222 (Bottle A)	4004						
☐	Radon-222 (Bottle B)	4004						
☐	Radon Field Blank A	4004						
☐	Radon Field Blank B	4004						
☐	Tritium							
☐								
☐								

Date Received: 11/19/18 Received By: AGilmith

Data Release Signature: [signature] Date: 12/4/18

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

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

FORM REVISED 05/15
DHMH 4540 05/17

SAMPLE TESTED AS RECEIVED

CUSTOMER COPY I

HOWARD COUNTY HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

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

January 3, 2019

Tim Keane
Trinity Homes
3625 Park Avenue
Ellicott City, Maryland 21043

RE: Estates at River Hill Lot 9
Allnutt Lane
Well Tag: HO – 17 – 0333

Dear Mr. Keane:

A sample was collected during a yield test on November 16, 2018 and submitted to the Maryland Department of Health Laboratories to assess the possible presence of **Gross Alpha** and **Gross Beta** in the future well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which exists in your area of development within the County.

Results from this screening revealed a **Gross Alpha** of **3.2 ± 1.7 picocuries/liter (pCi/L)**, while the **Gross Beta** level was **5.3 ± 1.9 pCi/L.** The **Gross Alpha** result was below its **maximum contaminant level (MCL)** of **15 pCi/L,** while the **Gross Beta** level was below its targeted standard 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 **is within** EPA regulatory standards. Additional testing **for these parameters** will not be required to secure the future Use & Occupancy. Please **note** that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be needed to help secure Use & Occupancy.

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

Sincerely,

Bert Nixon

Bert Nixon, Director
Bureau of Environmental Health

Enclosure
✓cc: Property file

SEND REPORT TO:

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

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

Lab No.

LABORATORY ANALYSIS REQUEST FORM

Plant/Site Name: ESTATES AT RIVER HILL County: HOWARD

Sample Source: LOT 9 Location: HO-17-0333
(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A HOJC0333RA Bottle B

Radon-222 Field Blank Bottle A Bottle B

County 13 Plant No.

CHECK (one per Box)

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

Submitters Code: 4F Federal Project:

Collector: COATES, J Telephone No.: 410 313 2643

Date Collected: 11/16/2018 Time Collected: 10:00 a.m. 3:30 p.m.

Field pH: Field Chlorine: NEG

Nitric Acid Preserved: Yes ✓ No Iced: Yes No

Remarks: SAMPLE AT YIELD TEST

☑	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
☑	Gross Alpha	4000	10516	EPA 900.0	3.2 ± 1.7	11/20/18	LST	12/3/18
☑	Gross Beta	4100	10516	EPA 900.0	5.3 ± 1.9	11/20/18	LST	12/3/18
☐	Radium-226	4020						
☐	Radium-228	4030						
☐	Total Uranium	4006						
☐	Radon-222 (Bottle A)	4004						
☐	Radon-222 (Bottle B)	4004						
☐	Radon Field Blank A	4004						
☐	Radon Field Blank B	4004						
☐	Tritium							
☐								
☐								

Date Received: 11/16/18 Received By:

Data Release Signature: Monica Saunders Date: 12/4/18

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

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

FORM REVISED 05/15
DHMH 4540 05/17

PROGRAM COPY

SAMPLE TESTED AS RECEIVED

SEND REPORT TO:

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

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

Lab No.

LABORATORY ANALYSIS REQUEST FORM

Plant/Site Name: HCHD County: HOWARD

Sample Source: WEGMANS DISTILLED Location: LAB
(Well no., lab sink, sample tap, etc.)

~~Radon-222~~ RADON Bottle A FIELD BLANK Radon-222 Field Blank Bottle A _____
Bottle B _____ Bottle B _____

County 13 Plant No.

CHECK (one per Box)

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

Submitters Code: 4 F Federal Project: ☐

Collector: CHRIS, JOSEPH Telephone No.: 410 313 2643

Date Collected: 11/16/18 Time Collected: ~~1:00~~ 1:30 a.m. _____ p.m.

Field pH: 7 C Field Chlorine: NEG

Nitric Acid Preserved: Yes ☑ No ☐ Iced: Yes ☐ No ☐

Remarks: ~~SAMPLE~~

☑	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
☑	Gross Alpha	4000	1051	EPA 900.0	< 2.0	11/19/18	MJT	12/3/18
☑	Gross Beta	4100	1051	EPA 900.0	< 4.0	11/19/18	MJT	12/3/18
☐	Radium-226	4020						
☐	Radium-228	4030						
☐	Total Uranium	4006						
☐	Radon-222 (Bottle A)	4004						
☐	Radon-222 (Bottle B)	4004						
☐	Radon Field Blank A	4004						
☐	Radon Field Blank B	4004						
☐	Tritium							
☐								
☐								

Date Received: Wed Received By: _____

Data Release Signature: Monica Saunders Date: 12/4/18

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

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

FORM REVISED 05/15
DHMH 4540 05/17

PROGRAM COPY

Invoice

Howard County Health Department

Bureau of Environmental Health
Attn: Bert Nixon, Director

DATE: DECEMBER 12, 2018
DATES OF SERVICE: NOVEMBER 15 & 16, 2018
INVOICE #: 2018-005

8930 Stanford Boulevard, Columbia, MD 21045
Phone 410-313-2640 Fax 410-313-2648
www.hchealth.org

BILL TO
Tim Keane
Trinity Homes
3625 Park Avenue
Ellicott City, Maryland 21043

COMMENTS
Payment due upon receipt. Letter and results will be released upon receipt of payment.

DATE	DESCRIPTION	BALANCE	AMOUNT
11/15/18	Gross Alpha/Beta testing performed for Lot 4 Estates at River Hill HO - 17 - 0328		$45.00
11/16/18	Gross Alpha/Beta testing performed for Lot 9 Estates at River Hill HO - 17 - 0333		$45.00
			AMOUNT DUE
			$90.00

Please detach and return with payment.

REMITTANCE	
Invoice #	2018-005
Site Information	Estates at River Hill Lots 4 & 9
Amount Due	$90.00

Receipt 64709
1/3/19

Make Checks Payable to: **Director of Finance** Mail Payments to: **Bureau of Env. Health**