STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

C 1 | 65165 | SEQUENCE NO. (MDE USE ONLY)
1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

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

COUNTY NUMBER

ST/CO USE ONLY
DATE Received MM DD YY
8 13

DATE WELL COMPLETED MM DD YY: 2-11-20 (15 20)

Approved 4/6/20 (ST)

Depth of Well: 150 (TO NEAREST FOOT) (22 26)

PERMIT NO. FROM "PERMIT TO DRILL WELL": NO - 18 - 0157 (28 29 30 31 32 33 34 35 36 37)

OWNER Toll Brothers (last name / first name)

WELL SITE ADDRESS Pudding Lane TOWN Ellicott City

SUBDIVISION Kings Forest SECTION LOT 28

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	9	
Grey Limestone	9	45	
Fracture	45	46	✓
Grey Limestone	46	125	
Fracture	125	126	✓
Grey Limestone	126	150	

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 S D 224

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 (44) / no N (44)

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT CM (45 46) BENTONITE CLAY BC (45 46)

NO. OF BAGS 3 NO. OF POUNDS 150

GALLONS OF WATER 75

DEPTH OF GROUT SEAL (to nearest foot)

from 0 (48 TOP 52) ft. to 20 (54 BOTTOM 58) ft.

(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 (60 61)	06 (63 64)	21 (66 70)

OTHER CASING (if used)

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

SCREEN RECORD
screen type or open hole — insert appropriate code below

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

C 2 — DEPTH (nearest ft.)

EACH SCREEN		from	to
1	HO (8 9)	21 (11 15)	150 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1 ____ 2 ____ 3 ____

DIAMETER OF SCREEN ____ (56 60) (NEAREST INCH)

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

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

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) 3 (8 9)

PUMPING RATE (gal. per min.) 10 (11 15)

METHOD USED TO MEASURE PUMPING RATE 1 gal

WATER LEVEL (distance from land surface)

BEFORE PUMPING 20 (17 20) ft.

WHEN PUMPING 25 (22 25) ft.

TYPE OF PUMP USED (for test)

A air (27) | P piston (27) | T turbine (27)
C centrifugal (27) | R rotary (27) | O other (describe below) (27)
J jet (27) | S submersible (27)

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. (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)

+ (49) above / − (49) below LAND SURFACE

1 (50 51) (nearest foot)

LATITUDE 39.253973
LONGITUDE 76.881507
(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.

WMA/PER.071

COUNTY

B 1 | 66402 | SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

Sdc429-J please type

STATE PERMIT NUMBER: Ho – 18 – 0157

fill in this form completely

Date Received (APA): 10/4/19

OWNER INFORMATION

Joe Brothers (Last Name / First Name)

7164 Columbia Gateway Dr

Columbia Md 21046 (Town / State / Zip)

DRILLER INFORMATION

Andrew Houseman M 5 D 224 (Driller's Name / License No.)

Eagles Well Drilling, LLC (Firm Name)

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

Andrew R Keen 11-1-19 (Signature / Date)

B 2 WELL INFORMATION

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

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

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

APPROXIMATE DEPTH OF WELL: 300 FEET

APPROXIMATE DIAMETER OF WELL: 6 NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) | JETTED | Jetted & DRIVEN

(AIR-ROTary) | AIR-PERcussion | ROTARY (Hydraulic Rotary)

(CABLE) | REVerse-ROTary | DRive-POINT

other

REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX)

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

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

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

APPROP. PERMIT NUMBER: HO 2018G004

PERMIT No. HO – 18 – 0157

B 3 LOCATION OF WELL

Howard (COUNTY)

Kings Forest (SUBDIVISION)

SECTION: | LOT: 28

Ellicott City (NEAREST TOWN)

B 4

SOURCES OF DRILLING WATER

1. Well water
2.
3. 2/11/20 Static 20' Pump 130' 10 gpm water 29' Bentonite Quik Grout

Pudding Lane (STREET ADDRESS)

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX): NORTH (N) WEST (W) 32 (E) EAST SOUTH (S)

DISTANCE FROM ROAD: 25 ENTER FT OR MI: FT

TAX MAP: 23 BLK: 23 PARCEL 148

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

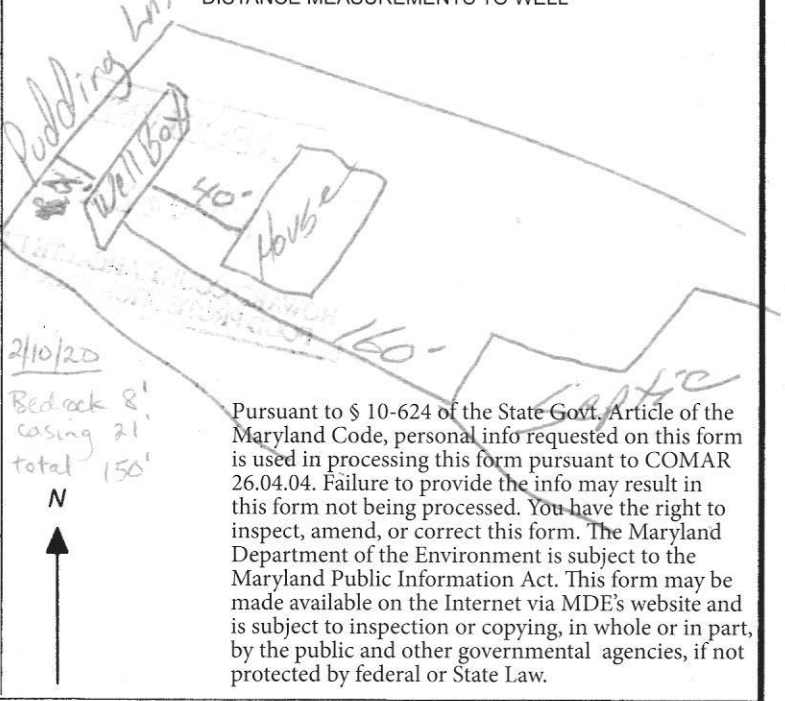
Howard (COUNTY NAME) 13 (COUNTY NO.)

STATE SIGNATURE: _____ INSERT S →

DATE ISSUED: 01/14/20 (MM DD YY) Dion Thomas (CO SIGNATURE) 01/14/21 (EXP. DATE)

DON: 2/10/2020 (ST) DOG: 2/14/20 (ST) DOY: 2/14/20 (ST)

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



2/10/20
Bedrock 8'
casing 21'
total 150'

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SPECIAL CONDITIONS: RADIUM SAMPLES REQUIRED. IF WELL IS WITHIN 10' OF DRIVEWAY, MUST BE SURROUNDED BY BOLLARDS. # SODIUM, CHLORIDE AND TDS SAMPLES REQUIRED

NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

MDE/WMA/PER.071

② COUNTY

Date: February 11, 2020

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-18-0157
Location of Property: Pudding Lane Ellicott City, Md
Subdivision: Kings Forest **Lot#:** 28
Well Driller/Tech: Fogles Andrew Houseman MSD224 **Owner/Buyer:** Toll Brothers

Depth of Well: 150' **Casing:** 21' of 6" Steel Casing **Pump Depth:** 130'

Distance of measuring point (M.P.) above ground: 2'
Static water level (S.W.L.) below M.P.: 20'
High rate pumping –reservoir Drawdown
Time pump started: 12:00 **Pumping rate:** 10
Total time 15 Mins **to reach pumping water level** 25 **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)
12:00	20'	6 Seconds		10 gpm
12:15	25'	6 Seconds		10 gpm
12:30	25'	6 Seconds		10 gpm
12:45	25'	6 Seconds		10 gpm
1:00	25'	6 Seconds		10 gpm
1:15	25'	6 Seconds		10 gpm
1:30	25'	6 Seconds		10 gpm
1:45	25'	6 Seconds		10 gpm
2:00	25'	6 Seconds		10 gpm
2:15	25'	6 Seconds		10 gpm
2:30	25'	6 Seconds		10 gpm
2:45	25'	6 Seconds		10 gpm
3:00	25'	6 Seconds		10 gpm
3:15	25'	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 – MAY 23, 2023

November 23, 2022

Homeowner
10537 Pudding Lane
Ellicott City, MD 21042

RE: Kingsley Woods, Lot 28
10537 Pudding Lane
Building Permit: B22000336
Well Permit: HO-18-0157

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 **11/23/2022.** Final approval of the well line connection to the dwelling was granted on **8/24/2022.** The well construction was completed on **2/11/2020.** Water samples were collected on **10/21/2022.**

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 **2/11/2020**. Results showed a Gross Alpha level of **2.0** ± 0.0 **pCi/L** and **Gross Beta** level of **4.0 ± 0.0 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-18-0157. 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

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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

Howard County Health Department

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

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

Sodium, Chloride and Total Dissolved Solids water sampling results

February 17, 2021

Toll Brothers
7164 Columbia Gateway Dr, Suite 230
Columbia, MD 21046

Re: Kings Forest Lot 28
Pudding Ln
Well Permit: HO-18-0157

Dear Toll Brothers,

The Health Department received results from the testing for sodium, chloride, and total dissolved solids (TDS) from your well water. These samples were collected directly from the raw well water when your well was drilled.

Sodium from your well measured 6.59 mg/L. There is no maximum contaminant level for sodium, however elevated sodium levels in drinking water could affect individuals on low-salt diets. If anyone in your household in on a low-salt diet, you may want to discuss these results with your physician.

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 you well measured <10 mg/L**. The secondary maximum contaminant level for TDS is 500 mg/L; **TDS from your well measured 70 mg/L**.

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

Respectfully,

Susan Thomas

Susan Thomas
Environmental Health Specialist
Howard County Health Department
Well and Septic Program
410-313-6287
sathomas@howardcountymd.gov

✓ *Cc: File*

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

0 25 50 100
(IN FEET)
1 inch = 50 ft.

KINGS FOREST
WELL EXHIBIT
LOT 28

DATE: OCTOBER, 2019
SCALE: 1" = 50'

Send Report To: Bert Nixon

Howard County Health Department
Bureau of Environmental Health
~~9830 Stanford Blvd.~~
Columbia, Maryland 21045

State of Maryland
DHMH – Laboratories Administration
Division of Environmental Sciences
TRACE METALS LABORATORY
1770 Ashland Avenue
Baltimore, Maryland 21205

E20002719001
Received: 02/12/2020
Metals HOST0157NA

LABORATORY ANALYSIS REQUEST

Do not write above this line

Please Print

Sample ID No: HOST0157NA **Site Name:** Pudding Lane, Kings Forest Lot 28 **County:** Howard

Sample Source: Pudding Lane (Street), King's Forest Lot 28 (Town or City) **Collector:** Susan Thomas (Name)

Date Collected: 2/11/2020 **Time Collected:** 2:30 a.m. / p.m. **Phone #:** 410-313-6287

pH <2 pH ~ 02-12-20

Sample Preserved By: ☐ Field ☐ ESRL ☐ WMRL ☐ Central Lab
Preservative Used: ☑ HNO_3 2 mL **pH:** 6.0

Sample Type: ☑ Drinking Water ☐ Landfill ☑ Source (Raw Water) ☐ Liquid
Data Category ☐ Community ☐ Stream ☐ Distribution (Treated) ☐ Solid
Code ☐☐ ☐ 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: collected at end of yield of H0-18-0157

√	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)	PSM		Potassium (K)				
	Thallium (Tl)			Silver (Ag)				

RECEIVED
FEB 21 2020
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

ACCREDITED
Certificate # 3525.02

Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project No: E20002719 Date Coll.: 02/11/2020 Date Received: 02/12/2020 Submitted By: Thomas

Field ID: HOST0157NA
Lab No.: E20002719001

Method	Element	Result	Units	Date Analyzed
EPA 200.7	Sodium	6.59	ppm	02/18/2020

RECEIVED
FEB 21 2020
HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

Comments:

Approved by: Wennifer Peterson Approval date: 02/19/2020

**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

Bureau of Environmental Health
8930 Stanford Boulevard, Columbia, MD 21045
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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:

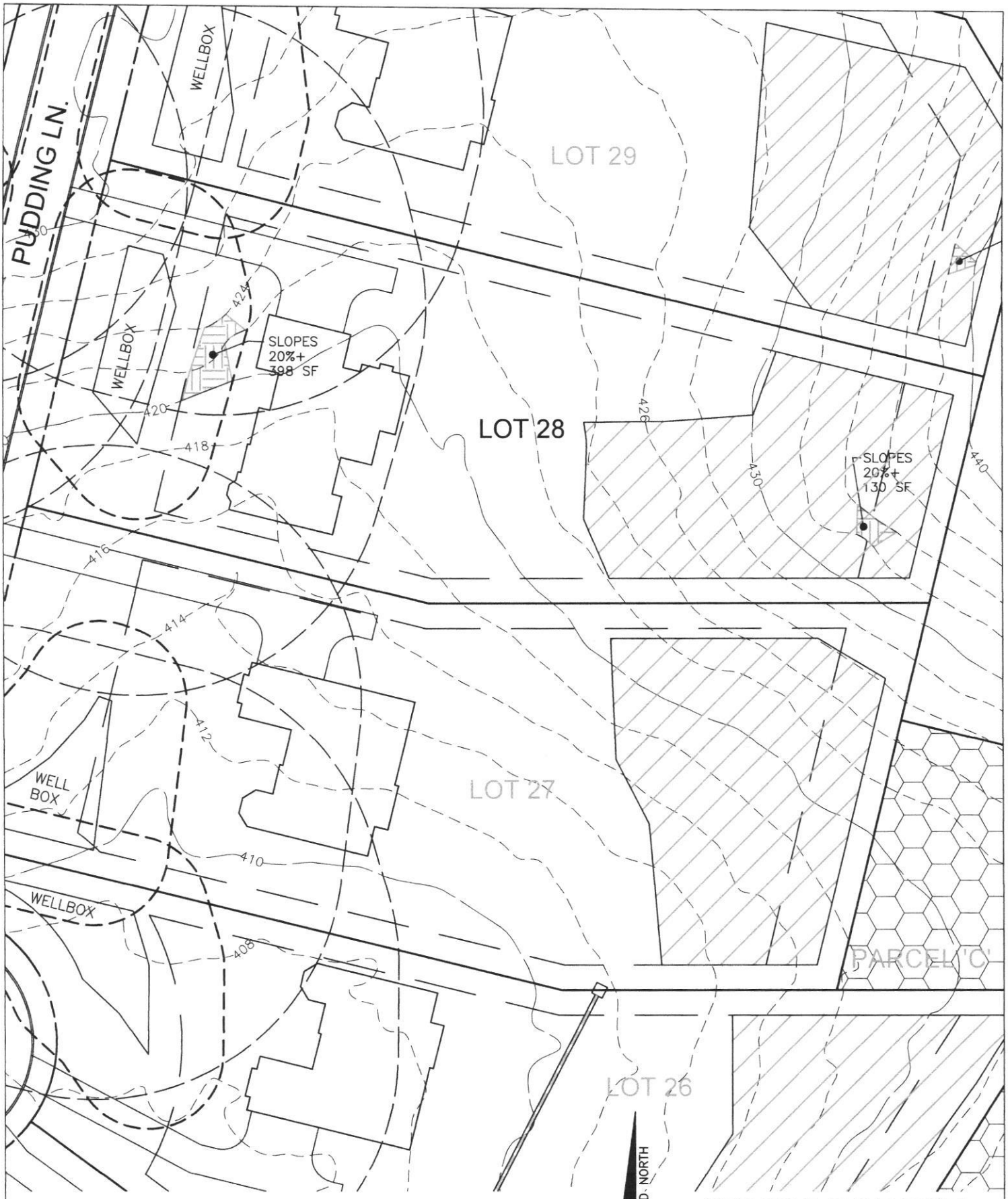
Well Site Location:

Kings Forest (Subdivision/Property Name) #18 thru #35 & parcel D (Lot #) Pudding Lane (Road Name)

☒ The well site has been staked by Benchmark
(professional land surveyor or company employing professional land surveyors)
on Oct 22, 2019 (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.



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WWW.BEI-CIVILENGINEERING.COM

KINGS FOREST
WELL EXHIBIT
LOT 28

DATE: OCTOBER, 2019
SCALE: 1" = 50'

HOWARD COUNTY HEALTH DEPARTMENT

Bureau of Environmental Health
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410.313.2648 - Fax
1.866.313.6300 - Toll Free

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

MEMORANDUM

TO: **Fogle's Well Drilling**
580 Obrecht Road
Sykesville, MD 21784

FROM: **Susan Thomas**
Environmental Health Specialist SD 12/27/19
Howard County Health Department
Well & Septic Program

RE: **Kings Forest Subdivision – Well Permits Lots 1-36 and Parcel D**
Special Conditions for wells

DATE: December 26th, 2019

The following comments apply to the above referenced Well Permit Applications. Please read through and complete as needed.

A. **Lots 17, 26, 27, and 33-35 will require 50' of Steel Casing or 10' into competent bedrock, whichever is deeper.**

> 10. A waiver for the location of the septic systems and wells, as shown on [Revised Percolation Certification Signed 11/12/2019] has been approved by MDE. As a condition of the approved [sic] of this waiver the initial and all replacement wells on lots 17, 26, 27, and 33 – 35 will require Steel Casings to be installed to 50' or 10' into competent bedrock, whichever is deeper.

B. **All lots in the Kings Forest Subdivision are within the Baltimore Gneiss Formation and will require Water Quality Tests for Radium to be collected at the time of the Yield Test.**

C. **If the wells on Lot 13 or Lot 28 are within 10' of the driveway the well must be surrounded by bollards.**

D. **Lots 2, 8, 9, 13, 18, 21, 24, 26, 27, 28, 33, 34 and 35 will require samples for Sodium, Chloride and TDS to be collected at the time of the Yield Test.**

HOWARD COUNTY HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
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1.866.313.6300 - Toll Free

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

March 23, 2020

Toll Brothers
7164 Columbia Gateway Drive
Columbia, Maryland 21045

RE: Kings Forest Lot 28
Pudding Lane
Well Tag: HO – 18 – 0157

To Who it May Concern:

A sample was collected during a yield test on February 11, 2020 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 **< 2.0 ± 0.0 picocuries/liter (pCi/L)**, while the **Gross Beta** level was **< 4.0 ± 0.0 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 **meets** 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
Theresa Miller, Fogles

SEND REPORT TO: Bert Nixon

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: Rattle Lane, Kings Forest Lot 28 County: Howard

Sample Source: Rattle Lane, Kings Forest Lot 28 Location: HO-18-0157
(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A HO-18-0157RA
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: 4 F Federal Project:

Collector: Susan Thomas Telephone No.: 410-313-6287

Date Collected: 2/11/20 Time Collected: a.m. 2:30 p.m.

Field pH: 6.0 Field Chlorine: negative

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

Remarks: collected from cold cycle of HO-18-0157

☑	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
☑	Gross Alpha	4000	17149	EPA 900.0	12.0	2/13/2020	RH	2/14/2020
☑	Gross Beta	4100	17149	EPA 900.0	24.0	2/13/2020	RH	2/14/2020
☐	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: 2/12/20 Received By: R. Holmes

Data Release Signature: Susan Thomas Date: 02/20/20

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

SEND REPORT TO: Rob Nixon

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. 28

LABORATORY ANALYSIS REQUEST FORM

Plant/Site Name: Rockburn Landfill Kings Forest Lot 28 County: Howard

Sample Source: Rockburn Landfill Kings Forest Lot 28 Location: Field Blank
(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A _____ Radon-222 Field Blank Bottle A HOSTF028
Bottle B _____ Bottle B _____

County 1 3 Plant No. _____

CHECK (one per Box)

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

Submitters Code: 4 F Federal Project: ☐

Collector: Susan Thomas Telephone No.: 410-313-6257

Date Collected: 2/4/20 Time Collected: _____ a.m. 12:30 p.m.

Field pH: 5.5 Field Chlorine: negative

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	11148	EPA 900.0	<2.0	2/13/2020	KH	2/14/2020
☑	Gross Beta	4100	11148	EPA 900.0	<4.0	2/13/2020	KH	2/14/2020
☐	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: 2/12/20 Received By: R. Holmes

Data Release Signature: Susan Thomas Date: 02/20/20

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

Howard County Health Department

MAR 0 2 2020

Invoice

Bureau of Environmental Health
Attn: Bert Nixon, Director

DATE: FEBRUARY 27, 2020
DATES OF SERVICE: FEBRUARY 7,10,11 & 12, 2020
INVOICE #: 2020-004

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

BILL TO
Toll Brothers
7164 Columbia Gateway Drive
Columbia, Maryland 21046

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

DATE	DESCRIPTION	BALANCE	AMOUNT
2/7/2020	Gross Alpha/Beta testing performed for Kings Forest Lot 21 HO - 18 - 0150		$45.00
2/10/2020	Gross Alpha/Beta testing performed for Kings Forest Lot 29 HO - 18 - 0158		$45.00
2/11/2020	Gross Alpha/Beta testing performed for Kings Forest Lot 28 HO - 18 - 0157		$45.00
2/12/2020	Gross Alpha/Beta testing performed for Kings Forest Lot 27 HO - 18 - 0156		$45.00
		AMOUNT DUE	
		$180.00	

Please detach and return with payment.

REMITTANCE	
Invoice #	2020-004
Site Information	Kings Forest Lots 21, 27, 28 & 29
Amount Due	$180.00

Rec'd 3/13/20
67344

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

Williams, Jeffrey

From: Steven Krieg -MDE- <steven.krieg@maryland.gov>
Sent: Sunday, June 8, 2014 10:04 PM
To: Williams, Jeffrey
Cc: Bernard, Dana; Bricker, Robert; Davis, Michael J; John Boris -MDE-; Geisert, Andrew; Wolf, Kevin; Baker, Brian
Subject: Re: Well variance

Jeff

Thanks again for the detail. I like your conditions and consider it approved. Please draft a letter indicating the requirements and have this on the perc cert. Please red flag all files so when they are developed, these conditions will be enforced such as LPD and proper depth and material of well casing. Any wells requiring the 50 feet of casing or ten feet into the bedrock must be clearly special conditioned on the bottom of the green well permit applications just like all the previous variances when we have required this. (It has been quite a few) We only hope this will be done by those staff issuing the well permits as this could be years from now before development takes place.

I have discussed these types of variances with John Boris and he has some concerns now that I hadn't really thought of before. He makes a good point. For all these downgradient well variances, you have been recommending and I have been approving based on this condition on the well construction of 50 feet of steel casing or casing set into the bedrock 10 feet. The reality is, is that we don't know if that will actually occur unless the we are on site with the well driller prior to well construction or if the person reviewing the well completion report pays attention and catches it on the back end.

John is suggesting and he makes a valid point, that staff must be present for the well construction portion when the casing is set for this to be properly enforced. He is also offering to be present for these with your staff for training opportunities with the driller. Although I agree with him, I am not sure he knows the amount of these that get approved but if he can help assist in many or all of the inspections with your staff, great. I just know that he covers the entire state so he will be a lot busier but maybe not as these wells get constructed at different times as the years go on.

This of course will require additional inspections and getting to these sites at the appropriate time to make sure the driller does what is required. It will require a lot more coordination with the driller. Maybe after some inspections we are convinced the driller is honest, we back off, maybe not. Once John trains Kevin and Brian, I think he would not want to make all of the inspections but maybe he will especially if they are not all at once.

The other way to help to ensure compliance with the variance conditions, is that the completion report is reviewed against the variance requirements. Assuming a good well completion report is turned in, all someone has to do is to review it. John could help with this too as I could. If the well permit is clearly special conditioned at the bottom of the green form to require this, and the driller's well completion report later reflects otherwise, the well will require proper abandonment. I am sure that will go over well with the property owner at the time but it does put the burden back on the licensed driller for reading the well permit and doing his job. This method would obvioudly use less of your staff time.

I think a meeting with or memo to the drillers would be very helpful to put them on notice that we are implementing these requirements for these variances. We have been doing this for at least 3 plus years. I would want John present with your staff for any meeting with the drillers.

I'll let John take it from here unless you have any suggestions.. I copied all the staff that deal with this issue.

On Wed, Jun 4, 2014 at 4:59 PM, Williams, Jeffrey <jewilliams@howardcountymd.gov> wrote:

As we discussed, here is the variance request for Carroll-Ziegler property. It's a little hard to see on the pdf, but I tried to highlight everything. The septic area circled on page 1 on lot 34 is at the top of a hill and is upgradient in a few different directions. It is 200' from the neighboring well at Burleigh Manor, 204' from its own well, about 215' from the well on lot 17 acorss the street, 203' from lot 35 on page two at the matchline, and about 220' from the well on lot 36 behind the well on 35.

On page 3, the circled well boxes on lots 26 and 27 are in the broad bottom of a swale. The septic areas on lots 27, 28, and PP V are upgradient of them.

Our variance recommendation would include the condition that the septics on lots 34, 27, 28, and PP V are LPD, and the wells on lots 17, 26, 27, 34, 35, 36 have 50' steel casing/10' into bedrock.

Let me know what you think. Thanks.

Jeff Williams

Program Supervisor, Well & Septic Program

Bureau of Environmental Health

Howard County Health Dept.

410-313-4261

jewilliams@howardcountymd.gov

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--

Steven R. Krieg, REHS/RS
Regional Consultant

Onsite Systems Division
Wastewater Permits Program
Water Management Administration
Maryland Department of the Environment

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

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

WATER ANALYSIS

E20002720001
Received: 02/12/2020
Inorganic H0ST0157CLTI

Do not write above this line.

SAMPLE ID

Bottle Number H0ST0157CL TDS Name King's Forest, Lot 28 County Howard County Code 13

Address Pudding Lane, King's Forest Lot 28 Data Category Code 4F

Collected: Date 2/11/20 Time 2:30 pm Collector & Phone Susan Thomas, 410-313-6287 Submitter Code

CHECK (one per box)

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

Federal Project ☐

FIELD

Plant No. Sampling Station Preservation: Iced ☐ Acid ☑ Type of Acid HNO3 not acidified

pH 6.0 Chlorine: Free 0.0 Total 0.0 Specific Conductance

Notes to Lab/Remarks: collected at end of yield of HO-18-0157

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:		

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

*Samples are tested as received.

Number of Tests Requested

Section Chief

Date Reported

SUBMITTER'S COPY

MDH-90-A 07/17

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

ACCREDITED
Certificate # 3525.02

Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project NoE20002720 Date Coll. 02/11/2020 Date Received: 02/12/2020 Submitted By: Susan Thomas

Field ID: H0ST0157CLTDS
Lab No.: E20002720001

Analyte	Method	Result	Units	Date Analyzed
Chloride	SM 4500-Cl E	<10	mg/L	02/24/2020
Total Dissolved Solids	SM 2540C	70	mg/L	02/19/2020

Comments:

Approved by: _____ Approval date: 02/25/2020

*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.

Bernard, Dana

From: Bernard, Dana
Sent: Tuesday, March 15, 2022 2:48 PM
To: sriley1@tollbrothers.com
Cc: JIM@DECATURBUILDINGSERVICES.COM
Subject: 10537 Pudding Lane

Hello All,

I have received your building permit for 10537 pudding lane however we cannot complete the review until the OSDS plan is received. Also, before the ICOP can be issued Radium testing must be completed.

Thanks

Dana Bernard
Howard County Health Department
Well and Septic Program