C 1 6706 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (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 MM 09 DD 13 YY 11 (8–13)

DATE WELL COMPLETED MM 8 DD 19 YY 11 (15–20)

Depth of Well 22 500 26 (TO NEAREST FOOT)

OK 10/25/11 SC

PERMIT NO. FROM "PERMIT TO DRILL WELL" 40 95 - 2189 (28–37)

OWNER Mckie Arthur

STREET OR RFD 1930 Woodstock Road TOWN Woodstock

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 FROM	FEET TO	check if water bearing
Overburden	0	5'	
Soft Brown Shale/Dirt	5'	53'	
Gray Rock	53'	500'	✓
Hot water	226	461'	

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 D 65 7 1

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: __ __ D __ __ __ 1

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

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriete Box) yes [X] (44) no [N] (44)

TYPE OF GROUTING MATERIAL (Circle one)

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

NO. OF BAGS 108 NO. OF POUNDS 6912 (46)

GALLONS OF WATER 24

DEPTH OF GROUT SEAL (to nearest foot)

from 0 (48) ft. TOP (52) to 59 (54) ft. BOTTOM (58)

(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)
PL (60 61)	6 (63 64)	59 (66 70)

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 [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

C 2 — DEPTH (nearest ft.)

		from	to
EACH SCREEN	1	440 (8 9)	59 (11 15) to 500 (17 21)
	2	(23 24)	(26 30) to (32 36)
	3	(38 39)	(41 45) to (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

TELESCOPE CASING | LOG INDICATOR | OTHER DATA (74 75 76)

C 3

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

PUMPING RATE (gal. per min.) 4.2 (11 15)

METHOD USED TO MEASURE PUMPING RATE Watch & Bucket

WATER LEVEL (distance from land surface)

BEFORE PUMPING 42 (17 20) ft.

WHEN PUMPING 220 (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)

[X] above (49) LAND SURFACE

[_] below (49)

1 (nearest foot) (50 51)

LOCATION OF WELL ON LOT

SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N 39° 27. 429

W 76° 41. 443

DENV-CR00 COUNTY

C 1 6706 (MDE USE ONLY)

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

WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

46 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER

ST/CO USE ONLY
DATE Received

DATE WELL COMPLETED: 4 29 14 (8/19/11)

Depth of Well: 500 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": 40 95 2189

OWNER: Hoke Arthur

STREET OR RFD: 740 Woodstock Road TOWN: Woodstock

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 FROM	FEET TO	check if water bearing
Overburden	0	5'	
Soft Brown Shale/Dirt	5'	53'	
Clay Rock	53'	500'	✓

5/9/2014

Radium Sample

Collected During Yield Test.

BB

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 D 552

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 [X] no [N]

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

NO. OF BAGS: 15 NO. OF POUNDS: 1512

GALLONS OF WATER: 24

DEPTH OF GROUT SEAL (to nearest foot): from 0 (TOP) ft. to 59 (BOTTOM) ft.

(enter 0 if from surface)

CASING RECORD

casing types insert appropriate code below: STEEL [ST] CONCRETE [CO] PLASTIC [PL] OTHER [OT]

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)	Total depth of main casing (nearest foot)
PL	6	59

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: STEEL [ST] BRASS/BRONZE [BR] OPEN HOLE [HO] PLASTIC [PL] OTHER [OT]

C 2

EACH SCREEN	DEPTH (nearest ft.)	
1	140	59 to 500
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 (8.57) 5/9/14

PUMPING RATE (gal. per min.): 4 (4.2)

METHOD USED TO MEASURE PUMPING RATE: Watch & Bucket

WATER LEVEL (distance from land surface)

BEFORE PUMPING: 42 ft.

WHEN PUMPING: 220 ft.

TYPE OF PUMP USED (for test): 231 5/9/14

air [A] piston [P] turbine [T] centrifugal [C] rotary [R] other (describe below) [O] jet [J] submersible [X]

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 [X] below [ ] LAND SURFACE; 1 (nearest) foot

LOCATION OF WELL ON LOT

SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N 39° 27. 429

W 76° 41. 443

EMERGENCY/TEMP NO. IF ANY

B 1 (1 2 3 6) 7259 SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

please type 535915

STATE PERMIT NUMBER (70 ... 79) HO-95-2189

fill in this form completely

Date Received (APA) (8 MM DD YY 13) 07/26/2011

OWNER INFORMATION

15 Last Name: Merkle — Owner — First Name: Arthur (34)

36 Street or RFD: 1940 (30) Woodstock Road (55)

57 Town: Woodstock — 70 State: MD — 72 Zip: 21163 (76)

DRILLER INFORMATION

Driller's Name: Michael B. Cochran — 76 License No.: M 5 D 157 (81)

Firm Name: G.E. Harr Well Drilling

Address: 12047 Falls Road Cockeysville MD.

Signature: [signature] — Date: 7-21-11

B 2 WELL INFORMATION

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

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) (14 20): 750

USE FOR WATER (CIRCLE APPROPRIATE BOX)

22
- [X] D — DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
- [ ] F — FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION
- [ ] I — INDUSTRIAL, COMMERICIAL, DEWATERING
- [ ] P — PUBLIC WATER SUPPLY WELL
- [ ] T — TEST, OBSERVATION, MONITORING
- [ ] G — GEO-THERMAL

APPROXIMATE DEPTH OF WELL (24 28): 300 FEET

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: - - - - - - G - - -

PERMIT No. HO-95-2189 (70 71 72 73 74 75 76 77 78 79)

B 3 LOCATION OF WELL

8 COUNTY: Howard (21) (DK 10/25/11 ESQ)

23 SUBDIVISION (42)

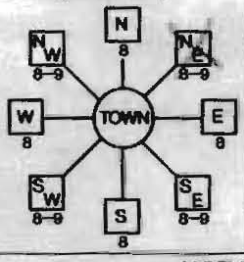
SECTION (44 46) LOT (48 50)

52 NEAREST TOWN: Woodstock (71)

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

B 4

1 2 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



11 [redacted] (1930?) Woodstock Road (30) NEAR WHAT ROAD

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 470 37 DISTANCE FROM ROAD

ENTER FT OR MI (38 39): FT

TAX MAP: 10 BLK: 24 PARCEL: [redacted] 206

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME: Howard (13) — COUNTY NO.: A533269

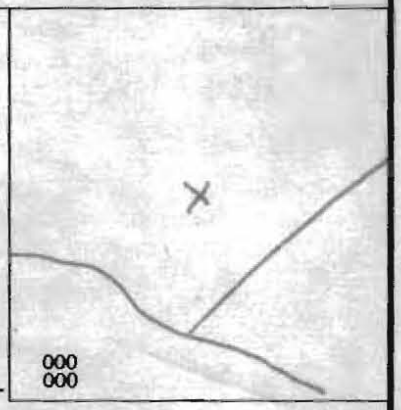
STATE SIGNATURE _____ INSERT S → (41)

DATE ISSUED (43 MM DD YY 48): 8/8/2011 — CO SIGNATURE: Brian Baker — EXP. DATE: 8/8/2012

NORTH GRID (50 55): 541 000 — EAST GRID (57 63): 833 000

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER
1. Stmp
2.
3.

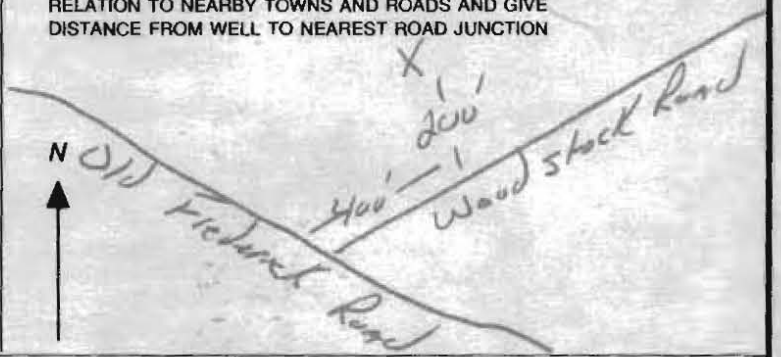


WRITE THE BOX NUMBER FROM THE MAP HERE

E 8303

N 5401

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



SPECIAL CONDITIONS
NOTE - APPROVING AUTHORITIES SHOULD USE ADDITIONAL SHEET IF NEEDED

H.D. Dept Must Collect Radium Sample During Yield Test

DENV-Permit 97 — ② COUNTY

HARR WELL DRILLING

12047 FALLS ROAD

COCKEYSVILLE, MD 21030
410-252-4588

HOWARD COUNTY WELL YIELD TEST REPORT

Date Test Performed: 08-25-11
Address: 1930 Woodstock Road
Owner: Arthur Merkle
Well Depth: 500 Ft

Permit Number: HO-95-2189
Subdivision:
Election District:
Static Water Level: 42 Ft

Time	Water Level	PSI Existing Pump	Pumping Rate Seconds to fill 1 Gallon bucket	Calculated Flow-Gallons Per Minute
0800	42 ft	60 psi	5 sec	12.00
0815	74	60	6	10.00
0830	94	60	6	10.00
0845	122	60	6	10.00
0900	166	60	7	8.57
0915	203	30	8	7.50
0930	215	25	10	6.00
0945	220	20	10	6.00
1000	220	20	13	4.61
1015	220	20	14	4.28
1030	220	20	14	4.28
1045	220	20	14	4.28
1100	220	20	14	4.28

HARR WELL DRILLING

12047 FALLS ROAD
COCKEYSVILLE, MD 21030
410-252-4588

HOWARD COUNTY YIELD TEST REPORT

Date Test Performed: 05-09-2014
Address: 1930 Woodstock Road
Owner Name: Arthur Merkle
Well Depth: 500 Ft

Permit Number: HO-95-2189
Subdivision:
Election District:
Static Water Level: 30 Ft

Time	Water Level	PSI Existing Pump	Pumping Rate Seconds to fill 5 gallon bucket	Calculated Flow-Gallons Per Minute
0815	30 ft	45 psi	15 sec	20.00
0830	144	30	20	15.00
0845	193	25	23	13.04
0900	212	20	25	12.00
0915	224	15	26	11.54
0930	228	15	28	10.71
0945	231	35	35	8.57
1000	231	35	35	8.57
1015	231	35	35	8.57
1030	231	35	35	8.57
1045	231	35	35	8.57
1100	231	35	35	8.57
1115	231	35	35	8.57
1130	231	35	35	8.57
1145	231	35	35	8.57
1200	231	35	35	8.57
1215	231	35	35	8.57
1230	231	35	35	8.57
1245	231	35	35	8.57
1300	231	35	35	8.57

'OK' JCB 5/14/14

HARR WELL DRILLING

12047 FALLS ROAD
COCKEYSVILLE, MD 21030
410-252-4588

HOWARD COUNTY YIELD TEST REPORT

Date Test Performed: 05-09-2014
Address: 1930 Woodstock Road
Owner Name: Arthur Merkle
Well Depth: 500 Ft

Permit Number: HO-95-2189
Subdivision:
Election District:
Static Water Level: 30 Ft

Time	Water Level	PSI Existing Pump	Pumping Rate Seconds to fill 5 gallon bucket	Calculated Flow-Gallons Per Minute
0815	30 ft	45 psi	15 sec	20.00
0830	144	30	20	15.00
0845	193	25	23	13.04
0900	212	20	25	12.00
0915	224	15	26	11.54
0930	228	15	28	10.71
0945	231	35	35	8.57
1000	231	35	35	8.57
1015	231	35	35	8.57
1030	231	35	35	8.57
1045	231	35	35	8.57
1100	231	35	35	8.57
1115	231	35	35	8.57
1130	231	35	35	8.57
1145	231	35	35	8.57
1200	231	35	35	8.57
1215	231	35	35	8.57
1230	231	35	35	8.57
1245	231	35	35	8.57
1300	231	35	35	8.57

HARR WELL DRILLING

12047 FALLS ROAD

COCKEYSVILLE, MD 21030
410-252-4588

HOWARD COUNTY WELL YIELD TEST REPORT

Date Test Performed: 08-25-11
Address: 1930 Woodstock Road
Owner: Arthur Merkle
Well Depth: 500 Ft

Permit Number: HO-95-2189
Subdivision:
Election District:
Static Water Level: 42 Ft

Time	Water Level	PSI Existing Pump	Pumping Rate Seconds to fill 1 Gallon bucket	Calculated Flow-Gallons Per Minute
0800	42 ft	60 psi	5 sec	12.00
0815	74	60	6	10.00
0830	94	60	6	10.00
0845	122	60	6	10.00
0900	166	60	7	8.57
0915	203	30	8	7.50
0930	215	25	10	6.00
0945	220	20	10	6.00
1000	220	20	13	4.61
1015	220	20	14	4.28
1030	220	20	14	4.28
1045	220	20	14	4.28
1100	220	20	14	4.28

not 3 hrs.
not approvable
rep

Attn Sarah Collins 410-313-6278

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: Classic Plumbing Telephone #: 301 695 7934
Address: PO Box 1143
Frederick Md 21702

(Must circle one) (Licensed Plumber) Licensed Well Driller Licensed Well Pump Installer
License # and name of individual responsible for the field installation:
Name (Print): Robert Halley License# 7788
*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: Mike McGinnis Telephone #: 410 - 409 - 8248
Subdivision: Lot #: Well Tag #: HO-95-2189
Site Address: 1930 Woodstock Rd

Submersible Pump Data
Make:
Model #:
Pump Capacity: GPM
Well Yield: GPM

Pitless Adapter
Make: McMaster
Model#: MBNL50
Depth: 3' (36" min)
NSF/WSC approved: ✓

Well Cap and Electric Conduit
Two piece watertight cap: ✓
Screened, vented well cap:
Can secured to casing: ✓
Conduit min 18" B.G.: ✓
Conduit secured to well cap: ✓

not up to code 11/23/16

Depth of well encountered at time of pump installation: (feet)
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4
Torque arrestors, Cable guards, or other acceptable method used– Must circle one
Safety rope, if used, attached to brass rope adapter or other acceptable method inside of well casing

Piping to house
Type: PDLI
PSI: 160 (160 psi min)
Depth of supply line: 36" (36" min)

House Connection
PVC sleeve to undisturbed soil at wall penetration: ✓
Length of sleeve(5' minimum from foundation): 5
Sleeve sealed properly: ✓

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

Signature of company representative responsible for installation date

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

Date Insp. Requested: 11/21/16 Date Insp. Approved: 11/21/16 Inspector: SC

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 ✓

Plat Showing Well Location For Tax Map 10, Parcel 206 Merickle Property

Scale 1" = 50' 6-22-11

David Ransone - LS
204 Ridge Ave
Towson, MD 21286
410-207-8358

Howard County Health Department

Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

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

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: 5/950 WOODSTOCK ROAD
TAX MAP #10 PARCEL 206, KAREN MERICLE, et al.
Subdivision/Property Name **Lot#** **Road Name**

☒ The well site has been staked by DAVID RANSONE MD. #10928 410-207-8358
(professional land surveyor or company employing professional land surveyors)
on June 22, 2011 (date) and does not require a site inspection.

STATE OF MARYLAND EDWARD RANSONE 10928

☐ 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.

6/22/11

Revised 3/11/05


EX. WELL
W
DISTRIBUTION TANK, ELEV. 456.80
N21°07'00"E
330.52'
2' (TYP.)
10' (TYP.)
INV. IN 454.0
INV. OUT 452.92
30' B.R.L.
EX. WELL HO-95-2189
PVC-SDR40 @2%
65'
455.3
INV. OUT 455.9
INV IN 452.92
A
B
C
D
56'
INV IN 452.62
INV IN 452.0
INV IN 451.22
INV IN 450.57
S45°21'00"E
215.97'
10' B.R.L.
40' B.R.L.
S32°41'00"W
153.91'
EX. WELL
458
456
454
452
450
448
446

Howard County Health Department

Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
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

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

July 21, 2014

Mr. Michael McGinnis
10138 Hopson's Choice Lane
Ellicott City, Maryland 21042

RE: 1930 Woodstock Road
Well Tag: HO - 95 – 2189

Dear Mr. McGinnis:

A sample was collected during a yield test on May 9, 2014 and submitted to the Department of Health & Mental Hygiene Laboratories to assess the possible presence of **Gross Alpha** and **Gross Beta** in the future well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which exists in your area of development within the County.

Results from this screening revealed a **Gross Alpha** of **14.9 ± 2.7 picocuries/liter (pCi/L),** while the **Gross Beta** level was **5.8 ± 2.0 pCi/L.** With the margin of error, the **Gross Alpha** result was above its **maximum contaminant level (MCL)** of **15 pCi/L,** while the **Gross Beta** level was below its targeted value of **50 pCi/L** (roughly equivalent to the **annual dose rate** of **4 millirems/year**).

At the time of testing and with respect to these parameters, the future well water supply **may not** meet EPA regulatory standards. Additional testing **for these parameters, plus Radium 226 and Radium 228** will be required to secure the future Use & Occupancy. Given the finding for **Gross Alpha**, the installation of a water softener system and / or a reverse osmosis system may be necessary. If treatment is installed, **pre and post short and long term Gross Alpha and Beta, plus a post Radium 226 / 228** will be needed to properly evaluate the effectiveness of the installed treatment(s). Alternatively, you may collect raw water samples for **short and long term Gross Alpha and Beta, plus Radium 226 / 228** to see if all values are below existing standards. Given that it typically takes up to one month to perform and receive back the **Radium** analyses, plan accordingly. Please also note that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

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

Sincerely,

Bert Nixon

Bert Nixon, Director
Bureau of Environmental Health

Enclosure
cc: Well & Septic Property File

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 – FEBRUARY 27, 2019

August 27, 2018

Homeowner
1930 Woodstock Road
Woodstock, MD 21163

RE: Merkle Property, P. 206
1930 Woodstock Road
Building Permit: B14000996
Well Permit: HO-95-2189

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 **2/8/2018.** Final approval of the well line connection to the dwelling was granted on **11/21/2016.** The well construction was completed on **8/19/2011.** Water samples were collected on **2/14/2018.**

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 **2/14/2018**. Results showed a Radium-226 level of **0.7** ± 0.0 **pCi/L** and a Radium-228 level of **1.1 ± 0.0 pCi/L**. The combined Radium 226/228 has a maximum contaminant level (MCL) of 5 pCi/L. The results for this test showed a combined level of 1.8pCi/L. 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-95-2189. 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 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	119948	Account #:	27689
Reference:	Mike McGinnis	Company:	CASH ACCOUNT
Location:	1930 Woodstock Road Granite, MD 21163	Requested By:	Mike McGinnis
		Source:	Well Water
Date/ Time Collected:	2/14/2018 1405	Site:	Powder Room Sink
Date/Time Rec'd:	2/14/2018 1540	Treatment:	None
Chlorine ppm:	Free: ND Total: ND	pH:	6.4
Collected By:	B. Dutterer 4717BD	Well #:	HO-95-2189

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Radium-226	0.7	pCi/L	****	903.1	2/26/2018 / 1107 / MJN
Radium-228	1.1	pCi/L	****	Ra-05	2/26/2018 / 0957 / SN

NOTES

1. ****Radium 226 and Radium 228 combined have a reference of 5 pCi/L
2. pCi/L = picocuries per liter
3. Radium 226 Detection Limit: 0.1 pCi/L; Radium 228 Detection Limit: 0.9 pCi/L
4. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
5. Sub-contracted to Reference Lab #278
6. ND:None Detected
7. Visual well check: Sealed, vented cap
8. pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : 14000996

Date Reported: 2/28/2018

MD State Certification # 133

Howard County Health Department

Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
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

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

July 21, 2014

Mr. Michael McGinnis
10138 Hopson's Choice Lane
Ellicott City, Maryland 21042

RE: 1930 Woodstock Road
Well Tag: HO - 95 – 2189

Dear Mr. McGinnis:

A sample was collected during a yield test on May 9, 2014 and submitted to the Department of Health & Mental Hygiene Laboratories to assess the possible presence of **Gross Alpha** and **Gross Beta** in the future well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which exists in your area of development within the County.

Results from this screening revealed a **Gross Alpha** of **14.9 ± 2.7 picocuries/liter (pCi/L),** while the **Gross Beta** level was **5.8 ± 2.0 pCi/L.** With the margin of error, the **Gross Alpha** result was above its **maximum contaminant level (MCL)** of **15 pCi/L,** while the **Gross Beta** level was below its targeted value of **50 pCi/L** (roughly equivalent to the **annual dose rate** of **4 millirems/year**).

At the time of testing and with respect to these parameters, the future well water supply **may not** meet EPA regulatory standards. Additional testing **for these parameters, plus Radium 226 and Radium 228** will be required to secure the future Use & Occupancy. Given the finding for **Gross Alpha**, the installation of a water softener system and / or a reverse osmosis system may be necessary. If treatment is installed, **pre and post short and long term Gross Alpha and Beta, plus a post Radium 226 / 228** will be needed to properly evaluate the effectiveness of the installed treatment(s). Alternatively, you may collect raw water samples for **short and long term Gross Alpha and Beta, plus Radium 226 / 228** to see if all values are below existing standards. Given that it typically takes up to one month to perform and receive back the **Radium** analyses, plan accordingly. Please also note that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

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

Sincerely,

Bert Nixon

Bert Nixon, Director
Bureau of Environmental Health

Enclosure
cc: Well & Septic Property File

SEND REPORT TO: Bert Nixon
Howard Co. Env. Health
8930 Stanford Blvd.
Columbia, MD 21045

DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St., Baltimore, MD 21201
Robert A. Myers, Ph.D., Director

Lab No. E02605 12

RADIATION ANALYSIS REQUEST FORM

Plant/Site Name: _____ County: Howard

Sample Source: 1930 Woodstock Rd. Location: HO-95-2189
(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A HO-95-2189 Radon-222 Field Blank Bottle A 2189 BB

Bottle B _____ 10138 Hobsons Choice Ln Bottle B _____

County 13 Ellicott City Plant No. MD 21042

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: _____ Federal Project: _____

Collector: B. Baker Telephone No.: (410) 313-2643

Date Collected: 5/9/2014 Time Collected: 11:00 a.m. _____ p.m.

Field pH: _____ Field Chlorine: _____

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

Remarks: Sample Collected During Yield Test

☑	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
☒	Gross Alpha	4000	2605	EPA 900.0	14.9 ± 2.7	5/13/14	MA	5/14/14
☒	Gross Beta	4100	2605	"	5.8 ± 2.0	"	"	"
☐	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: 5/12/14 Received By: _____

Data Release Signature: Deborah Muller-Sutch Date: 5/14/14

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

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

FORM REVISED 01/13
DHMH 4540 01/13

CUSTOMER COPY II

SEND REPORT TO:

DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St., Baltimore, MD 21201
Robert A. Myers, Ph.D., Director

Lab No. 002604 E12

RADIATION ANALYSIS REQUEST FORM

Plant/Site Name: Field Blank County: Howard

Sample Source: 289 Location: HO-95.2195 FB
(Well no., lab sink, sample tap, etc.)

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

County 13 Plant No.

CHECK (one per Box)

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

Submitters Code: ☐☐ Federal Project: ☐

Collector: B. Baker Telephone No.: (410) 313-2643

Date Collected: 5/9/14 Time Collected: 11:00 a.m. _____ p.m.

Field pH: _____ Field Chlorine: _____

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

Remarks: _____

☒	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
☒	Gross Alpha	4000	2604	EPA 900.0	< 2.0	5/13/14	MA	5/14/14
☒	Gross Beta	4100	2604	"	< 4.0	"	"	"
☐	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: 5/12/14 Received By: _____

Data Release Signature: Deborah Miller-Stiles Date: 5/14/14

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

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

FORM REVISED 01/13
DHMH 4540 01/13

CUSTOMER COPY I

ORIG MW1330 6/2/14

Invoice

Howard County Health Department

Bureau of Environmental Health
Attn: Bert Nixon, Director

DATE: JUNE 2, 2014
DATE OF SERVICE: MAY 9, 2014
INVOICE #: 2014-007

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

BILL TO Michael McGinnis
~~2257 Merion Pond~~
~~Woodstock, Maryland 21163~~
10138 Hobsons Choice Ln
Ellicott City MD 21042

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

DATE	DESCRIPTION	BALANCE	AMOUNT
05/09/14	Gross alpha/beta testing performed for 1930 Woodstock Road HO - 95 - 2189		$45.00
			AMOUNT DUE
			$45.00

Please detach and return with payment.

REMITTANCE	
Invoice #	2014-007
Site Information	1930 Woodstock Road
Amount Due	$45.00

payment 7/16/14

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

Receipt 54543

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 #:	119947	Account #:	27689
Reference:	Mike McGinnis	Company:	CASH ACCOUNT
Location:	1930 Woodstock Road	Requested By:	Mike McGinnis
	Granite, MD 21163	Source:	Well Water
Date/ Time Collected:	2/14/2018 1405	Site:	Powder Room Sink
Date/Time Rec'd:	2/14/2018 1540	Treatment:	None
Chlorine ppm:	Free: ND Total: ND	pH:	6.4
Collected By:	B. Dutterer 4717BD	Well #:	HO-95-2189

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223	2/15/2018 / 1015 / CRS
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223	2/15/2018 / 1015 / CRS
Nitrate	2.45	mg/L	10	601	2/15/2018 / 0900 / CRS
Turbidity	0.73	NTU	<10	SM20 2130B	2/14/2018 / 1630 / CRS
Sand	NS	mg/L	5	Visual/Gravimetric	2/14/2018 / 1645 / CRS

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. NS = None Seen (NS indicates less than 5 mg/L)
4. NTU = Nephelometric Turbidity Units
5. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
6. ND:None Detected
7. Visual well check: Sealed, vented cap
8. pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : 14000996

Date Reported: 2/15/2018

MD State Certification # 133