C 1 | 36714 — SEQUENCE NO. (MDE USE ONLY)

(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 12 DD 01 YY 15

DATE WELL COMPLETED MM 11 DD 18 YY 15

Depth of Well 200 (TO NEAREST FOOT)

OK 12/3/15 SC

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-15-0178

OWNER MILLER, BARRY (last name, first name)

WELL SITE ADDRESS 3715 WOODBINE RD TOWN WOODBINE

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
Top Soil	0	2	
Brown Slate	2	55	✓
Grey Slate	55	70	✓
Brown Slate	70	71	
Grey Slate	71	90	
Brown Slate	90	93	✓
Grey Slate	93	200	

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 W D 040

Gene F. Easterday
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: W R D 0 6 4

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 480

GALLONS OF WATER 184

DEPTH OF GROUT SEAL (to nearest foot)

from 0 ft. (TOP) to 55 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	6	60

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

C 2

EACH SCREEN	DEPTH (nearest ft.)	
1	40	58	200
2			
3			

SLOT SIZE 1 ____ 2 ____ 3 ____

DIAMETER OF SCREEN ____ (NEAREST INCH)

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

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

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

70 TELESCOPE CASING ____ 72 LOG INDICATOR ____ 74 75 76 OTHER DATA ____

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) 3

PUMPING RATE (gal. per min.) 20

METHOD USED TO MEASURE PUMPING RATE Bucket

WATER LEVEL (distance from land surface)

BEFORE PUMPING 50 ft.

WHEN PUMPING 200 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 2 (nearest foot)

LATITUDE 39.284980

LONGITUDE 77.129441

(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

B 1 | 32056 | SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

please type

557446

STATE PERMIT NUMBER: HO - 15 - 0178

fill in this form completely

Date Received (APA): NOV 13 13165

OWNER INFORMATION

MILLER (Last Name) BARRY (First Name)

3715 WOODBINE ROAD (Street or RFD)

WOODBINE MD 21797 (Town / State / Zip)

DRILLER INFORMATION

George F. Easterday M VD 040 (Driller's Name / License No.)

J. Franklin Easterday, Inc. (Firm Name)

9265 Brown Church Rd., Mt. Airy, Md. 21771 (Address)

George F. Easterday 11/3/2015 (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 ----- G ---

PERMIT No. HO - 15 - 0178

B 3 LOCATION OF WELL CC#

Howard (COUNTY)

SUBDIVISION

SECTION LOT

Woodbine (NEAREST TOWN)

B 4

SOURCES OF DRILLING WATER
1. wells
2.
3.

3715 Woodbine Road (STREET ADDRESS)

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

DISTANCE FROM ROAD: 100 Ft. ENTER FT OR MI

TAX MAP: 12 BLK: 24 PARCEL 22

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

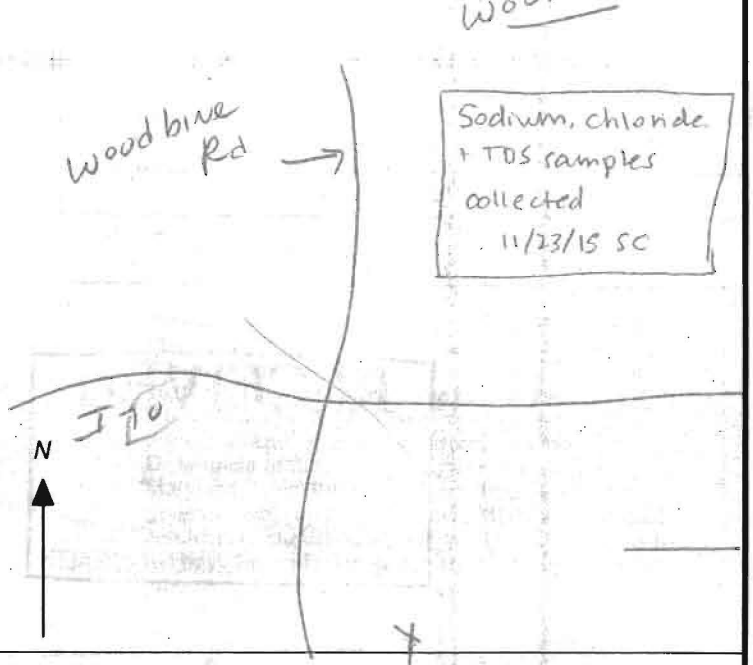
Howard (13) (COUNTY NAME / COUNTY NO.)

STATE SIGNATURE INSERT S

DATE ISSUED 11/10/15 CO SIGNATURE EXP. DATE 11/10/16

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



SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED= SEE ATTACHED MEMO

MDE/WMA/PER.071

② COUNTY

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

****

WATER WELL ABANDONMENT-SEALING REPORT FORM

****

SUBMIT COPIES OF COMPLETED FORM TO:
* COUNTY ENVIRONMENTAL AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

OK
11/18/16 SC

DATE WELL ABANDONED: 6-15-16 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) — —

* PERMIT NUMBER OF REPLACEMENT WELL: HO — 15 — 0178

* PERSON ABANDONING WELL: Bruce Thompson WELL DRILLER'S LICENSE NUMBER: JSO 038
CIRCLE: MWD / MSD / MGD

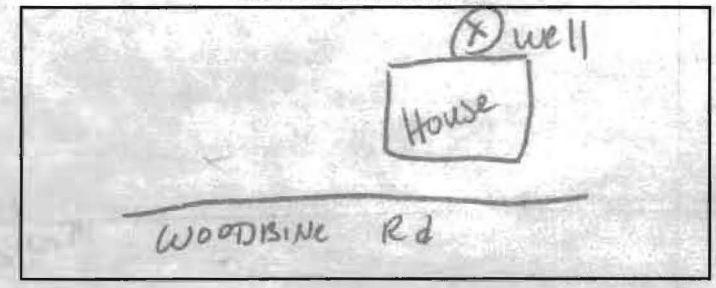
* OWNER'S NAME: BARRY Miller

* WELL LOCATION:
COUNTY: Howard
NEAREST TOWN: WOODBINE
TAX MAP ____ BLOCK ____ PARCEL ____
SUBDIVISION: ____
SECTION: ____ LOT: ____
STREET ADDRESS: 3715 WOODBINE Rd

LATITUDE 39.284688

LONGITUDE 77.129453

SITE LOCATION MAP



LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
Bentonite	50	5
Pit	5	0

VOLUME OF MATERIAL USED

350 # Bentonite as slurry

* TYPE OF WELL BEING ABANDONED:
X DRILLED ____ JETTED
____ BORED ____ HAND DUG
____ OTHER (specify) ____

* USE CODE:
X DOMESTIC ____ MUNICIPAL/PUBLIC
____ IRRIGATION ____ INDUSTRIAL
____ TEST/OBSERVATION ____ GEOTHERMAL

* TYPE OF CASING:
X STEEL ____ PLASTIC
____ CONCRETE ____ OTHER (specify)
____

SIZE OF CASING: 6 INCHES IN DIAMETER

DEPTH OF WELL: 150 FEET DEEP

WAS ANY CASING REMOVED? ____ YES X NO
If yes, length removed, in feet: ____

WAS CASING RIPPED OR PERFORATED? ____ YES X NO

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Bruce F. Robertson — MWD / MSD / MGS — 6-15-16

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE# — CIRCLE ONE — DATE

COUNTY

PROPERTY KNOWN AS:
L. 494 C F. 214
4TH ELECTION DISTRICT
HOWARD COUNTY, MD

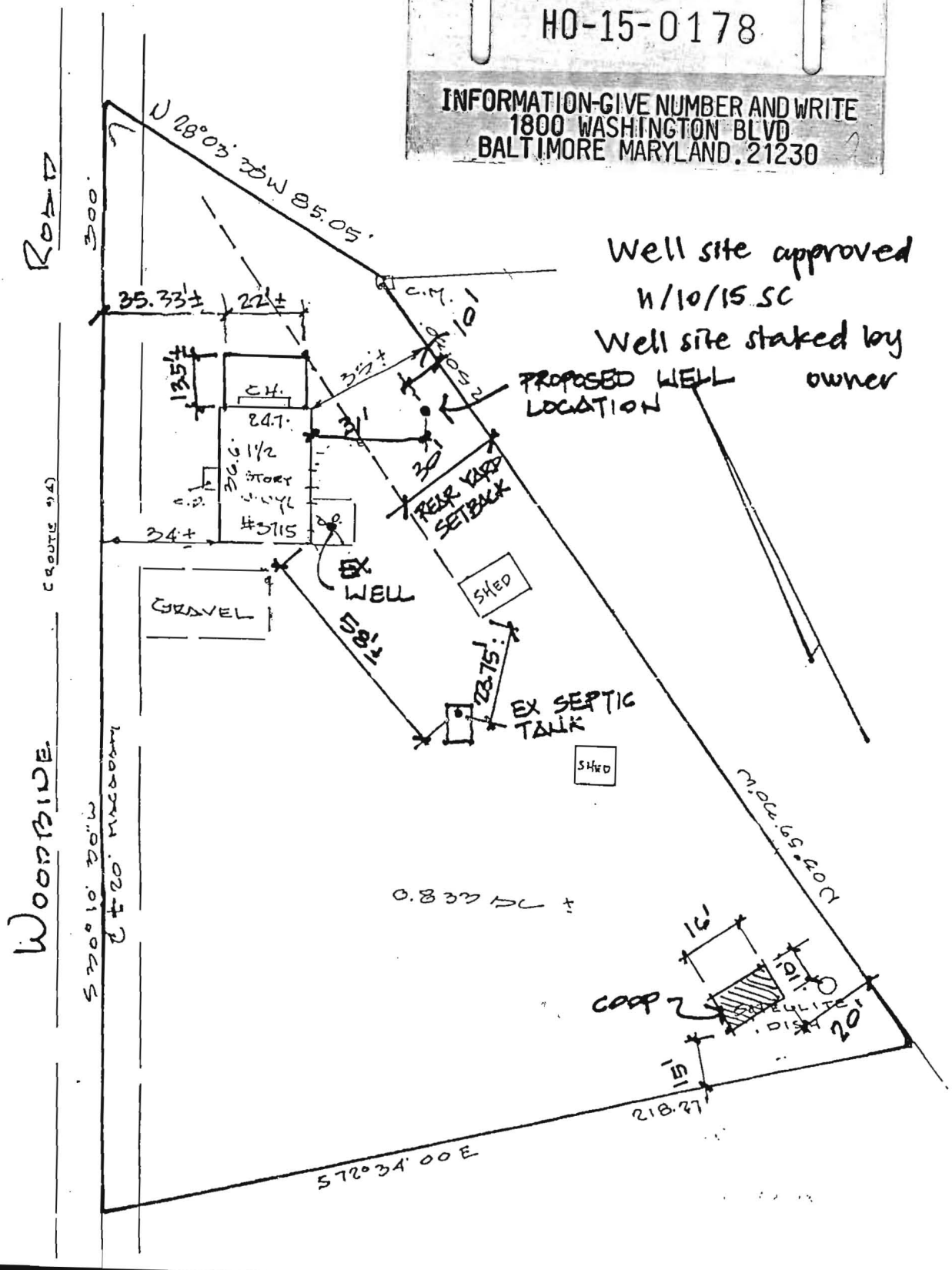
THIS PLAT CAN NOT BE USED TO ESTABLISH PROPERTY LINES OR CORNERS.

DO NOT REMOVE THIS TAG
DEPARTMENT OF THE ENVIRONMENT
WELL PERMIT NUMBER

HO-15-0178

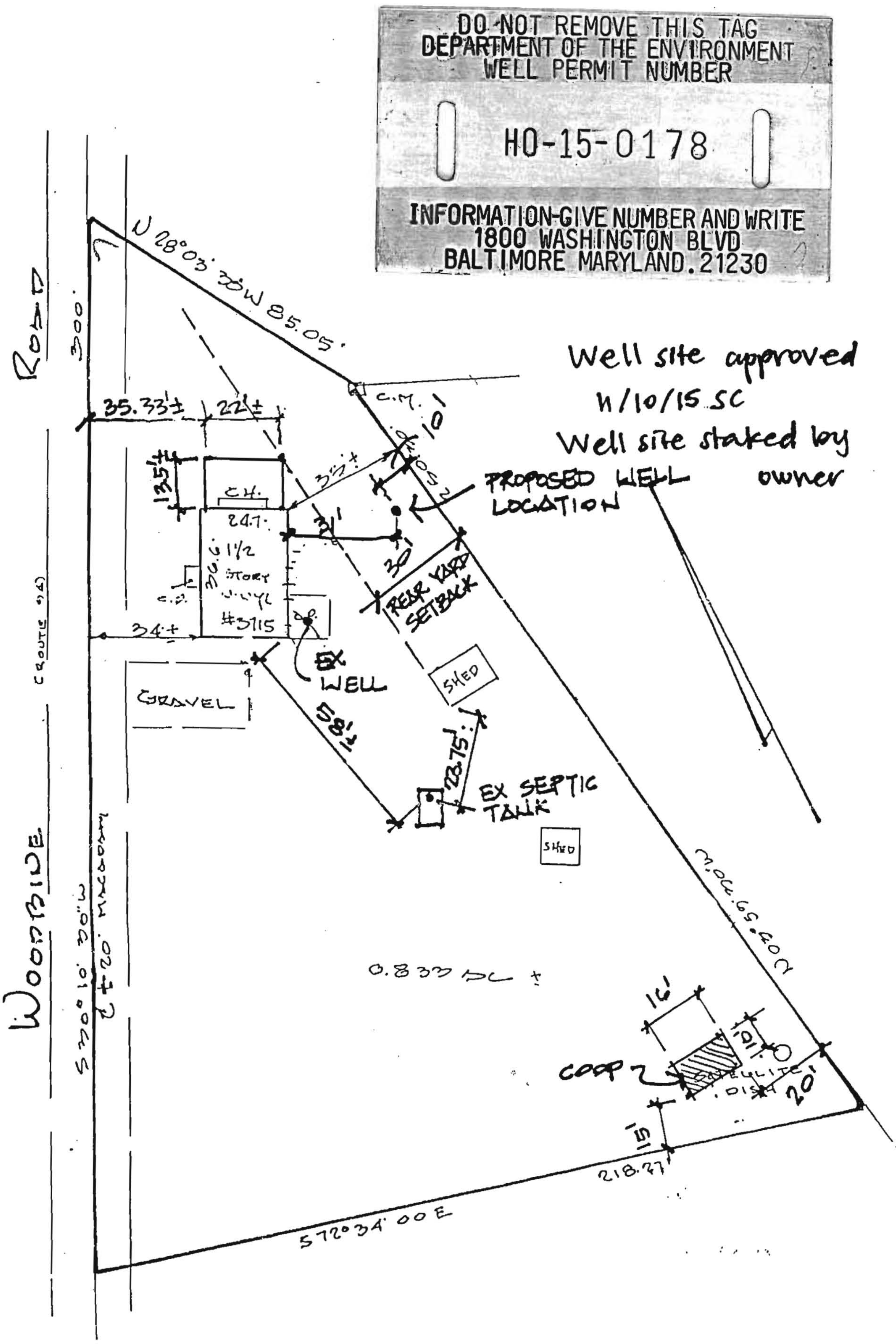
INFORMATION-GIVE NUMBER AND WRITE
1800 WASHINGTON BLVD
BALTIMORE MARYLAND. 21230

Well site approved
11/10/15 SC
Well site staked by owner



PROPERTY KNOWN AS:
L. 4974 F. 214
4th ELECTION DISTRICT
HOWARD COUNTY, MD

THIS PLAT CAN NOT BE USED TO ESTABLISH PROPERTY LINES OR CORNERS.



LOCATION DRAWING

CERTIFICATION	SEAL	SCALE 1" = 40'	DATE 8-18-00
This is to certify that I have surveyed the property known as: 3715 WOODBINE ROAD The information shown has been established by current acceptable survey procedures and from available record information. This drawing is to be used for Title Transfer Financing, or Refinancing Only and IS NOT to be used for the Establishment of Property Lines, Location for Fences, Garages, Buildings, or other Existing or Future Improvements.	STATE OF MARYLAND REGISTERED LAND SURVEYOR Walter Parl	LDE Inc. 9250 Rumsey Road Suite 106 Columbia, Maryland 21045 (410) 715-1070 (Balt.) (301) 596-3424 (Wash) (410) 715-9540 (Fax)	

Howard County
Health Department

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

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

TO ALL INTERESTED PARTIES

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

- [x] The well site has been staked by OWNER, (professional land surveyor or company employing professional land surveyors) on 11-2-15 (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.

Revised 6/10/03

3715 WOODBINE Rd

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

November 10, 2015

MEMORANDUM

TO: L.F. Easterday, Inc.

FROM: Sarah Collins SEC
Howard County Health Department
Well and Septic Program

RE: Replacement well at 3715 Woodbine Road

The Health Department sample collected water samples from the existing pit well at 3175 Woodbine Road on 10/21/2015. The water showed high levels of sodium, chloride, and total dissolved solids.

Due to its proximity to the road, the replacement well must be sampled for sodium, chloride, and total dissolved solids. In addition, the replacement well must be constructed of steel casing that extends 50' below grade or 10' into competent bedrock, whichever is deeper.

The existing pit well on the property must be abandoned. (sealed)

Cc: File

RECEIVED
JUN 21 2016
HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

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: Michael Runk Plumbing & Htg Telephone #: 410-781-6791
Address: P.O. Box 1453
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): Michael Runk License# 9698
***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: Barry Miller Telephone #: 410-675-0507
Subdivision: Lot #: Well Tag #: HO - -
Site Address: 3715 Woodbine Rd.

Submersible Pump Data		**Pitless Adapter**		**Well Cap and Electric Conduit**	
Make:	Berkeley	Make:	Harvard	Two piece watertight cap:	✓
Model #:	S7P4H505221	Model#:	APT800NL	Screened, vented well cap:	✓
Pump Capacity	7 GPM	Depth:	42" (36" min)	Cap secured to casing:	✓
Well Yield:	20 GPM	NSF/WSC approved:	✓	Conduit min 18" B.G.:	✓

Depth of well encountered at time of pump installation: 200 (feet) Conduit secured to well cap: ✓
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4
Torque arrestors, Cable guards, or other acceptable method used– Must circle one
Safety rope, if used, attached to brass rope adapter or other acceptable method inside of well casing ____

Piping to house		**House Connection**	
Type:	poly	PVC sleeve to undisturbed soil at wall penetration:	✓
PSI:	200 (160 psi min)	Length of sleeve(5' minimum from foundation):	40ft.
Depth of supply line:	42" (36" min)	Sleeve sealed properly:	fernco ✓

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.

Michael Runk — 6/10/16
Signature of company representative responsible for installation — date

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

Date Insp. Requested: 4/26/16 Date Insp. Approved: 4/27/16 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	✓	under footer
Adequate grout observed below pitless adapter	✓	

Connection at yard hydrant good - near chicken coop

FILE INQUIRY NOTES

DATE	RESULTS OF REVIEW FOR FILE
11/10/15	Site visit to look at proposed well location. Stake (multiple marking flags) is 31' off the house, possibly 75' from existing septic tank (no cleanout visible, in location shown on plan, recently uncovered in area + line to house). Proposed site is out of swale, possibly less downstream of contamination washing off road. (SC)
11/19/15	Spoke w/ Driller. Explained he was called in. Could not find record of call in. Confirmed steel casing and > 50' depth min casing. (~60'). Explained to make sure in future for all Drilling Activities make sure Approving Authority has receipt of Notification. Will coordinate time to meet onsite to sample TDS / sodium / chlorides (KMW)
11/23/15	Started pumping at 9:15 am. Collected sodium, chloride + TDS samples at 11 am. Bonnie from SHA (see card) was on site taking measurements - owners are submitting a claim to the State for high levels of road salts in water. Well 200' deep. water at 70'. (SC)

FILE INQUIRY NOTES

DATE	RESULTS OF REVIEW FOR FILE
1/4/15	Spoke w/ George Eastorday, confirmed that
	Fracture @ 55' was sealed off. Asked if
	possibly sealing off Fracture @ 93' and drilling
	deeper is alternative to ~~[illegible]~~ elevated chlorides results.
	He explained that may not be able to get water
	below 200'. (KMW)

Wolf, Kevin

From: John Boris -MDE- <john.boris@maryland.gov>
Sent: Wednesday, January 13, 2016 12:16 PM
To: Bricker, Robert; Williams, Jeffrey; Wolf, Kevin; Collins, Sarah
Cc: Steven Krieg -MDE-; Naomi Howell -MDE-
Subject: Re: geology inquiry_FW: 3715 Woodbine Road

All,

Thank you all for your participation in this discussion. Here is a summary and response to what was covered.

1. The argument presented by Mr. Bricker regarding the depth of casing issue has a lot of merit. Even if we're present when the well is drilled without extensive logging equipment we'll never know what the depth of the "competent" bedrock is.
2. We now have a new well that, on paper, meets the current construction specs that does not meet a secondary water quality standard. There is no regulatory requirement to deny a COP for secondary contaminants.
3. The math shows that if the well yield was run for the required 3 hours at 20 gallons per minute there was 3,600 gallons pulled from the well. Based on the static and depth of the well that number would be 16 times the volume of the well. Most sampling protocols require at least 3 well volumes be removed prior to sampling. The Applicant of record has indicated that running the well off for another 24 hours may alleviate the high chloride levels. Rather than going through the process of a percolation test and separate drainfield construction for the RO waste water the well owner may wish to consider the applicant's suggestion.
4. Based on the completion report a water bearing fracture exists between 90' to 93'. Sealing off of this zone may prevent the chlorides from entering the well bore. This is speculative, may cause a reduction in yield and cannot be done without additional cost incurred by the well owner. I think this should also be presented to the well owner as an option. This liner may cost less than a drainfield.
5. Although not a concern of ours does this 200' well that still requires treatment meet the SHA contract? For my own clarity and to provide insight into you I will attempt to follow up with SHA.

I think that sums it up. Let me know if you feel I missed something.

John A. Boris, Jr., LEHS
Geologist Program Consultant
Maryland Dept.of the Environment
Onsite Systems Division
Office: (410) 537-3678
Cell: (443) 992-6195
Fax: (410) 537-3163

On Mon, Jan 11, 2016 at 11:38 AM, Bricker, Robert <RBricker@howardcountymd.gov> wrote:

John,

Attached is a well completion report for a well that was drilled to replace a well that has high levels of TDS and chloride. A discussion of conflicting results for chloride and TDS concentrations found in the replacement well (HO-15-0178) is in the email string below.

These wells are located on a tiny parcel next to Route 94 and immediately south of a divide. An upland drain begins on the subject property, near the road, and continues east then southeast, being more or less coincident with the north side line and back line of the parcel. The replacement well would be at the west boundary of this drain feature. Also, there is a thrust fault, illustrated on Geologic Map of Howard County (Maryland Geologic Survey, 1993), that occurs under the property or immediately east of the property. The fault separates the Pleasant Grove Formation (which underlies Route 94 and the area west) from the Morgan Run Formation which lies to the east.

I contend that the well was not sealed deep enough, that the seal should have been at about 71-72 feet. I say this because of the thrust fault, thinking that the layer of 'Grey Slate' that is described at 55-to-70 feet depth was at one time continuous with the layer of 'Grey Slate' that is now 71-to-90 feet depth. For this to be true, an event would had to have occurred relatively early in a period when materials that formed the 'Brown Slate' were being deposited. That event being movement of the fault such that the 'Grey Slate' was thrust up, broken, and turned over upon the thin layer of materials that would eventually become 'Brown Slate' described now as being at 70-to-71 feet depth. In this scenario, any water more shallow than 71 feet, would be directly influenced by water infiltrating from the surface with little or no dilution. Of course, I'm not a geologist and this is conjecture.

The State Highways Commission folks seem satisfied to say that an RO treatment is needed. Kevin and I lean toward requiring a deeper seal, which may result in extending the depth of the well due to lower yield. We really need the opinion of a geologist familiar with Piedmont geology and the types of rocks described and their occurrence.

What's your opinion about the sequence described in the Driller's Well Log? Can you support a requirement to seal the well at greater depth?

Robert Bricker, CPSS, REHS/R.S., L.E.H.S.

From: Wolf, Kevin
Sent: Friday, January 08, 2016 5:02 PM
To: Bricker, Robert
Subject: FW: 3715 Woodbine Road

From: Bonnie Crosby [mailto:BCrosby@sha.state.md.us]
Sent: Friday, January 08, 2016 2:34 PM
To: Wolf, Kevin

Cc: Eric Dougherty
Subject: RE: 3715 Woodbine Road

Kevin,

When I was at the Miller home I was told, by the driller, static level is 33 feet, after pumping water table is at 70 feet. The casing is 60 feet and was grouted to 55 feet behind the casing, with a depth of 200 feet. The claimant's hand dug well is 50 feet in depth and was treated with a water softener treatment system. This well should be grouted from the base of the hole and sealed off. It is unclear where the water softener system was discharging to. The site may have limitations for the operation of the claimant's septic systems.

I met Sarah at the site. Our test results are 96 mg/L below the health department result for chloride and our result for TDS is 800 mg/L. We sampled at 10:30 a.m. Sarah sampled after SHA but not sure of the time. Don't understand her result of TDS at 1083 mg/L. Probably should resample. An RO System will work if the level of TDS is below 1000 mg/L. I'm not sure if drilling deeper would improve the water quality.

The claimant is in an area where the water table should be between 10 to 35 feet. Surface flow north of the claimant moves towards Cabin Run. South of the claimant the surface water moves south southwest. Several wells north of the claimant have well yields greater than 15 gallons a minute. South of the claimant the well yield is less than 2 gallons of water a minute. Wells located west of the claimant had dry holes. Well yields in this area are highly variable across short distances and cannot be predicted with much certainty. Fractures may also be more numerous under stream valleys and upland draws.

Thanks,

Bonnie

From: Wolf, Kevin [mailto:KWolf@howardcountymd.gov]
Sent: Monday, January 04, 2016 12:26 PM
To: Bonnie Crosby
Subject: 3715 Woodbine Road

Bonnie,

Please see attached water test results for Mr. Miller. I have also attached the Well completion report from Easterday's. Could you possibly have yourself and/or Eric take a look at this. I am a little beyond by expertise here understanding the hydrogeology behind this so I would love to hear Eric's feedback. Please take note of the water bearing fractures and casing depths to rock material. My initial thoughts: would drilling deeper be an option to lower the numbers? Relocation is limited as well. The driller (Mr. George Easterday) explained that an extended run-off on the well of maybe 24hrs might give us a better analytical analysis. Keep in mind, whole-house treatment is an option but Mr. Miller is limited to the area of subsurface treatment.

Thanks,

Kevin M. Wolf, **LEHS**

Groundwater Mgmt. Sec. Supervisor

Well & Septic Program

Bureau of Environmental Health

8930 Stanford Blvd.

Columbia, MD 21045

(o) 410-313-2645

(f) 410-313-2648

Howard County Health Department

kwolf@howardcountymd.gov

Wolf, Kevin

From: Wolf, Kevin
Sent: Monday, January 04, 2016 12:26 PM
To: 'bcrosby@sha.state.md.us'
Subject: 3715 Woodbine Road
Attachments: 3715_Woodbine_Road_analysis.pdf; 3715_Woodbine_Road_Completion_report.pdf

Bonnie,
Please see attached water test results for Mr. Miller. I have also attached the Well completion report from Easterday's. Could you possibly have yourself and/or Eric take a look at this. I am a little beyond by expertise here understanding the hydrogeology behind this so I would love to hear Eric's feedback. Please take note of the water bearing fractures and casing depths to rock material. My initial thoughts: would drilling deeper be an option to lower the numbers? Relocation is limited as well. The driller (Mr. George Easterday) explained that an extended run-off on the well of maybe 24hrs might give us a better analytical analysis. Keep in mind, whole-house treatment is an option but Mr. Miller is limited to the area of subsurface treatment.

Thanks,

Kevin M. Wolf, **LEHS**
Groundwater Mgmt. Sec. Supervisor
Well & Septic Program
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, MD 21045
(o) 410-313-2645
(f) 410-313-2648

Howard County
Health Department

kwolf@howardcountymd.gov

Collins, Sarah

From: Miller, Barry <BMiller@jmt.com>
Sent: Tuesday, May 17, 2016 1:44 PM
To: Collins, Sarah
Subject: 3715 Woodbine road RO

Sarah
Attached is my email from Carroll Water. Rusty from Feezer was planning on calling you directly.

Thanks
Barry

Sent from my iPhone

Begin forwarded message:

From: Charles Samardelis <charlie@carrollwater.com<mailto:charlie@carrollwater.com>>
Date: May 17, 2016 at 1:32:58 PM EDT
To: "'Miller, Barry'" <BMiller@jmt.com<mailto:BMiller@jmt.com>>
Subject: Water usage

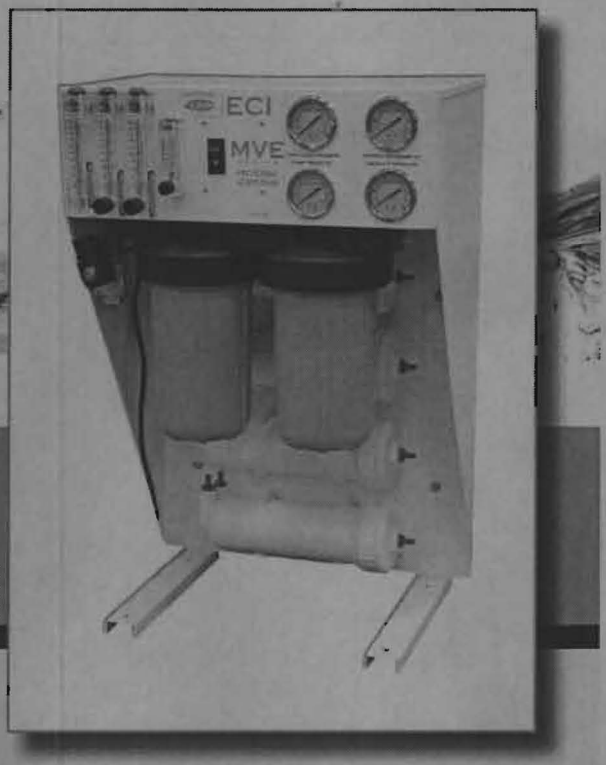
Hi Barry,

So the RO unit we will be installing has a 50:50 product to waste ratio but can be made to produce 75:25. Reverse osmosis systems are pressure and temperature sensitive so there is some fluctuation in estimated production. But for purposes of calculation we will you the 50:50 ratio. Since we will be installing 400 gallon storage the unit will send equal amount to waste. Given you are a family of 4 using 75 gallons/person/day you will use about 300 gallons of stored water per day. Over a week your usage will be ~2100 gallons of water week. So this would equal your waste stream at a 50:50 ratio. The other equipment will be negligible in waste since the softener is metered and uses only 36 gallons of water to clean itself. In the interest of being as accurate as possible the softener will add another ~ 144 additional gallons week to waste. So your total waste per week should be ~2300 gallons. Since all other quoted devices do not waste any water for cleaning purposes this should be your total. Again these are all approximate and ultimately waste depends on your usage patterns. Hope this helps to clarify numbers.

Kind Regards,
Charlie Samardelis
Certified Water Specialist level 5
Water Quality Association
Cell# 443-605-5029
Ecowater. Purifying the Essential

ECOWATER SYSTEMS®
PROFESSIONAL PRODUCTS

ECI



MVE Series Reverse Osmosis
500 to 2,000 GPD Capacity

Applications

Whole Home

Food Service

Car Wash

Features & Benefits

- ✔ **Compact Design** – Wall mount or floor/shelf mount
- ✔ **Ease of Serviceability** – Zero clearance required on bottom and sides. All components can be serviced from front or top of unit
- ✔ **Pretreatment Lockout** – Disables RO production during pretreatment regeneration
- ✔ **Single Power Connection** – For all controls, switches and solenoid valves
- ✔ **Filter In, Filter Out, Pump and Product Pressure Gauges** – Easy to operate and maintain
- ✔ **High Flow, Low-Pressure XLP Membrane** – 98.5% maximum TDS rejection. Stands up to the most rugged of feed water conditions
- ✔ **Carbon and Sediment Filter Included** – Provides basic pretreatment, dechlorination and sediment removal down to 5 microns.
- ✔ **Standard Plumbing Connection** – Uses 1/2" Inlet, 3/8" permeate and drain connections
- ✔ **Stainless Steel Solenoid Valves**
- ✔ **Brass Vane-Type Pump** – Smooth and quiet operating (pump on 2000 GPD unit only)
- ✔ **Heavy Duty** – Powder-coated steel cabinet for durability and rust resistance. Stainless steel frame available upon request

Pre-treatment Packages Available. Pre-treatment of feed water protects and extends the life of the purification. We offer complete pretreatment capabilities that include iron filters, sediment removal, water softeners, chlorine filters and antiscalant.

Specifications

Model	R2E12-BETTER	R4E12-BETTER	R4E12P-BETTER
Part Number	13000432	13000434	13000444
Nominal Capacity	500 GPD (0.347 gpm)	1,000 GPD (0.694 gpm)	2000 GPD (1.389 gpm)
Membranes (No. & Size)	2 – 3" x 12"	4 – 3" x 12"	4 – 3" x 12"
Operating Pressure (psi)	40-125	40-125	40-125
Recovery*	up to 75%	up to 75%	up to 75%
Typical Rejection**	98%	98%	98%
Max Feed Temperature	113 F (45 C)	113 F (45 C)	113 F (45 C)
Feed pH Range	2-11	2-11	2-11
Max Chlorine***	< 0.1 ppm	< 0.1 ppm	< 0.1 ppm
Max TDS	1000	1000	1000
Electrical	110V 60Hz, 1-phase	110V 60Hz, 1-phase	110V 60Hz, 1-phase
Motor	N/A	N/A	1/3 HP
Shipping Weight (lbs.)	75	80	100

* Ships with flow control to receive approximately 50% recovery.
** RO Performance may vary depending on feed water characteristics.
*** Please ensure carbon filter is replaced regularly to ensure feed water remains dechlorinated for proper performance.

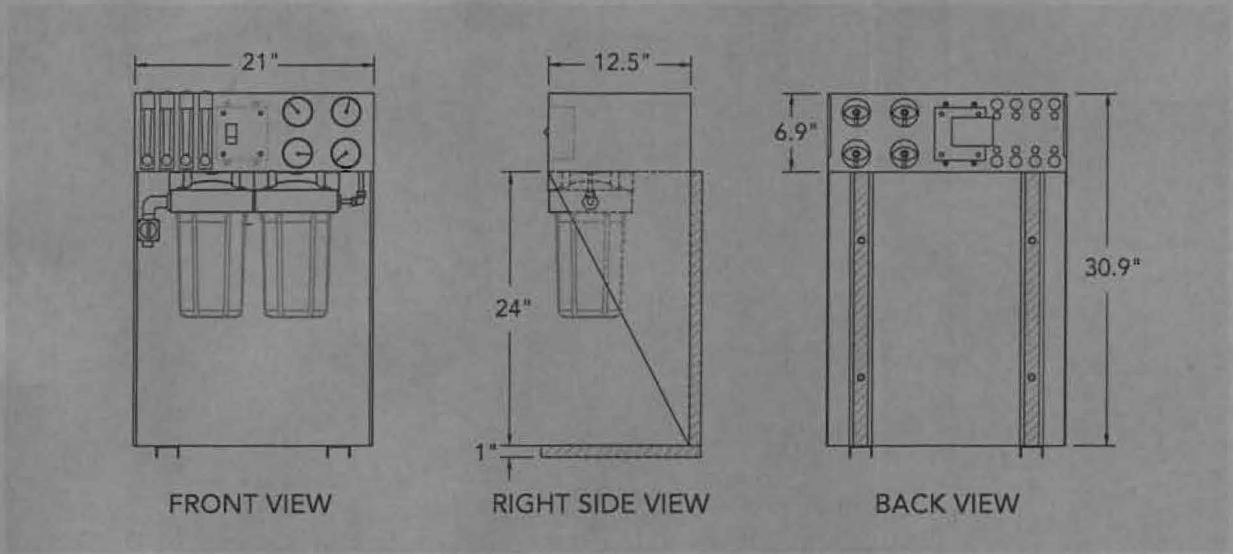
Pre-treatment Packages Available. Pre-treatment of feed water protects and extends the life of the purification. We offer complete pretreatment capabilities that include iron filters, sediment removal, water softeners, chlorine filters and antiscalant.

Accessory Options
651030 - MVE/LVE Replacement Membrane
235024 - 5-Micron Sediment Filter Cartridge
235037 - Carbon Filter

Please see manual and online ordering system for a complete service parts list and pricing.

Please contact ecicustomerservice@ecowater.com to learn more about our offering for both pressurized and atmospheric storage and delivery solutions.

Dimensions



For speedy quotes or answers to questions, contact us at:
ecicustomerservice@ecowater.com

ECOWATER SYSTEMS

CRO Series | Commercial Reverse Osmosis Membrane Systems

CustomCare®

	Design				Rejection and Flow Rates				Connections			Membranes			Vessels		Pumps			Electric	Size[2]	
	Configuration	Feed Water Source[1]	System Recovery[3]	System Recovery with Recycle	Nominal Salt Rejection	Permeate Flow Rate	Concentrate Flow Rate (Minimum)	Concentrate Recycle Flow Rate	Feed Connection	Permeate Connection	Concentrate Connection	Per Vessel	Quantity	Size	Array	Quantity	Type	HP	RPM @ 60Hz	Standard Voltage	Dimensions (LxWxH in inches)	Weight (lbs)
CRO-500	Single Pass	TDS <2000 ppm	26%	50% – 75%	98.5%	.34 gpm	1.00 gpm	Up to 1.00 gpm	3/4" FNPT	1/2" MNPT	1/2" FNPT	1	2	2521	1:1	2	Multi-Stage	½ HP	3450	120V 1Ph 60 Hz 9 Amps	18x18x55	110
CRO-1000	Single Pass	TDS <2000 ppm	41%	50% – 75%	98.5%	.69 gpm	1.00 gpm	Up to 1.00 gpm	3/4" FNPT	1/2" MNPT	1/2" FNPT	1	3	2521	1:1:1	3	Multi-Stage	½ HP	3450	120V 1Ph 60 Hz 9 Amps	18x18x55	115
CRO-2000	Single Pass	TDS <2000 ppm	32%	50% – 75%	98.5%	1.39 gpm	3.00 gpm	Up to 5.00 gpm	3/4" FNPT	1/2" MNPT	1/2" FNPT	1	1	4040	1	1	Multi-Stage	½ HP	3450	120V 1Ph 60 Hz 9 Amps	18x18x55	130
CRO-4000	Single Pass	TDS <2000 ppm	47%	50% – 75%	98.5%	2.78 gpm	3.00 gpm	Up to 5.00 gpm	3/4" FNPT	1/2" MNPT	1/2" FNPT	1	2	4040	1:1	2	Multi-Stage	½ HP	3450	120V 1Ph 60 Hz 9 Amps	18x18x55	135
CRO-6000	Single Pass	TDS <2000 ppm	58%	50% – 75%	98.5%	4.17 gpm	3.00 gpm	Up to 5.00 gpm	3/4" FNPT	1" MNPT	1/2" FNPT	1	3	4040	1:1:1	3	Multi-Stage	1 HP	3450	220V 1Ph 60 Hz 14.2 Amps	18x18x55	155
CRO-8000	Single Pass	TDS <2000 ppm	65%	50% – 75%	98.5%	5.56 gpm	3.00 gpm	Up to 5.00 gpm	3/4" FNPT	1" MNPT	1/2" FNPT	1	4	4040	1:1:1:1	4	Multi-Stage	1 HP	3450	220V 1Ph 60 Hz 14.2 Amps	18x18x55	180

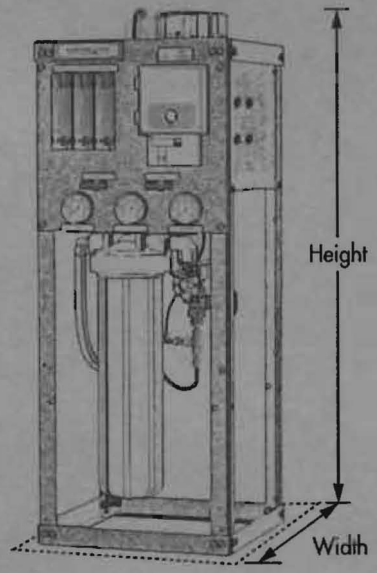
1 CustomCare recommends pretreatment.
2 Does not include operating space requirements.

Test Parameters: Static pressure test for 5 minutes.
3 Lower water temperature and high TDS feed water levels will significantly affect systems production capabilities.

NOTE: Shipping weight is dry.

Operating Limits

Design Temperature	77° F
Max/Min Feed Temperature	85°/40° F
Max/Min Ambient Temperature	120°/40° F
Max/Min Feed Pressure (psi)	85/45
Max Operating Pressure (psi)	150
Max SDI Rating	<3
Max Turbidity NTU	1
Max Free Chlorine, ppm	0
Max TDS, ppm	2000
Max Hardness GPG	0
Max/Min pH (continuous)	11/5
Max/Min pH (cleaning 30 Min.)	12/2



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

November 18, 2016

Miller
3715 Woodbine Road
Woodbine, MD 21797
Sent to barry.a.miller@gmail.com on 11/18/16

RE: **Replacement Well Sampling**
3715 Woodbine Road
#HO-15-0178

Dear Mr. Miller,

According to our records, your replacement well has been connected to the dwelling. We request that you contact the Community Hygiene Program at **(410) 313-1773** to schedule initial water sampling for the above referenced replacement well, as required by the Maryland Well Construction Regulation (*COMAR 26.04.04*). This sampling includes testing for bacteria, nitrates, turbidity, and sand. In addition, we would like to collect samples to test for sodium, chloride, and total dissolved solids (TDS) post-treatment by reverse osmosis. There is currently **no charge** for the sampling and it is to your benefit to have it tested.

Sampling of the new well should be collected from the primary indoor drinking tap, but if suitable scheduling is not possible, the sample may be taken from an outside tap to complete your sampling obligation. However, the potential for unsuccessful sample results increases when samples are collected from taps exposed to the outside environment. If sampling has already been performed by an outside lab, please help us by forwarding the results of the samples to our office.

The old well was abandoned by L.F. Easterday, Inc. on 6/15/16. Documentation was received by the Health Department that this task has been completed.

Feel free to contact me with any questions.

Sincerely,

Sarah Collins, L.E.H.S.
Well and Septic Program
SCollins@howardcountymd.gov
410-313-6287

Cc: Community Hygiene Program
File

Howard County
Health Department

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

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

November 03, 2015

Barry Miller
3715 WOODBINE ROAD
WOODBINE, MD 21797

RE: Water Sample Results
3715 WOODBINE ROAD

Dear Mr. Miller,

We have received the results from the testing of the water sample(s) taken from the above referenced property on October 21, 2015. A description of the results and the established standards for each test is included below. Standards such as maximum contaminant levels (MCL), secondary maximum contaminant levels (SMCL), and drinking water equivalency levels (DWEL) are established by the EPA and other agencies to provide a reference for determining when action should be taken. These standards help to improve the overall quality of your water or ensure that steps are taken to treat the water to prevent you and your family from getting sick. Typically, no water is completely free of contamination but you should be concerned if the level of contamination for a particular test exceeds the standard.

A sample was collected to determine the levels of **Chlorides** in your water supply. The chloride level was 698 parts per million. The SMCL for chlorides is 250 parts per million.

A sample was collected to determine the levels of **Dissolved Solids** in your water supply. The Dissolved Solids level was 1405 parts per million. The SMCL for Dissolved Solids is 500 parts per million.

A sample was collected to determine the levels of **Sodium** in your water supply. The Sodium level was 213.80 parts per million. The DWEL for Sodium is 20 parts per million.

Please contact the Health Department at (410) 313-1773 between 8:30 a.m. and 4:30 p.m., Monday through Friday if you have any questions regarding these test results.

Sincerely,

Ramar Martin, R.S.
Community Hygiene Program

Enclosures

SEND REPORT TO:

Howard County Health Department
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, Maryland 21045
PHONE NO.:

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
LABORATORIES ADMINISTARTION
1770 Ashland Avenue, Baltimore MD 21205
Robert A. Myers, Ph.D., Director

MICROBIOLOGICAL ANALYSIS OF DRINKING WATER

J03

Category Code: 4F **Invoice No.:** ICCP **Lab No.:**

FIELD RECORD

Sample Type:
Community ☐
Transient ☐
Non-Transient ☐
Private ☒
Repeat Sample ☐
C.O.P. ☐
Bottled Water ☐
OTHER: ☐

Source Address: Barry Miller, 3715 Woodbine Rd.
Sampling Site: Powder Room Faucet Bottle No.: HC 3715
Iced: Yes ☒ No ☐ Treated: Yes ☐ No ☐ County: Howard
Date Collected: 7/11/16 Time Collected: 10:00 ☒ am ☐ pm
Collector Name: Boleslav Shkolnik Collector ID No.: 3179 BS
Collector Tel. No.: 410-313-1787 PWS ID No.:

Test Requested:
Quantitative: Colilert®-QT ☒ Enterolert® ☐
P/A: Colilert® ☐ Enterolert® ☐
Multiple Tube Fermentation: MTF ☐ MTF (AI Method-Source Waters Only) ☐
Heterotrophic Plate Count (HPC-Pour Plate Method) ☐
OTHER: * Sand pressure not found
REMARKS:

County	Plant No.	Sampling Station
13		

pH	Res. Cl:	Free	Total
6.8	0.0	0.0	0.0

LABORATORY RECORD (DHMH Use Only)

Test Method(s): *(Check all that apply)*
☐ SM 9223 Colilert® ☐ SM 9223 Colilert®QT ☑ SM 9223 Colilert®-18
☐ SM 9221 B (MTF) ☐ SM 9221 B, E (MTF) ☐ SM 9221 E (AI)
☐ SM 9215B (HPC) ☐ Enterolert® ASTM D6503-99
☐ OTHER:

Temperature Control: 1.3 °C

Thiosulfate:
☑ Present
☐ Absent
☐ Undetermined

P/A TEST (Colilert®/Enterolert®)

100 mL sample	(+/-)
Total coliforms	
E. coli	
Enterococci	

JUL 11 '16 PM 1:59
RECEIVED
JUL 11 '16 PM 3:49
PLACED IN INCUBATOR
JUL 12 '16 AM 10:00
RESULTS READ/REPORTED

QUANTITATIVE TEST (Colilert®-QT/Enterolert®)

Dilution
☐ 1:10
☐ 1:100
☐ 1:1000

100 mL sample	# Positive wells	MPN/100 mL
Total coliforms	0	<1
E. coli	0	<1
Enterococci		

PRESUMPTIVE MTF TEST

mL of Sample	10
Gas/24h	
Gas/48h	

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CONFIRMED MTF TEST (MTF/AI Method)

mL of Sample	10	1	0.1
Total Coliforms			
Fecal Coliforms			

HETEROTROPHIC PLATE COUNT
(Pour Plate Method, Plate Count Agar)

Plate A: Plate B:
Incubate 24.48.72 hrs @ 35°C (CFU/ml) =
Average:

RESULTS

No. of Positives (+)	MPN/ 100 mL	Recorded Value

SAMPLE INVALIDATION:
☐ Sample Rejection
☐ Laboratory Accident
☐ Other:
RESAMPLE REQUIRED:
YES ☐ NO ☐
DATE:

BACTERIOLOGIST: CPlayer 7-12-16 **REVIEWED BY/DATE:** K. Jones 7/12/16 EA 7/13/16
REMARKS: ☐FAX ☐EMAIL ☐PHONE
LABORATORY: ☑ CENTRAL (443) 681-3960 ☐ ES REGIONAL (410) 219-9005 ☐WMD REGIONAL (301) 759-5115

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 Chemistry
INORGANICS ANALYTICAL LABORATORY
1770 Ashland Ave
Baltimore, Maryland 21205

WATER ANALYSIS

E17000110001
Received: 07/11/2016
Inorganic HC3715

Do not write above this line.

SAMPLE ID

Bottle Number HC3715 Name Barry Miller County Howard County Code 13

Location 3715 Woodbine Rd, Woodbine Data Category Code 4F

Collected: Date 7/8/16 Time 10:00 am Collector & Phone Boleslav Shkyar 410-313-1787 Submitter Code

CHECK (one per box)

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

FIELD

Plant No. Sampling Station Preservation: Iced X Acid V Type of Acid H_2SO_4

pH 6.8 Chlorine: Free 0.0 Total 0.0 Specific Conductance

Notes to Lab/Remarks: Samples taken from Powder Room 1st floor R/O Sys present (whole house)

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:		
●			

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JUL 15 2016
HOWARD COUNTY HEALTH DEPT
COMMUNITY HYGIENE PROGRAM

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

Number of Tests Requested Section Chief Date Reported

DHMH 90-A 6/15

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State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
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 NoE17000110 Date Coll. 07/11/2016 Date Received 07/11/2016 Submitted By:B. Shklyar

Field ID: HC3715
Lab No.: E17000110001

Analyte	Method	Result	Units	Date Analyzed
Nitrate + Nitrite, as N	EPA 353.2	0.61	mg N/L	07/12/2016
Turbidity	EPA 180.1	<0.5	NTU	07/12/2016

Comments:

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JUL 15 2016
HOWARD COUNTY
COMMUNITY HYGI

Approved by: _____ Approval date: 07/14/2016

*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.

Telephone: (443) 681 - 3855 Fax: (443) 681 - 4507 S:\EnviroFinal-InorganicsA.rpt

State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
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: E16002224 Date Coll.: 11/23/2015 Date Received 11/23/2015 Submitted By: Collins

Field ID: HO-15-0178
Lab No.: E16002224001

Method	Element	Result	Units	Date Analyzed
EPA 200.7	Sodium	106.20	ppm	11/24/2015

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DEC 07 2015
HOWARD COUNTY HEALTH DEPT.
BUREAU OF ENVIRONMENTAL HEALTH

Comments:

Approved by: Tinghao Choi Approval date: 12/01/2015

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

State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
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 NoE16002211 Date Coll. 11/23/2015 Date Received 11/23/2015 Submitted By:S. Collins

Field ID: HO-15-0178
Lab No.: E16002211001

Analyte	Method	Result	Units	Date Analyzed
Chloride	SM 4500-Cl E	504	mg/L	12/01/2015
Total Dissolved Solids	SM 2540C	1083	mg/L	11/24/2015

Comments:

RECEIVED
DEC 07 2015
HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

Approved by: _____ Approval date: 12/02/2015

*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.

Send Report To: Bert Nixon
Howard Co. Health Dept
Bureau of Environmental Health
9830 Stanford Blvd.
Columbia, MD 21045

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

E16002224001
Received: 11/23/2015
Metals HO-15-0178

Do not write above this line

LABORATORY ANALYSIS REQUEST

Please Print

Sample ID No: HO-15-0178 **Site Name:** 3715 Woodbine Rd. **County:** Howard

Sample Source: 3715 Woodbine Rd. (Street) Woodbine (Town or City) **Collector:** S. Collins (Name)

Date Collected: 11 / 23 /20 15 **Time Collected:** 11 a.m. _____ p.m. **Phone #:** 410-313-6287

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

Preservative Used: ☑ HNO_3 pH<2, SHS, 11/23/15 mL pH: _____

Sample Type:
Data Category Code ☐☐

☑ Drinking Water ☐ Community ☐ Non-Community ☑ Private
☐ Landfill ☐ Stream ☐ Sediment
☑ Source (Raw Water) ☐ Distribution (Treated) ☐ Other _____
☐ Liquid ☐ Solid

Specify Program: ☑ SDWA ☐ NPDES ☐ CWA ☐ RCRA ☐ Consumer Products ☐ Other _____

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

Remarks: Sample taken during yield

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

RECEIVED
DEC 07 2015
HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

Lab Supervisor: _____ **Date Reported:** _____ / _____ / _____

•Phone: (443) 681-3857 •Fax: (443) 681-4507

DHMH 4432 (05/15)

SUBMITTER'S COPY

Send Report To: Bert Nixon
Howard Co. Health Dept.
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, MD 21045

State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
INORGANICS ANALYTICAL LABORATORY
1770 Ashland Ave
Baltimore, Maryland 21205

WATER ANALYSIS

E16002211001
Received: 11/23/2015
Inorganic HO-15-0178

SAMPLE ID

Bottle Number HO-15-0178 Name 3715 Woodbine Rd. County Howard County Code 13

Location 3715 Woodbine Rd. Woodbine Data Category Code 4F

Collected: Date 11/23/15 Time 11 am Collector & Phone S. Collins 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 S

FIELD

Plant No. Sampling Station Preservation: Iced ☑ Acid ☐ Type of Acid

pH Chlorine: Free Total Specific Conductance

Notes to Lab/Remarks: Sample taken during yield

CHECK TESTS	TESTS	Error Code	RESULTS
	Alkalinity (Total)		
	Ammonia - N		
✓	Chloride		
	Conductance*,Spec.		
✓	Dissolved Solids (Total)		
	Hardness		
	Fluoride		
	Nitrite, N		
	Nitrate - Nitrite, N		
	Sulfate		
	Total Solids		
	Turbidity*		
	Other:		

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

Number of Tests Requested

Section Chief

Date Reported

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State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
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 NoE16001741 Date Coll. 10/21/2015 Date Received 10/21/2015 Submitted By:Boleslav Shklyar

Field ID: HC 3715
Lab No.: E16001741001

Analyte	Method	Result	Units	Date Analyzed
Chloride	SM 4500-Cl E	698	mg/L	10/23/2015
Total Dissolved Solids	SM 2540C	1405	mg/L	10/23/2015

Comments:

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Approved by: Charles Ali Approval date: 10/27/2015

*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.

Telephone: (443) 681 - 3855 Fax: (443) 681 - 4507 S:\EnviroFinal-InorganicsA.rpt

State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
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: E16001766 Date Coll.: 10/21/2015 Date Received 10/21/2015 Submitted By: Shklyar

Field ID: HC 3715
Lab No.: E16001766001

Method	Element	Result	Units	Date Analyzed
EPA 200.7	Sodium	213.80	ppm	10/23/2015

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Comments:

Approved by: Sadia Munsen Approval date: 10/27/2015

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

Telephone: (443) 681 - 3853 Fax: (443) 681-4507 S:\EnviroFinal-Metals.rpt

MD DHMH Laboratories Administration
1770 Ashland Avenue
Baltimore City, MD 21205

E16001766001
Received: 10/21/2015
Metals HC 3715

Send Report To:

Howard County Health Department
Bureau of Environmental Health
6930 Stanford Blvd.
Columbia, Maryland 21045

Division of Environmental Chemistry
ENVIRONMENTAL METALS SECTION
201 W. Preston Street, Baltimore, Maryland 21201
Robert A. Myers Ph.D. Director

Do not write above this line

LABORATORY ANALYSIS REQUEST
Please Print

Sample ID No: HC 3715 **Site Name:** Berry Mill Rd **County:** Howard

Sample Source: 3715 Woodbine Rd (Street) Woodbine (Town or City) **Collector:** B. Shkyar (Name)

Date Collected: 10/21/2015 **Time Collected:** 9:00 a.m. ____ p.m. **Phone #:** 410 313-1727

Sample Preserved By: ☐ Field ☐ ESRL ☐ WMRL ☐ Central Lab
Preservative Used: ☑ HNO_3 pH<2, SHS, 10/22/15

Sample Type: ☑ Drinking Water ☐ Community ☐ Non-Community ☑ Private ☐ Landfill ☐ Stream ☐ Sediment ☑ Source (Raw Water) ☐ Distribution (Treated) ☐ Other ____ ☐ Liquid ☐ Solid

Data Category Code ☐☐

Specify Program: ☑ SDWA ☐ NPDES ☐ CWA ☐ RCRA ☐ Consumer Products ☐ Other ____

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

Remarks: Samples taken from Outdoor Faucet

✓	Element	Results (ppm)	✓	Element	Results (ppm)
	Antimony (Sb)			Copper (Cu)	
	Arsenic (As)			Lead (Pb)	
	Barium (Ba)			Silver (Ag)	
	Beryllium (Be)			Zinc (Zn)	
	Cadmium (Cd)			Aluminum (Al)	
	Chromium (Cr)			Iron (Fe)	
	Mercury (Hg)			Manganese (Mn)	
	Nickel (Ni)			Calcium (Ca)	
	Selenium (Se)			Magnesium (Mg)	
✓	Sodium (Na)			Potassium (K)	
	Thallium (Tl)			Uranium (U)	

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Lab Supervisor: ____ **Date Reported:** ____/____/____

• Phone: (410) 767 – 6186 • Fax: (410) 333 – 5122

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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 Chemistry
INORGANICS ANALYTICAL LABORATORY
1770 Ashland Ave
Baltimore, Maryland 21205

WATER ANALYSIS

E16001741001
Received: 10/21/2015
Inorganic HC 3715

Do not write above this line.

SAMPLE ID

Bottle Number HC 3715 Name Barry Miller County Howard County Code 13

Location 3715 Woodbine Rd, Woodbine Data Category Code 4F

Collected: Date 10/21/15 Time 9:00 am Collector & Phone Boleslav Sukiyar 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 S

FIELD

Plant No. Sampling Station Preservation: Iced ☑ KH Acid ☐ Type of Acid

pH 66 Chlorine: Free 00 Total 00 Specific Conductance

Notes to Lab/Remarks: Samples taken from Outdoor Faucet

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:		

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

Number of Tests Requested

Section Chief

Date Reported

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