

C1 56412

SEQUENCE NO. (MDE USE ONLY)

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

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

ST/CO USE ONLY DATE Received

DATE WELL COMPLETED

APPROVED Depth of Well 600 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO 17-0239

OWNER Land Design + Development WELL SITE ADDRESS Philadelphia Mall TOWN Clarksburg SUBDIVISION JACKS LAND, INC SECTION LOT 7

WELL LOG

Not required for driven wells

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

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Rows include Soil, Red clay, Brown shale, MD GRAN, Rock.

GROUTING RECORD

WELL HAS BEEN GROUTED (Y/N) TYPE OF GROUTING MATERIAL (Cement, Bentonite Clay) NO. OF BAGS, NO. OF POUNDS, GALLONS OF WATER, DEPTH OF GROUT SEAL

CASING RECORD

MAIN CASING TYPE (Steel, Concrete, Plastic, Other) Nominal diameter, Total depth

OTHER CASING (if used)

Table for other casing with columns: diameter, depth (from, to)

SCREEN RECORD

screen type or open hole (Steel, Brass, Bronze, Plastic, Open Hole, Other)

DEPTH (nearest ft.)

Table for depth with columns: slot size, diameter of screen

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, PUMPING RATE, METHOD USED TO MEASURE PUMPING RATE, WATER LEVEL, BEFORE PUMPING, WHEN PUMPING, TYPE OF PUMP USED

PUMP INSTALLED

DRILLER INSTALLED PUMP (YES/NO), TYPE OF PUMP INSTALLED, CAPACITY: GALLONS PER MINUTE, PUMP HORSE POWER, PUMP COLUMN LENGTH, CASING HEIGHT

LATITUDE 39 21497 LONGITUDE 76 97544 (DEFAULT COORD. WGS 84)

Pursuant to §10-624 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04.

 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
 DW
 10/13/16

DATE WELL ABANDONED: 9/26/16 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) _____

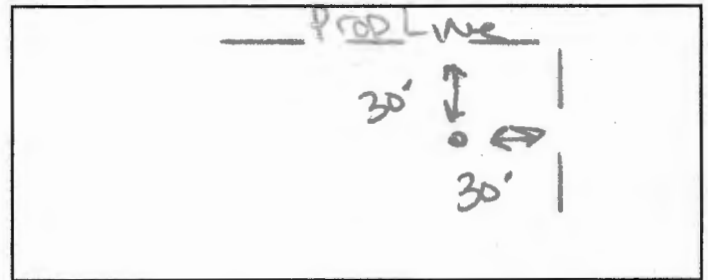
* PERMIT NUMBER OF REPLACEMENT WELL: _____

* PERSON ABANDONING WELL: Michael Barlow WELL DRILLER'S LICENSE NUMBER: 355

CIRCLE: MWD / MSD / MGD

* OWNER'S NAME: Land Design + Development

SITE LOCATION MAP



* WELL LOCATION:
 COUNTY: HOWARD
 NEAREST TOWN: HIGHLAND
 TAX MAP 34 BLOCK _____ PARCEL 414
 SUBDIVISION: JACKS LANDING
 SECTION: _____ LOT: _____
 STREET ADDRESS: TRIADOPHA MILL ROAD

LATITUDE 3 9.21602 - -

LONGITUDE 76.97469 - -

LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
<u>Cement</u>	<u>445</u>	<u>0</u>
VOLUME OF MATERIAL USED		

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

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

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

SIZE OF CASING: 6 INCHES IN DIAMETER

DEPTH OF WELL: 445 FEET DEEP

WAS ANY CASING REMOVED? _____ YES NO

If yes, length removed, in feet: _____

WAS CASING RIPPED OR PERFORATED? _____ YES NO

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN _____ LICENSE#

355

MWD / MSD / MGS

CIRCLE ONE

9/27/16

DATE

COUNTY _____

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C1 34146

SEQUENCE NO. (MDE USE ONLY)

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.

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

COUNTY NUMBER

ST/CO USE ONLY DATE RECEIVED

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL"

OWNER, WELL SITE ADDRESS, SUBDIVISION, SECTION, LOT

WELL LOG Not required for driven wells

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

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes handwritten entries: Soil, Brown Sandy Shale, Brown shale, Med Gray Rock, Well # 1 - 500' DRY, Well # 2 - 300' DRY (DRY HOLES BACKFILLED)

GROUTING RECORD

WELL HAS BEEN GROUTED (Y/N), TYPE OF GROUTING MATERIAL (CEMENT, BENTONITE CLAY), NO. OF BAGS, NO. OF ROUNDS, GALLONS OF WATER, DEPTH OF GROUT SEAL

CASING RECORD

MAIN CASING TYPE (PL), Nominal diameter top (main) casing (6), Total depth of main casing (45)

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

SCREEN RECORD screen type or open hole (ST, BR, HO, PL, OT)

NUMBER OF UNSUCCESSFUL WELLS: 2, WELL HYDROFRACTURED (Y/N)

CIRCLE APPROPRIATE LETTER A, E, P

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION"

DRILLERS LIC. NO., DRILLERS SIGNATURE, LIC. NO.

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

DEPTH (nearest ft.) 45, 500

DIAMETER OF SCREEN (NEAREST INCH) 56, 60

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

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T, W, Q

PUMPING TEST

HOURS PUMPED (nearest hour) 6, PUMPING RATE (gal. per min.) 1.0, METHOD USED TO MEASURE PUMPING RATE (Submersible), WATER LEVEL (distance from land surface) BEFORE PUMPING 50, WHEN PUMPING 200

TYPE OF PUMP USED (for test) S submersible

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

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

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

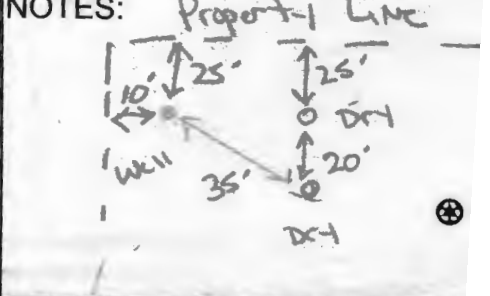
CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31, 35

PUMP HORSE POWER 37, 41

PUMP COLUMN LENGTH (nearest ft.) 43, 47

CASING HEIGHT (circle appropriate box and enter casing height) + above, - below, LAND SURFACE 1 (nearest foot)

LATITUDE 39.21596, LONGITUDE 76.97468 (DEFAULT COORD. WGS 84)



B 1 28750

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

Ho-14-0115 fill in this form completely

554595-F please type

Date Received (APA)

08 22 14

OWNER INFORMATION

LAND DESIGN & DEVELOPMENT 5300 DORSEY HALL DRIVE, SUITE 102 ELLICOTT CITY MD 21043

LOCATION OF WELL

HONARD COUNTY JACK'S LANDING SUBDIVISION SECTION 44 46 LOT 7 48 50 HIGHLAND NEAREST TOWN

DRILLER INFORMATION

MICHAEL BARLOW MWD 355 BARLOW WELL DRILLING 6 522 UNDERWOOD LANE MD 8/18/14

SOURCES OF DRILLING WATER

1. WELL

TRIADELPHIA MILL RD STREET ADDRESS

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)



34 500 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39

TAX MAP: 34 BLK: 3 PARCEL 414

WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) 8 12 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 20

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard COUNTY NAME 517922 COUNTY NO. STATE SIGNATURE INSERT S DATE ISSUED 10/7/14 CO SIGNATURE EXP. DATE

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) INDUSTRIAL, COMMERCIAL, DEWATERING PUBLIC WATER SUPPLY WELL TEST, OBSERVATION, MONITORING OPEN LOOP GEOTHERMAL CLOSED LOOP GEOTHERMAL

PROPOSED LOCATION OF WELL ON LOT SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL

APPROXIMATE DEPTH OF WELL 250 FEET

APPROXIMATE DIAMETER OF WELL 6 INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jettied & DRIVEN AIR-ROTary AIR-PERCussion ROTARY (Hydraulic Rotary) CABLE REVERSE-ROTary Drive-POINT

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

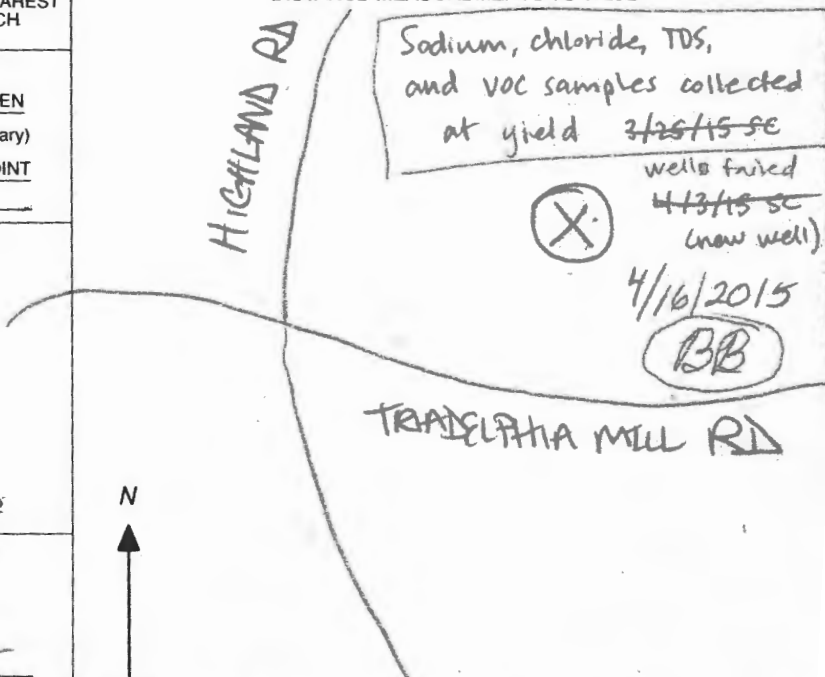
- THIS WELL WILL NOT REPLACE AN EXISTING WELL THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS THIS WELL WILL DEEPEM AN EXISTING WELL

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

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

APPROP. PERMIT NUMBER G

PERMIT No. Ho-14-0115



SPECIAL CONDITIONS

Sodium, chlorides TDS sample needed @ Yield VOC testing required at yield test

TAG: 2/20/18 (SC)

B 1 SEQUENCE NO. (MDE USE ONLY) **55284** STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type STATE PERMIT NUMBER **40-17-02309**
fill in this form completely

OWNER INFORMATION
 Date Received (APA) **10/28/15**
 8 MM 'DD' YY 13
 15 Last Name **Land Design & Development** Owner First Name 34
 36 **8318 Forrest Street, Suite 200** Street or RFD 55
 57 **Ellicott City MD 21043** Town 70 State 72 Zip 76

B 3 LOCATION OF WELL
 8 COUNTY **Howard** 21
 23 SUBDIVISION **Jacks Landing** 42
 SECTION **44** 46 LOT **7** 48 50
 52 NEAREST TOWN **Clarkville** 71

DRILLER INFORMATION
 Driller's Name **Michael Barlow** MWD **355** License No. 81
 Firm Name **Barlow Well Drilling**
 Address **522 Underwood Lane 21014**
 Signature **[Signature]** Date **12/7/17**

B 4 SOURCES OF DRILLING WATER
 1. **Well**
 2.
 3.
 STREET ADDRESS **Tridelpia Mill Rd** 30
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
 NORTH WEST EAST SOUTH
 34 **50** 37 DISTANCE FROM ROAD
 ENTER FT OR MI 38 39
 TAX MAP: **34** BLK: **3** PARCEL **414**

B 2 WELL INFORMATION
 APPROX. PUMPING RATE (GAL. PER MIN.) **5**
 8 12
 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) **750**
 14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)
 DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
 FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
 INDUSTRIAL, COMMERCIAL, DEWATERING
 PUBLIC WATER SUPPLY WELL
 TEST, OBSERVATION, MONITORING
 OPEN LOOP GEOTHERMAL
 CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL
 COUNTY NAME **Howard** COUNTY NO. **13**
 STATE SIGNATURE _____ INSERT S → 41
 DATE ISSUED **2/9/18** CO SIGNATURE **[Signature]** EXP. DATE **2/9/19**
 43 MM DD YY 48

APPROXIMATE DEPTH OF WELL **300** FEET
 24 28

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
 2/15
 - @ 40'
 - bedrock
 @ 45'
 - set 55'
 steel casing
 2/16
 - pulling rods
 - 600 deep
 - 2' gap
 - water @ 240', 525'
 3/26
 - yield w/ collected samples
 3/27 - yield w/ collected samples
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APPROXIMATE DIAMETER OF WELL **6** INCH
 NEAREST

METHOD OF DRILLING (circle one)
 BORED (or Augered) JETTED Jettied & DRIVEN
 30 AIR-ROTary AIR-PERcussion ROTARY (Hydraulic Rotary)
 37 CABLE REVERSE-ROTary DRIVE-POINT
 other _____

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)
 THIS WELL WILL NOT REPLACE AN EXISTING WELL
 THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
 THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
 THIS WELL WILL DEEPEM AN EXISTING WELL
 PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 _____ 52

Not to be filled in by driller (MDE OR COUNTY USE ONLY)
 APPROP. PERMIT NUMBER _____ **G** _____
 PERMIT No. **40-17-02309**
 70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS See attached memo
 NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED



MICHAEL BARLOW WELL DRILLING & SERVICE, INC.
 522 Underwood Lane Bel Air, Maryland 21014
 (410) 838-6910 Fax (410) 838-3582

WELL YIELD REPORT

Date Test Completed:		March 26, 2018	
Well Depth:		600	feet
Customer	Land Design & Development	Permit #	H0-17-0239
Road	Triadelphia Mill Rd	Subdivision	Jacks Landing
City	Highland	Section	
State	Maryland	Lot #	7

Time	Water Level feet	Time to Fill 1-gallon bucket seconds	G.P.M.
9:30 AM	45	4	15.00
9:45 AM	121	7	8.57
10:00 AM	183	30	2.00
10:15 AM	183	30	2.00
10:30 AM	183	30	2.00
10:45 AM	182	30	2.00
11:00 AM	182	30	2.00
11:15 AM	182	30	2.00
11:30 AM	182	30	2.00
11:45 AM	182	30	2.00
12:00 PM	182	30	2.00
12:15 PM	182	30	2.00
12:30 PM	181	30	2.00
12:45 PM	181	30	2.00
1:00 PM	181	30	2.00
1:15 PM	181	30	2.00
1:30 PM	181	30	2.00
1:45 PM	181	30	2.00
2:00 PM	181	30	2.00
2:15 PM	181	30	2.00
2:30 PM	181	30	2.00
2:45 PM	181	30	2.00
3:00 PM	181	30	2.00
3:15 PM	181	30	2.00
3:30 PM	181	30	2.00
3:45 PM	181	30	2.00
4:00 PM	181	30	2.00

This yield test report is for informational purposes only. Please note the yield may increase or decrease over time and the GPM indicated above is not a guarantee.



MICHAEL BARLOW WELL DRILLING & SERVICE, INC.
 522 Underwood Lane Bel Air, Maryland 21014
 (410) 838-6910 Fax (410) 838-3582

WELL YIELD REPORT

Date Test Completed:	June 8, 2018		
Well Depth:	600	feet	
Customer	Land Design & Development	Permit #	H0-17-0239
Road	Triadelphia Mill Rd	Subdivision	Jacks Landing
City	Highland	Section	
State	Maryland	Lot #	7

Time	Water Level feet	Time to Fill 1-gallon bucket seconds	G.P.M.
9:45 AM	48	7	8.57
10:00 AM	150	30	2.00
10:15 AM	150	30	2.00
10:30 AM	150	30	2.00
10:45 AM	150	30	2.00
11:00 AM	150	30	2.00
11:15 AM	150	30	2.00
11:30 AM	150	30	2.00
11:45 AM	150	30	2.00
12:00 PM	150	30	2.00
12:15 PM	150	30	2.00
12:30 PM	150	30	2.00
12:45 PM	149	30	2.00
1:00 PM	149	30	2.00
1:15 PM	149	30	2.00
1:30 PM	149	30	2.00
1:45 PM	149	30	2.00
2:00 PM	149	30	2.00
2:15 PM	149	30	2.00
2:30 PM	149	30	2.00
2:45 PM	149	30	2.00
3:00 PM	149	30	2.00
3:15 PM	149	30	2.00
3:30 PM	149	30	2.00
3:45 PM	149	30	2.00
4:00 PM	149	30	2.00
4:15 PM	149	30	2.00
4:30 PM	149	30	2.00

This yield test report is for informational purposes only. Please note the yield may increase or decrease over time and the GPM indicated above is not a guarantee.

 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

*o/gw
10/13/16*

DATE WELL ABANDONED: 9-26-16 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any)

Ho-14-0115

* PERMIT NUMBER OF REPLACEMENT WELL:

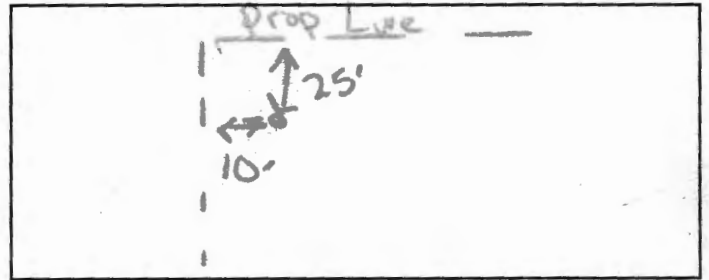
* PERSON ABANDONING WELL: Michael Bartlow WELL DRILLER'S LICENSE NUMBER: 355

CIRCLE: (MWD) MSD / MGD

* OWNER'S NAME: Land Design + Development

SITE LOCATION MAP

* WELL LOCATION:
 COUNTY: Howard
 NEAREST TOWN: Highland
 TAX MAP 34 BLOCK PARCEL 414
 SUBDIVISION: Jacks Landing
 SECTION: 7 LOT: 7
 STREET ADDRESS: Triadelphia Mill Rd



LATITUDE 3 9.21596

LONGITUDE 7 6.97468

LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
<u>Cement</u>	<u>500</u>	<u>0</u>
VOLUME OF MATERIAL USED		

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

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

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

SIZE OF CASING: 6 INCHES IN DIAMETER

DEPTH OF WELL: 500 FEET DEEP

WAS ANY CASING REMOVED? YES NO

If yes, length removed, in feet: _____

WAS CASING RIPPED OR PERFORATED? YES NO

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SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN [Signature] LICENSE# 355

CIRCLE ONE (MWD) MSD / MGS

DATE 9/27/16

COUNTY

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

WATER WELL ABANDONMENT-SEALING REPORT FORM

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- * WELL OWNER
- * MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 4/8/2015 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any)

* PERMIT NUMBER OF REPLACEMENT WELL:

* PERSON ABANDONING WELL: Michael Borlas WELL DRILLER'S LICENSE NUMBER: 355
CIRCLE: (MWD) MSD / MGD

* OWNER'S NAME: Land Design + Development

* WELL LOCATION:
COUNTY: HOWARD
NEAREST TOWN: CLARKSVILLE
TAX MAP 34 BLOCK PARCEL 414
SUBDIVISION: JACKS LANDING
SECTION: LOT 7
STREET ADDRESS: Trindelphia Mill Rd

LATITUDE 39.21590

LONGITUDE 76.97471

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

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

* TYPE OF CASING: NONE - Dry hole #1
 STEEL PLASTIC
 CONCRETE OTHER (specify) _____

SIZE OF CASING: 6 INCHES IN DIAMETER

DEPTH OF WELL: 500 FEET DEEP

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

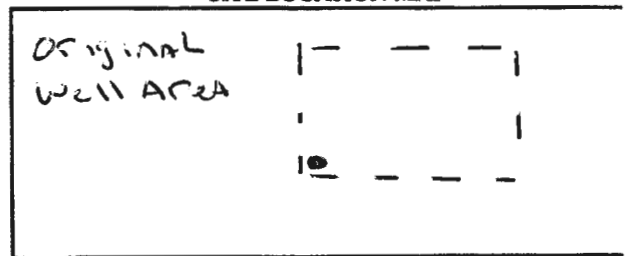
WAS CASING RIPPED OR PERFORATED? YES NO

SIGNATURE: [Signature] LICENSE# 355

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE#

HO - 14 - 0115

SITE LOCATION MAP



LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
Drill Cuttings	500	20
Cement	20	0

VOLUME OF MATERIAL USED

Cement - 470 lbs

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(MWD) MSD / MGS 3/12/19
CIRCLE ONE DATE

Analytical Results

Project: Jacks Landing

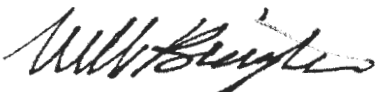
Project Number: E053297
Project Manager: Stephen Shelley

Reported:
04/02/18 16:24

E053297-01 (Lot 7 HO 17-0239)
Jacks Landing
8032903-01 (Drinking Water)
Sample Date: 03/26/18

Analyte	Result	Units	Reporting				Analyzed	Analyst	Notes
			Limit	Dilution	Prepared				
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS)									
tert-Amyl alcohol (TAA)	ND	ug/L	10.0	1	03/29/18	03/29/18 14:17	WB		
tert-Amyl methyl ether (TAME)	0.80	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Benzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Bromobenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Bromochloromethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Bromodichloromethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Bromoform	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Bromomethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
tert-Butanol (TBA)	ND	ug/L	10.0	1	03/29/18	03/29/18 14:17	WB		
n-Butylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
sec-Butylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
tert-Butylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Carbon tetrachloride	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Chlorobenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Chloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Chloroform	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Chloromethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
2-Chlorotoluene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
4-Chlorotoluene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Dibromochloromethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,2-Dibromo-3-chloropropane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Dibromomethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,2-Dichlorobenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,3-Dichlorobenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,4-Dichlorobenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
Dichlorodifluoromethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,1-Dichloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,2-Dichloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,1-Dichloroethene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
cis-1,2-Dichloroethene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
trans-1,2-Dichloroethene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,2-Dichloropropane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
1,3-Dichloropropane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		
2,2-Dichloropropane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Will Brewington, President

Analytical Results

Project: Jacks Landing

Project Number: E053297
Project Manager: Stephen Shelley

Reported:
04/02/18 16:24

E053297-01 (Lot 7 HO 17-0239)
Jacks Landing
8032903-01 (Drinking Water)
Sample Date: 03/26/18

Analyte	Result	Units	Reporting		Prepared	Analyzed	Analyst	Notes
			Limit	Dilution				
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS) (continued)								
1,1-Dichloropropene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Diisopropyl ether (DIPE)	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Ethyl tert-butyl ether (ETBE)	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Ethylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Hexachlorobutadiene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
4-Isopropyltoluene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Methyl tert-butyl ether (MTBE)	5.52	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Methylene chloride	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Naphthalene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
n-Propylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Styrene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Tetrachloroethene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Toluene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,2,3-Trichlorobenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,1,1-Trichloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,1,2-Trichloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Trichloroethene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Trichlorofluoromethane (Freon 11)	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,2,3-Trichloropropane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Vinyl chloride	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
o-Xylene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
m- & p-Xylenes	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Surrogate: 4-Bromofluorobenzene		80-120	95 %		03/29/18	03/29/18 14:17		
Surrogate: 1,2-Dichlorobenzene-d4		80-120	97 %		03/29/18	03/29/18 14:17		



Will Brewington, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: Jacks Landing

Project Number: E053297
Project Manager: Stephen Shelley

Reported:
04/02/18 16:24

E053297-01 (Lot 7 HO 17-0239)
Jacks Landing
8032903-01 (Drinking Water)
Sample Date: 03/26/18

Analyte	Result	Units	Reporting				Analyst	Notes
			Limit	Dilution	Prepared	Analyzed		
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS) (continued)								
1,1-Dichloropropene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Diisopropyl ether (DIPE)	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Ethyl tert-butyl ether (ETBE)	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Ethylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Hexachlorobutadiene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
4-Isopropyltoluene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Methyl tert-butyl ether (MTBE)	5.52	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Methylene chloride	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Naphthalene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
n-Propylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Styrene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Tetrachloroethene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Toluene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,2,3-Trichlorobenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,1,1-Trichloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,1,2-Trichloroethane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Trichloroethene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Trichlorofluoromethane (Freon 11)	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,2,3-Trichloropropane	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Vinyl chloride	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
o-Xylene	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
m- & p-Xylenes	ND	ug/L	0.50	1	03/29/18	03/29/18 14:17	WB	
Surrogate: 4-Bromofluorobenzene		80-120	95 %		03 29 18	03 29 18 14:17		
Surrogate: 1,2-Dichlorobenzene-d4		80-120	97 %		03 29 18	03 29 18 14:17		



Will Brewington, President

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: Jacks Landing

Project Number: E053297
Project Manager: Stephen Shelley

Reported:
04/02/18 16:24

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Analytical Results

Project: Jacks Landing

Project Number: E053297
Project Manager: Stephen Shelley

Reported:
04/02/18 16:24

E053297-01 (Lot 7 HO 17-0239)
Jacks Landing
8032903-01 (Drinking Water)
Sample Date: 03/26/18

Analyte	Result	Units	Reporting			Prepared	Analyzed	Analyst	Notes
			Limit	Dilution					
VOLATILE ORGANICS BY EPA METHOD 524.2 (GC/MS)									
tert-Amyl alcohol (TAA)	ND	ug/L	10.0	1		03/29/18	03/29/18 14:17	WB	
tert-Amyl methyl ether (TAME)	0.80	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Benzene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Bromobenzene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Bromochloromethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Bromodichloromethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Bromoform	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Bromomethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
tert-Butanol (TBA)	ND	ug/L	10.0	1		03/29/18	03/29/18 14:17	WB	
n-Butylbenzene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
sec-Butylbenzene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
tert-Butylbenzene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Carbon tetrachloride	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Chlorobenzene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Chloroethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Chloroform	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Chloromethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
2-Chlorotoluene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
4-Chlorotoluene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Dibromochloromethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,2-Dibromo-3-chloropropane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Dibromomethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
Dichlorodifluoromethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,1-Dichloroethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,2-Dichloroethane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,1-Dichloroethene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,2-Dichloropropane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
1,3-Dichloropropane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	
2,2-Dichloropropane	ND	ug/L	0.50	1		03/29/18	03/29/18 14:17	WB	



Will Brewington, President

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Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab. No: E18003497005

Method: EPA 524.2 VOCs and THMs

Date Received: 03/28/2018
Field ID: H0170239FB

Date Collected: 03/27/2018
Submitted By: S. COLLINS

Date Analyzed: 04/05/2018

Contaminant	RL	MCL	Result	Contaminant	RL	MCL	Result
REGULATED				2-Chlorotoluene	0.5		ND
1,1,1-Trichloroethane	0.5	200	ND	4-Chlorotoluene	0.5		ND
1,1,2-Trichloroethane	0.5	5	ND	Bromobenzene	0.5		ND
1,1-Dichloroethane	0.5	7	ND	Bromochloromethane	0.5		ND
1,2,4-Trichlorobenzene	0.5	70	ND	Bromomethane	0.5		ND
1,2-Dichlorobenzene	0.5	600	ND	Chloroethane	0.5		ND
1,2-Dichloroethane	0.5	5	ND	Chloromethane	0.5		ND
1,2-Dichloropropane	0.5	5	ND	cis-1,3-Dichloropropene	0.5		ND
1,4-Dichlorobenzene	0.5	75	ND	Dibromomethane	0.5		ND
Benzene	0.5	5	ND	Dichlorodifluoromethane	0.5		ND
Carbon Tetrachloride	0.5	5	ND	Ethyl-tert-Butyl Ether (ETBE)	0.5		ND
Chlorobenzene	0.5	100	ND	Hexachlorobutadiene	0.5		ND
cis-1,2-Dichloroethene	0.5	70	ND	Isopropylbenzene	0.5		ND
Ethylbenzene	0.5	700	ND	Methyl-tert-Butyl Ether (MTBE)	0.5		ND
m+p-Xylene	1.0		ND	Naphthalene	0.5		ND
Methylene Chloride	0.5	5	0.57	n-Butylbenzene	0.5		ND
o-Xylene	0.5		ND	n-Propylbenzene	0.5		ND
Styrene	0.5	100	ND	p-Isopropyltoluene	0.5		ND
Tetrachloroethene	0.5	5	ND	sec-Butylbenzene	0.5		ND
Toluene	0.5	1000	ND	tert-Amyl Methyl Ether (TAME)	0.5		ND
Total Xylenes	1.5	10000	ND	tert-Butylbenzene	0.5		ND
trans-1,2-Dichloroethene	0.5	100	ND	trans-1,3-Dichloropropene	0.5		ND
Trichloroethene	0.5	5	ND	Trichlorofluoromethane	0.5		ND
Vinyl Chloride	0.5	2	ND				
TRihalOMETHANES							
Bromodichloromethane	0.5		ND				
Bromoform	0.5		ND				
Chloroform	0.5		ND				
Dibromochloromethane	0.5		ND				
TOTAL THMs		80	0.00				
UNREGULATED							
1,1,1,2-Tetrachloroethane	0.5		ND				
1,1,1,2,2-Tetrachloroethane	0.5		ND				
1,1-Dichloroethane	0.5		ND				
1,1-Dichloropropene	0.5		ND				
1,2,3-Trichlorobenzene	0.5		ND				
1,2,3-Trichloropropane	0.5		ND				
1,2,4-Trimethylbenzene	0.5		ND				
1,2-Dibromo-3-Chloropropane	0.5		ND				
1,2-Dibromoethane	0.5		ND				
1,3,5-Trimethylbenzene	0.5		ND				
1,3-Dichlorobenzene	0.5		ND				
1,3-Dichloropropane	0.5		ND				
2,2-Dichloropropane	0.5		ND				

Comments:

Approved by:

Approval date:

Sadia Hussain

04/10/2018

*All results are in parts per billion (ppb); ND = Less than the detection level; na = not applicable; e = estimate

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Telephone: (443) 681 -3853 Fax: (443) 681-4507



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
 8930 STANFORD BLVD
 COLUMBIA, MD 21045

Lab. No: E18003497003

Method: EPA 524.2 VOCs and THMs

Date Received: 03/28/2018
 Field ID: H0170239T

Date Collected: 03/27/2018
 Submitted By: S. COLLINS

Date Analyzed: 04/05/2018

Contaminant	RL	MCL	Result	Contaminant	RL	MCL	Result
REGULATED							
1,1,1-Trichloroethane	0.5	200	ND	2-Chlorotoluene	0.5		ND
1,1,2-Trichloroethane	0.5	5	ND	4-Chlorotoluene	0.5		ND
1,1-Dichloroethene	0.5	7	ND	Bromobenzene	0.5		ND
1,2,4-Trichlorobenzene	0.5	70	ND	Bromochloromethane	0.5		ND
1,2-Dichlorobenzene	0.5	600	ND	Bromomethane	0.5		ND
1,2-Dichloroethane	0.5	5	ND	Chloroethane	0.5		ND
1,2-Dichloropropane	0.5	5	ND	Chloromethane	0.5		ND
1,4-Dichlorobenzene	0.5	75	ND	cis-1,3-Dichloropropene	0.5		ND
Benzene	0.5	5	ND	Dibromomethane	0.5		ND
Carbon Tetrachloride	0.5	5	ND	Dichlorodifluoromethane	0.5		ND
Chlorobenzene	0.5	100	ND	Ethyl-tert-Butyl Ether (ETBE)	0.5		ND
cis-1,2-Dichloroethene	0.5	70	ND	Hexachlorobutadiene	0.5		ND
Ethylbenzene	0.5	700	ND	Isopropylbenzene	0.5		ND
m+p-Xylene	1.0		ND	Methyl-tert-Butyl Ether (MTBE)	0.5		ND
Methylene Chloride	0.5	5	0.66	Naphthalene	0.5		ND
o-Xylene	0.5		ND	n-Butylbenzene	0.5		ND
Styrene	0.5	100	ND	n-Propylbenzene	0.5		ND
Tetrachloroethene	0.5	5	ND	p-Isopropyltoluene	0.5		ND
Toluene	0.5	1000	ND	sec-Butylbenzene	0.5		ND
Total Xylenes	1.5	10000	ND	tert-Amyl Methyl Ether (TAME)	0.5		ND
trans-1,2-Dichloroethene	0.5	100	ND	tert-Butylbenzene	0.5		ND
Trichloroethene	0.5	5	ND	trans-1,3-Dichloropropene	0.5		ND
Vinyl Chloride	0.5	2	ND	Trichlorofluoromethane	0.5		ND
TRihalOMETHANES							
Bromodichloromethane	0.5		ND				
Bromoform	0.5		ND				
Chloroform	0.5		ND				
Dibromochloromethane	0.5		ND				
TOTAL THMs		80	0.00				
UNREGULATED							
1,1,1,2-Tetrachloroethane	0.5		ND				
1,1,1,2,2-Tetrachloroethane	0.5		ND				
1,1-Dichloroethane	0.5		ND				
1,1-Dichloropropene	0.5		ND				
1,2,3-Trichlorobenzene	0.5		ND				
1,2,3-Trichloropropane	0.5		ND				
1,2,4-Trimethylbenzene	0.5		ND				
1,2-Dibromo-3-Chloropropane	0.5		ND				
1,2-Dibromoethane	0.5		ND				
1,3,5-Trimethylbenzene	0.5		ND				
1,3-Dichlorobenzene	0.5		ND				
1,3-Dichloropropane	0.5		ND				
2,2-Dichloropropane	0.5		ND				

Comments:

Approved by:

Approval date:

Sadia Muneer

04/10/2018

*All results are in parts per billion (ppb); ND = Less than the detection level; na = not applicable; e = estimate

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) 767-6648 and arrange for return or destruction.

Telephone: (443) 681-3853 Fax: (443) 681-4507

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

MEMORANDUM

TO: Barlow Well Drilling
Attn: Mike Isom (MSD 162)

Barlow notified of special condition with phone several 2/9/18

FROM: Kevin M. Wolf, L.E.H.S., REHS/RS, Supervisor *KW*
Groundwater Mgmt. Sec.
Well & Septic Program

DATE: February 9, 2018

RE: Jack's Landing Lots 6-8 – Well Permits
Special Condition

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

In order to preserve the quality of ground drinking water, a special condition has been set for the above referenced wells. This condition will require the driller to seal off upper strata by placing a minimum of **50 feet** of steel casing OR **10 feet** into competent bedrock (whichever comes first). For example, if you hit a water-bearing fracture or bedrock at 70 feet, then there should be at least 72 feet of casing or enough casing to get below that fracture. **Any deviations to this condition are to be prior approved by the Health Department.**

Both of these wells will also require sampling at the time of the yield test. Sampling will include but not limited to, Volatile Organic Compounds (VOC's), Total Dissolved Solids (TDS), Chlorides, and Sodium. When calling in the yield and grout on a pre-scheduled day, please make a note that a certified water testing lab and/or the Health Department must be present in order to collect the recommended samples. Please allow 24hrs notification when drilling commences and when the yield/grouts take place.

If you have any questions regarding the above mentioned information, please feel free to contact me at 410-313-2645 or email kwolf@howardcountymd.gov.

KMW

Cc: Ron Green, Land Design and Development, rgreen@ldandd.com
file

Send Report To: Bert Nixon

State of Maryland
DHMH - Laboratories Administration

Division of Environmental Sciences
TRACE METALS LABORATORY

1770 Ashland Avenue
Baltimore, Maryland 21205

~~Howard County Health Dept
Bureau of Environmental Health
8930 Stanford Blvd
Columbia, MD 21045~~

Lab No. _____ Date Received _____

E18003472001
Received: 03/27/2018
Metals HO-17-0239

LABORATORY ANALYSIS REQUEST

Please Print

Digest

Do not write above this line

Sample ID No: HO-17-0239 Site Name: Jack's Landing Lot 7 County: Howard

Sample Source: Tradelphia Mill Rd Dayton Collector: S. Collins
Street Town or City Name

Date Collected: 3/26/2018 Time Collected: 2:30 a.m./(p.m.) Phone #: 410 313-6207

Sample Preserved By: Field ESRL WMRL Central Lab
Preservative Used: HNO₃ _____ mL pH: < 2, SHS, 3/27/18

Sample Type: Drinking Water Landfill Source (Raw Water) Liquid
Data Category: Community Stream Distribution (Treated) Solid
Code Non-Community Sediment Other _____
4F 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: field test

✓	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)	SHS			
	Chromium (Cr)			Lead (Pb)				
	Mercury (Hg)			Magnesium (Mg)				
	Nickel (Ni)			Manganese (Mn)				
	Selenium (Se)			Molybdenum (Mo)				
✓	Sodium (Na)	SHS		Potassium (K)				
	Thallium (Tl)			Silver (Ag)				

Lab Supervisor: _____

Date Reported: ____/____/____

•Phone: (443) 681 - 4596

•Fax: (443) 681 - 4507

ENVIRO-CHEM LABORATORIES, INC.



47 Loveton Circle, Suite K • Sparks, Maryland 21152

410-472-1112

FINAL REPORT OF ANALYSIS

Michael Barlow Well Drilling
522 Underwood Lane
Bel Air, MD 21014

Report Date: 04/10/2018
Report Number: 180410110243

LAB#- E053297-01 SAMPLE ID- Lot 7 HO 17-0239 WELL # HO 17-0239
LOCATION- Well Head SAMPLER- 8862 MI
DATE SAMPLED- 03/26/2018 TIME SAMPLED- 16:00 Residual Chlorine- <0.05 mg/L
DATE RECEIVED- 03/27/2018 TIME RECEIVED- 13:45
DELIVERED BY- S Bangledorf RECEIVED BY- Ginny Shelley
COMMENTS-

COMMENTS-

ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DATA FLAG
Total Metals by EPA 200.7 by Enviro-Chem					
\$ Sodium	EPA 200.7	03/28/18 15:06	RAS	21.7	mg/L
Wet Chemistry by Enviro-Chem					
\$ Chloride	EPA 300.0	03/27/18 20:04	WND	142	mg/L
\$ Dissolved Solids	SM 2540C	04/02/18 12:00	SES	549	mg/L

Stephen Shelley
Laboratory Director

Certifications

- State of Maryland Certification #192
Virginia Drinking Water 8634
Indicates a MD certified Analyte
! Indicates a MD, VA certified Analyte
\$ Not a certified Analyte



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



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project NoE18003469 Date Coll. 03/26/2018 Date Received 03/27/2018 Submitted By: S. Collins

Field ID: HO-17-0239
Lab No.: E18003469003

<u>Analyte</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
Chloride	SM 4500-Cl E	200	mg/L	03/30/2018
Total Dissolved Solids	SM 2540C	516	mg/L	03/29/2018

Comments:

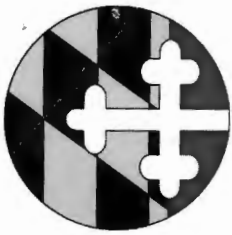
Approved by: _____

Shahin Amini

Approval date: 04/04/2018

*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.

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.



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab. No: E18003497004

Method: EPA 524.2 VOCs and THMs

Date Received: 03/28/2018
Field ID: H0170239-AB

Date Collected: 03/27/2018
Submitted By: S. COLLINS

Date Analyzed: 04/05/2018

<u>Contaminant</u>	<u>RL</u>	<u>MCL</u>	<u>Result</u>	<u>Contaminant</u>	<u>RL</u>	<u>MCL</u>	<u>Result</u>
REGULATED				2-Chlorotoluene	0.5		ND
1,1,1-Trichloroethane	0.5	200	ND	4-Chlorotoluene	0.5		ND
1,1,2-Trichloroethane	0.5	5	ND	Bromobenzene	0.5		ND
1,1-Dichloroethene	0.5	7	ND	Bromochloromethane	0.5		ND
1,2,4-Trichlorobenzene	0.5	70	ND	Bromomethane	0.5		ND
1,2-Dichlorobenzene	0.5	600	ND	Chloroethane	0.5		ND
1,2-Dichloroethane	0.5	5	ND	Chloromethane	0.5		ND
1,2-Dichloropropane	0.5	5	ND	cis-1,3-Dichloropropene	0.5		ND
1,4-Dichlorobenzene	0.5	75	ND	Dibromomethane	0.5		ND
Benzene	0.5	5	ND	Dichlorodifluoromethane	0.5		ND
Carbon Tetrachloride	0.5	5	ND	Ethyl-tert-Butyl Ether (ETBE)	0.5		ND
Chlorobenzene	0.5	100	ND	Hexachlorobutadiene	0.5		ND
cis-1,2-Dichloroethene	0.5	70	ND	Isopropylbenzene	0.5		ND
Ethylbenzene	0.5	700	ND	Methyl-tert-Butyl Ether (MTBE)	0.5		5.19
m+p-Xylene	1.0		ND	Naphthalene	0.5		ND
Methylene Chloride	0.5	5	ND	n-Butylbenzene	0.5		ND
o-Xylene	0.5		ND	n-Propylbenzene	0.5		ND
Styrene	0.5	100	ND	p-Isopropyltoluene	0.5		ND
Tetrachloroethene	0.5	5	ND	sec-Butylbenzene	0.5		ND
Toluene	0.5	1000	ND	tert-Amyl Methyl Ether (TAME)	0.5		0.77
Total Xylenes	1.5	10000	ND	tert-Butylbenzene	0.5		ND
trans-1,2-Dichloroethene	0.5	100	ND	trans-1,3-Dichloropropene	0.5		ND
Trichloroethene	0.5	5	ND	Trichlorofluoromethane	0.5		ND
Vinyl Chloride	0.5	2	ND				
TRIHALOMETHANES							
Bromodichloromethane	0.5		ND				
Bromoform	0.5		ND				
Chloroform	0.5		ND				
Dibromochloromethane	0.5		ND				
TOTAL THMs		80	0.00				
UNREGULATED							
1,1,1,2-Tetrachloroethane	0.5		ND				
1,1,1,2,2-Tetrachloroethane	0.5		ND				
1,1-Dichloroethane	0.5		ND				
1,1-Dichloropropene	0.5		ND				
1,2,3-Trichlorobenzene	0.5		ND				
1,2,3-Trichloropropane	0.5		ND				
1,2,4-Trimethylbenzene	0.5		ND				
1,2-Dibromo-3-Chloropropane	0.5		ND				
1,2-Dibromoethane	0.5		ND				
1,3,5-Trimethylbenzene	0.5		ND				
1,3-Dichlorobenzene	0.5		ND				
1,3-Dichloropropane	0.5		ND				
2,2-Dichloropropane	0.5		ND				

Comments:

Approved by:

Approval date:

Sadia Muneer

04/10/2018

*All results are in parts per billion (ppb); ND = Less than the detection level; na = not applicable; e = estimate

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Telephone: (443) 681-3853 Fax: (443) 681-4507



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



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project No: E18003472 Date Coll.: 03/26/2018 Date Received: 03/27/2018 Submitted By: Collins

Field ID: HO-17-0239
Lab No.: E18003472001

<u>Method</u>	<u>Element</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
EPA 200.7	Iron	11.81	ppm	04/02/2018
EPA 200.7	Sodium	26.58	ppm	04/02/2018

Comments:

Approved by: Kimberly Choi

Approval date: 04/05/2018

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

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Send Report to: Bert Nixon

Howard County Health Dept
Bureau of Environmental Health
8930 Stanford Blvd
Columbia, MD 21045

State of Maryland
DHMH - Laboratories Administration
Division of Environmental Chemistry
ORGANICS ANALYTICAL LABORATORY
1770 Ashland Avenue
BALTIMORE, MARYLAND 21205

Temperature Blank: 45 °C

LABORATORY ANALYSIS REQUEST FORM

Please write legibly

Bottle No.: H0170239-B
H0170239-A Plant/Site Name: Jack's Landing County: Howard

Location: H0-17-0239 Sample Source: Triadelphia Mill Rd Dayton
Street Town or City

Collector/ID: S. Collins / 3406 SC Phone No.: 410-313-6287

County: 013 System No. PWSID Plant No.
Date Collected: 3 / 27 / 2018 Time Collected: 2 am/pm

Field Data: pH 6.5 Free Cl: 0 Total Cl: 0

Sample Type: Drinking water Landfill Source (water) Oil
 Private Stream Distribution (treated) Solid
 Community Soil/Sediment Water Treatment Plant POE Other
 Non-Community

Specify Program: SDWA NPDES RCRA CWA CERCLA Consumer Products
 Other

Test Requested	Field & Trip Blank	Preservative Used	Comment
<input type="checkbox"/> EPA Method 504.1 (EDB/DBCP)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 508 (Aroclors (SCAN only) & Toxaphene)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 515.3 (Herbicides)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 515.4 (Herbicides)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium sulfite	
<input type="checkbox"/> EPA Method 525.2 (Pesticides)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> HCL (6N) <input type="checkbox"/> Sodium sulfite	
<input type="checkbox"/> EPA Method 531.2 (Carbamates)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Potassium Citrate monobasic <input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 552.2 (Haloacetic acids)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Ammonium chloride	
<input type="checkbox"/> EPA Method 8270 (Semi-Volatiles) <input type="checkbox"/> Pesticides <input type="checkbox"/> Aroclors	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 524.2 (Volatiles) <input checked="" type="checkbox"/> VOCS <input type="checkbox"/> THMs	<input type="checkbox"/> Field Blank <input type="checkbox"/> Trip Blank	<input checked="" type="checkbox"/> 1:1 HCL <input type="checkbox"/> 1:1 HCL + Ascorbic acid <input type="checkbox"/> Sodium thiosulfate	FB 1 H0170239 FB-1 FB-2 H0170239 FB 2
<input type="checkbox"/> EPA Method 8260 (VOCs)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> 1:1 HCL <input type="checkbox"/> 1:1 HCL + Ascorbic acid	

<p>E18003497004 Received: 03/28/2018 EPA 524.2 Trace Organics H0170239-AB</p>	<p>E18003497005 Received: 03/28/2018 EPA 524.2 Trace Organics H0170239FB</p>	

Remarks: Meelz in FB

Lab Supervisor: _____ Date Reported: / /

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

SUBMITTER'S COPY

Send Report to: Bert Noun

State of Maryland

Temperature Blank: 4 °C

Howard County Health Dept
Bureau of Environmental Health
8930 Stanford Blvd
Columbia, MD 21045

DHMH - Laboratories Administration
Division of Environmental Chemistry
ORGANICS ANALYTICAL LABORATORY
1770 Ashland Avenue
BALTIMORE, MARYLAND 21205

LABORATORY ANALYSIS REQUEST FORM

Please write legibly

Bottle No.: H0170239-B
H0170239-A

Plant/Site Name: Jack's Landing Lot 7

County: Howard

Location: H0-17-0239

Sample Source: Triadelphia Mill Rd
Street Town or City Dayton

Collector/ID: S Collins / 3406 SC

Phone No.: 410-313 6737

County: 013

System No.

PWSID

Plant No.

Date Collected: 3 / 27 / 2018

Time Collected: 2 am/pm

Field Data: pH 6.5

Free Cl: 0

Total Cl: 0

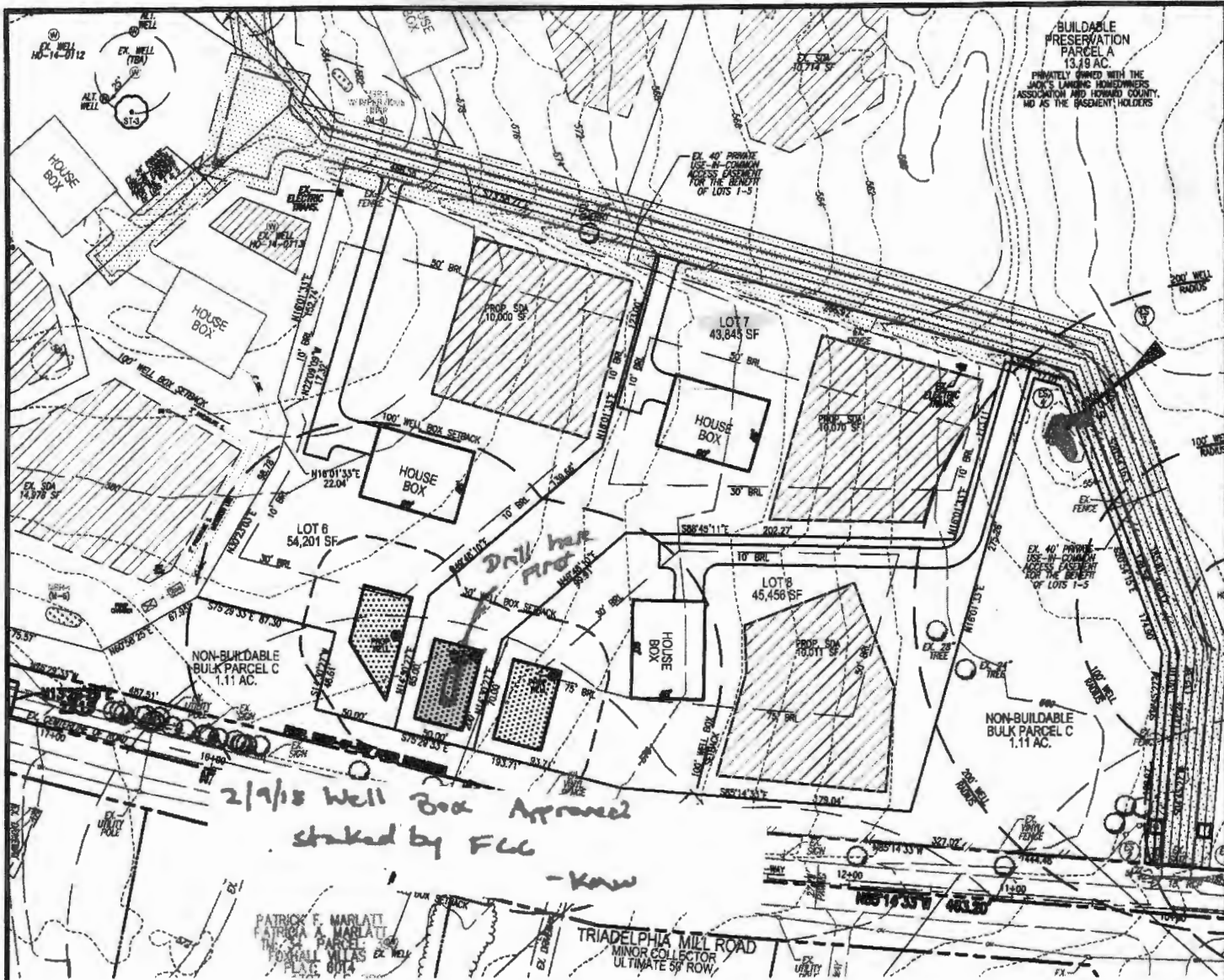
- Sample Type:
- Drinking water
 - Landfill
 - Source (water)
 - Oil
 - Private
 - Stream
 - Distribution (treated)
 - Solid
 - Community
 - Soil/Sediment
 - Water Treatment Plant POE
 - Other
 - Non-Community

- Specify Program:
- SDWA
 - NPDES
 - RCRA
 - CWA
 - CERCLA
 - Consumer Products
 - Other

Test Requested	Field & Trip Blank	Preservative Used	Comment
<input type="checkbox"/> EPA Method 504.1 (EDB/DBCP)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 508 (Aroclors (SCAN only) & Toxaphene)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 515.3 (Herbicides)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 515.4 (Herbicides)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium sulfite	
<input type="checkbox"/> EPA Method 525.2 (Pesticides)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> HCL (6N) <input type="checkbox"/> Sodium sulfite	
<input type="checkbox"/> EPA Method 531.2 (Carbamates)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Potassium Citrate monobasic <input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 552.2 (Haloacetic acids)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Ammonium chloride	
<input type="checkbox"/> EPA Method 8270 (Semi-Volatiles) <input type="checkbox"/> Pesticides <input type="checkbox"/> Aroclors	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Sodium thiosulfate	
<input type="checkbox"/> EPA Method 524.2 (Volatiles) <input type="checkbox"/> VOCS <input type="checkbox"/> THMs	<input type="checkbox"/> Field Blank <input checked="" type="checkbox"/> Trip Blank	<input checked="" type="checkbox"/> 1:1 HCL <input type="checkbox"/> 1:1 HCL + Ascorbic acid <input type="checkbox"/> Sodium thiosulfate	FB 1 H0170239 FB-1 FB 2 H0170239 FB 2 H0170239 T
<input type="checkbox"/> EPA Method 8260 (VOCs)	<input type="checkbox"/> Field Blank	<input type="checkbox"/> 1:1 HCL <input type="checkbox"/> 1:1 HCL + Ascorbic acid	


E18003497004
 Received: 03/28/2018 EPA 524.2
 Trace Organics H0170239-AB


E18003497005
 Received: 03/28/2018 EPA 524.2
 Trace Organics H0170239FB

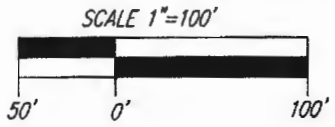


LOT 7 - WELL EXHIBIT
SCALE: 1"=100'

LEGEND:

PROPERTY LINE
 PROPOSED TREELINE
 COMMON
 EXISTING SEWAGE DISPOSAL AREA

DO NOT REMOVE THIS TAG
 DEPARTMENT OF THE ENVIRONMENT
 WELL PERMIT NUMBER
 HO-17-0239
 INFORMATION GIVE NUMBER AND WRITE
 1800 WASHINGTON BLVD
 BALTIMORE MARYLAND 21230



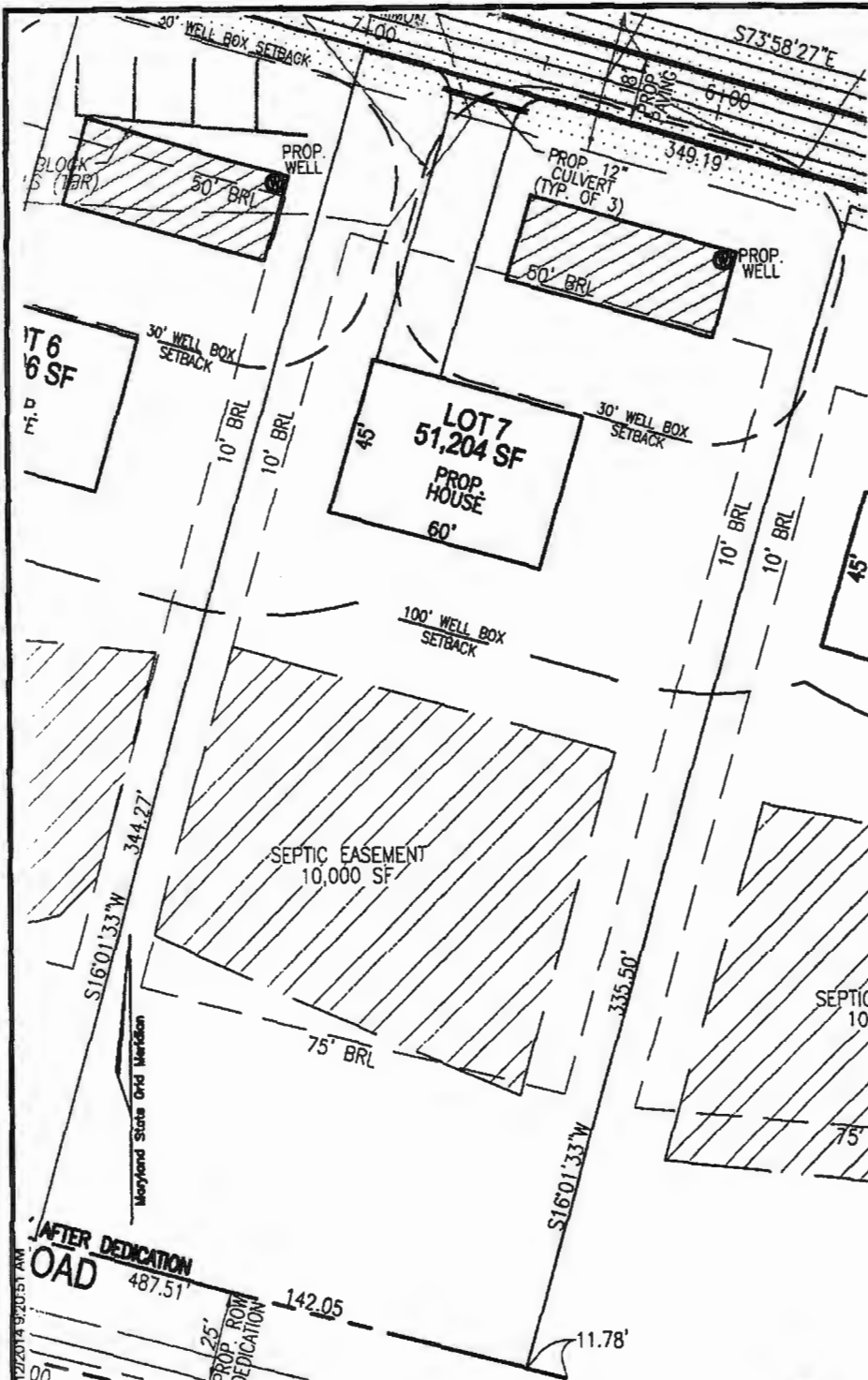
ROBERT H. VOGEL
ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043 TEL: 410-381-2887

SCALE: 1"=100'
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: 1/27/18
 W. O. #: 13-31
 SHEET #: 1 OF 1

WELL EXHIBIT - LOT 7
JACK'S LANDING
 LOTS 1-8, BUILDABLE PRESERVATION PARCEL "A"
 AND NON-BUILDABLE PARCEL "B"
 A SUBDIVISION OF TAX MAP 34
 PARCEL 414 (L. 3172 / F. 336)

TAX MAP: 34 GRID: 03
5TH ELECTION DISTRICT

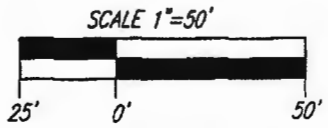
PARCEL: 414
 ZONED: RR-DEO
 HOWARD COUNTY, MARYLAND



LEGEND:

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- PROPOSED RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF PAVING
- EXISTING TREELINE
- EXISTING TREES
- EXISTING WOOD FENCE
- EXISTING METAL FENCE
- PROPOSED TREELINE
- PROPOSED USE-IN-COMMON ACCESS EASEMENT PLAT.
- PROPOSED SEPTIC EASEMENT
- PROPOSED WELL BOX
- EXISTING UTILITY POLE
- PROPOSED STORMDRAIN
- PROPOSED WELL LOCATION

10/7/14
 Well Box Approval
 stated by Vogel.
 -Kaw



ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8991

13938 Highland Rd

**WELL EXHIBIT - LOT 7
 JACK'S LANDING**

LOTS 1-8, BUILDABLE PRESERVATION PARCEL A,
 AND NON-BUILDABLE PRESERVATION PARCEL B
 A SUBDIVISION OF TAX MAP 34
 PARCEL 414 (L. 3172 / F. 336)

SCALE: 1"=50'
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: MARCH 2014
 W. O. #: 13-31
 SHEET # 1 OF 1

TAX MAP 34 BLOCK 03
 5TH ELECTION DISTRICT

PARCEL 414
 ZONED RR-DEO
 HOWARD COUNTY, MARYLAND

K:\PROJECTS\33\ENGINROW\DISP\WELL EXHIBIT LOT 7.DWG. 8/12/2014 9:20:51 AM

ENVIRO-CHEM LABORATORIES, INC.



47 Loveton Circle, Suite K • Sparks, Maryland 21152

410-472-1112

FINAL REPORT OF ANALYSIS

Michael Barlow Well Drilling
522 Underwood Lane
Bel Air, MD 21014

Report Date: 06/01/2015
Report Number: 150601105515

LAB#- E039578-01 SAMPLE ID- Lot 7 2nd Well WELL #
LOCATION- SAMPLER- M Dixon
DATE SAMPLED- 05/21/2015 TIME SAMPLED- 12:30 Residual Chlorine-
DATE RECEIVED- 05/21/2015 TIME RECEIVED- 14:28
DELIVERED BY- M Dixon RECEIVED BY- Stephen Shelley
COMMENTS-

COMMENTS-

ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DATA FLAG
Metals by Enviro-Chem					
*! Sodium	EPA 200.7	05/29/15 09:24	CHK	28.4	mg/L
Wet Chemistry by Enviro-Chem					
\$ Chloride	EPA 300.0	05/22/15 12:25	EJF	217	mg/L
\$ Dissolved Solids	SM 2540C	05/22/15 13:10	SES	953	mg/L



State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
INORGANICS ANALYTICAL LABORATORY
201 W. Preston Street, Baltimore, Maryland 21201
Robert Myers, Ph.D., Director



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project NoE15003314 Date Coll. 04/16/2015 Date Received 04/22/2015 Submitted By: B. Baker

Field ID: 14-0115
Lab No.: E15003314001

<u>Analyte</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
Chloride	SM 4500-Cl E	<10	mg/L	04/27/2015
Total Dissolved Solids	SM 2540C	Rejected	mg/L	

Lot 7

Comments:

Approved by:

Approval date: 04/30/2015

*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.

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.

Send Report To: Bert Nixon
Howard Co. Env. Health
3930 Stanford Blvd.
Columbia, MD 21045

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
ENVIRONMENTAL METALS SECTION
 201 W. Preston Street, Baltimore, Maryland 21201

Lab No. Date Received


E15003326001
 Received: 04/22/2015
 Metals 14-0115

LABORATORY ANALYSIS REQUEST
 Please Print

Sample ID No: 14-0115 Site Name: Jacks Landing-Lot 7 County: Howard

Sample Source: 13938 Highland Rd, Clarksville 21029 Collector: B. Baker
Street Town/City Name

Date Collected: 4/16/2015 Time Collected: 11:45 a.m. p.m. Phone #: (410) 313-2643

Sample Preserved By: Field ESRL Central Lab
 Preservative Used: HNO₃ pH 2.0 4.3345 5.15
 Sample Type: Drinking Water Landfill Source (Raw Water) Liquid
 Community Stream Distribution (Treated) Solid
 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: Sample Collected During Yield Test

✓	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)	22.3		Potassium (K)	
	Thallium (Tl)			Uranium (U)	

RECEIVED
 Date Reported: MAY 2/8 2015
 HOWARD COUNTY HEALTH DEPT.
 COMMUNITY HYGIENE PROGRAM

Lab Supervisor: Sandra Kline
 • Phone: (410) 767-6186

• Fax: (410) 333-5122



State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
TRACE METALS LABORATORY
201 W. Preston Street, Baltimore, Maryland 21201
Robert Myers, Ph.D., Director



Certificate of Analysis

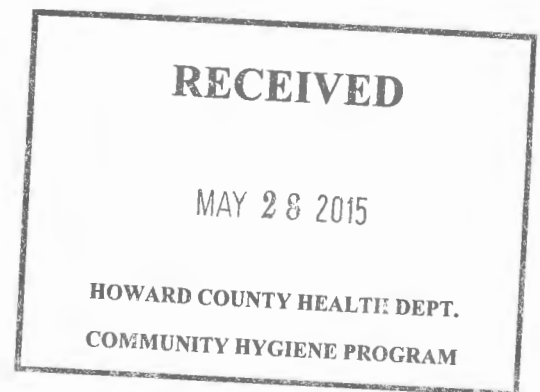
HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project No: E15003326 Date Coll.: 04/16/2015 Date Received 04/22/2015 Submitted By: BAKER

Field ID: 14-0115
Lab No.: E15003326001

<u>Method</u>	<u>Element</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
EPA 200.7	Sodium	22.29	ppm	04/30/2015

Lot 7



Comments:

Approved by: Sadia Muneeb

Approval date: 05/12/2015

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

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.



State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
TRACE METALS LABORATORY
201 W. Preston Street, Baltimore, Maryland 21201
Robert Myers, Ph.D., Director



Certificate of Analysis

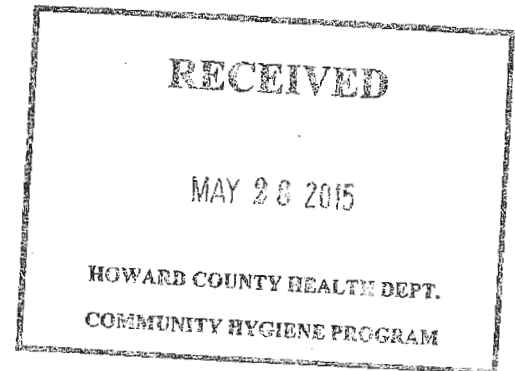
HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project No: E15003326 Date Coll.: 04/16/2015 Date Received 04/22/2015 Submitted By: BAKER

Field ID: 14-0115
Lab No.: E15003326001

<u>Method</u>	<u>Element</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
EPA 200.7	Sodium	22.29	ppm	04/30/2015

Lot 7



Comments:

Approved by: Sadia Muneer

Approval date: 05/12/2015

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

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.

Telephone: (410) 767 - 6944

Fax: (410) 728-7055

S:\EnviroFinal-Metals.rpt



State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
TRACE METALS LABORATORY
201 W. Preston Street, Baltimore, Maryland 21201
Robert Myers, Ph.D., Director



Certificate of Analysis

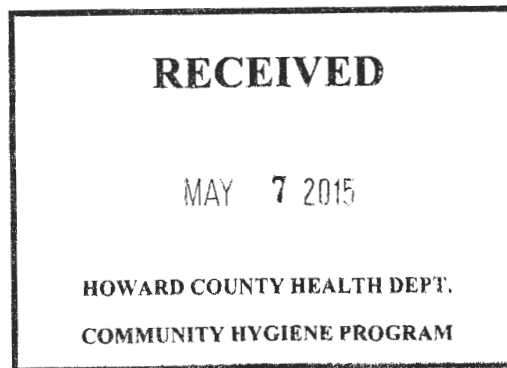
HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project No: E15003133 Date Coll.: 04/02/2015 Date Received 04/06/2015 Submitted By: COLLINS

Field ID: HO-14-0115
Lab No.: E15003133001

<u>Method</u>	<u>Element</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
EPA 200.7	Sodium	18.64	ppm	04/13/2015

Lot 7



Comments:

Approved by: *Sadia Muneer*

Approval date: 04/29/2015

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

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.

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

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
ENVIRONMENTAL METALS SECTION
 201 W. Preston Street, Baltimore, Maryland 21201



E15003133001
 Received: 04/06/2015
 Metals HO-14-0115

LABORATORY ANALYSIS REQUEST
 Please Print

Sample ID No: ~~HO-15~~ HO-14-0115 Site Name: Jack's Landing Lot 7 County: Howard

Sample Source: Triadelphia Mill Rd. Highland Collector: S. Collins
Street Town or City Name

Date Collected: 4/7/2015 Time Collected: 11:45 a.m. p.m. Phone #: 410-333-6287

Sample Preserved By: Field ESRL Central Lab
 Preservative Used: HNO₃ ptt Low 4-15-15
 Sample Type: Drinking Water Landfill Source (Raw Water) Liquid
 Community Stream Distribution (Treated) Solid
 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: Sample taken during yield test

✓	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)	18.6		Potassium (K)	
	Thallium (Tl)			Uranium (U)	

RECEIVED

Date Reported: 4/7/2015
 MAY 7 2015

HOWARD COUNTY HEALTH DEPT.
 COMMUNITY HYGIENE PROGRAM

Lab Supervisor: _____
 •Phone: (410) 767-6186

•Fax: (410) 333-5122



State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
INORGANICS ANALYTICAL LABORATORY
201 W. Preston Street, Baltimore, Maryland 21201
Robert Myers, Ph.D., Director



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project NoE15003129 Date Coll. 04/02/2015 Date Received 04/06/2015 Submitted By: S. Collins

Field ID: HO-14-0115
Lab No.: E15003129001

<u>Analyte</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
Chloride	SM 4500-Cl E	118	mg/L	04/13/2015
Total Dissolved Solids	SM 2540C	364	mg/L	04/09/2015

Comments:

Approved by:

Approval date: 04/14/2015

*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.

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Collins, Sarah

From: Collins, Sarah
Sent: Thursday, February 21, 2019 4:36 PM
To: Mike Isom
Subject: Jack's Landing wells

Hi Mike,

Jeff in our office looked over the wells for lots 6-8 and came up with a few things regarding water treatment for the future houses.

Given the presence of VOCs in the water, we'd like you to pump the wells on all three lots for 24 hrs and then resample for VOCs. We're hoping that the levels decrease similar to the drop in VOCs after the 24-hr pumping of the initial well on lot 6. Please also note the static levels of the wells and the time it takes the wells to recover after pumping stops.

Because of the intermediate-to-high levels of sodium, chloride, and TDS in the wells, stainless steel pitless adaptors, water tanks, etc. will be required in the future houses to avoid corrosion.

For the wells on lots 6 and 7 which had high levels of iron, the septic system must have room for a trench specifically for backwash from a treatment system.

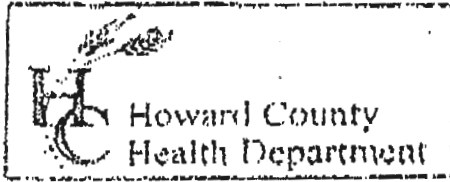
Let me know if you have any questions.

Thanks,
Sarah

Sarah Collins, L.E.H.S.
Howard County Health Department
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, MD 21045
SCollins@howardcountymd.gov
410-313-6287

CONFIDENTIALITY NOTICE

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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

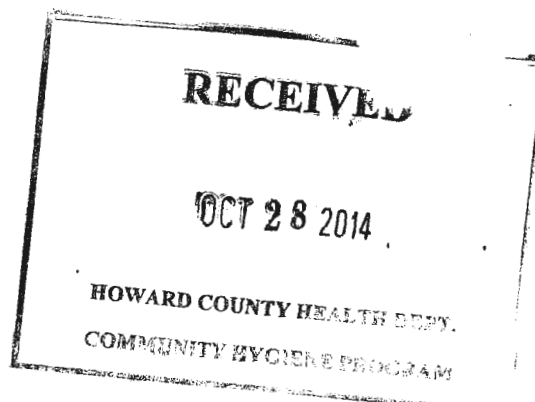
TO ALL INTERESTED PARTIES

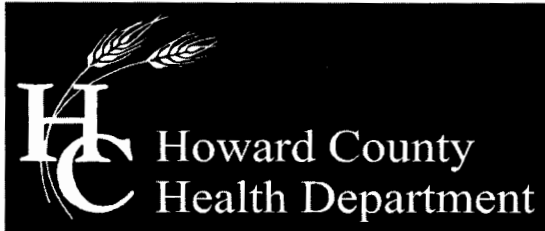
When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

- The well site has been staked by JACKS LANDING Lots 1-8 + Parcel A
Robert Vogel Engineering,
 (professional land surveyor or company employing professional land surveyors)
 on 10/29/2014 (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





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

Twitter: HowardCoHealthDep

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

MEMORANDUM

TO: Michael Barlow, MWD 355
Barlow Well Drilling

FROM: Ryan Rappaport, LEHS 
Well & Septic Program

RE: VOC Testing required of all wells at Jack's Landing Lots 1-8 & Parcel A

DATE: October 20, 2014

As per the approved and signed Percolation Certification Plan dated February 6, 2014, general note #13: VOC Testing will be required on all wells prior to health signature of final plat. See special condition on each well permit for specific requirements.



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

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: Liberty Pce Solutions Telephone #: 410-527-1024
 Address: 2024 Paper Mill Rd
Phoenix MD 21131

Must circle one: Licensed Plumber / Licensed Well Driller / Licensed Well Pump Installer

License # and name of individual responsible for the field installation:
 Name (Print): Kevin Oaster License# 81996

*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: Majid Mirshah Telephone #: _____
 Subdivision: 1001 Lot #: 7 Well Tag #: HO - -
 Site Address: 5513 Jacks Landing Way
Clarksville MD 21029

Submersible Pump Data

Make: Sta R. Fe
 Model #: SBP4NS15231
 Pump Capacity: 5 gpm
 Well Yield: 2.05 gpm
 Depth of well encountered at time of pump installation: 600 (feet)

Pitless Adapter

Make: Boshart +
 Model#: 81 P100
 GPM Depth: 40" (36" min)
 GPM NSF/WSC approved: 10 gpm

Well Cap and Electric Conduit

Two piece watertight cap: Y
 Screened, vented well cap: -
 Cap secured to casing: Yes
 Conduit min 18" B.G.: Yes
 Conduit secured to well cap: Yes

If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4

Must circle one: ~~Torque arrestors~~ / Cable guards / Other acceptable method used

Safety rope, if used, attached to brass rope adapter or other acceptable method inside of well casing

Piping to house

Type: 1" Poly
 PSI: 200 (160 psi min)
 Depth of supply line: 42" (36" min)

House Connection

PVC sleeve to undisturbed soil at wall penetration: 42"
 Length of sleeve (5' minimum from foundation): 8'
 Sleeve sealed properly: Yes

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

[Signature] _____ date 1/24/23
 Signature of company representative responsible for installation

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

Date Insp. Requested: _____ Date Insp. Approved: _____ Inspector: _____
 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 _____

(Revised form 10/24/2018)

INTERIM CERTIFICATE OF POTABILITY
Expiration Date – DECEMBER 27, 2023

June 27, 2023

Homeowner
5513 Jacks Landing Way
Clarksville, MD 21029

RE: Jacks Landing, Lot 7
5513 Jacks Landing Way
Building Permit: B21003127
Well Permit: HO-17-0239

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 **6/20/2023**. Final approval of the well line connection to the dwelling was granted on **1/24/2023**. The well construction was completed on **6/8/2018**. Water samples were collected on **6/7/2023, 6/11/2023**.

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. This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-17-0239. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

This Interim Certificate of Potability will expire **six months** from the date of issuance. Submission of a second bacteriological test indicating the water is free of coliform and fecal coliform bacteria is required prior to the expiration date, after which time a Final Certificate of Potability will be issued. **Failure to submit an additional sample and obtain a Final Certificate of Potability will result in a Notice of Violation and is punishable as a misdemeanor under the *Annotated Code of Maryland, Environment Article, 9-1311*, subject to a fine of up to \$500 or imprisonment not to exceed three months.**

Please contact (410) 313-1773 to schedule a final water sample appointment or contact a Maryland certified water 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>



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

In closing, please refer to our "Homeowner Fact Sheet" which illustrates a better understanding for your Onsite Sewage Disposal System. You will also find a link to Maryland Department of the Environment's website which describes in further detail operation and maintenance of your septic system.

Approving Authority,

A handwritten signature in black ink, appearing to read 'Kevin M. Wolf', is written over a light blue horizontal line.

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

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

HOME LAND

L A B S

1220 East Joppa Road #C505
Towson, MD 21286
Phone 443.505.8375
lab@homelandhealthyhomes.com
State Certified Water Quality Lab 365

108 Old Solomons Island Road, Suite I2
Annapolis, MD 21401
Phone 443.505.8375
lab@homelandhealthyhomes.com
State Certified Water Quality Lab 106

3430 Rockefeller Court
Waldorf, MD 20602
Phone 443.505.8375
lab@homelandhealthyhomes.com
State Certified Water Quality Lab 139

Certificate of Analysis

Report Date: 06/23/2023

Client: Well Water Solutions, Inc.
Property Address: 5513 Jacks Landing Way
Clarksville, MD 21029

Report No: 240013

Sample Time: 06/06/2023 13:30

Date & Time Received: 06/07/2023 12:40

Sampled By: John Moseman - 2674JM

Field Preservation: Ice

Sample Point(s): Post treatment- Kitchen, Raw - From Pressure Tank

Water Conditioning Appears to be: Reverse Osmosis System – Whole House

Field Chlorine: 0.00

Field pH: 7.00

Well Type: Drilled

Well Height: 3'

Cap Type: 2-Piece

Casing: Steel

Conduit: PVC

Clarity: Clear

Sand: None Observed

Well Tag Number: HO-17-0239

This report is the sole property of Well Water Solutions, Inc.. Any questions about the report MUST be directed to Well Water Solutions, Inc. at (410) 935-7185. Home Land Labs is not at liberty to discuss this report without written consent from Well Water Solutions, Inc..

Primary Contaminants								
Parameter	Method	Result	Pass/ Fail	Units	MCL	RL	Analyst	Date of Analysis
240013-01- Raw - From Pressure Tank- Bacteria-Total Coliform	Colilert-18 Test	Absent	Pass	Per/ 100ml	Present	1	E H - 365	06/08/2023
240013-01- Raw - From Pressure Tank- Bacteria-E.coli	Colilert-18 Test	Absent	Pass	Per/ 100ml	Present	1	E H - 365	06/08/2023
240013-01- Raw - From Pressure Tank- Nitrate + Nitrite as N	EPA 353.2	1.4	Pass	mg/L	10	0.5	M K - 365	06/07/2023
240013-01- Raw - From Pressure Tank- Turbidity	EPA 180.1	1.8	Pass	NTU	10	0.5	D J - 365	06/07/2023
240013-02- Post treatment- Kitchen- Bacteria-Total Coliform	Colilert-18 Test	Absent	Pass	Per/ 100ml	Present	1	E H - 365	06/08/2023
240013-02- Post treatment- Kitchen- Bacteria-E.coli	Colilert-18 Test	Absent	Pass	Per/ 100ml	Present	1	E H - 365	06/08/2023
240013-02- Post treatment- Kitchen- Nitrate + Nitrite as N	EPA 353.2	Not Detected	Pass	mg/L	10	0.5	M K - 365	06/07/2023
240013-02- Post treatment- Kitchen- Turbidity	EPA 180.1	Not Detected	Pass	NTU	10	0.5	D J - 365	06/07/2023

HOME LAND

LABS

240013 Due Date: 06/09/2023
Client: Well Water

Phone: (443) 505-8375 Email: lab@homelandhealthyhomes.com

1220 E Joppa Rd. Ste C505
Towson, MD 21286
MD Lab # 365

108 Old Solomons Island Road, Ste L2
Annapolis, MD 21401
MD Lab # 106

3430 Rockefeller Court
Waldorf, MD 20602
MD Lab # 139

2216 Commerce Road, St
Forest Hill, MD 21050

Please provide completed form with samples. Highlighted fields are required.

Client Name: Well Water Solutions, Inc.	Property Address:
Email Address: jemoeman@wellwatersolutions.net & rlieber@wellwatersolutions.net	5513 JACKS LANDING L
Phone Number: 410-835-7185	CLARKSVILLE MD 21029

Field Collection Information

~~B~~ B21003127

Sampler Name: John Moseman	Field pH: 7
Sampler ID #: 2874JM	Field Chlorine (mg/L): Present / Absent
Date Sampled: 6/16	Time Sampled: 1:30
Well Tag Number: 140-13	Clarity: Clear / Un-Clear
Compliance sample for public water system? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	If yes, PWS ID #:

Well Casing and Cap Condition

Well Type: Drilled Well Pit Below Grade Artesian Hand Dug N/A Other:

Height Above Grade: 3 FT	Cap Type: 2 piece	Casing: Steel	Conduit: PVC
Sample Point: ① RAW - FROM PT #1 ② POST TREATMENT - KITCHEN		Water Conditioning: HOUSE NO SYST.	

Requested Testing: (Please check all that apply)

2 Potability (Bacteria, Nitrate + Nitrite, Turbidity)

FHA/VA (Bacteria, Nitrate + Nitrite, Turbidity, Lead, Iron)

<input type="checkbox"/> Bacteria	<input type="checkbox"/> Chlorides	<input type="checkbox"/> Total Dissolved Solids
<input type="checkbox"/> Lead	<input type="checkbox"/> Hardness	<input type="checkbox"/> Copper
<input type="checkbox"/> Nitrate + Nitrite	<input type="checkbox"/> Arsenic	<input type="checkbox"/> VOCs
<input type="checkbox"/> Iron	<input type="checkbox"/> Cadmium	<input type="checkbox"/> Other: <input type="checkbox"/> Lead <input type="checkbox"/> Sodium
<input type="checkbox"/> Turbidity	<input type="checkbox"/> Gross Alpha	<input type="checkbox"/> Other: <input type="checkbox"/> Radium Long Term <input type="checkbox"/> Radium Short Term

List rush samples below
Refer to table for rush turnaround times and fees

Release Signatures

Released By:	Date/Time: 6/16 1:50
Released By:	Date/Time: 6/17 9:00
Released By:	Date/Time: 6/17/23 12:40

HOME LAND LABS

1220 East Joppa Road #C505
Towson, MD 21286
Phone 443.505.8375
lab@homelandhealthyhomes.com
State Certified Water Quality Lab 365

108 Old Solomons Island Road, Suite 12
Annapolis, MD 21401
Phone 443.505.8375
lab@homelandhealthyhomes.com
State Certified Water Quality Lab 106

3430 Rockefeller Court
Waldorf, MD 20602
Phone 443.505.8375
lab@homelandhealthyhomes.com
State Certified Water Quality Lab 139

Certificate of Analysis

Report Date: 06/12/2023

Client: Well Water Solutions, Inc.

Property Address: 5513 Jacks Landing Way Permit B21003127
Clarksville, MD 21029

Report No: 240084

Sample Time: 06/07/2023 13:30

Date & Time Received: 06/08/2023 10:51

Sampled By: John Moseman - 2674JM

Field Preservation: Ice

Sample Point(s): Kitchen, Raw PT

Water Conditioning Appears to be: Not Noted

Field Chlorine: 0.00

Field pH: 7.00

Well Type: Drilled

Well Height: 2'

Cap Type: 1-piece

Casing: Steel

Conduit: PVC

Clarity: Clear

Sand: Absent

Well Tag Number: HO-17-0239

This report is the sole property of Well Water Solutions, Inc.. Any questions about the report MUST be directed to Well Water Solutions, Inc. at (410) 935-7185. Home Land Labs is not at liberty to discuss this report without written consent from Well Water Solutions, Inc..

Secondary Contaminants								
Parameter	Method	Result	Acceptable/ High	Units	SMCL	RL	Analyst	Date of Analysis
240084-01- Raw PT- Chlorides	SM4500 Cl- B	159.0	Acceptable	mg/ L	250.0	10	A D - 365	06/08/2023
240084-01- Raw PT- Total Dissolved Solids	EPA 160.1	569.5	High	mg/ L	500	10	E H - 365	06/08/2023
240084-02- Kitchen- Chlorides	SM4500 Cl- B	37.5	Acceptable	mg/ L	250.0	10	A D - 365	06/08/2023
240084-02- Kitchen- Total Dissolved Solids	EPA 160.1	132.9	Acceptable	mg/ L	500	10	E H - 365	06/08/2023

Approved By:

Denise Junis

Denise Junis, Lab Director

HOME LAND

LABS

240084 Due Date: 06/12/2023
Client: Well Water

Phone: (443) 505-8375 Email: lab@homelandhealthyhomes.com

1220 E Joppa Rd. Ste C505
Towson, MD 21286
MD Lab # 365

108 Old Solomons Island Road, Ste L2
Annapolis, MD 21401
MD Lab # 106

3430 Rockefeller Court
Waldorf, MD 20602
MD Lab # 139

2216 Commerce Road, Ste 2
Forest Hill, MD 21050

Please provide completed form with samples. Highlighted fields are required.

Client Name: Well Water Solutions, Inc.	Property Address:
Email Address: jmoseman@wellwatersolutions.net & jbleber@wellwatersolutions.net	5513 JACKS LANDING WAY
Phone Number: 410-935-7185	CLARKSVILLE MD 21029

Field Collection Information

Sampler Name: John Moseman	Field pH: 7
Sampler ID #: 2674JM	Field Chlorine (mg/L): Present / Absent
Date Sampled: 6/7	Time Sampled: 1:30
Well Tag Number: 40-17-0239	Clarity: Clear / Un-Clear
Compliance sample for public water system? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	If yes, PWS ID #:

Well Casing and Cap Condition PERMIT B21003127

Well Type: Drilled Well Pit Below Grade Artesian Hand Dug N/A Other:

Height Above Grade: 8 FT	Cap Type: 1 piece	Casing: steel	Conduit: PVC
Sample Point: ① RAW PT ② Ketchu	Water Conditioning: ① RAW FROM PT ② POST TREATMENT		

Requested Testing: (Please check all that apply)

- | | | |
|--|---|--|
| <input type="checkbox"/> Potability (Bacteria, Nitrate + Nitrite, Turbidity) | <input checked="" type="checkbox"/> Chlorides | <input checked="" type="checkbox"/> Total Dissolved Solids |
| <input type="checkbox"/> FHA/VA (Bacteria, Nitrate + Nitrite, Turbidity, Lead, Iron) | <input type="checkbox"/> Hardness | <input type="checkbox"/> Copper |
| <input type="checkbox"/> Bacteria | <input type="checkbox"/> Arsenic | <input type="checkbox"/> VOCs |
| <input type="checkbox"/> Lead | <input type="checkbox"/> Cadmium | <input type="checkbox"/> Other: <input type="checkbox"/> TDS <input type="checkbox"/> Sodium |
| <input type="checkbox"/> Nitrate + Nitrite | <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Radium Long Term 226 & 228 |
| <input type="checkbox"/> Iron | | |
| <input type="checkbox"/> Turbidity | | |

List rush samples below
Refer to table for rush turnaround times and fees

Release Signatures

Released By: John Moseman

Date/Time: 6/7 1:30

Released By: _____

Date/Time: 6/8 9:00

Released By: _____

Date/Time: 6/8 10:54

Received in lab by: _____

Date/Time: 6/12/23 10:51

HOME LAND LABS

1220 East Joppa Road #C505
Towson, MD 21286
Phone 443.505.8375
lab@homelandhealthyhomes.com
State Certified Water Quality Lab 365

108 Old Solomons Island Road, Suite I2
Annapolis, MD 21401
Phone 443.505.8375
lab@homelandhealthyhomes.com
State Certified Water Quality Lab 106

3430 Rockefeller Court
Waldorf, MD 20602
Phone 443.505.8375
lab@homelandhealthyhomes.com
State Certified Water Quality Lab 139

Certificate of Analysis

Report Date: 06/20/2023

Client: Well Water Solutions, Inc.
Property Address: 5513 Jacks Landing Way
Clarksville, MD 21029

Report No: 240227

Sample Time: 06/11/2023 14:00

Date & Time Received: 06/12/2023 12:30

Sampled By: John Moseman - 2674JM

Field Preservation: Ice

Sample Point(s): Pre Treatment, Post Treatment

Water Conditioning Appears to be: Reverse Osmosis System – Whole House

Field Chlorine: 0.00

Field pH: Not Noted

Well Type: Drilled

Well Height: 3'

Cap Type: 2 Piece

Casing: Steel

Conduit: PVC

Clarity: Clear

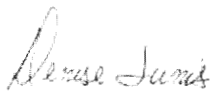
Sand: Absent

Well Tag Number: HO-17-0239

This report is the sole property of Well Water Solutions, Inc.. Any questions about the report MUST be directed to Well Water Solutions, Inc. at (410) 935-7185. Home Land Labs is not at liberty to discuss this report without written consent from Well Water Solutions, Inc..

Contaminants								
Parameter	Method	Result	Acceptable/High	Units	SMCL	RL	Analyst	Date of Analysis
240227-01- Pre Treatment- Sodium, Total	EPA 200.8	32.544	-	mg/L	N/A	0.5	M K - 365	06/14/2023
240227-02- Post Treatment- Sodium, Total	EPA 200.8	4.393	-	mg/L	N/A	0.1	M K - 365	06/14/2023

Approved By: _____



Denise Junis, Lab Director

HOME LAND

LABS



240227 Due Date: 06/19/2023
Client: Well Water

Phone: (443) 505-8375 Email: lab@homelandhealthyhomes.com

1220 E Joppa Rd. Ste C505
Towson, MD 21286
MD Lab # 365

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Waldorf, MD 20602
MD Lab # 139

2216 Commerce Road, Ste 2
Forest Hill, MD 21050

Please provide completed form with samples. Highlighted fields are required.

Client Name: Well Water Solutions, Inc.	Property Address:
Email Address: jmoseman@wellwatersolutions.net & jlaber@wellwatersolutions.net	5573 JACKS LANDING WAY
Phone Number: 410-835-7185	CRAKSVILLE MD 21029

Field Collection Information

Sampler Name: John Moseman	Field pH: <u>7.5</u>
Sampler ID #: 2674JM	Field Chlorine (mg/L): Present / <u>Absent</u>
Date Sampled: <u>6/11</u> Time Sampled: <u>2:00</u>	Sand Present / <u>Absent</u>
Well Tag Number: <u>40-17-0239</u>	Clarity: <u>Clear</u> / Un-Clear
Compliance sample for public water system? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	If yes, PWS ID #:

Well Casing and Cap Condition

Well Type: Drilled Well Pit Below Grade Artesian Hand Dug N/A Other: _____

Height Above Grade: 3 FT Cap Type: 2 piece Casing: Steel Conduit: PVC

Sample Point: 1 PRE TREATMENT Water Conditioning: 1 RAW
2 POST TREATMENT 2 HOUSE RO

Requested Testing: (Please check all that apply)

- | | | |
|--|--------------------------------------|---|
| <input type="checkbox"/> Potability (Bacteria, Nitrate + Nitrite, Turbidity) | <input type="checkbox"/> Chlorides | <input type="checkbox"/> Total Dissolved Solids |
| <input type="checkbox"/> FHA/VA (Bacteria, Nitrate + Nitrite, Turbidity, Lead, Iron) | <input type="checkbox"/> Hardness | <input type="checkbox"/> Copper |
| <input type="checkbox"/> Bacteria | <input type="checkbox"/> Arsenic | <input type="checkbox"/> VOCs |
| <input type="checkbox"/> Lead | <input type="checkbox"/> Cadmium | <input type="checkbox"/> Other: <input type="checkbox"/> TDS <input checked="" type="checkbox"/> Sodium |
| <input type="checkbox"/> Nitrate + Nitrite | <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Radium Long Term |
| <input type="checkbox"/> Iron | | <input type="checkbox"/> Other: <u>228 & 226</u> |
| <input type="checkbox"/> Turbidity | | |

List rush samples below
Refer to table for rush turnaround times and fees

Release Signatures

Released By: <u>John Moseman</u>	Date/Time: <u>6/11/23</u>
Released By: _____	Date/Time: <u>6/12/23</u>
Released By: _____	Date/Time: <u>6/12/23 12:30 PM</u>