c1 52151	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND WELL COMPLETION REPORT	THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.
1 2 3 6 (THIS NUMBER IS TO BE PU IN COLS. 3-6 ON ALL CARD		FILL IN THIS FORM COMPLETELY PLEASE TYPE	COUNTY NUMBER
ST/CO USE ONLY DATE Flechived MM DOD YY 8 13			OK FROM "PERMIT NO. FROM "PERMIT TO DRILL WELL" 
OWNER	last name Scalogs	SVILLE POL first name TOWN	Hapland
SUBDIVISION_CS+0	utes at 54	DOOLU MILLI SECTION	LOT
WELL I Not required for		GROUTING RECORD WELL HAS BEEN GROUTED (Circle Appropriate Box)	
STATE THE KIND OF FORMAT COLOR, DEPTH, THICKNESS	IONS PENETRATED, THEIR AND IF WATER BEARING	TYPE OF GROUTING MATERIAL (Circle one)	HOURS PUMPED (nearest hour) 3
DESCRIPTION (Use additional sheets if needed)	FEET check if water bearing	CEMENT CM BENTONITE CLAY BC	14.3
Brown	0 44	NO. OF BAGS OF WATER DEPTH OF GROUT SEAL (to nearest foot)	PUMPING RATE (gal. per min.)
Grey	44 71	from $\frac{0}{48 \text{ TOP } 52}$ ft. to $\frac{58}{54 \text{ BOTTOM } 58}$ ft. (enter 0 if from surface)	WATER LEVEL (distance from land surface)
Fracture	71 72 ~	casing types insert appropriate	BEFORE PUMPING 17 20 ft. WHEN PUMPING 148 ft.
Grey	72 230	code below PLASTIC OTHER	22     25       TYPE OF PUMP USED (for test)     Image: Comparison of the second seco
Fracture	290 291	MAIN Nominal diameter Total depth CASING top (main) casing TYPE (nearest inch)! (nearest foot)	C centrifugal R rotary O ther (describ
Grey	291 400	Old         GO           60         61         63         64         66         70           E         OTHER CASING (if used)	J jet S submersible
		A     diameter     depth (feet)       H     inch     from     to       C	PUMP INSTALLED DRILLER INSTALLED PUMP YES NO (CIRCLE) (YES or NO) IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
		screen type or open hole insert appropriate code below SCREEN RECORD STEL BRASS BRONZE PL PLASTIC OTHER	TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) 29 IN BOX 29. CAPACITY : GALLONS PER MINUTE (to nearest gallon) 31 PUMP HORSE POWER
NUMBER OF UNSUCCESSF		C 2 DEPTH (nearest ft.)	PUMP COLUMN LENGTH (nearest ft.)
WELL HYDROFRACTURED	Yes N	E 8 9 11 15 17 21	CASING HEIGHT (circle appropriate box and enter casing height)
CIRCLE APPROPI A A WELL WAS ABANDONI WHEN THIS WELL WAS E ELECTRIC LOG OBTAINE P TEST WELL CONVERTED WELL	ED AND SEALED COMPLETED ED	H 23 24 26 30 32 36 S 3 C 3 R 38 39 41 45 47 61 E E SLOT SIZE 1 2 3	LAND SURFACE 49 below LAND SURFACE 50 51 (nearest foot) LATITUDE 3 9. 1668396
I HEREBY CERTIFY THAT THIS WEL ACCORDANCE WITH COMAR 26.04.0 IN CONFORMANCE WITH ALL COMI CAPTIONED PERMIT, AND THAT T HEREIN IS ACCURATE AND COM KNOWLEDGE.	4 "WELL CONSTRUCTION" AND DITIONS STATED IN THE ABOVE THE INFORMATION PRESENTED	DIAMETER OF SCREEN <u>56</u> 60 from to	LONGITUDE 7 6. 9514084 (DEFAULT COORD. WGS 84) Pursuant to \$10-624 of the State Govt. Article of
DRILLERS LIC NO. , M	7fra	GRAVEL PACK	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
(MUST MATCH SIGNATURE O		MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) .T (E.R.O.S.) W Q	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
SITE SUPERVISOR (sign. of responsible for sitework if diff		70         72           TELESCOPE CASING         LOG INDICATOR         74 .75 .76           OTNER DATA         OTNER DATA	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 AG: 12/29/17/SC STATE PERMIT NUMBER SEQUENCE NO. STATE OF MARYLAND (MDE USE ONLY) APPLICATION FOR PERMIT TO DRILL WELL 687 0194 please type fill in this form completely 2 LOCATION OF WELL 3 Date Re B OWNER INFORMATION COUN 8 42 SECTION 55 State 76 DRILLER INFORMATION D B 4 **Driller's Na** SOURCES OF DRILLING WATER wellwater 30 Firm Nan 2 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) N Add à. 3 Signature 37 nn2 WELL INFORMATION DISTANCE FROM ROAD B 2 APPROX. PUMPING RATE 3 ENTER FT OR MI (GAL. PER MIN.) AVERAGE DAILY QUANTITY NEEDED TAX MAP: \_ BLK: PARCEL (GAL. PER DAY) 14 20 NOT TO BE FILLED IN BY DRILLER USE FOR WATER (CIRCLE APPROPRIATE BOX) HEALTH DEPARTMENT APPROVAL OMESTIC POTABLE SUPPLY & RESIDENTIAL D RIGATION FARMING (LIVESTOCK WATERING & AGRICULTURAL F COUNTY NO. IRRIGATION) STATE T INDUSTRIAL, COMMERCIAL, DEWATERING 22 INSERT S P PUBLIC WATER SUPPLY WELL DATE ISSUED TEST, OBSERVATION, MONITORING T **OPEN LOOP GEOTHERMAL** 0 CLOSED LOOP GEOTHERMAL C 11/14/17 50 74 PROPOSED LOCATION OF WELL ON LOT 300 FEET SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, APPROXIMATE DEPTH OF WELL ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL NEAREST APPROXIMATE DIAMETER OF WELL INCH METHOD OF DRILLING (circle one) starting NO BORED (or Augered) JETTED **Jetted & DRIVEN** drill 30 AIR-ROTary AIR-PERcussion **ROTARY** (Hydraulic Rotary) some water (2) 25 propline CABLE DRive-POINT **REVerse-ROTary** bedrock @ 45 other 11/15 REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX) 60' N stee Buck HIS WELL WILL NOT REPLACE AN EXISTING WELL 100 THIS WELL WILL REPLACE A WELL THAT WILL BE casing so Y ABANDONED AND SEALED THIS WELL WILL REPLACE A WELL THAT WILL BE USED S 172 ursuant to \$ 100624 of the State Govt. Article of the 39 AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS Maryland Code, personal info requested on this form D is used in processing this form pursuant to COMAR THIS WELL WILL DEEPEN AN EXISTING WELL 26.04.04. Failure to provide the info may result in PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENED 20 CR this form not being processed. You have the right to (IF AVAILABLE) 52 41 Treme Department of the Environment is subject to the OV Not to be filled in by driller (MDE OR COUNTY USE ONLY) Maryland Public Information Act. This form may be made available on the Internet via MDE's website and 12 APPROP. PERMIT NUMBER is subject to inspection or copying, in whole or in part pump to by the public and other governmental agencies, if not protected by federal or State Law. PERMIT No. rodiunti CA PCA Sample SPECIAL CONDITIONS 8 Drill 4 NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED attached sile 00 inemo WMA/PER.071 2 COUNTY -

### FIELD DATE SHEET HOWARD COUNTY WELL YIELD TEST

 Well Permit No. <u>HO-17-0194</u>

 Location of Property: <u>Scaggsville Rd Highland, Md 20777</u>

 Subdivision: <u>Estates @ Schooly Mill</u> Lot: <u>9</u>

 Well Driller: <u>Andrew Houseman</u>

 Owner: <u>Williamsburg Group</u>

Depth of Well: <u>400'</u> Distance of measuring point (M.P.) above ground: <u>3'</u> Static water level (S.W.L.) below M.P.:<u>20'</u>

High rate pumping -reservoir Drawdown

Time pump started: <u>8:30</u> Pumping rate: <u>12 gpm</u> Total time <u>60 Mins</u> to reach pumping water level <u>148</u>ft. below M.P.

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

TIME (in 15 minute intervals)	WATER LEVEL Below M.P.	PUMPING RATE Time to fill 1 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
8:30	20'	5 Seconds		12 gpm
8:45	46'	5 Seconds		12 gpm
9:00	69'	5 Seconds		12 gpm
9:15	98'	5 Seconds		12 gpm
9:30	148'	13 Seconds		4.6 gpm
9:45	139'	12 Seconds		5 gpm
10:00	135'	12 Seconds		5 gpm
10:15	134'	12 Seconds		5 gpm
10:30	132'	12 Seconds		5 gpm
10:45	132'	12 Seconds		5 gpm
11:00	133'	12 Seconds		5 gpm
11:15	134'	14 Seconds	-	4.3 gpm
11:30	129'	14 Seconds		4.3 gpm
11:45	126	14 Seconds		4.3 gpm
12:00	125'	14 Seconds		4.3 gpm
12:15	124'	14 Seconds		4.3 gpm
12:30	123'	14 Seconds		4.3 gpm
12:45	122'	14 Seconds		4.3 gpm

Page of Date	<u> </u>		Review	Cababarp_					
		FIELD DATA HOWARD COUNTY WEL							
Well Permit No. HO - Location of property (road) Subdivision Black Schooley M. Lot R Block Plat Sec. Well Driller Logic (CLCE) Owner									
Distance Static V	Depth of well 400' Distance of measuring point (M.P.) above ground 3' Static water level (S.W.L.) below M.P. 20'								
Time pum <u>p</u> Total tin	I. High rate pumping reservoir drawdown Rump Set @ 300 Time pump started Pumping rate Total time to reach pumping water level ft. below M.P.								
			recorded every 15 minu						
	WATER LEVEL below M.P.	PUMPING RATE time to fill 51 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)					
10.45	~ 133	125		5					
11:00	133	125		8					
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HD-224

### HOWARD COURTY HEALTH DEPARTMENT SURBAU OF ENVIRONMENTAL HEALTH WELL & SEPTIC PROGRAM TEL: (410)513-1771 FAX: (410)513-2648

24224-00-022

### . Information Form for the Installation of the Well Pomm, Pitless Adapter, and Supply Fining

WEAR The mistaler is rearrant for the former of a second s

Company Name [00] 15 WELL RUMP + WELKY. THERMORE = 590 Obrecht Ro -11710 VYIYO コズト

Name a Property Owner WILLIB MSKING HOME PElephonie # .

Subdivision (5+ a) SUDDOLLY MILL Late 9 Well Tage BO-17-0194

411 HENRID Site Address GITTON MD () 159 Satmaersale Pasun Daia Fiffers Ananier Well Cap and Electric Confinit Male MMDEDS Male rumphel ी फाठ ग्रांस्टर अर्थास्त्र निर्मेश व्याप -180 Model 4 Madel Sciencel waited well cape NE Deptir 20 GPM Furth Calacy Cap secured to resing. (36<sup>-</sup> mm) Mell Right GPM NSE/WSC approved W Conduit min 18 E.G. Depth of well encountered at time of pump installation (1) (ief) Conduit second to well cap Erpuny capacity exceeds well yield, a low water coloff switch is required by NSPC 1990 Section 17.2.4

Tanyazaneston, Cable guands, ar offica acceptable naitod read-Mast circle one Sedievane, Arbeed, stizached in Incor roy- adiquis or afficie acceptable mediod incide af well certug [

Pinne to house Hunse Comertine TYPE 1" DOLY PIPE PVC shave to undisturbed soil at wall penetration PSI-20050 psidi Length of sleever monimum from in the first state of the 6 " (367 min) Serve maled properly: Depth a supply Enc.

The wait supply fine is required to be at least its pet from the septic tank; proof charder, sowage piping. Institution bur drainfields, and sewage reservence. If this <u>cannot</u> be accomplished, contact this university approval prior to installation.

veresponsible for installation daire Stenature of company repres

For Health Department UseOnly -- Not to be completed by Installer

Date Insp. Requested 1/1.2/19. Date Insp. Approved 2/28/20 Tuspector 50" from pittess Inspection Data: Filess adapter wateright & water supply line at least 36" below grade Two piece cap installed and attached to casing securely Elec. conduit extends at least 18 bdow gradelattached to cap properly Safety rope not outside of well captasing s' above grade, Poss Currectivell tag attached properly and casing 5" above finished grade Water supply fine sleeved adequately at house connection Adequate grout observed below pitters adapter 9/12/19 Perit

11/14/19 Reinspicted. Casing only 2" above grade. 1/2/20 Casiny 13" above grade. No well tag ST 2/28/20 Well tag



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

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

# **INTERIM CERTIFICATE OF POTABILITY**

Expiration Date - MAY 13, 2020

November 13, 2019

Homeowner 7411 Haven Court Highland, MD 20777

RE: Estates @ Schooley Mill, Lot 9 7411 Haven Court Building Permit: B19000252 Well Permit: HO-17-0194

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 9/12/2019. Final approval of the well line connection to the dwelling was granted on 11/13/2019. The well construction was completed on 11/21/2017. Water samples were collected on 10/30/2019.

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

Gross Alpha and Beta samples were also collected on 12/7/2017. Results showed a Gross Alpha level of  $4.1 \pm 1.4 \text{ pCi/L}$  and Gross Beta level of  $9.8 \pm 2.0 \text{ pCi/L}$ . The Gross Alpha was below the maximum contaminant level (MCL) of 15 pCi/L and the Gross Beta was below the target level of 50 pCi/L (roughly equivalent to the annual dose rate of 4 millirems per year). At the time of testing and with respect to these parameters, the well water is safe for all uses.

This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-17-0194. 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.



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

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

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

Approving Authority,

fin h. Kalf

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

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

# FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

## **REPORT OF ANALYSIS**

Laboratorv ID #: Reference: Location: Date/ Time Collected Date/Time Rec'd: Chlorine ppm: Collected By:	133813 Schooly Mill Lot 7411 Haven Cour Highland, MD 2 10/30/2019 10/30/2019 Free: ND J. Yeager	t 0777 1335 1512	ND Y	Account #: Company: Requested By: Source: Site: Treatment: pH: Well #:	4470 Williamsburg H Bill McBride Well Water Pressure Tank None 7.0 HO-17-0194	Homes LLC
PARAMETERS	RES	ULTS	UNITS	REFERENCE	METHOD D.	ATE/TIME/ANALYST
Gross Alpha, Short Term	5.	5	pCi/L	15	900.0	11/1/2019 / 0618 / MJN
Gross Beta, Short Term	10	.6	pCi/L	50	900.0	11/1/2019 / 0618 / M <b>JN</b>

#### NOTES

- 1 Gross Alpha Detection Limit: 1.1 pCi/L; Gross Beta Detection Limit: 2.1 pCi/L
- 2 Gross Alpha Error +/- 1.6 pCi/L; Gross Beta Error +/- 1.8 pCi/L
- $3 \quad pCi/L = picocuries per liter$
- 4 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 5 Sub-contracted to Reference Lab #278
- 6 ND:None Detected
- 7 Visual well check: Sealed, vented cap
- 8 pH & Chlorine level tested on site

<b>Reason for Test :</b>	Use & Occupancy
Building Permit # :	19000252

### Date Reported: <u>11/5/2019</u>

### FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC. 1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

# **REPORT OF ANALYSIS**

Laboratory ID #:	133812			Account #:	4470	
Reference:	Schooly Mill I	Lot 9		Company:	Williamsburg H	Homes LLC
Location:	7411 Haven C	ourt		Requested By:	Bill McBride	
	Highland, MD	20777		Source:	Well Water	
Date/ Time Collected:	: 10/30/2019	1335		Site:	Pressure Tank	
Date/Time Rec'd:	10/30/2019	1512		Treatment:	None	
Chlorine ppm:	Free: ND	Total	: ND	pH:	7.0	
Collected By:	J. Yeager	6176	JY	Well #:	HO-17-0194	
PARAMETERS	J	RESULTS	UNITS	REIFIERENCE	METHOD D	ATE/TIME/ANALYST
Bacteria, Coliform, Total,	MPN	<1.0	MPN/ 100 m	1 <1.0	SM20 9223B	10/31/2019 / 1000 / CRS
Bacteria, E. coli, MPN		<1.0	MPN/ 100 m	1 <1.0	SM20 9223B	10/31/2019 / 1000 / CRS
Turbidity		2.90	NTU	<10	SM20 2130B	10/30/2019 / 1555 / RER
Sand		NS	mg/L	5	Visual/Gravimetric	10/30/2019 / 1555 / RER
Nitrate		<1.0	mg/L	10	601	10/30/2019 / 1545 / RER

### NOTES

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

Reason for Test :Use & OccupancyBuilding Permit # :19000252

Date Reported: <u>11/5/2019</u>



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

April 20, 2018

Williamsburg Group LLC 5485 Harpers Farm Road Columbia, Maryland 21044

> RE: Estates at Schooley Mill Lot 9 Scaggsville Road Well Tag: HO - 17 – 0194

Dear Williamsburg Group:

A sample was collected during a yield test on December 7, 2017 and submitted to the Maryland Department of Health Laboratories to assess the possible presence of **Gross Alpha** and **Gross Beta** in the future well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which exists in your area of development within the County.

Results from this screening revealed a Gross Alpha of  $4.1 \pm 1.4$  picocuries/liter (pCi/L), while the Gross Beta level was  $9.8 \pm 2.0$  pCi/L. The Gross Alpha result was above its maximum contaminant level (MCL) of 15 pCi/L, while the Gross Beta level was below its targeted standard of 50 pCi/L (roughly equivalent to the annual dose rate of 4 millirems/year).

At the time of testing and with respect to these parameters, the well water supply is within EPA regulatory standards. Additional testing for these parameters will not be required to secure the future Use & Occupancy. Please note that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

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

Sincerely,

Bert Nixon, Director Bureau of Environmental Health

Enclosure cc: Property file

Howard County Health De ureau of Envrionmental He 8930 Stanford Blvd Columbia, MD 21045		Divi R	State of Mary MH - Laboratories A sion of Environmen ADIATION LABO 1770 Ashland A Baltimore, Maryla	Administration ntal Sciences <b>DRATORY</b> avenue	Lab N	o.	2-02
Plant/Site Name:	s Q S	chooley A	Aill- Lot 9	Count	ty: How	ard	
	sville		Itighia		(W Bottle	- 0194 fell no., lab sink, sam A B	
County 13		al da al V ny Lin	Plant N	0.		a	
CHECK (one per Box)							
TypeDrinking WaterImage: Constraint of the streamOther	Comm Non-O Private Other	Community e		Point of Collection ce (Raw) ibution (treated)		Testing Emergency Routine Recheck Special	
Submitters Code:			F	ederal Project:		<u>ورا این تانو بالارا این اور این</u>	₩ <u>₩</u> ₩ <u>₩</u> ₩ <u>₩</u> ₩
				elephone No.:	410-313		
Date Collected: 17/-	7/17_			ime Collected:		a.m.	p.m.
Field pH:			F	ield Chlorine:	A. M. P. J		
Nitric Acid Preserved:	Yes	No	Ic	ed: Yes			
Thur Thom Trought to solved.				ieu. 1es	No		
	EPA			Results (pCi/L)		Analyst	Date
Remarks: <u>Sample</u>	coller	cted alte	V I. by P Method No.	Results (pCi/L)	11		Date Reported
Remarks: <u>Semple</u> Image: Semple         Image: Semple	EPA Code 4000 4100	ched afte Lab No.	r l. br p	unpot we	11		
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Remarks: <u>Semple</u> Image: Semple         Image: Semily sem	EPA Code 4000 4100 4020 4030	ched afte Lab No.	Method No.	Results $(pCi/L)$	11		
Remarks: <u>Semple</u> M       TEST         Ø       Gross Alpha         Ø       Gross Beta         Ø       Radium-226         Ø       Radium-228         Ø       Total Uranium	EPA Code 4000 4100 4020 4030 4006	ched afte Lab No.	Method No.	Results $(pCi/L)$	11		
Remarks: <u>Semple</u> Image: Semple         Image: Semiler	EPA Code 4000 4100 4020 4030 4006 4004	ched afte Lab No.	Method No.	Results $(pCi/L)$	11		
Remarks: <u>Semple</u>	EPA Code 4000 4100 4020 4030 4006 4004 4004	ched afte Lab No.	Method No.	Results $(pCi/L)$	11		
Remarks: Semple TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	ched afte Lab No.	Method No.	Results $(pCi/L)$	11		
Remarks:       Source         ☑       TEST         ☑       Gross Alpha         ☑       Gross Beta         □       Radium-226         □       Radium-228         □       Total Uranium         □       Radon-222 (Bottle A)         □       Radon-222 (Bottle B)         □       Radon Field Blank A         □       Radon Field Blank B	EPA Code 4000 4100 4020 4030 4006 4004 4004	ched afte Lab No.	Method No.	Results $(pCi/L)$	11		
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Remarks: Semple	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	ched afte Lab No.	Method No.	Results $(pCi/L)$	11		
Remarks:       Somple         ☑       TEST         ☑       Gross Alpha         ☑       Gross Beta         □       Radium-226         □       Radium-228         □       Total Uranium         □       Radon-222 (Bottle A)         □       Radon-222 (Bottle B)         □       Radon Field Blank A         □       Radon Field Blank B         □       Tritium	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	ched afte Lab No.	Method No.	Results $(pCi/L)$	11		
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Remarks: Semple	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004 4004	Cted_afte Lab No. 1111 1111	V I. W. P Method No. EPAGOD.D EPAGOD.D	Results (pCi/L) 4.1±1.4 9.8±2.0	Date Analyzed		
Remarks: Semple	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004 4004	Cted_afte Lab No. 1111 1111	V I. W. P Method No. EPAGOD.D EPAGOD.D	Results (pCi/L) 4.1±1.4 7.8±2.0	Date Analyzed		
Remarks: Semple	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004 4004 4004	cted afte	Received By:	Results (pCi/L) 4.1±1.4 7.8±2.0	11         Date Analyzed         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:117 <t< td=""><td></td><td></td></t<>		
Remarks:       Semple         Image: Constraint of the system       TEST         Image: Constraint of the system       Gross Alpha         Image: Constraint of the system       Gross Beta         Image: Constraint of the system       Radium-226         Image: Red constraint of the system       Radon-222 (Bottle A)         Image: Red constraint of the system       Radon-222 (Bottle B)         Image: Red constraint of the system       Radon Field Blank A         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constraint of the system       Image: Red constraint of the system         Image: Red constred constraint of the system	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004 4004 4004	Cted_afte Lab No. 1111 1111	Received By:	Results (pCi/L) 4.1±1.4 7.8±2.0	11         Date Analyzed         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:117 <t< td=""><td></td><td></td></t<>		
Remarks: Semple	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004 4004 4004	cted afte	Received By:	Results (pCi/L) 4.1±1.4 7.8±2.0	11         Date Analyzed         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:1117         121:117 <t< td=""><td></td><td></td></t<>		

PROGRAM COPY

DHMH 4540 05/17

T.T.

	* Howard County Health Bureau of Envrionmenta 8930 Stanford Bly Columbia, MD 210	Dept Il Health rd		State of Mar HMH - Laboratories ivision of Environme <b>RADIATION LAB</b> 1770 Ashland Baltimore, Maryla	Administration Intal Sciences <b>ORATORY</b> Avenue and 21205	Lab N		6 3				
		21 e a		BORATORY ANA		TFORM		1102-05				
Pl	ant/Site Name:	Blan	nk LOF	79	Cou	nty: How	ard					
Sa	mple Source:AH	2			Loca		D Lab	mple tap. etc.)				
Ra	don-222 Bottle A		·	Radon-	222 Field Blank							
						Bottle	е В					
Co	unty 2	. '		Plant N	0.							
CH	ECK (one per Box)											
La Str	Type       inking Water     I       adfill     I       eam     I       her     I				Point of Collection ce (Raw) ibution (treated)		Testin Emergency Routine Recheck Special					
Su	bmitters Code:		7	E	ederal Project:	2	<u> </u>	•				
Co	llector: <u><u>S</u> Colly</u>			T	elephone No.:	412.212	67.07					
Da	te Collected:	7/17		T	ime Collected:	····	a.m	<u>3:15 p.m.</u>				
Fie		U.		F	ield Chlorine:							
					Field pH: Field Chlorine:							
Nitric Acid Preserved: Yes Vo Iced: Yes Vo												
		Yes	No	Ic	ed: Yes	5 🖌 No [						
	ric Acid Preserved:		No		ed: Yes	s 🔽 No [						
		Yes EPA Code	Lab No.	Ic	ed: Yes Results (pCi/L)	Date Analyzed	Analyst	Date Reported				
Re	marks: TEST Gross Alpha	EPA Code 4000			I · · · · · · · · · · · · · · · · · · ·		Analyst	Date Reported				
Re Ø	TEST Gross Alpha Gross Beta	EPA Code 4000 4100	Lab No.		Results (pCi/L)	Date Analyzed	Analyst					
Re	TEST Gross Alpha Gross Beta Radium-226	EPA Code 4000 4100 4020	Lab No.		Results (pCi/L)	Date Analyzed	Analyst II II					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228	EPA Code 4000 4100 4020 4030	Lab No.		Results (pCi/L)	Date Analyzed	Analyst TT TT					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium	EPA Code 4000 4100 4020 4030 4006	Lab No.		Results (pCi/L)	Date Analyzed	Analyst II IJ					
	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A)	EPA Code 4000 4100 4020 4030 4006 4004	Lab No.		Results (pCi/L)	Date Analyzed	Analyst II IJ					
	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B)	EPA Code 4000 4100 4020 4030 4006 4004 4004	Lab No.		Results (pCi/L)	Date Analyzed	Analyst II II					
	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	Lab No.		Results (pCi/L)	Date Analyzed	Analyst TT TT					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B	EPA Code 4000 4100 4020 4030 4006 4004 4004	Lab No.		Results (pCi/L)	Date Analyzed	Analyst					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	Lab No.		Results (pCi/L)	Date Analyzed	Analyst II II					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	Lab No.		Results (pCi/L)	Date Analyzed	Analyst					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B Tritium	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	Lab No.		Results (pCi/L)	Date Analyzed	Analyst					
	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B Tritium	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	Lab No. ///D ///D	Method No. EPAGOD O EPAGOD O	Results (pCi/L)	Date Analyzed	Analyst					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B Tritium	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	Lab No. ///D ///D		Results (pCi/L) $< 2.0$ $< 4.0$	Date Analyzed	Analyst					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B Tritium	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	Lab No. ///D ///D	Method No. EPAGOD O EPAGOD O	Results (pCi/L) $< 2.0$ $< 4.0$	Date Analyzed	Analyst II II II II					
	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B Tritium	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004	Lab No. ///D ///D	Method No. EPAGOD O EPAGOD O	Results (pCi/L) < 2.0 $\angle 4.0$	Date Analyzed	Analyst					
	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B Tritium	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004 4004 21081	Lab No. ///D ///D	Method No. EPAGOD O EPAGOD O EPAGOD O EPAGOD O Received By:	Results (pCi/L) < 2.0 $\angle 4.0$	Date Analyzed	Analyst TT TT TT TT TT TT TT TT TT T					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B Tritium e Received: a Release Signature: Lab pple Intact upon arrival? pple pH <2.0?	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004 4004 21081	Lab No. ///D ///D	Method No. EPAGOD O EPAGOD O EPAGOD O EPAGOD O Received By:	Results (pCi/L) < 2.0 $\angle 4.0$	Date Analyzed	Analyst TT TT TT TT TT TT TT TT TT T					
Re	TEST Gross Alpha Gross Beta Radium-226 Radium-228 Total Uranium Radon-222 (Bottle A) Radon-222 (Bottle B) Radon Field Blank A Radon Field Blank B Tritium e Received: a Release Signature: Lab pple Intact upon arrival?	EPA Code 4000 4100 4020 4030 4006 4004 4004 4004 4004 21081	Lab No. ///D ///D	Method No. EPAGOD O EPAGOD O EPAGOD O EPAGOD O Received By:	Results (pCi/L) < 2.0 $\angle 4.0$	Date Analyzed	Analyst III IIII IIIII					

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FORM REVISED 05/ DHMH 4540 05/17

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	e oward County ealth Department				Invoice
	Environmental Health Nixon, Director	w. •	Ľ		E: DECEMBER 18, 2017 DECEMBER 6 & 7, 2017 INVOICE #: 2017-011
	Boulevard, Columbia, MD 21045 -2640 Fax 410-313-2648 .org	na an an an an an an an an an			•
TO 5485 Ha	burg Group rpers Farm Road a, Maryland 21044		COMMENT	•	upon receipt. Letter Il be released upon ment.
DATE	DESC	RIPTION		BALANCE	AMOUNT
12/07/17	Gross alpha/beta testing perfo Schooley Mill	rmed for Lots 6 and	9, Estates at		\$90.00
•	HO - 17 - 0191 HO -17 -0194	4			

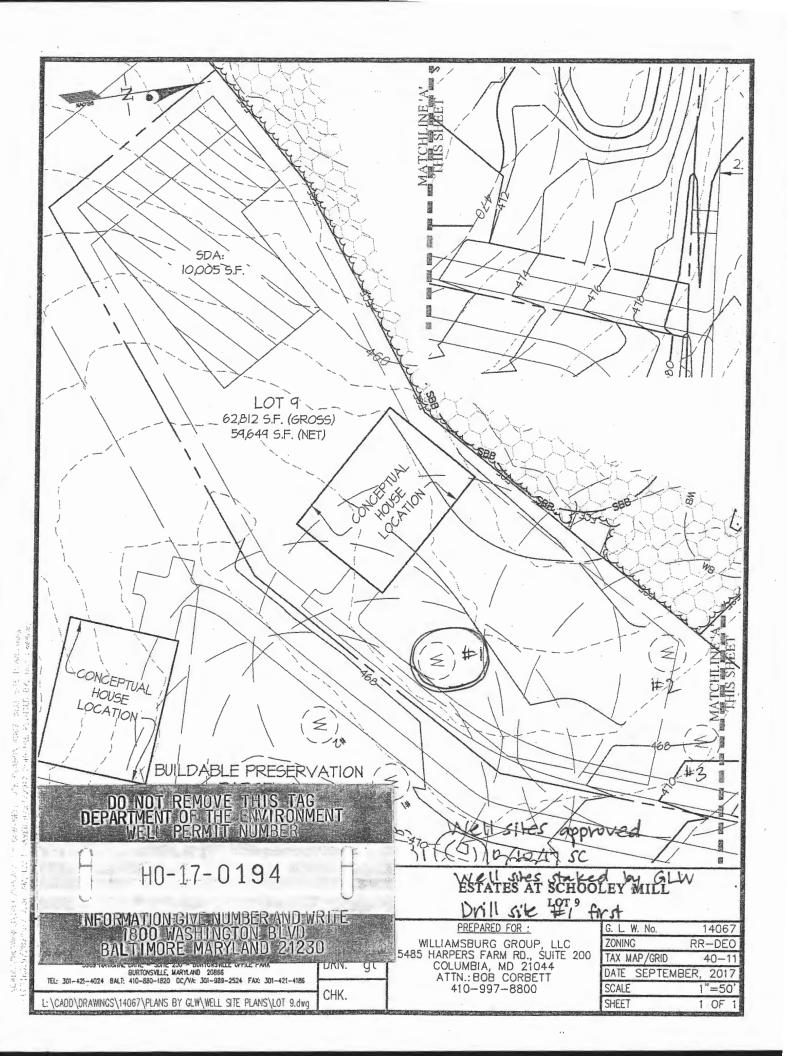
	م میں بند ہے۔ 1997ء - میں			AMOUNT DUE \$90.00
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	• • •	-	· .	
•				
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	1.1.1			

Please detach and return with payment.

REMITTANCE	
Invoice #	2017-011
Site Information	Estates at Schooley Mill Lots 6 and 9
Amount Due	\$90.00

Decerpt 62957 4/16/18

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



H -E	nd Report To: Ioward County Health Department Bureau of Environmental Health 1930 Stanford Blvd. Polymbia Maryland 21045	State of Maryland MDH-Laboratories Administration Division of Environmental Sciences INORGANICS ANALYTICAL LABORATORY 1770 Ashland Avenue Baltimore, Maryland 21205 WATER ANALYSIS	E18002034002 Received: 11/21/2017 Inorganic HOJC0194TD
S A M P L E I D	Bottle Number HQ CO194TD Location ESt. at Schooley Collected: Date W21/2017 Time CHECK (one per box) Drinking Water Landfill Stream Other Drinking Water Landfill Stream Other	Mill Lot 9 Mill Lot 9 Collector & Cabaling Phone 410 313 2 Source (raw water)	Jounty     County     Code       Data Category     Code       Code     Image: Code       Submitter     Image: Code       Code     Image: Code       Emergency     Code       Recheck     Federal       Special     Federal
F I E L D		ee 00 Total 00 Spec collected at yield	Acid Type of Acid

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	1	
	Turbidity*		
	Other:		
			RECEIVED
	<i>#</i>		NOV 3 0 2017
			HOWARDA OUNTY HEALTH DEPT. COMMUNITY HYGIENE PROGRAM
	\$		

\* Results reported in Units, all others in milligrams per liter (ppm) Number of Tests Requested \_\_\_\_\_\_\_ Section Chief\_\_\_\_\_\_

Date

Reported

SUBMITTER'S COPY

MDH-90-A 07/17



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



## **Certificate of Analysis**

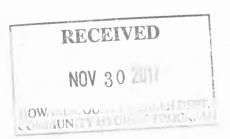
HOWARD CO ENVIRONMENTAL HLTH 8930 STANFORD BLVD COLUMBIA, MD 21045

Lab Project NoE18002034 Date Coll. 11/21/2017 Date Received 11/21/2017 Submittee

Submitted By: J. Cabahug

Field ID: HOJC0194TD Lab No.: E18002034002				
Analyte	Method	Result	Units	Date Analyzed
Chloride	SM 4500-CI E	<10	mg/L	11/27/2017
Total Dissolved Solids	SM 2540C	123	mg/L	11/22/2017

Comments:



Approved by:

Ohnhlen andi

Approval date: 11/29/2017

\*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.



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

# MEMORANDUM

DATE: October 10, 2017

- TO: Allen Compten (MSD 009) Fogle's Well Drilling
- FROM: Sarah Collins, L.E.H.S. SEC Howard County Health Department
- RE: Estates at Schooley Mill Well Permits

Please note the following special conditions for the wells at the Estates at Schooley Mill:

- 1. All wells require 50' of steel casing or 10' into competent bedrock, whichever is deeper.
- 2. All wells require a radium sample at the yield test.
- 3. Wells on lots 1 and 2 require volatile organic compounds (VOCs) sampling at the yield test.
- 4. Wells on lots 1, 3, 4, 7, and 9 require sodium, chloride, and total dissolved solids (TDS) sampling at the yield test.

inkt Lot 9 **FILE INQUIRY NOTES** property DATE **RESULTS OF REVIEW FOR FILE** he Well installed this MUST have Steel casing installed to at eas? 50 feet depth, 0 feet into competent bedrock, t 10/11/17 Discussed special conditions on well permit with Alten Compton Via phone. (SC) WILLS DOWNZRADIENT FROM BUCKHAUEN MANOR 54 4 notice that Se ions on Lot quare Drill 4 numbered.

Send Report To:

930 Stanford Blvd.

Howard County Health Department

Bureau of Environmental Health

Columbia, Maryland 21045

-

State of Maryland DHMH – Laboratories Administration

### Division of Environmental Sciences TRACE METALS LABORATORY

1770 Ashland Avenue Baltimore, Maryland 21205 **E18002033001** Received: 11/21/2017 Metals HOJC0194NA

Do not write above this line

LABORATORY ANALYSIS REQUEST

### **Please Print**

Sample Source: Est: at Schooley Mill Lot 9 Collector: Cabahus Street Street
and the state of the
Date Collected: 11 21/2013 Time Collected: 1 0.m p.m. Phone #: 410 313 264
Sample Preserved By:  Field  Field  Freservative Used:  HNO <sub>3</sub> Preservative Used:  HNO <sub>3</sub> Field  Field Fi
Sample Type:       Drinking Water       Landfill       Source (Raw Water)       Liquid         Data Category       Community       Stream       Distribution (Treated)       Solid         Code Inf       Non-Community       Sediment       Other       Solid         Private       Private       Sediment       Other       Solid
Specify Program:  SDWA  NPDES  CWA  RCRA  Consumer Products  Other
Type of Sample Preparation:       I Total Metals       I Total Metals TCLP       I Dissolved Metals (field preparation required)         Remarks:       Calculate Sample at yield

1	Element	Lab Use	1	Element	Lab Use	1	Element	Lab Use
-	Antimony (Sb)		124	Aluminum (Al)	2	1	Uranium (U)	- K.
(.	Arsenic (As)	0		Calcium (Ca)			Vanadium (V)	
	Barium (Ba)	1.1.1.1.1.		Cobalt (Co)		1. 4	Zinc (Zn)	*
	Beryllium (Be)			Copper (Cu)			·	
	Cadmium (Cd)	-	-	Iron (Fe)			, . ž	
-	Chromium (Cr)			Lead (Pb)				
	Mercury (Hg)	and the second		Magnesium (Mg)				
	Nickel (Ni)			Manganese (Mn)				
	Selenium (Se)			Molybdenum (Mo)	-	4	· · ·	
1	Sodium (Na)	Stat		Potassium (K)				
	Thallium (Tl)			Silver (Ag)		8.		-

Lab Supervisor:

•Phone: (443) 681 - 4596

•Fax: (443) 681 – 4507

DHMH 4432 (05/17)

SUBMITTER'S COPY



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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:	E18002033	Date Coll.: 11/21/2017	Date Received: 11/21/2017	Submitted By: Cabahug	

### Field ID: HOJC0194NA Lab No.: E18002033001

Method	Element	Result	Units	Date Analyzed
EPA 200.7	Sodium	6.42	ppm	11/27/2017

### Comments:

Chei Tinftas Approved by:

Approval date: 11/28/2017

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

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