

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			

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

 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

*orig
 10/13/16*

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

- * PERMIT NUMBER OF ABANDONED WELL (if any)
- * PERMIT NUMBER OF REPLACEMENT WELL:

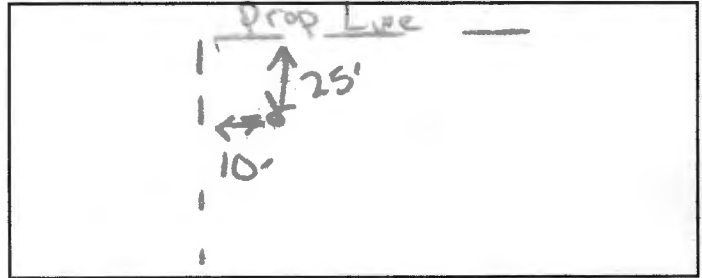
HO-14-0115

PERSON ABANDONING WELL: Michael Barlow WELL DRILLER'S LICENSE NUMBER: 355
 CIRCLE: MWD MSD / MGD

OWNER'S NAME: Land Design + Development

WELL LOCATION:
 COUNTY: Howard
 NEAREST TOWN: Highland
 TAX MAP 34 BLOCK PARCEL 414
 SUBDIVISION: JACKS LANDING
 SECTION: LOT: 7
 STREET ADDRESS: Tr. Adolphia Mill Rd

SITE LOCATION MAP



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

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

CIRCLE ONE MWD / MSD / MGS

DATE 9/27/16

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. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or State Law.



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.

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.



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

RECEIVED

MAY 7 2015

HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

Comments:

Approved by: Sadia Muneeb

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.

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


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

Bureau of Environmental Health
1930 Stanford Blvd.
Columbia, MD 21045

LABORATORY ANALYSIS REQUEST
Please Print

Sample ID No: ~~HO-14-0115~~ ^{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. Phone #: 410-313-6287

Sample Preserved By: Field ESRL Central Lab

Preservative Used: HNO₃ pH 2.0 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: 1.0.1
MAY 7 2015
HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

Lab Supervisor: _____

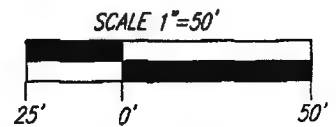
• Phone: (410) 767 - 6186

• Fax: (410) 333 - 5122

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 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 Approved.
 stated by Vogel.
 -Kaw



ROBERT H. VOGEL
ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043 TEL: 410.461.7666
 FAX: 410.461.8961

13938 Highland Rd

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

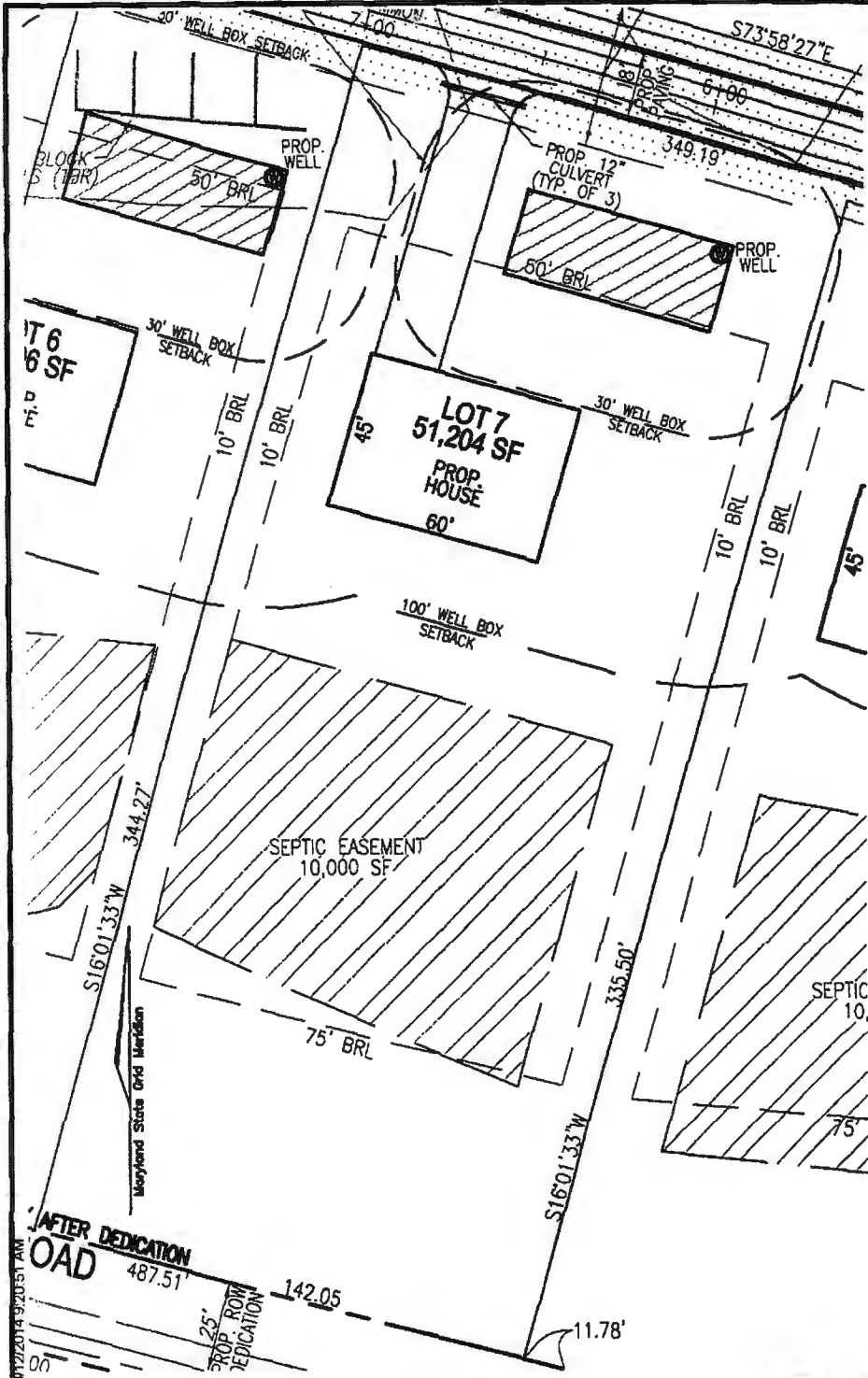
LOTS 1-8, BUILDABLE PRESERVATION PARCEL A,
 AND NON-BUILDABLE PRESERVATION PARCEL B
 A SUBDIVISION OF TAX MAP 34
 PARCEL 414 (L. 3172 / F. 336)

PARCEL 414
 ZONED RR-DEO
 HOWARD COUNTY, MARYLAND

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

PROJECT: S:\ENGINEERING\WELLS\WELL EXHIBIT LOT 7 DWG. BY: JMR 14 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

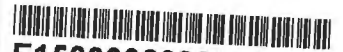
*The following methods are included in our A2LA Scope of Accreditation: EPA150.1, EPA 353.2, EPA 375.2, SM4500F C, SM 4500-CN G & QCM-CN, QCM-CN.

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 pit 2.0 4-22-15 SHV

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 28 2015
 HOWARD COUNTY HEALTH DEPT.
 COMMUNITY HYGIENE PROGRAM

Lab Supervisor: Sandra Kline

•Phone: (410) 767-6186

•Fax: (410) 333-5122

DHMH 4432 (7/10)

SUBMITTER'S COPY

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: °C

LABORATORY ANALYSIS REQUEST FORM

Please write legibly

Bottle No.: H0170239-A Plant/Site Name: Jack's Landing Lot 7 County: Howard

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

Collector/ID: J. Collins / 3426 SC Phone No.: 410-313-6237

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 checked="" type="checkbox"/> EPA Method 524.2 (Volatiles) <input checked="" 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

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: 4.5 °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	


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


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



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

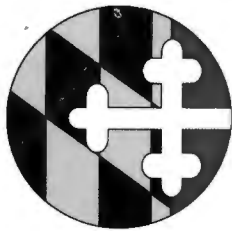
Comments:

Approved by: _____

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

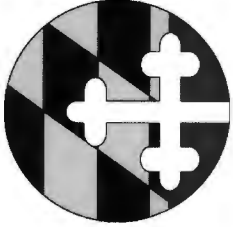
04/10/2018

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

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

S:\EnviroFinal-Organics.rpt



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.

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.

Analytical Results

Project: Jacks Landing

Project Number: E053297
Project Manager: Stephen Shelley

Reported:
04/02/18 16:24

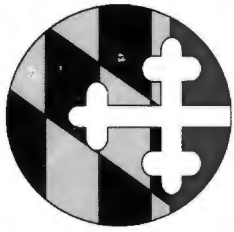
E053297-01 (Lot 7 HO 17-0239)
Jacks Landing
8032903-01 (Drinking Water)
Sample Date: 03/26/18

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		

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



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

<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		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				
1,1,2,2-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



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

<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		ND
m+p-Xylene	1.0		ND	Naphthalene	0.5		ND
Methylene Chloride	0.5	5	0.66	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 Nunez

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)

Driller notified of special condition via phone several 2/3/18

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

Lab No. Date Received



E18003472001

Received: 03/27/2018

Metals

HO-17-0239

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

LABORATORY ANALYSIS REQUEST

Please Print

Digest

Do not write above this line

Sample ID No: HO-17-0239 Site Name: Jack's Landng 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 Bangedorf 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

Analytical Results

1500 Caton Center Dr Suite G

Baltimore MD 21227

410-247-7600

www.mdspectral.com

Reported:

04/02/18 16:24

Project: Jacks Landing

Project Number: E053297

Project Manager: Stephen Shelley

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



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 Rice Solutions Telephone #: 410-527-1024
 Address: 2024 Paper Mill Rd
Proveny 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: SFA R. I. E
 Model #: SBP4HS15231
 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#: 81P100
 GPM Depth: 40" (36" min)
 GPM NSF/WSC approved: Down

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)



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.

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

WATER WELL ABANDONMENT-SEALING REPORT FORM

SUBMIT COPIES OF COMPLETED FORM TO:

- * COUNTY ENVIRONMENTAL AGENCY (contact MDE, WMA if address needed)
- * WELL OWNER
- * MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

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

* PERMIT NUMBER OF ABANDONED WELL (if any)

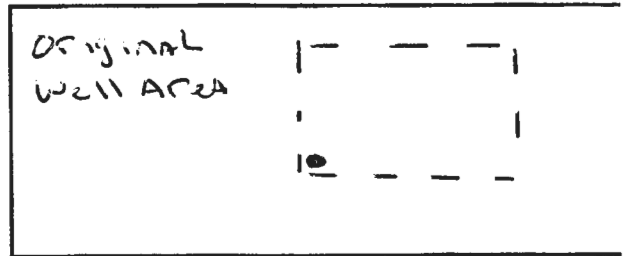
* PERMIT NUMBER OF REPLACEMENT WELL:

HO - 14 - 0115

* PERSON ABANDONING WELL: Michael Borkow 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: Clarksville
TAX MAP 34 BLOCK PARCEL 414
SUBDIVISION: JACKS LANDING
SECTION: LOT: 7
STREET ADDRESS: Trindelphia Mill Rd

LATITUDE 39.21590

LONGITUDE 76.97471

LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
Drill Cuttings	500	20
Cement	20	0

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

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

VOLUME OF MATERIAL USED

Cement - 470 lbs

* 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

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

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. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or State Law.