

C1 4072

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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 TULL last name, 15005. first name, 4803 Rivercrossing TOWN ELLIOTT CITY SUBDIVISION Homewood CIBSINS SECTION LOT 70

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 (Use additional sheets if needed), FEET (FROM, TO), check if water bearing. Rows include: red clay (0-3), light brown loamy (3-27), dark brown (27-28), white brown sands (28-41), dark brown (41-43), light brown (43-59), gray schist (59-175).

GROUTING RECORD

WELL HAS BEEN GROUTED (Circle Appropriate Box) YES [Y] NO [N] TYPE OF GROUTING MATERIAL (Circle one) CEMENT [CM] BENTONITE CLAY [BC] NO. OF BAGS 26 NO. OF POUNDS 2494 GALLONS OF WATER 156 DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 65 ft.

CASING RECORD

casings types insert appropriate code below [ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER MAIN CASING TYPE [ST] Nominal diameter top (main) casing (nearest inch) 06 Total depth of main casing (nearest foot) 47

OTHER CASING (if used)

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

SCREEN RECORD

screen type or open hole insert appropriate code below [ST] STEEL [BR] BRASS [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

C2

DEPTH (nearest ft.)

Table for screen depth with columns: E A C H S R E N, 1, 2, 3. Values: 10, 67, 175.

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

C3

PUMPING TEST

HOURS PUMPED (nearest hour) 03 PUMPING RATE (gal. per min.) 10 METHOD USED TO MEASURE PUMPING RATE 1 gal. WATER LEVEL (distance from land surface) BEFORE PUMPING 26 ft. WHEN PUMPING 73 ft. TYPE OF PUMP USED (for test) [A] air [P] piston [T] turbine [C] centrifugal [R] rotary [O] other [J] jet [S] submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP YES [NO] IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS. TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. CAPACITY: GALLONS PER MINUTE (to nearest gallon) 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 01 (nearest foot)

LATITUDE 39.2378502 LONGITUDE 76.9031906 (DEFAULT COORD. WGS 84)

NOTES:

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED YES [Y] NO [N]

CIRCLE APPROPRIATE LETTER A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED E ELECTRIC LOG OBTAINED P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. 1 M S D 009 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. 1 D

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

B 1 09362

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type

STATE PERMIT NUMBER

HO-95-2463 fill in this form completely

Date Received (APA)

12 19 12

OWNER INFORMATION

Toll Brothers 11423 Hunt Crossing Ct Ellicott City, Md. 21042

B 3

LOCATION OF WELL

Howard Home wood Crossing Ellicott City

DRILLER INFORMATION

Allen Compton MS D 009 Eagles Well Drilling, LLC P.O. Box 202, Woodbine, Md 21797 Allen Compton 12-6-12

B 4

SOURCES OF DRILLING WATER

1. 3.

4803 Rivercrossing Ct ON WHICH SIDE OF ROAD DISTANCE FROM ROAD ENTER FT OR MI TAX MAP: 0039 BLK: 0009 PARCEL 0028

B 2

WELL INFORMATION

APPROX. PUMPING RATE 5 AVERAGE DAILY QUANTITY NEEDED 500

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

Howard 13 A 515043 COUNTY NAME COUNTY NO. STATE SIGNATURE DATE ISSUED 1/17/13 CO SIGNATURE EXP. DATE 1/12/14

APPROXIMATE DEPTH OF WELL 300 FEET

APPROXIMATE DIAMETER OF WELL 6 INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) AIR-ROTary AIR-ROtation JETTED AIR-PERcussion ROTARY (Hydraulic Rotary) Drive-POINT

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

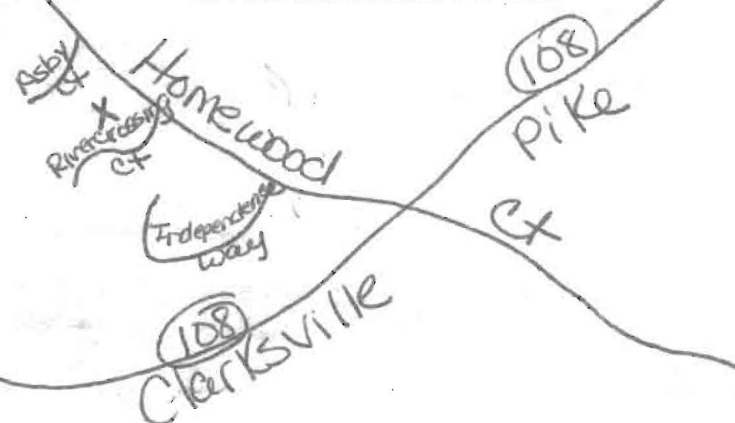
- THIS WELL WILL NOT REPLACE AN EXISTING WELL THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS THIS WELL WILL DEEPEM AN EXISTING WELL

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

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

APPROP. PERMIT NUMBER HO 2003 G006 PERMIT No. HO-95-2463

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



SPECIAL CONDITIONS

SEE ATTACHED MEMO



**HOWARD COUNTY HEALTH DEPARTMENT  
BUREAU OF ENVIRONMENTAL HEALTH  
WELL & SEPTIC PROGRAM  
TEL: (410)313-1771 FAX: (410)313-2648**

Information Form for the Installation of the Well Pump, Pitless Adapter, and Supply Piping

NOTE: The installer is responsible for requesting an inspection prior to 9 am on the day of the desired inspection. No work is to be covered until approved by the Health Department. All installations must comply with the National Standard Plumbing Code (NSPC, as amended locally) and COMAR 26.04.04 (MD Well Construction Regulations). Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: Fudge's Well Drilling LLC Telephone #: 410 795 5370  
Address: J PO Box 202 J  
Woodbine, MD 21797

(Must circle one) Licensed Plumber  Licensed Well Driller  Licensed Well Pump Installer  
License # and name of individual responsible for the field installation:  
Name (Print): David C. Fudge License # MSD226  
\*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: Toil Brothers Telephone #: 410-489-2275  
Subdivision: Benedict Farm Lot #: 70 Well Tag #: HO-95-2463 ✓  
Site Address: 4803 Rivercrossing Ct  
Ellicott City, MD 21042

<u>Submersible Pump Data</u>	<u>Pitless Adapter</u>	<u>Well Cap and Electric Conduit</u>
Make: <u>Grundfos</u>	Make: <u>Aimco Bell</u>	Two piece watertight cap: <u>YES</u>
Model #: <u>ISSQE07-180</u>	Model #: <u>N/A</u>	Screened, vented well cap: <u>YES</u>
Pump Capacity: <u>15</u> GPM	Depth: <u>36"</u> (36" min)	Cap secured to casing: <u>YES</u>
Well Yield: <u>10</u> GPM	NSF/WSC approved: <u>YES</u>	Conduit min 1 1/2" B.G.: <u>YES</u>
Depth of well encountered at time of pump installation: <u>17.5</u> (feet)		Conduit secured to well cap: <u>YES</u>
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4		
Torque arrestors, Cable guards, or other acceptable method used— Must circle one		
Safety rope, if used, attached to brass rope adaptor or other acceptable method <u>inside of well casing</u> <u>N/A</u>		

<u>Piping to house</u>	<u>House Connection</u>
Type: <u>1" poly pipe</u>	PVC sleeve to undisturbed soil at wall penetration: <u>YES</u>
PSI: <u>200</u> (160 psi min)	Length of sleeve (5' minimum from foundation): <u>6'</u>
Depth of supply line: <u>30'</u> (36" min)	Sleeve sealed properly: <u>YES</u>

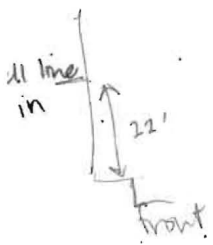
The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

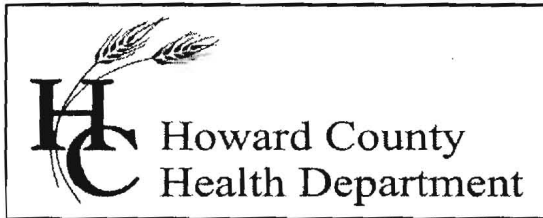
Signature of company representative responsible for installation: David Fudge date: 7-29-15

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

Date Insp. Requested: 7/30/15 Date Insp. Approved: 7/30/15 Inspector: SC

Inspection Data: Pitless adapter watertight & water supply line at least 36" below grade	✓
Two piece cap installed and attached to casing securely	✓
Elec. conduit extends at least 18" below grade/attached to cap properly	✓
Safety rope not outside of well cap/casing	✓
Correct well tag attached properly and casing 3" above finished grade	✓
Water supply line sleeved adequately at house connection	✓
Adequate grout observed below pitless adapter	✓





Bureau of Environmental Health

8930 Stanford Blvd., Columbia, MD 21046-2147

Main: 410-313-1774 | 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

**INTERIM CERTIFICATE OF POTABILITY**

**Expiration Date – JULY 29, 2016**

January 29, 2016

Homeowner  
4803 Rivercrossing Court  
Ellicott City, MD 21042

**RE: Homewood Crossing, Lot 70  
4803 Rivercrossing Court  
Building Permit: B14004496  
Well Permit: HO-95-2463**

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 **1/6/2016**. Final approval of the well line connection to the dwelling was granted on **7/30/2015**. The well construction was completed on **8/28/2013**. Water samples were collected on **10/20/2015**.

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 **8/28/2013**. Results showed a Gross Alpha level of **2.0 ± 0.0 pCi/L** and **Gross Beta** level of **4.0 ± 0.0 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 50pCi/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-95-2463. 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 certified water quality laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website:  
<http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf>

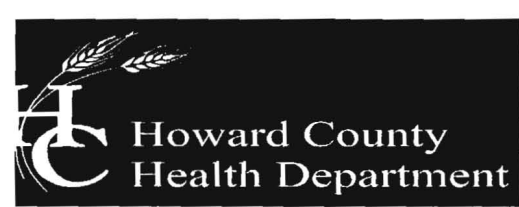
In closing, please refer to our "Homeowner Fact Sheet" for understanding your Best Available Technology (BAT) for your onsite sewage disposal. You will also find a link to Maryland Department of the Environments website which elaborates in further detail operation and maintenance of your BAT.

Approving Authority,



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

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



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Maura Rossman, M.D., Health Officer

October 27, 2014 ?

Toll Brothers Inc.  
14540 Edgewood Way  
Glenelg, Maryland 21737

RE: Homewood Crossing Lot 70 ✓  
4803 River Crossing Court  
Well Tag: HO - ~~95-1238~~  
95-2463


To Whom it May Concern:

A sample was collected during a yield test on August 28, 2013 and submitted to the Department of Health & Mental Hygiene Laboratories to assess the possible presence of **Gross Alpha** and **Gross Beta** in the future well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which exists in your area of development within the County.

Results from this screening revealed a **Gross Alpha** of  $< 2.0 \pm 0.0$  picocuries/liter (pCi/L), while the **Gross Beta** level was  $< 4.0 \pm 0.0$  pCi/L. The **Gross Alpha** result was below its **maximum contaminant level (MCL)** of 15 pCi/L, while the **Gross Beta** level was below its targeted value of 50 pCi/L (roughly equivalent to the **annual dose rate** of 4 millirems/year).

At the time of testing and with respect to these parameters, the future well water supply meets 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: Well & Septic property file



# Fredericktowne Labs Inc.

ENVIRONMENTAL TESTING

3020 Venture Court • P.O. BOX 245 • Myersville, MD 21773 • 800-332-3340 • FAX 301-293-2366  
 www.fredericktownelabs.com • info@fredericktownelabs.com

## Certificate of Analysis

Acct. No. 8933 - 4-1

### Field Record

Site visit performed on: Friday, November 20, 2015 2:12 PM  
 by: Jessica Fogle  
 Affiliation: Fogle's Well Drilling & Pumps  
 Property Owner: Residence  
 Property Address: 4803 River Crossing Road  
 Ellicott City, MD  
 Sample Source: Pressure Tank

### Laboratory Report

Sample Received at laboratory: 11/20/2015 3:30 PM

#### Bacteriological results:

<u>Total Colif. (/100ml)</u>	<u>E.coli. (/100ml)</u>	<u>Start</u>		<u>End</u>		<u>Method</u>	<u>Analyst</u>
		<u>Date</u>	<u>Time</u>	<u>Date</u>	<u>Time</u>		
<1	<1	11/20/15	16:20	11/21/15	16:20	9223B	KB

**Bacteriological analysis of this sample indicates the water is safe for human consumption and meets federal, state and local requirements. Analysis was performed according to the 20th edition of Standard Methods**

#### Inorganic Chemical results:

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>MCL</u>	<u>Date of Analysis</u>	<u>Method</u>	<u>Analyst</u>
Nitrate-Nitrogen	<0.2	mg/l	10	11/20/2015	300.0	PH
Sand	<2	mg/l	5	11/21/2015	0.065mm Filter	KB
Turbidity	3.3	NTU	10	11/20/2015	180.1	PH

Reported by:

*Tallen Mellott* 11/25/15  
 Name Date

Fredericktowne Labs, Inc. is a State Certified Water Quality Laboratory  
 Maryland Cert. No. 116 Virginia Cert. No. 00444  
 MDOT WBE Cert. No.: 91-158

# Chain of Custody Form

**Fredericktowne Labs, Inc.**

3020 Ventrie Ct. P. O. Box 245

Myersville, MD 21773-

(301) 293-3340 / FAX (301) 293-2366

**Acct. No.: 8933-4-2**

<b>Project:</b> Residence 4803 River Crossing Road Ellicott City, MD	<b>Collected by:</b> J Fogle <b>Affiliation:</b> Fogle's
--	---

Sample Description Sample Number	Date of Collection	Time of Collection	Analysis to be Performed	Field Observations	Preservation	Verif. By:
<b>Source:</b> Pressure Tank <b>Matrix:</b> Drinking Water <b>Grab/Comp:</b> Grab						

8933-4-2-1	11/20/15	14:20	Radium 226		HNO3 to pH < 2	
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If lead or copper are sample collection forms attached?  
 Yes  No 
 Water last used: \_\_\_\_\_ (Date) \_\_\_\_\_ (Time)

Relinquished by: [Signature]	Received by:
------------------------------	--------------

Relinquished by:	Received by:
------------------	--------------

Relinquished by:	Received by:
------------------	--------------

Method of Shipment:	Iced: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Temp <input type="checkbox"/>	Treatment:
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Note: Recd samples 11/20/15

SET 11/23/15



# Fredericktowne Labs Inc.

ENVIRONMENTAL TESTING

3020 Venture Court • P.O. BOX 245 • Myersville, MD 21773 • 800-332-3840 • FAX 301-293-2366  
 www.fredericktownelabs.com • info@fredericktownelabs.com

## Analysis Results

Account No.: 8933 - 4-2

Residence  
 4803 River Crossing Road  
 Ellicott City, MD


Date Received: Friday, November 20, 2015  
 Collected By: Jessica Fogle  
 Fogle's Well Drilling & Pumps  
 Date Reported: Wednesday, December 02, 2015

Matrix: Drinking Water

Lab#	Parameter	Result	Limit of Detection	Method	Start Date	End Date	Analyst
<b>Source: - Pressure Tank Type: Grab Collection Date: 11/20/2015 - 14:12</b>							
8933-4-2-1	Radium 226	See Report					BRD

Notes:

1. mg/l stands for milligrams per liter and is nearly synonymous with parts per million
2. ug/l stands for micrograms per liter and is nearly synonymous with parts per billion
3. < stands for "less than" and indicates that the component in question was not detected (i.e. was less than the detection limit)
4. All analyses performed using EPA accepted methods in accordance with Title 40 Code of Federal Regulations Part 141 & 143. Method references: (1) Methods for the Chemical Analysis of Water & Wastewater EPA-600/4-79-020, (2) Standard Methods for the Examination of Water Wastewater - AWWA 19<sup>th</sup>/20<sup>th</sup> eds.
5. "\*" denotes an analysis that was subcontracted to a State of Maryland approved lab.
6. Information concerning field pH and chlorine for bacteriological samples may be found on the chain of custody form.

Verified by:   
 M. L. Miller, Ph.D.  
 Laboratory Director

Fredericktowne Labs is a State Certified Water Quality Laboratory  
 MD Cert. No.: 116 VA Cert. No.: 444  
 MDOT WBE Cert. No.: 91-158



Summit Environmental Technologies, Inc.  
 3310 Wm St.  
 Cuyahoga Falls, Ohio 44223  
 TEL: (330) 253-8211 FAX: (330) 253-4489  
 Website: <http://www.sctek.com>

# Analytical Report

(consolidated)

WO#: 15111669

Date Reported: 11/30/2015

CLIENT: Fredericktowne Labs, Inc  
 Project: 8933-4-2  
 Lab ID: 15111669-001  
 Client Sample ID 8933-4-2-1

Collection Date: 11/20/2015 2:12:00 PM

Matrix: DRINKING WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
DW RADIUM-226 ANALYSIS (903.0)				E903.0	E903-904	Analyst: BRD	
Radium-226	ND	0.980		pCi/L	± 0.11	1	11/30/2015 11:47:00 A
Yield	0.960					1	11/30/2015 11:47:00 A

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level.
  - H Holding times for preparation or analysis exceeded
  - MC Value is below Minimum Compound Limit.
  - ND Not Detected at the Reporting Limit
  - ‡ Second column confirmation exceeds

- E Value above quantitation range
- M Manual Integration used to determine area response
- N Tentatively identified compounds
- O RSD is greater than RSDlimit
- PL Permit Limit



**SUMMIT**  
ENVIRONMENTAL TECHNOLOGIES, INC.  
Analytical Laboratories

Summit Environmental Technologies, Inc.  
3310 Win St.  
Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4430  
Website: <http://www.seitak.com>

November 30, 2015

Patricia Hill  
Fredericktowne Labs, Inc  
PO 245  
Myersville, MD 21773  
TEL: 301-293-3340  
FAX: 301-293-2366

RE: 8933-4-2

Dear Patricia Hill:

Order No.: 15111669

Summit Environmental Technologies, Inc. received 1 sample(s) on 11/24/2015 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Ana C. Stocum  
Project Manager  
3310 Win St.  
Cuyahoga Falls, Ohio 44223

32LA 072401, Alabama 41683, Arizona AZ0788, Arkansas 89-0735, California 07256CA, Colorado, Connecticut PH-0105, Delaware, Florida NELA-1  
68768, Georgia IN7688 and 943, Idaho OH0923, Illinois 290061 and Reg. 8, Indiana C-CO-13, Kansas B-10347, Kentucky (Underground Storage Tank)  
3, Kentucky 90146, Louisiana 04061 and LA12004, Maine 2012015, Maryland 339, Massachusetts M-OPH923, Minnesota 469711, Montana CRT0059,  
New Hampshire 2906, New Jersey OJ006, New York 11777, North Carolina 89705 and 631, Ohio Drinking Water 4170, Ohio VAP CL 052, Oklahoma  
9940, Oregon GHT/0001, Rhode Island LA00317, South Carolina 9201600, Tennessee TN0018, Texas TH0470440611-5, Region 8 SIME-1,  
USDA, AMES P530-11-00244, Utah OH000232011-1, Vermont VT 87688, Virginia 00440 and 1581, Washington C891, West Virginia 248 and 99570  
and IN 7688, Wisconsin 890613010



Summit Environmental Technologies, Inc.  
5310 Win St.  
Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4489  
Website: <http://www.softek.com>

## Case Narrative

WO#: 15111669  
Date: 11/30/2015

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**CLIENT:** Fredericktowne Labs, Inc  
**Project:** 8933-4-2

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This report in its entirety consists of the documents listed below. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Paginated Report including Cover Letter, Case Narrative, Analytical Results, Applicable Quality Control Summary Reports, and copies of the Chain of Custody Documents are supplied with this sample set.

Concentrations reported with a J-Flag in the Qualifier Field are values below the Limit of Quantitation (LOQ) but greater than the established Method Detection Limit (MDL).

Method numbers, unless specified as SM (Standard Methods) or ASTM, are EPA methods.

Estimated uncertainty values are available upon request.

Analysis performed by DBM, VRM, or SFG were performed at Summit Labs 2704 Eatonton Highway Haddock, GA 31033

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

This report is believed to meet all of the requirements of NELAC or the accrediting / certifying agency. Any comments or problems with the analytical events associated with this report are noted below.

Original  
Page 2 of 5



Summit Environmental Technologies, Inc.  
 5310 Wm.  
 Cuyahoga Falls, Ohio 44227  
 TEL: (330) 253-8211 FAX: (330) 253-4422  
 Website: <http://www.settek.com>

## Qualifiers and Acronyms

WOB: 15111669  
 Date: 11/30/2015

These commonly used Qualifiers and Acronyms may or may not be present in this report

### Qualifiers

U	The compound was analyzed for but was not detected.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B/MB+	The analyte was detected in the associated blank.
G	The ICB or CCB contained reportable amounts of analyte.
QC +/-	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL +/-	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM +/-	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV +/-	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
Z	Deviation: A deviation from the method was performed; Please refer to the Case Narrative for additional information

### Acronyms

ND	Not Detected	RL	Reporting Limit
QC	Quality Control	MDL	Method Detection Limit
MB	Method Blank	LOD	Level of Detection
LCS	Laboratory Control Sample	LOQ	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	PQL	Practical Quantitation Limit
QCS	Quality Control Sample	CRQL	Contract Required Quantitation Limit
DUP	Duplicate	PL	Permit Limit
MS	Matrix Spike	Reg.L	Regulatory Limit
MSD	Matrix Spike Duplicate	MCL	Maximum Contamination Limit
RPD	Relative Percent Different	MbCL	Minimum Compound Limit
ICV	Initial Calibration Verification	RA	Reanalysis
ICB	Initial Calibration Blank	RE	Reextraction
CCV	Continuing Calibration Verification	TIC	Tentatively Identified Compound
CCB	Continuing Calibration Blank	RT	Retention Time
RLC	Reporting Limit Check	CF	Calibration Factor
DF	Dilution Factor	RF	Response Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.



**SUMMIT**  
ENVIRONMENTAL TECHNOLOGIES, INC.  
Analytical Laboratories, Inc.

Summit Environmental Technologies, Inc.  
3310 Wm St.  
Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4489  
Website: <http://www.sattek.com>

## Workorder Sample Summary

WO#: 15111669  
30-Nov-15

**CLIENT:** Fredericktowne Labs, Inc  
**Project:** 8933-4-2

Lab Sample ID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
15111669-001	8933-4-2-1		11-20-2015 2:12:00 PM	11-24-2015 11:00:00 AM	Drinking Water

# CHAIN OF CUSTODY

FREDERICKTOWNE LABS, INC.

3020 VENTRIE CT., PO BOX 245, MYERSVILLE, MD 21773

301-293-3340 OR FAX 301-293-2366

Page: \_\_\_\_\_ of \_\_\_\_\_

FTL Acct. No.: <b>8933-4,5,6,7</b>					Collected By: (Please Print) <b>Jessica Fogle</b>					Analyses To Be Performed							
Compliance Sample (regulated): Yes <input type="checkbox"/> No <input type="checkbox"/>					Project:					Affiliation: <b>Fogle's Well Drilling &amp; Pumps</b>							
Lab ID	Field Sample ID	Site Description	Collection Start		Collection End		Matrix DW/WW	pH	Res. Cl	DO	Temp	Grab/Comp	Rec'd Temp (at lab)	Radium 226	Bacteria, ND3	Turba + Sand	Preservation
			Date	Time	Date	Time											
4	pressure Tank	4803 River Crossing Ct. Ellicott City, MD	11/20/15	2:12pm	11/20/15	2:12pm								✓	✓	✓	
	pressure Tank	4702 Ashby Ct. Ellicott City, MD	11/20/15	1:55pm	11/20/15	1:55pm								✓	✓	✓	
	Kitchen Sink	1207 Creekside Ct. Sykesville, MD 21784	11/20/15	12:45pm	11/20/15	12:45pm								✓	✓	✓	
	Kitchen Sink	3534 Oxwood Ct. Westminster, MD 21157	11/20/15	11:58am	11/20/15	11:58am								✓	✓	✓	
Relinquished By: (Print): <b>Jessica Fogle</b>			Date/Time		Received By: (Print): <b>Kellen Mellott</b>			Date/Time		Treatment Devices Present: Yes <input type="checkbox"/> No <input type="checkbox"/>							
(Signature): <i>Jessica Fogle</i>					(Signature): <i>Kellen Mellott</i>			11/20/15 15:30		Describe Treatment Device(s):							
Relinquished By: (Print):			Date/Time		Received By: (Print):			Date/Time		Lead & Copper Samples - Water Last Used:							
(Signature):					(Signature):					Date: _____ Time: _____							
										Method of Shipment: Iced: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
Relinquished By: (Print):			Date/Time		Received By: (Print):			Date/Time		Condition of Sample(s) upon Receipt:							
(Signature):					(Signature):												

SEND REPORT TO: Bert Nixon DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Howard Co. Env. Health Laboratories Administration  
2178 Columbia Gateway Dr. 201 W. Preston St., Baltimore, MD 21201  
Columbia, MD 21046 Robert A. Myers, Ph.D., Director

Lab No. E000571 229

**RADIATION ANALYSIS REQUEST FORM**

Plant/Site Name: Homewood Crossing - Lot 70 County: Howard  
 Sample Source: 4803 River Crossing Ct. Location: HO ~~95-1238~~ 95-2463  
(Well no., lab sink, sample tap, etc.)  
 Radon-222 Bottle A 951238BB Radon-222 Field Blank Bottle A 1238  
 Bottle B \_\_\_\_\_ Bottle B \_\_\_\_\_

County 13 Plant No. \_\_\_\_\_

CHECK (one per Box)

Type	Service	Point of Collection	Testing
Drinking Water <input checked="" type="checkbox"/>	Community <input type="checkbox"/>	Source (Raw) <input checked="" type="checkbox"/>	Emergency <input type="checkbox"/>
Landfill <input type="checkbox"/>	Non-Community <input type="checkbox"/>	Distribution (treated) <input type="checkbox"/>	Routine <input checked="" type="checkbox"/>
Stream <input type="checkbox"/>	Private <input checked="" type="checkbox"/>	MCL <input type="checkbox"/>	Recheck <input type="checkbox"/>
Other <input type="checkbox"/>	Other <input type="checkbox"/>		Special <input type="checkbox"/>

Submitters Code: \_\_\_\_\_ Federal Project: \_\_\_\_\_  
 Collector: B. Baker Telephone No.: (410) 313-2643  
 Date Collected: 8/28/2013 Time Collected: \_\_\_\_\_ a.m. 1:30 p.m.  
 Field pH: \_\_\_\_\_ Field Chlorine: \_\_\_\_\_  
 Nitric Acid Preserved: Yes  No  Iced: Yes  No

Remarks: Sample Collected During Yield Test

TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input checked="" type="checkbox"/> Gross Alpha	4000	<u>0571</u>	<u>EPA 900.0</u>	<u>&lt; 2.0</u>	<u>9/4/13</u>	<u>MA</u>	<u>9/4/13</u>
<input checked="" type="checkbox"/> Gross Beta	4100	<u>0571</u>	<u>EPA 900.0</u>	<u>5.9 ± 1.8</u>	<u>9/4/13</u>	<u>J</u>	<u>9/4/13</u>
<input type="checkbox"/> Radium-226	4020						
<input type="checkbox"/> Radium-228	4030						
<input type="checkbox"/> Total Uranium	4006						
<input type="checkbox"/> Radon-222 (Bottle A)	4004						
<input type="checkbox"/> Radon-222 (Bottle B)	4004						
<input type="checkbox"/> Radon Field Blank A	4004						
<input type="checkbox"/> Radon Field Blank B	4004						
<input type="checkbox"/> Tritium							

Date Received: 8/29/13 Received By: [Signature] Date: 9/4/13  
 Data Release Signature: \_\_\_\_\_

Lab Use Only	Yes	No	N/A.
Sample Intact upon arrival?	<input checked="" type="checkbox"/>		
Sample pH < 2.0?	<input checked="" type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>		

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

SEND REPORT TO:

Bert Nixon

7178 Columbia Gateway Dr  
Columbia MD 21046

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration  
201 W. Preston St., Baltimore, MD 21201  
Robert A. Myers, Ph.D., Director

Lab No.

000570 29

RADIATION ANALYSIS REQUEST FORM

Plant/Site Name: Howard Co.

County:

Sample Source: Field Blank

Location:

(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A  
Bottle B

Radon-222 Field Blank  
Bottle A  
Bottle B

County 13

Plant No.

CHECK (one per Box)

Type	
Drinking Water	<input type="checkbox"/>
Landfill	<input type="checkbox"/>
Stream	<input type="checkbox"/>
Other	<input type="checkbox"/>

Service	
Community	<input type="checkbox"/>
Non-Community	<input type="checkbox"/>
Private	<input type="checkbox"/>
Other	<input type="checkbox"/>

Point of Collection	
Source (Raw)	<input type="checkbox"/>
Distribution (treated)	<input type="checkbox"/>
MCL	<input type="checkbox"/>

Testing	
Emergency	<input type="checkbox"/>
Routine	<input type="checkbox"/>
Recheck	<input type="checkbox"/>
Special	<input type="checkbox"/>

Submitters Code:

Federal Project:

Collector: B. Baker

Telephone No.: (410) 313-2643

Date Collected: 8/28/13

Time Collected: a.m. p.m.

Field pH:

Field Chlorine:

Nitric Acid Preserved: Yes  No

Iced: Yes  No

Remarks:

TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input checked="" type="checkbox"/> Gross Alpha	4000	0570	EPA900.0	2.0	9/4/13	MA	9/5/13
<input checked="" type="checkbox"/> Gross Beta	4100	0570	J	24.0	J	J	J
<input type="checkbox"/> Radium-226	4020						
<input type="checkbox"/> Radium-228	4030						
<input type="checkbox"/> Total Uranium	4006						
<input type="checkbox"/> Radon-222 (Bottle A)	4004						
<input type="checkbox"/> Radon-222 (Bottle B)	4004						
<input type="checkbox"/> Radon Field Blank A	4004						
<input type="checkbox"/> Radon Field Blank B	4004						
<input type="checkbox"/> Tritium							

Date Received: 8/29/13

Received By: [Signature]

Data Release Signature: [Signature]

Date: 9/5/13

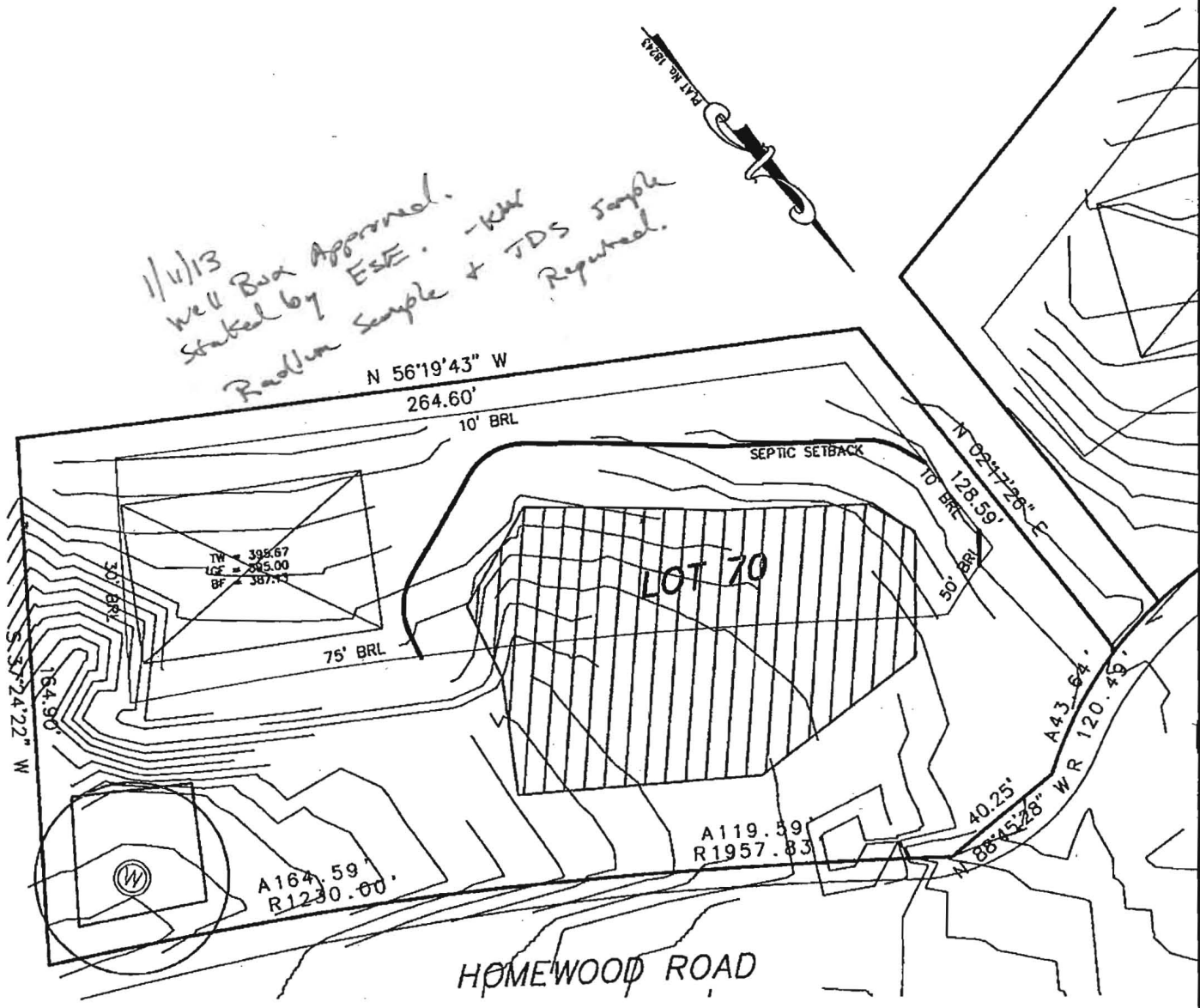
Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	/		
Sample pH <2.0?	/		
Received within holding time?	/		

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

FORM REVISED 01/13  
DHMH 4540 01/13

ORIGINAL LABORATORY

11/11/13  
 Well Box Approved.  
 Staked by ESE. -KWR  
 Radon Sample + TDS Sample  
 Required.



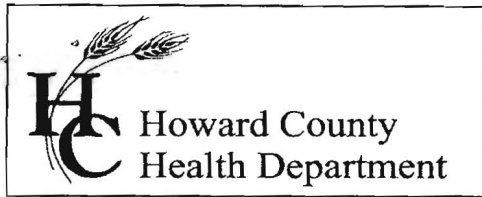
WELL EXHIBIT  
 LOT 70  
 HOMEWOOD CROSSING

DATE: 12/14/2012  
 DRAWN BY: C.E.R.  
 CHK'D: M.J.B.

SCALE 1" = 50'



ESE Consultants Inc.  
 7164 Columbia Gateway Dr.  
 Suite 203  
 Columbia, MD 21046  
 TEL: 410-872-9105  
 FAX: 410-872-4870



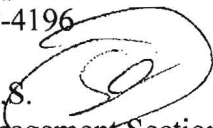
7178 Columbia Gateway Drive, Columbia MD 21046  
(410) 313-2640 Fax (410) 313-2648  
TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

---

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

**MEMORANDUM**

TO: Teresa Miller  
Allen Compton, MWD  
Fogles Well & Septic  
Faxed to 443-609-4196

FROM: Stuart F. Oster, R.S.   
Groundwater Management Section Supervisor  
Well and Septic Program

DATE: August 21, 2009

RE: One year well permit extension (8/23/09 to 8/23/10) for the following  
wells in the **Patuxent Chase (Homewood Crossing) Development**

---

<u>LOT #</u>	<u>WELL TAG #</u>
44	HO-95-1229
67	HO-95-1295
70	HO-95-1238
71	HO-95-1296
73	HO-95-1239
75	HO-95-1240
76	HO-95-1241
78	HO-95-1242
79	HO-95-1243

C: Files

OD ROAD  
LECTOR

NON-BUILD  
PRESERVATION  
PARCEL 'D'

8/23/07  
Well Site to be  
Staked by Benchmarks  
on 8/27/07

BB

\* NOTE:  
ROAD IMPROVEMENTS FOR  
HOMWOOD ROAD ARE  
SHOWN IPER F 04-82  
(RIVERWOOD - PHASE 1)

CASTLEBRIT  
PUBLIC

NON-BUILDABLE  
PRES. PARCEL 'M'  
RECS AND PARKS

PROPOSED  
50' TURN LANE

PROPOSED  
75' DUCK-IN

PT = 1+44.98

PC = 0+21.04

EG&E  
POLE  
#10B24S

1+00

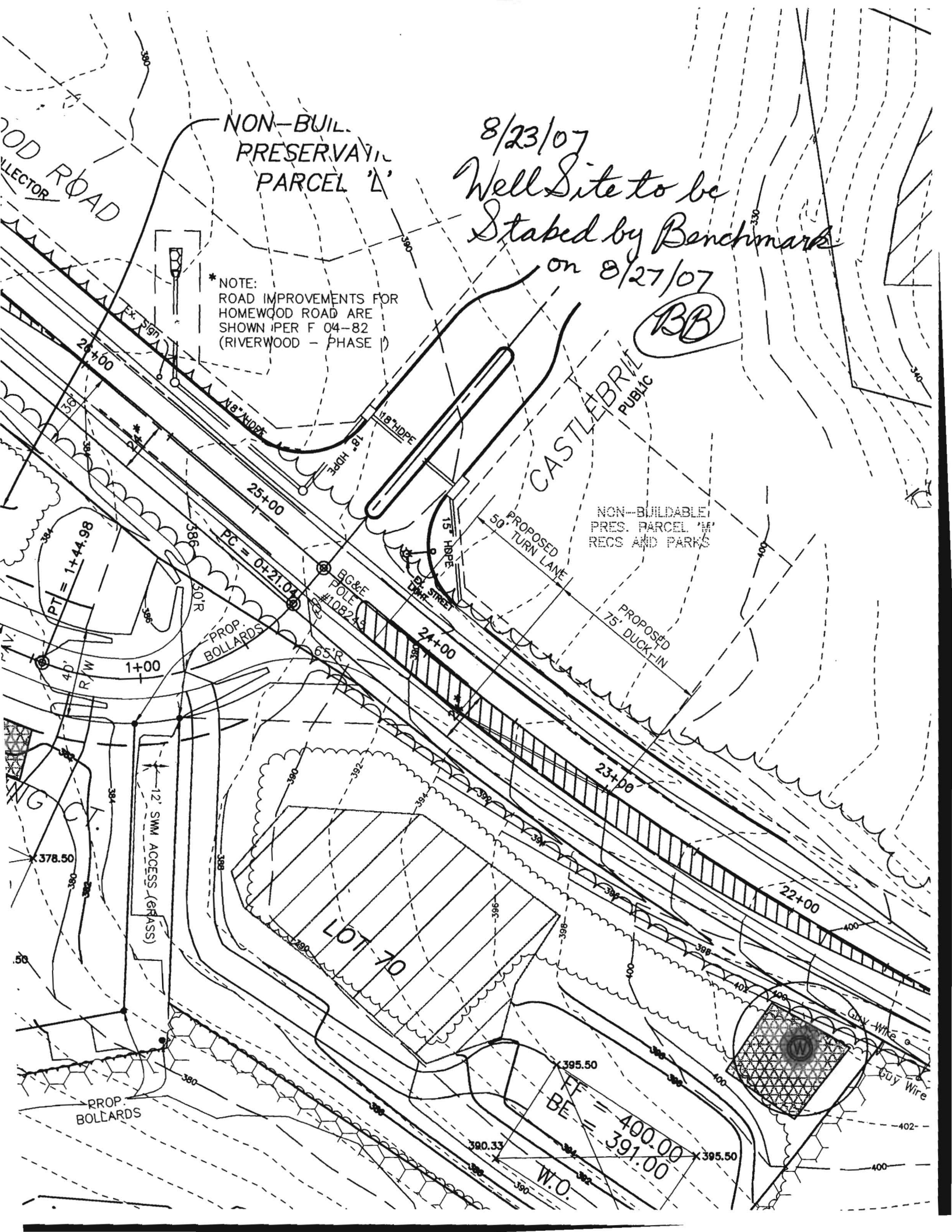
PROP.  
BOLLARDS

12' SWM ACCESS (GRASS)

LOT 70

PROP.  
BOLLARDS

BE = 400.00  
391.00  
W.O.





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: Fogle's Well Drilling  
ATTN: Theresa  
Allen Compton MWD

FROM: Kevin M. Wolf, R.S., R.E.H.S. *(KMW)*  
Well and Septic Program  
Groundwater Management Section

RE: ***Homewood Crossing Lots 70, 71, 73, 75, 76, 78, 79 Well Permit Applications: Special Conditions***

DATE: January 17<sup>th</sup>, 2013

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 lots. This condition requires the driller to seal off the upper strata by placing a certain amount of casing to the approximate depth below the very first water-bearing fracture OR a minimum of 75 feet (which ever comes first). For example, if you hit a water-bearing fracture at 53 feet, then there should be at least 55 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.** This will also require sampling at the time of yield test for each well. Sampling will include but not limited to, total dissolved solids, chlorides and sodium.

Homewood Crossing Lots 70, 71, 73, 75, 76, 78, and 79 are located in the Radium area and require testing. This testing will be done during the yield test of each well on each indicated lot. When calling in yields and grouts on such pre-scheduled days, please make a note that a sanitarian will need to be present during the time of the yield test to take the recommended samples.

If you have any questions on this matter, please feel free to call me at any time at 410-313-2645.

KMW

C.C. Files Lots 70, 71, 73, 75, 76, 78, and 79





Send Report To:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

State of Maryland  
DHMH - Laboratories Administration  
Division of Environmental Chemistry  
**RADIATION LABORATORY**

201 W. Preston Street, Baltimore, Maryland 21201  
John M. DeBoy, Dr. P. H., Director

**LABORATORY ANALYSIS REQUEST**

Sample Bottle No. A: \_\_\_\_\_ No. B: \_\_\_\_\_ Field Blank Bottle No. 1: \_\_\_\_\_ No B: \_\_\_\_\_

Plant/Site Name: \_\_\_\_\_ County: \_\_\_\_\_

Sample Source: \_\_\_\_\_ Location: \_\_\_\_\_  
(well no, lab sink, sample tap, etc.)

County:   Plant No.

CHECK (one per box)

Drinking Water	<input type="checkbox"/>
Landfill	<input type="checkbox"/>
Stream	<input type="checkbox"/>
Other	<input type="checkbox"/>

Community	<input type="checkbox"/>
Non-community	<input type="checkbox"/>
Private	<input type="checkbox"/>
Other	<input type="checkbox"/>

Source (raw water)	<input type="checkbox"/>
Distribution (treated)	<input type="checkbox"/>
MCL	<input type="checkbox"/>

Emergency	<input type="checkbox"/>
Routine	<input type="checkbox"/>
Recheck	<input type="checkbox"/>
Special	<input type="checkbox"/>

Collector: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Date Collected: \_\_\_/\_\_\_/\_\_\_

Time Collected: \_\_\_\_\_ a.m. \_\_\_\_\_ p.m.

Nitric Acid Preserved: Yes  No

Iced: Yes  No

Submitters Code:  Federal Project:

Field Data: \_\_\_\_\_  
pH \_\_\_\_\_ Chlorine \_\_\_\_\_

Remarks: \_\_\_\_\_

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Analyzed	Date Reported
	Gross Alpha	4000				
	Gross Beta	4100				
	Radon-222 Bottle A	4004				
	Radon-222 Bottle B	4004				
	Field Blank #A	4004				
	Field Blank #B	4004				
	Tritium					
	Ra - 226	4020				
	Ra - 228	4030				
	Total Uranium	4006				

Date Received: \_\_\_/\_\_\_/\_\_\_

Supervisor: \_\_\_\_\_