

C1 6913

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

FILL IN THIS FORM COMPLETELY PLEASE TYPE

COUNTY NUMBER A 520414

ST/CO USE ONLY DATE RECEIVED

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO - 95 - 0690

OWNER: Wenchester Homes Inc. STREET OR RFD: Goshelbridge Rd. TOWN: Elliott City. SUBDIVISION: Rivewood Phase 2. SECTION: LOT 45

WELL LOG

Not required for driven wells

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

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes handwritten entries: Sand 0-55, Gray Granite 55-240.

GROUTING RECORD

WELL HAS BEEN GROUTED (Y/N). TYPE OF GROUTING MATERIAL: CEMENT (CM), BENTONITE CLAY (BC). NO. OF BAGS: 17. NO. OF POUNDS: 1578. DEPTH OF GROUT SEAL: 36 ft.

CASING RECORD

MAIN CASING TYPE: ST (STEEL). Nominal diameter: 6 inch. Total depth of main casing: 60 feet.

OTHER CASING (if used)

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

SCREEN RECORD

screen type or open hole: HO (OPEN HOLE). DIAMETER OF SCREEN: 56 inch.

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: YES (Y) / NO (N)

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

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 28.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT...

DRILLERS LIC. NO. 1 M S D O 24

DRILLERS SIGNATURE: [Signature]

LIC. NO. 1 D

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

C 2 DEPTH (nearest ft.)

Table with columns: 1, 2, 3. Includes handwritten entries: 1: HO 58, 2: 240.

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

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q

TELESCOPE CASING LOG INDICATOR OTHER DATA

C 3

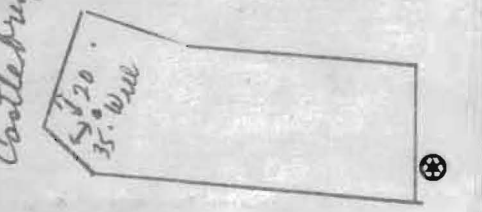
PUMPING TEST

HOURS PUMPED (nearest hour): 3. PUMPING RATE (gal. per min.): 20. METHOD USED TO MEASURE PUMPING RATE: Bucket. WATER LEVEL (distance from land surface) BEFORE PUMPING: 24 ft. WHEN PUMPING: 40 ft.

PUMP INSTALLED

DRILLER INSTALLED PUMP (CIRCLE) YES (NO). TYPE OF PUMP INSTALLED: S (submersible). 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: 2 (nearest foot).

LOCATION OF WELL ON LOT SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



B 1 1418

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type 525693

STATE PERMIT NUMBER

140-95-0690 fill in this form completely

Date Received (APA) 2/1/07

OWNER INFORMATION

Winchester Homes Inc. 6905 Rockledge Drive Suite 800 Bethesda Md 20817

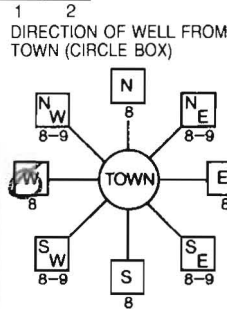
LOCATION OF WELL

Howard County Rivaewood Phase 2 Section 44 46 Lot 45 48 50 Ellersitt City

DRILLER INFORMATION

Joseph K Mayne MSD 024 Driller's Name License No. 76 81 Firm Name Joseph K Mayne Well Drilling Address 5512 Ridge Rd Mt Airy Md 21221 Signature Date 1-30-07

DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



Cattlebridge Road NEAR WHAT ROAD

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) NORTH SOUTH WEST EAST DISTANCE FROM ROAD 30 FT ENTER FT OR MI TAX MAP: 29 BLK: 4 PARCEL 20

WELL INFORMATION

APPROX. PUMPING RATE 5 GAL. PER MIN. AVERAGE DAILY QUANTITY NEEDED 500 GAL. PER DAY

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION (circled) FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) INDUSTRIAL, COMMERCIAL, DEWATERING PUBLIC WATER SUPPLY WELL TEST, OBSERVATION, MONITORING GEO-THERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard 13 A520414 COUNTY NAME COUNTY NO. STATE SIGNATURE INSERT S DATE ISSUED 2/13/07 CO SIGNATURE EXP. DATE 2/13/08 NORTH GRID 512 000 EAST GRID 0827 000

APPROXIMATE DEPTH OF WELL 300 FEET

APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) AIR-ROTary (circled) JETTED AIR-PERcussion ROTARY (Hydraulic Rotary) CABLE REVerse-ROTary DRive-POINT other

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

- THIS WELL WILL NOT REPLACE AN EXISTING WELL (circled) 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 G

PERMIT No. 140-95-0690

SPECIAL CONDITIONS

NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

NEED RADIUM SAMPLE

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER

- 1. well 2. 3.

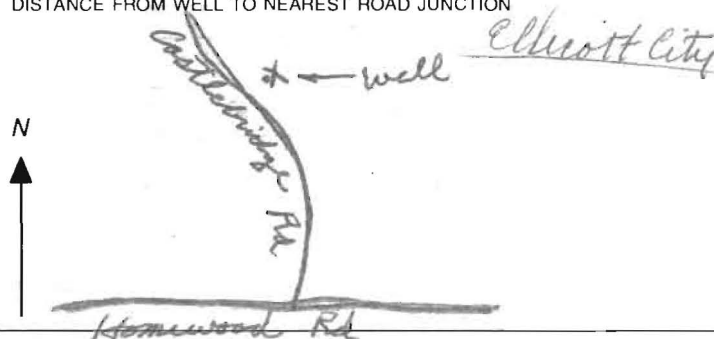
WRITE THE BOX NUMBER FROM THE MAP HERE

E 8207

N 512

8/14/07 Radium Sample Collected During Yield Test. BB

DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION



**HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
WATER AND SEWERAGE PROGRAM
TEL: (410)313-2640 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: NATIONAL WATER SVC Telephone #: 301-854-1333
Address: PO BOX 138
ASHTON, MD 20861

(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 RYCKE License# PL 0145

*A licensed individual must perform the actual installation. Apprentices must be under the direct supervision of a licensed journeymen or master plumber, pump installer or well driller. Licenses may be subjected to field verification.

Name of Property Owner: Winchester Homes Telephone #:
Subdivision: RIVERWOOD Lot #: 45 Well Tag #: HO-95-0690
Site Address: 4880 Castlebridge Rd
Ellicott City, MD 21042

Submersible Pump Data	Pitless Adapter	Well Cap and Electric Conduit
Make: <u>GRUNDfos</u>	Make: <u>MARTINSON</u>	Two piece watertight cap: <input checked="" type="checkbox"/>
Model #: <u>15 SQE 07-180</u>	Model#: <u>B-10X</u>	Screened, vented well cap: <input checked="" type="checkbox"/>
Pump Capacity <u>15</u> GPM	Depth: <u>48"</u> (36" min)	Cap secured to casing: <input checked="" type="checkbox"/>
Well Yield: <u>20</u> GPM	NSF approved: <input checked="" type="checkbox"/>	Conduit min 18" B.G.: <input checked="" type="checkbox"/>
Depth of well encountered at time of pump installation: <u>246</u> (feet)		Conduit secured to well cap: <input checked="" type="checkbox"/>

If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4
Torque arrestors or Cable guards are required - Must circle one
Safety rope, if used, attached to inside of well casing with eye bolt _____

Piping to house
Type: BLACK POLY
PSI: 112 (160 psi min)
Depth of supply line: 48" (36" min)

House Connection
PVC sleeved to undisturbed soil at wall penetration:
Approximate length of sleeve: 6'
Sleeve caulked and sealed properly:

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 _____ date 3/9/10

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

Date Insp. Requested: _____	Date Insp. Approved: _____
Inspection Data: Pitless adapter and 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 installed inside of well 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	_____

**HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
WATER AND SEWERAGE PROGRAM
TEL: (410)313-2640 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: _____ Telephone #: _____
Address: _____

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer
License # and name of individual responsible for the field installation:

Name (Print): _____ License# _____

***A licensed individual must perform the actual installation. Apprentices must be under the direct supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification.**

Name of Property Owner: _____ Telephone #: _____
Subdivision: Riverwood Lot #: 45 Well Tag #: HO-95-0690
Site Address: 4820 Castlebridge

Submersible Pump Data

Make: _____
Model #: _____
Pump Capacity _____ GPM
Well Yield: _____ GPM

Pitless Adapter

Make: _____
Model#: _____
Depth: _____ (36" min)
NSF approved: _____

Well Cap and Electric Conduit

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

Depth of well encountered at time of pump installation: _____ (feet)
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4

Torque arrestors or Cable guards are required - Must circle one

Safety rope, if used, attached to inside of well casing with eye bolt _____

Piping to house

Type: _____
PSI: _____ (160 psi min)
Depth of supply line: _____ (36" min)

House Connection

PVC sleeved to undisturbed soil at wall penetration: _____
Approximate length of sleeve: _____
Sleeve caulked and sealed properly: _____

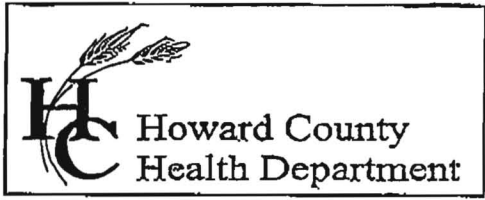
The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Signature of company representative responsible for installation _____ date _____

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

Date Insp. Requested: _____ Date Insp. Approved: 3/3/2010 BB

Inspection Data: Pitless adapter and 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 installed inside of well 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



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

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

TO ALL INTERESTED PARTIES

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

Well Site Location:

Riverwood Phase II 43-77 Castlebridge Rd, Hunters View Road
 Subdivision/Property Name Lot# Road Names
OPEN RUN ROAD & Whitford Way

The well site has been staked by Benchmark Eng,
 (professional land surveyor or company employing professional land surveyors)
 on _____ (date) and does not require a site inspection.
all lots will be staked by 12/29/06

The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify the proposed well site location.

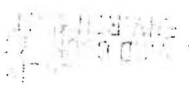
This sheet, along with two copies of an acceptable well site plan, must be attached to the green well permit application.

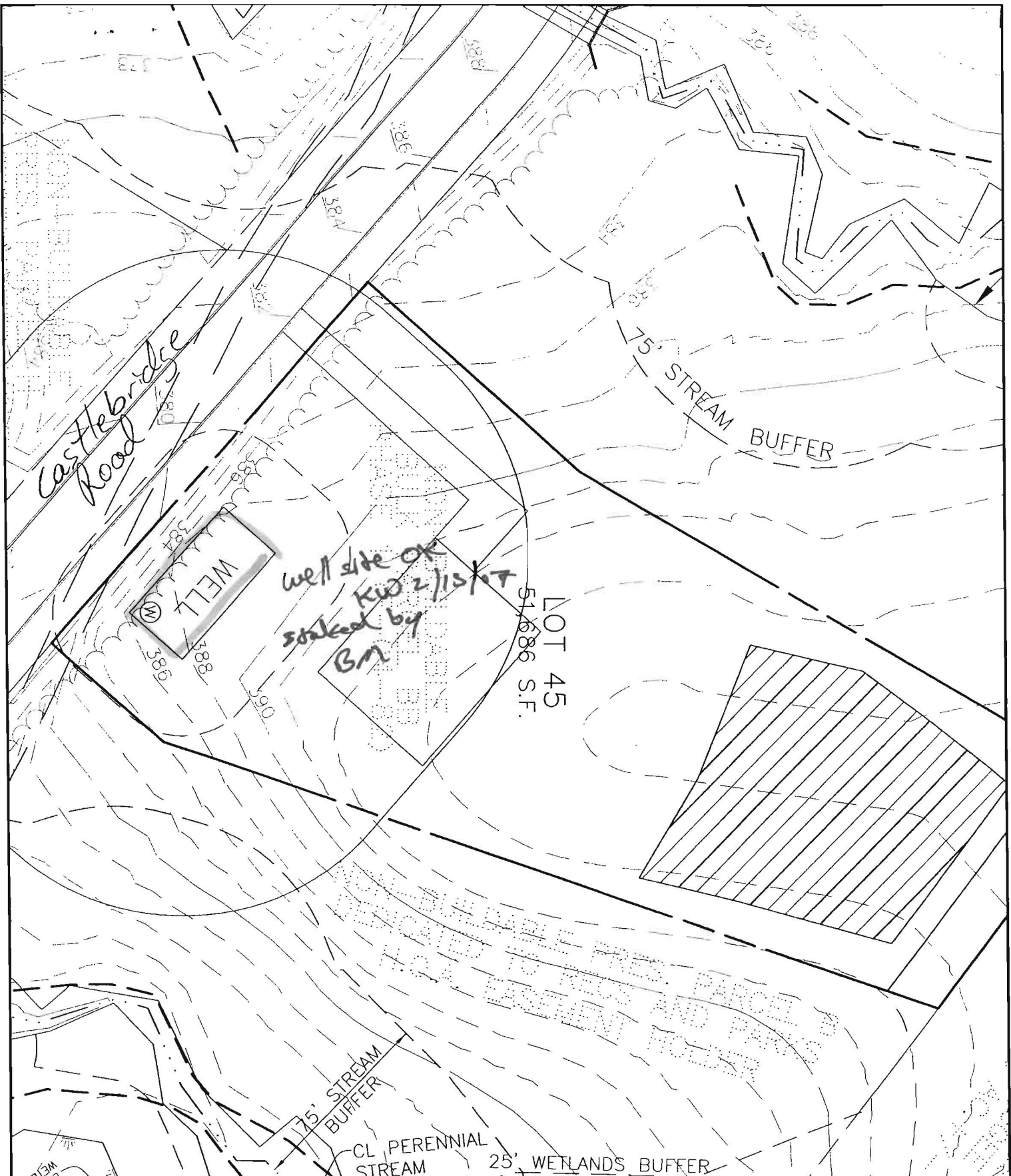
Revised 3/11/05

Contact is:

~~_____~~
~~Set 8/29/06~~

2006 DE 18 PM 2:32





Castlebridge Road

75' STREAM BUFFER

well site OK
installed by
BM

LOT 45
51,686 S.F.

UNDESIGNATED WETLANDS PARCEL 3
LOCATED TO THE EAST AND PART OF
THE EASTERN BOUNDARY

75' STREAM BUFFER

CL PERENNIAL STREAM

25' WETLANDS BUFFER

BENCHMARK

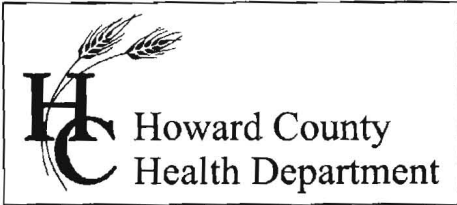
RIVERWOOD, PHASE 2

LOT 45

ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.

FORTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1" = 50' DATE: 1/24/07



7178 Columbia Gateway Drive, Columbia Maryland 21046
(410) 313-1771 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

September 21, 2010

Homeowner
4820 Castle Bridge Road
Ellicott City, MD 21042

RE: 4820 Castle Bridge Road
Ellicott City, MD 21042
BP #: B09003238
Well Permit # HO-95-0690

Dear Sir or Madame:

This is to advise you that the septic system for the above referenced property has been installed and inspected. **Final approval of the septic system was granted on 08/25/2010. Final approval of the well line connection to the dwelling was approved on 03/03/2010.**

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. The water sample results were found to be in compliance with COMAR water quality standards.

INTERIM CERTIFICATE OF POTABILITY

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-95-0690**. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies. Based upon satisfactory investigation and evaluation, the Howard County Health Department as authorized by the Maryland Department of the Environment accepts this well system as required by COMAR 26.04.04.

This certificate may become final upon completion of the second bacteriological test, which is to be taken by the county health department within six months of receipt of this letter. **Please contact (410) 313-1773 to schedule a final water sample appointment. Currently, there is no charge for this final sampling.**

Date of Water Samples: **08/24/2010**
Date of Well Completion: **08/14/2007**

Approving Authority,

Dana Bernard
Well & Septic Program

cc: Building Inspector's Office
Community Health Services
File

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1415 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	76545	Account #:	3123
Reference:	Winchester Riverwood Lot 45	Company:	National Water Servicing
Location:	4820 Castle Bridge Road Ellicott City, MD 21042	Requested By:	Dave Rycke
Date/ Time Collected:	8/23/2010 1210	Source:	Well Water
Date/Time Rec'd:	8/23/2010 1351	Site:	Pressure Tank
Chlorine ppm:	Free: ND Total: ND	Treatment:	Softener/Neutralizer/Sediment Filter**
Collected By:	J. Yeager 6176JY	pH:	6.8
		Well #:	HO-95-0690

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Radon	2200.0	pCi/L	---	913	8/26/2010 / --- / ASL

NOTES

- 1 **Sample collected prior to treatment
- 2 pCi/L = picocuries per liter
- 3 Sub-contracted to Reference Lab
- 4 ND:None Detected
- 5 Visual well check: Sealed, vented cap
- 6 pH and Chlorine level tested on site

Reason for Test : Use & Occupancy
 Building Permit # : B09003238

Date Reported: 8/30/2010

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #:	76623	Account #:	3123
Reference:	Winchester Riverwood Lot 45	Company:	National Water Servicing
Location:	4820 Castle Bridge Road Ellicott City, MD 21042	Requested By:	Dave Rycke
Date/ Time Collected:	8/27/2010 1045	Source:	Well Water
Date/Time Rec'd:	8/27/2010 1302	Site:	Pressure Tank
Chlorine ppm:	Free: ND Total: ND	Treatment:	Softener/Neutralizer/Sediment Filter**
Collected By:	J.Yeager 6176JY	pH:	7.1
		Well #:	HO-95-0690

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	8/28/2010 / 1000 / BCD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	8/28/2010 / 1000 / BCD
Turbidity	7.06	NTU	<10	SM18 2130B	8/27/2010 / 1515 / KME

NOTES

- 1 **Sample collected prior to treatment
- 2 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 3 NTU = Nephelometric Turbidity Units
- 4 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 5 ND:None Detected
- 6 Visual well check: Sealed, vented cap
- 7 pH and Chlorine level tested on site

Reason for Test : Use & Occupancy
 Building Permit # : B09003238

Date Reported: 8/30/2010



REPORT OF ANALYSIS

Laboratory ID #:	76544	Account #:	3123
Reference:	Winchester Riverwood Lot 45	Company:	National Water Servicing
Location:	4820 Castle Bridge Road Ellicott City, MD 21042	Requested By:	Dave Rycke
Date/ Time Collected:	8/23/2010 1210	Source:	Well Water
Date/Time Rec'd:	8/23/2010 1351	Site:	Pressure Tank
Chlorine ppm:	Free: ND Total: ND	Treatment:	Softener/Neutralizer/Sediment Filter**
Collected By:	J.Yeager 6176JY	pH:	6.8
		Well #:	HO-95-0690



Gross Alpha	23.5	pCi/L	15	900.0	8/26/2010 / 1358 / M.JN
Gross Beta	17.8	pCi/L	50	900.0	8/26/2010 / 1358 / M.JN

NOTES

- 1 **Sample collected prior to treatment
- 2 Gross Alpha Detection Limit:1.2 pCi/L
- 3 Gross Beta Detection Limit:1.5 pCi/L
- 4 pCi/L = picocuries per liter
- 5 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 6 Sub-contracted to Lab # 278
- 7 ND:None Detected
- 8 Visual well check: Sealed, vented cap
- 9 pH and Chlorine level tested on site

Reason for Test : Use & Occupancy
 Building Permit # : B09003238

Date Reported: 8/30/2010



REPORT OF ANALYSIS

Laboratory ID #:	76780	Account #:	3123
Reference:	Winchester Riverwood Lot 45	Company:	National Water Servicing
Location:	4820 Castle Bridge Road Ellicott City, MD 21042	Requested By:	Dave Rycke
Date/ Time Collected:	9/10/2010 1215	Source:	Well Water
Date/Time Rec'd:	9/10/2010 1330	Site:	Test Port
Chlorine ppm:	Free: ND Total: ND	Treatment:	Softener/Neutralizer/Sediment Filter
Collected By:	C. Mooshian 7268CM	pH:	8.5
		Well #:	HO-95-0690

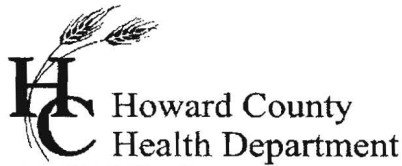
PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha	2.0	pCi/L	15	900.0	9/15/2010 / 1534 / MJN
Gross Beta	<1.5	pCi/L	50	900.0	9/15/2010 / 1534 / MJN

NOTES

- 1 Gross Alpha Detection Limit: 1.0 pCi/L
- 2 Gross Beta Detection Limit: 1.5 pCi/L
- 3 pCi/L = picocuries per liter
- 4 pH & chlorine level tested in lab
- 5 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 6 ND:None Detected
- 7 Visual well check: Sealed, vented cap
- 8 Subcontracted to Reference Lab #278

Reason for Test : Use & Occupancy
 Building Permit # : B09003238

Date Reported: 9/17/2010



Bureau of Environmental Health
7178 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

January 15, 2010

Sylkie Knuppel, P.E.
Development Manager
Winchester Homes, Inc.
6905 Rockledge Dr, Suite 800
Bethesda, MD 20817

RE: 4820 Castlebridge Road, Riverwood II subdivision, Lot 45
Well tag: HO-95-0690

Dear Ms. Knuppel,

A sample was collected from a yield test on August 14, 2007 and submitted to the Department of Health and 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. In turn, this can provide information regarding naturally occurring radiation (i.e., Radionuclides) that may exist in your area of development within the County. Your organization may have received a letter of notification (October 17, 2007) advising you of the following results at the subject property.

Results from the screening revealed a **Gross Alpha** of 16.0 ± 3.0 picocuries/liter (pCi/L); while the **Gross Beta** level was 8.0 ± 3.0 pCi/L. The **Gross Alpha** result exceeded its **maximum contaminant level (MCL)** of 15 pCi/L, while the **Gross Beta** level was below its target value of 50 pCi/L (roughly equivalent to the **annual dose rate** of 4 millirems/year).

As the **Gross Alpha** finding exceeded its **MCL**, additional testing for **Gross Alpha, Gross Beta (short-term and long-term), and Radium** will be necessary prior to issuance of an Interim Certificate of Potability (ICOP), in essence prior to Use and Occupancy. You may choose to test either (A) a raw water sample, or (B) a post-treatment sample. The analysis of each water sample requires approximately one month.

Should you choose to install a treatment system, an agreement for installation and maintenance must be signed by a representative of your organization and the Director, Bureau of Environmental Health, and then recorded at Howard County Land Records. The agreement is attached with this letter. This agreement must be recorded prior to issuance of the ICOP.

A copy of the treatment agreement is attached. Please call this office at 410-313-1771 if you have any further questions.

Sincerely,

Robert Bricker, R.S.
Environmental Sanitarian Supervisor
Well and Septic Program
410-313-2691

Enclosure: 1

Copy: Well and Septic property file

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1415 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #: 76543 Account #: 3123
 Reference: Winchester Riverwood Lot 45 Company: National Water Servicing
 Location: 4820 Castle Bridge Road Requested By: Dave Rycke
 Ellicott City, MD 21042 Source: Well Water
 Date/ Time Collected: 8/23/2010 1210 Site: Pressure Tank
 Date/Time Rec'd: 8/23/2010 1351 Treatment: Softener/Neutralizer/Sediment Filter**
 Chlorine ppm: Free: ND Total: ND pH: 6.8
 Collected By: J.Yeager 6176JY Well #: HO-95-0690

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	11.1	MPN/ 100 ml	<1.0	SM18 9223	8/24/2010 / 0830 / KME
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	8/24/2010 / 0830 / KME
Nitrate	<1.0	mg/L	10	601	8/23/2010 / 1600 / BCD
Turbidity	20.1	NTU	<10	SM18 2130B	8/23/2010 / 1445 / KME
Sand	NS	mg/L	5	Visual/Gravimetric	8/23/2010 / 1445 / KME

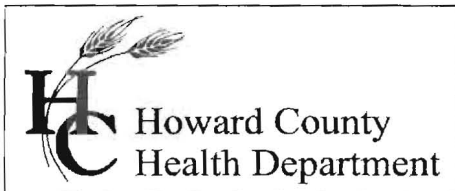
NOTES

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

Reason for Test : Use & Occupancy

Building Permit # : B09003238

Date Reported: 8/24/2010



Bureau of Environmental Health
7178 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

October 17, 2007

Winchester of Howard County
6905 Rockledge Drive
Suite 800
Bethesda, Maryland 20817

RE: Riverwood Lot 45
Well Tag: HO - 95 - 0690

To Whom It May Concern:

A sample was collected from a yield test on August 14, 2007 and submitted to the Department of Health & Mental Hygiene Laboratory 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 16.0 ± 3.0 picocuries/liter (pCi/L); while the **Gross Beta** level was 8.0 ± 3.0 pCi/L. The **Gross Alpha** result exceeded 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).

Since the **Gross Alpha** finding exceeded its **MCL**, additional testing for **Gross Alpha**, **Gross Beta** and **Radium** will be necessary prior to occupancy to verify existing levels. Alternatively, you may install treatment designed to reduce **Gross Alpha**, **Gross Beta** and **Radium**, plus provide post treated results (for all 3 parameters) confirming that levels are in conformance with existing standards. These tests are **in addition to** the standard parameters required for Use & Occupancy.

Additionally, the owners will be required to sign an "AGREEMENT FOR APPROVAL OF AN INDIVIDUAL DRINKING WELL WITH AN ON-SITE TREATMENT SYSTEM" as part of the Use and Occupancy process.

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 or to discuss additional testing requirements.

Sincerely,


Bert Nixon, Director
Bureau of Environmental Health

cc: Eric Dougherty, MDE Water Mgmt., Groundwater
Well & Septic property file