

C1 6944

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 4 5 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

COUNTY NUMBER AS 20414

ST/CO USE ONLY DATE Received

DATE WELL COMPLETED MM DD YY 06 14 2007

Depth of Well 22 365 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" Ho - 95-0693

OWNER: Waverly Homes Inc. STREET OR RFD: Winters View Rd. TOWN: Ellicott City. SUBDIVISION: Riverwood Phase 2. SECTION: LOT 48

WELL LOG table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes handwritten entries: Sand Stone 0-36, Gray Mica Rock 36-365.

GROUTING RECORD: WELL HAS BEEN GROUTED (Y), TYPE OF GROUTING MATERIAL (CM), NO. OF BAGS (16), NO. OF POUNDS (254).

CASING RECORD: MAIN CASING TYPE (ST), Nominal diameter (6), Total depth of main casing (40).

OTHER CASING (if used) table with columns: diameter, depth (feet).

SCREEN RECORD: screen type (ST), BRONZE (BR), PLASTIC (PL), HO (HO).

PUMPING TEST: HOURS PUMPED (3), PUMPING RATE (15), METHOD USED TO MEASURE PUMPING RATE (Bucket), WATER LEVEL (56), TYPE OF PUMP USED (S).

NUMBER OF UNSUCCESSFUL WELLS: 0. WELL HYDROFRACTURED: Y.

CIRCLE APPROPRIATE LETTER: A, E, P. 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...

DRILLERS LIC. NO.: MS D 024. DRILLERS SIGNATURE: [Signature]. LIC. NO.: D.

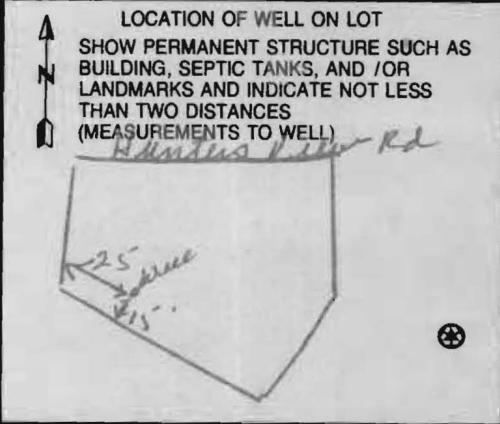
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

DEPTH (nearest ft.) table with columns: 1-6, 7-12, 13-18, 19-24, 25-30, 31-36, 37-42, 43-48, 49-54, 55-60, 61-66, 67-72, 73-78, 79-84, 85-90.

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

PUMP INSTALLED: DRILLER INSTALLED PUMP (YES), TYPE OF PUMP INSTALLED (S), CAPACITY: GALLONS PER MINUTE (31), PUMP HORSE POWER (37), PUMP COLUMN LENGTH (43), CASING HEIGHT (2).



B 1 1421

SEQUENCE NO. (MDE USE ONLY)

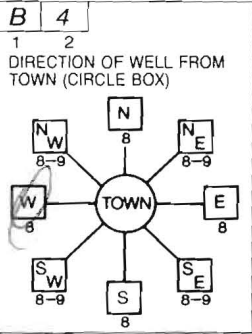
STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type 525693

STATE PERMIT NUMBER H0-95-0693 fill in this form completely

OWNER INFORMATION Date Received (APA) 2/1/07 Winchester Homes Inc 6905 Rockledge Drive Suite 800 Bethesda Md 20817

LOCATION OF WELL B 3 Howard Riverwood Phase 2 SECTION 44 46 LOT 48 48 50 Edlicott City NEAREST TOWN 52 MILES FROM TOWN 5

DRILLER INFORMATION Joseph & Mayne M S D 094 5512 Ridge Rd Mt. Airy Md 21771 1-30-07



Hunters View Rd. NEAR WHAT ROAD ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) 34 95 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39 TAX MAP: 29 BLK: 4 PARCEL 20

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

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

- USE FOR WATER (CIRCLE APPROPRIATE BOX) D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) I INDUSTRIAL, COMMERCIAL, DEWATERING P PUBLIC WATER SUPPLY WELL T TEST, OBSERVATION, MONITORING G GEO-THERMAL

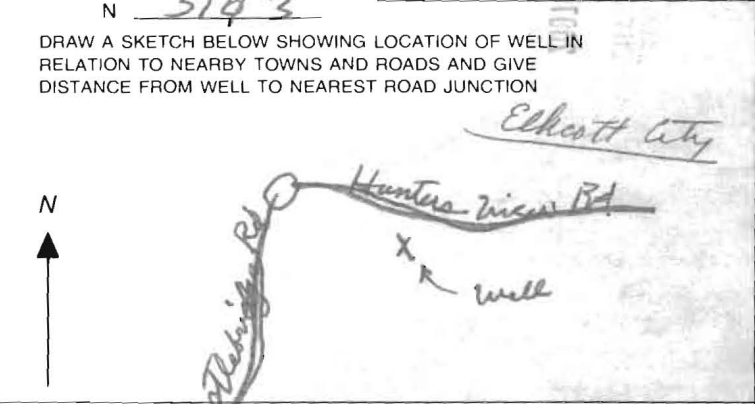
Howard 13 A 520414 COUNTY NAME COUNTY NO. STATE SIGNATURE DATE ISSUED 2/13/07 CO SIGNATURE EXP. DATE 2/13/08 NORTH GRID 513 000 EAST GRID 0828 000

APPROXIMATE DEPTH OF WELL 300 FEET APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST

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 8268 N 5143

METHOD OF DRILLING (circle one) BORED (or Augered) JETTED Jetted & DRIVEN AIR-ROTary AIR-Percussion ROTARY (Hydraulic Rotary) CABLE REVerse-ROTary DRive-POINT other

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



Not to be filled in by driller (MDE OR COUNTY USE ONLY) APPROP PERMIT NUMBER H0 2004G007 PERMIT No. H0-95-0693

SPECIAL CONDITIONS NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

**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: P.O. BOX 138
ASATON, 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 journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification.

Name of Property Owner: Winchester Homes Telephone #: 301-803-4174
Subdivision: RIVERWOOD Lot #: 48 Well Tag #: HO 95-0693
Site Address: 11045 HUNTERS VIEW RD
ELICOTT CITY, MD

Submersible Pump Data	Pitless Adapter	Well Cap and Electric Conduit
Make: <u>GRUNDFOS</u>	Make: <u>Campbell</u>	Two piece watertight cap: <input checked="" type="checkbox"/>
Model #: <u>15 SQE 10-200</u>	Model#: <u>PA 500</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>15</u> GPM	NSF approved: <u>YES</u>	Conduit min 18" B.G.: <input checked="" type="checkbox"/>
Depth of well encountered at time of pump installation: <u>36.5</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 <u>CPS</u>		
Safety rope, if used, attached to inside of well casing with eye bolt <u>N/A</u>		

Piping to house	House Connection
Type: <u>Poly</u>	PVC sleeved to undisturbed soil at wall penetration: <u>YES</u>
PSI: <u>160</u> (160 psi min)	Approximate length of sleeve: <u>5'</u>
Depth of supply line: <u>4"</u> (36" min)	Sleeve caulked and sealed properly: <u>YES</u>

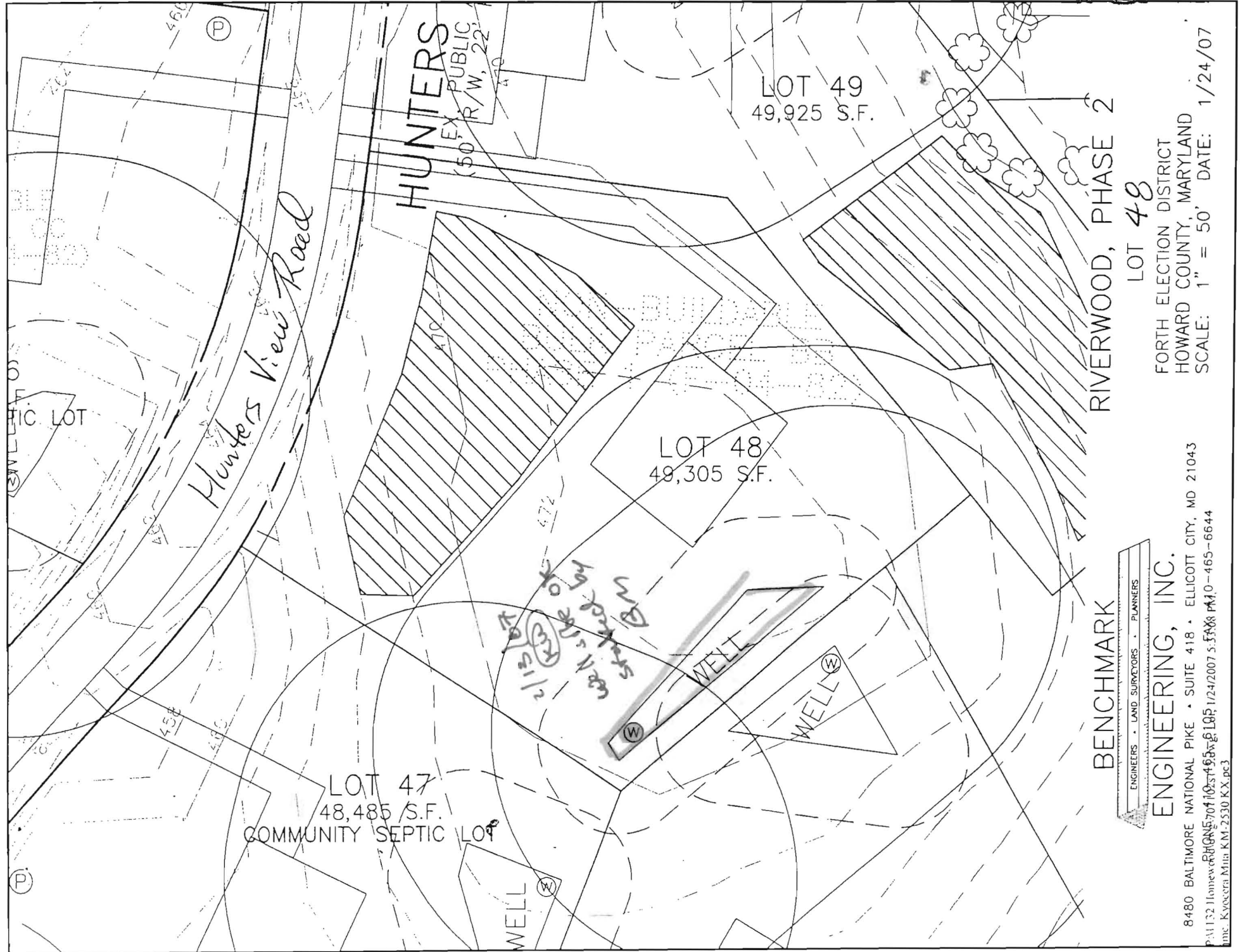
The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Signature of company representative responsible for installation _____ date 4-18-11

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

Date Insp. Requested: _____ Date Insp. Approved: 1/26/11 ^{OK} ^(KW)

Inspection Data: Pitless adapter and water supply line at least 36" below grade	<input checked="" type="checkbox"/>
Two piece cap installed and attached to casing securely	<input checked="" type="checkbox"/>
Elec. conduit extends at least 18" below grade/attached to cap properly	<input checked="" type="checkbox"/>
Safety rope installed inside of well casing	<input checked="" type="checkbox"/>
Correct well tag attached properly and casing 8" above finished grade	<input checked="" type="checkbox"/>
Water supply line sleeved adequately at house connection	<input checked="" type="checkbox"/>
Adequate grout observed below pitless adapter	<input checked="" type="checkbox"/>



Hunters View Road

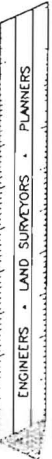
HUNTERS
EX. PUBLIC
(50' R/W, 22')

LOT 49
49,925 S.F.

LOT 48
49,305 S.F.

LOT 47
48,485 S.F.
COMMUNITY SEPTIC LOT

BENCHMARK



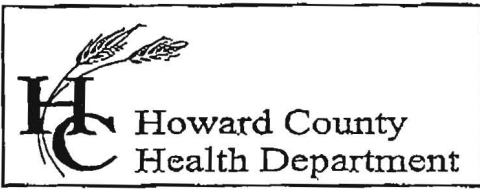
ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MD 21043
 PHONE: 701-1057-6585 FAX: 410-465-6644
 E-MAIL: KYS@BEN.MD.KM-2530 KX.PC3

RIVERWOOD, PHASE 2

LOT 48

FORTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: 1" = 50' DATE: 1/24/07



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 Name
OPEN RUN ROAD & Whithorn 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

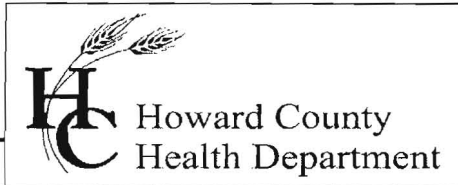
The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify the proposed well site location.

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:
Easterday's
301-829-1440

2006 DE 18 PM 2:32



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

April 18, 2011

Homeowner
11045 Hunters View Road
Ellicott City, MD 21042

RE: Riverwood, Lot 48
11045 Hunters View Road
BP #: B10002670
Well Tag: HO-95-0693

Dear Sir:

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 02/15/2011. Final approval of the well line connection to the dwelling was approved on 01/26/2011.**

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.

Gross Alpha and Beta samples were also collected on 08/27/2008. Results showed a post-treated Gross Alpha level of **8.0 +/- 2.0pCi/L** and **Gross Beta** level of **9.0 +/- 2.0pCi/L**. The **Gross Alpha** was below the maximum contaminant level (MCL) of 15 pCi/L, while the Gross Beta was below the MCL of 50pCi/L. Your Reverse Osmosis (R.O.) water conditioning unit appears to be working as it should to effectively treat the high levels of Radium in your water supply.

Enclosed with this certificate, is a copy of the septic permit and the as-built along with important information regarding the use and maintenance of your septic system. Please read through carefully and thoroughly. Any questions regarding your well and/or septic, please call this office for guidance 410-313-1771.

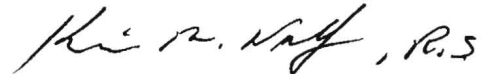
INTERIM CERTIFICATE OF POTABILITY

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-95-0693. 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: 04/13/2011
Date of Radium Samples: 08/27/2008
Date of Well Completion: 06/14/2007

Approving Authority,



Kevin M. Wolf, R.E.H.S./R.S.
Environmental Sanitarian
Well & Septic Program

cc: Building Inspector's Office
Community Hygiene Program
File

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #: 79078 Account #: 3123
Reference: Riverwood Lot #48 Company: National Water Servicing
Location: 11045 Hunter's View Road Requested By: Dave Rycke
Ellicott City, MD 21042 Source: Well Water
Date/ Time Collected: 4/13/2011 1115 Site: Pressure Tank
Date/Time Rec'd: 4/13/2011 1320 Treatment: **Neutralizer/Softener/Rev.Osmosis
Chlorine ppm: Free: ND Total: ND pH: 5.7
Collected By: C. Holland 0547CH Well #: HO-95-0693

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	4/14/2011 / 0830 / CCH
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	4/14/2011 / 0830 / CCH
Nitrate	<1.0	mg/L	10	601	4/13/2011 / 1530 / CCH
Turbidity	9.02	NTU	<10	SM18 2130B	4/13/2011 / 1440 / KME
Sand	NS	mg/L	5	Visual/Gravimetric	4/13/2011 / 1440 / KME

NOTES

- 1 **Sample collected prior to treatment
- 2 *Revised Report to show correct Tag# 4-14-11 BCD
- 3 mg/L = milligrams per liter (also, parts per million)
- 4 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 5 NS = None Seen (NS indicates less than 5 mg/L)
- 6 NTU = Nephelometric Turbidity Units
- 7 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 8 ND:None Detected
- 9 Visual well check: Sealed, vented cap
- 10 pH and Chlorine level tested on site

Reason for Test : Use & Occupancy

Building Permit # : 10002670

Date Reported: 4/14/2011

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

August 27, 2008

Elioak LLC
P.O. Box 417
Ellicott City, Maryland 21041

RE: Riverwood Lot 48
Well Tag: HO - 95 - 0693

To Whom It May Concern:

A follow-up sample was collected from a second yield test on August 4, 2008 and submitted to the Department of Health & Mental Hygiene Laboratory to reassess the level 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. Prior yield test sampling done in August 2007 indicated a **Gross Alpha** level of **15 pCi/L**.

Results from this screening revealed a **Gross Alpha** of **8.0 ± 2.0 picocuries/liter (pCi/L)**; while the **Gross Beta** level was **9.0 ± 2.0 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**).

Since the **Gross Alpha** finding from this testing was well below the MCL and the **Gross Beta** finding was similar to that of the August 2007 test, additional testing for **Radium** will not be necessary prior to occupancy. Given the variability in the **Gross Alpha** findings, treatment designed to reduce **Gross Alpha**, **Gross Beta** and **Radium**, can still be considered but will not be required to secure Use & Occupancy. As a reminder, standard water parameters required for Use & Occupancy will still be needed..

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: Barry Glotfelty, MDE Water Mgmt.
✓ Well & Septic property file

Send Report To:

State of Maryland

Howard Co. Environmental Health
7178 Columbia Gateway Dr.
Columbia, MD 21046

DHMH - Laboratories Administration
Division of Environmental Chemistry
RADIATION LABORATORY
201 W. Preston Street, Baltimore, Maryland 21201
John M. DeBoy, D.P.H., Director

LABORATORY ANALYSIS REQUEST

Sample Bottle No. A: R40BB0693 No. B: _____ Field Blank Bottle No. A: _____ No. B: _____

Plant/Site Name: 11045 Hunters View Rd County: Howard

Sample Source: Riverwood - Lot 48 Location: HO-95-0693
(well no., tap sink, sample tap, etc.)

County: B Plant No.

CHECK (one per box)

Drinking Water <input checked="" type="checkbox"/>	Community <input type="checkbox"/>	Source (raw water) <input checked="" type="checkbox"/>	Emergency <input type="checkbox"/>
Landfill <input type="checkbox"/>	Non-community <input type="checkbox"/>	Distribution (treated) <input checked="" 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 checked="" type="checkbox"/>		Special <input type="checkbox"/>

Collector: Brian Baker Telephone No: (410) 313-2643

Date Collected: 8/4/2008 Time Collected: 10 a.m. _____ p.m.

Nitric Acid Preserved: Yes No Iced: Yes No

Submitters Code: Federal Project: Field Data: _____

Remarks: Sample Collected From Second Yield Test ^{pH} ^{Chlorine}

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Reported
✓	Gross Alpha	4000	0274	8 ± 2	08/11/08
✓	Gross Beta	4100	0274	9 ± 2	"
	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: 08/10/08
Supervisor: [Signature]



Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
(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

July 30, 2008

Sylke Knuppel
Winchester Homes
6905 Rockledge Dr.
#800
Bethesda, Maryland 20817

RE: Riverwood II Lot 48
11045 Hunters View Rd

Dear Ms. Knuppel:

This property lies within the radium sampling area. The Health Department has reviewed the file and determined radium sampling was not completed. To complete this sampling, a minimum of a one-hour pump test can be done and samples taken for Gross Alpha & Gross Beta (short and long term). If the results come back elevated, a treatment system will need to be installed and post-treated Gross Alpha & Gross Beta (short and long term) samples collected along with a Radium 226 & 228 sample. An alternative to this approach is to install the plumbing and a treatment system in the home prior to sampling, and then, at one time, have pre-treatment and post-treatment samples taken of Gross Alpha & Gross Beta (short term and long term) and Radium 226 & 228. Test results are received in the Health Department approximately one week after sampling for Gross Alpha & Gross Beta and approximately one month after sampling for Radium 226 & 228. If in either approach the pre-treatment levels of Gross Alpha and/or Gross Beta are elevated, a treatment agreement will need to be signed by the builder, the buyers, and the Health Department prior to issuance of an ICOP.

Contact the Health Department to schedule water samples. Please indicate your understanding of the above information by signing and dating this letter and returning it to the Health Department. Once the Health Department receives your confirmation, the building permit will be released. If you have any questions regarding this matter, please contact me at the above address or by calling (410) 313-4261. Information is available online at www.hchealth.org.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sara Sappington', is written over a horizontal line.

Sara Sappington, R.S.
Well and Septic Program
Development Coordination Section