

C1 2970

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 A520414

ST/CO USE ONLY DATE Received MM DD YY 8 13

DATE WELL COMPLETED MM DD YY 7 3 2007

Depth of Well 22 200 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" Ho-95-0703

OWNER: Westchester Homes Inc. STREET OR RFD: Open Run Rd. TOWN: Edlicott City. SUBDIVISION: Riverwood Phase 2. SECTION: LOT 58

WELL LOG table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes entries for Sand Stone (0-51) and Gray Granite (51-200).

GROUTING RECORD form. Includes fields for GROUTING MATERIAL (CEMENT, BENTONITE CLAY), NO. OF BAGS (16), NO. OF POUNDS (1504), GALLONS OF WATER (96), DEPTH OF GROUT SEAL (0-51).

CASING RECORD form. Includes fields for MAIN CASING TYPE (ST), Nominal diameter (6), Total depth (55').

OTHER CASING (if used) form. Includes fields for diameter and depth.

SCREEN RECORD form. Includes fields for screen type (ST), diameter (56-60), and depth.

PUMPING TEST form. Includes fields for HOURS PUMPED (3), PUMPING RATE (20), METHOD USED TO MEASURE PUMPING RATE (Bucket), WATER LEVEL (21-27 ft.), TYPE OF PUMP USED (S).

PUMP INSTALLED form. Includes fields for DRILLER INSTALLED PUMP (YES), TYPE OF PUMP INSTALLED (S), CAPACITY (31-35), PUMP HORSE POWER (37-41), PUMP COLUMN LENGTH (43-47).

WELL HYDROFRACTURED form. Includes fields for NUMBER OF UNSUCCESSFUL WELLS (0) and WELL HYDROFRACTURED (Y).

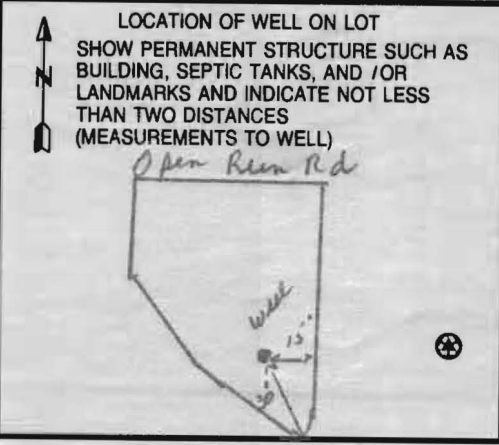
DEPTH (nearest ft.) form. Includes fields for casing depth (53) and slot size (2).

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. 1 M SD 024. DRILLERS SIGNATURE: [Signature]. LIC. NO. 1 D.

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68. Includes fields for diameter and depth.

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) form. Includes fields for TELESCOPE CASING, LOG INDICATOR, OTHER DATA.



B 1 9868

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

40-95-0703 fill in this form completely

Date Received (APA) 2/11/07

OWNER INFORMATION

15 Winchester Homes Inc. Owner First Name
36 6905 Rockledge Drive Suite 800 Street or RFD
57 Bethesda Md 20817 Town State Zip

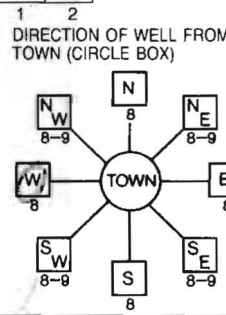
LOCATION OF WELL

8 Howard COUNTY
23 Riverwood Phase 2 SUBDIVISION
SECTION 44 46 LOT 58 48 50
52 Ellicott City NEAREST TOWN
MILES FROM TOWN (enter 0 if in town) 5 MI

DRILLER INFORMATION

Driller's Name Joseph L. Mayne MS D024 License No. 81
Firm Name Joseph L. Mayne Well Drilling
Address 5512 Ridge Rd Mt. Airy Md 21111
Signature Joseph L. Mayne Date 1-30-07

DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



11 open Run Rd NEAR WHAT ROAD
ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
34 35 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39
TAX MAP: 29 BLK: 4 PARCEL 20

WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) 5 8 12
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 500 20

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
GEO-THERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard 13 COUNTY NAME COUNTY NO.
STATE SIGNATURE INSERT S
DATE ISSUED 2/13/07
CO SIGNATURE EXP. DATE 2/13/08
NORTH GRID 515 000 EAST GRID 0828 000

APPROXIMATE DEPTH OF WELL 300 FEET

APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST

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)

- 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) 41

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

APPROX. PERMIT NUMBER H02004-G007
PERMIT No. H0-95-0703

SPECIAL CONDITIONS

NEED RADIUM SAMPLE

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X
SOURCES OF DRILLING WATER
WRITE THE BOX NUMBER FROM THE MAP HERE
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: P.O. 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 KYCKE License# PI 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 #: 301-803-4834
Subdivision: RIVERWOOD Lot #: 58 Well Tag #: HO-93-0703
Site Address: 12063 OPEN RUN Rd
ELICOTT CITY, MD

Submersible Pump Data

Make: Grundfos
Model #: 15 SQE07-180
Pump Capacity 15 GPM
Well Yield: 20 GPM

Pitless Adapter

Make: Campbell
Model #: PA-800
Depth: 48" (36" min)
NSF approved: YES

Well Cap and Electric Conduit

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

Depth of well encountered at time of pump installation: 200 (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 CPS
Safety rope, if used, attached to inside of well casing with eye bolt N/A

Piping to house

Type: Poly
PSI: 160 (160 psi min)
Depth of supply line: 4' (36" min)

House Connection

PVC sleeved to undisturbed soil at wall penetration: YES
Approximate length of sleeve: 5'
Sleeve caulked and sealed properly: YES

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

Signature of company representative responsible for installation

date

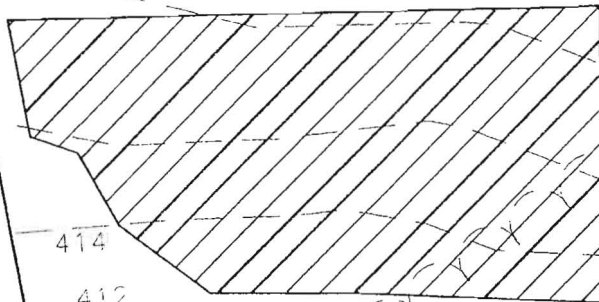
7/15/10

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

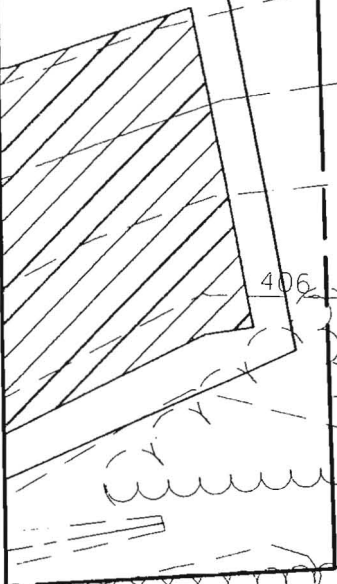
Date Insp. Requested: Date Insp. Approved: 4/20/10 [initials]
Inspection Data: Pitless adapter and water supply line at least 36" below grade [check]
Two piece cap installed and attached to casing securely [check]
Elec. conduit extends at least 18" below grade/attached to cap properly [check]
Safety rope installed inside of well casing [check]
Correct well tag attached properly and casing 8" above finished grade [check]
Water supply line sleeved adequately at house connection [check]
Adequate grout observed below pitless adapter [check]
under footer

Open Run Rd.

ROAD
STREET
F-04-82)



LOT 58
49,996 S.F.



Staked by
B/27
WELL

OK (KW)
2/13/07

BENCHMARK

RIVERWOOD, PHASE 2

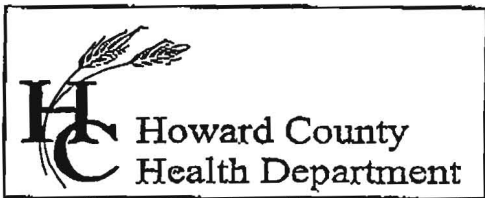
LOT 58

ENGINEERING, INC.

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

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MD 21043

PHONE: 410-465-6105 FAX: 410-465-6644
P:\1132 Homewood\1132\1132.dwg 1/25/2007 8:56 AM
tmc, Kyocera Mita KM-2530 KX.pc3



7178 Columbia Gateway Drive, Columbia, MD 21046
 (410) 313-2640 Fax (410) 313-2648
 TDD (410) 313-2923 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 & 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

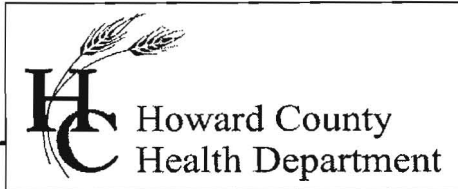
Contact is:

Easterday

301-829-1440

2006 DE 18 PM 2:32

ENVIRONMENTAL HEALTH
 7178 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MD 21046



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

July 26, 2010

Homeowner
12063 Open Run Road
Ellicott City, MD 21042

RE: Riverwood, Lot 58
12063 Open Run Road
BP #: B09003239
Well Tag: HO-95-0703

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 07/09/2010. Final approval of the well line connection to the dwelling was approved on 04/20/2010.**

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.

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.

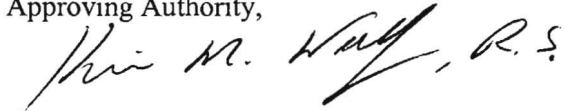
INTERIM CERTIFICATE OF POTABILITY

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-95-0703. 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: 07/12/2010, 07/19/2010
Date of Well Completion: 07/03/2010
Date of Radium Testing: 07/03/2007

Approving Authority,



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

cc: Building Inspector's Office
Community Hygiene Program
File

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.
 1415 Old Valleytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #: 76072 Account #: 3123
 Reference: Riverwood Lot 58 Company: National Water Servicing
 Location: 12063 Open Run Road Requested By: Dave Rycke
 Ellicott City, MD 21042 Source: Well Water
 Date/ Time Collected: 7/19/2010 1023 Site: Pressure Tank
 Date/Time Rec'd: 7/19/2010 1503 Treatment: Neutralizer/Softener/Sediment Filter**
 Chlorine ppm: Free: ND Total: ND pH: 6.4
 Collected By: J.Yeager 6176JY Well #: HO-95-0703

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYSIS
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	7/20/2010 / 0945 / BCD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	7/20/2010 / 0945 / BCD

OK.
 (Signature)

NOTES

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

Reason for Test : Use & Occupancy retest 76060
 Building Permit # : B5809003239

Date Reported: 7/20/2010

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 #: 75971 Account #: 3123
 Reference: Riverwood Lot 58 Company: National Water Servicing
 Location: 12063 Open Run Road Requested By: Dave Rycke
 Ellicott City, MD 21042 Source: Well Water
 Date/ Time Collected: 7/12/2010 1020 Site: Pressure Tank
 Date/Time Rec'd: 7/12/2010 1132 Treatment: Neutralizer/Softener/Sediment Filter**
 Chlorine ppm: Free: ND Total: ND pH: 6.7
 Collected By: J.Yeager 6176JY Well #: HO-95-0703

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	1.0	MPN/ 100 ml	<1.0	SM18 9223	7/13/2010 / 1000 / KME
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	7/13/2010 / 1000 / KME
Nitrate ✓	<1.0	mg/L	10	601	7/12/2010 / 1345 / CCH
Turbidity ✓	7.23	NTU	<10	SM18 2130B	7/12/2010 / 1200 / CCH
Sand ✓	NS	mg/L	5	Visual/Gravimetric	7/12/2010 / 1200 / CCH

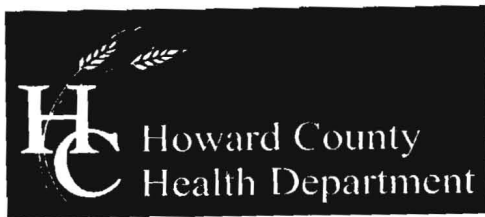
*Fail
 Bacteria
 Need 2-test. (100)*

NOTES

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

Reason for Test : Use & Occupancy
 Building Permit # : B5809003239

Date Reported: 7/13/2010



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

November 7, 2007

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

RE: Riverwood II Lot 58
Well Tag: HO - 95 - 0703

To Whom It May Concern:

A sample was collected from a yield test on July 3, 2007 and submitted to GPL 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 0.4 ± 1.0 picocuries/liter (pCi/L); while the **Gross Beta** level was 3.8 ± 2.2 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 appears safe for all uses. No additional testing for **these parameters** will be required to secure the future Use & Occupancy. However, other standard testing will still be necessary.

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

Sincerely,

A handwritten signature in cursive script that reads 'Bert Nixon'.

Bert Nixon, Director
Bureau of Environmental Health

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

Send Report To:

Bert Nelson

State of Maryland

DHMH - Laboratories Administration
Division of Environmental Chemistry
RADIATION LABORATORY

Howard County Health Department
Bureau of Environmental Health
7178 Columbia Gateway Drive
Columbia, Maryland 21046

201 W. Preston Street, Baltimore, Maryland 21201

John M. DeBoy, Dr. P.H., Director

LABORATORY ANALYSIS REQUEST

Sample Bottle No. A: 140-95-0703 No. B: _____ Field Blank Bottle No. A: _____ No. B: _____

Plant/Site Name: Riverwood 2 lot 58 County: Howard

Sample Source: open on rd. Location: 140-95-0703
(well no., lab sink, sample tap, etc.)

County: B Plant No.

CHECK (one per box)

Drinking Water
Landfill
Stream
Other

Community
Non-community
Private
Other

Source (raw water)
Distribution (treated)
MCL

Emergency
Routine
Recheck
Special

Collector: K. Wolf

Telephone No: 410-313-2695

Date Collected: 7/3/07

Time Collected: ~~#~~ a.m. 1:30 p.m.

Nitric Acid Preserved: Yes No

Iced: Yes No

Submitters Code: Federal Project: Field Data: _____

Remarks: Sample collected @ Yield pH _____ Chlorine _____

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Reported
✓	Gross Alpha	4000	<u>707013-001</u>	<u>0.4 ± 1.0</u>	<u>7/10/07</u>
✓	Gross Beta	4100		<u>3.8 ± 2.2</u>	
	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: _____