

C1 2916 SEQUENTIAL (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT FILL IN THIS FORM COMPLETELY PLEASE TYPE

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

COUNTY NUMBER A 516063

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

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

DATE WELL COMPLETED MM DD YY 3 27 26

Depth of Well 22 285 26 (TO NEAREST FOOT) 4/21/06 GAC BK

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-95-0266 28 29 30 31 32 33 34 35 36 37

OWNER Horton R. D. STREET OR RFD Heather Glen Way TOWN Clarksville md SUBDIVISION Tisbury Grove SECTION LOT 13

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. Includes handwritten entries: Sand 0 44, Gray Mica Rock 44 285 ✓.

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 9 NO. OF POUNDS 416 GALLONS OF WATER 54 DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 45 ft.

CASING RECORD

MAIN CASING TYPE ST Nominal diameter top (main) casing (nearest inch) 6 Total depth of main casing (nearest foot) 48

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 PL PLASTIC HO OPEN HOLE OT OTHER

DEPTH (nearest ft.) 1 HO 46 285

Table for well depth and diameter: A C H S C 3 R E N SLOT SIZE 1 2 3 DIAMETER OF SCREEN 56 60

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

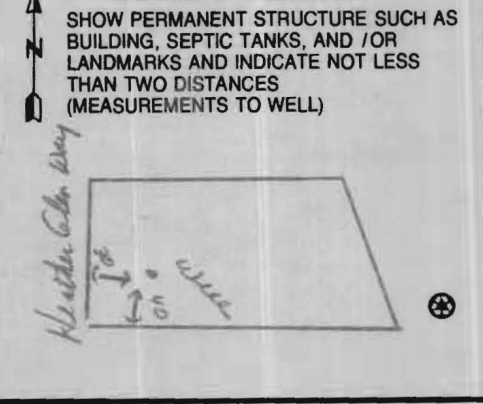
PUMPING TEST

HOURS PUMPED (nearest hour) 3 PUMPING RATE (gal. per min.) 15 METHOD USED TO MEASURE PUMPING RATE Bucket WATER LEVEL (distance from land surface) BEFORE PUMPING 24 ft. WHEN PUMPING 40 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 (CIRCLE) (YES or NO) 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) LAND SURFACE below 2 (nearest foot)

LOCATION OF WELL ON LOT



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 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT...

DRILLERS LIC. NO.: M SD 024 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: D

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

B 1 1466
1 2 3 6

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

40-95-0266
70 fill in this form completely 79

523944 please type

Date Received (APA)

01 20 06
8 MM DD YY 13

OWNER INFORMATION

15 Last Name: Horton
Owner: R. D.
34 First Name: D.
36 Street or RFD: 1370 Piccard Drive
55
57 Town: Rockville 70 State: Md. 72 Zip: 20850 76

B 3 LOCATION OF WELL

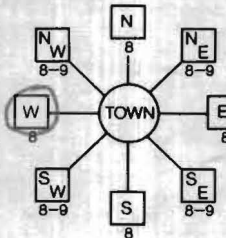
8 COUNTY: Howard 21
23 SUBDIVISION: Sunbury Grove 42
SECTION: 44 46 LOT: 23 48 50
52 NEAREST TOWN: Clarksville 71
MILES FROM TOWN (enter 0 if in town): 1/2 M I 73 76 77 78

DRILLER INFORMATION

Driller's Name: Joseph L. Mayne M 5 D 024 76 License No. 81
Firm Name: Joseph L Mayne Well Drilling
Address: 5512 Ridge Rd Mt. Airy, Md 20877
Signature: Joseph L Mayne Date: 1-6-06

B 4

1 2 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



11 NEAR WHAT ROAD: Heather Glen Way 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 25 37 DISTANCE FROM ROAD FT
ENTER FT OR MI 38 39

TAX MAP: 34 BLK: 17 PARCEL 77

B 2 WELL INFORMATION

1 2 APPROX. PUMPING RATE (GAL. PER MIN.): 5 8 12
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): 500 14 20

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

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME: HOWARD (13) COUNTY NO. A516063
STATE SIGNATURE: [Signature] INSERT S
DATE ISSUED: 2/24/06 43 MM DD YY 48 CO SIGNATURE: [Signature] EXP. DATE: 2/25/07 41
NORTH GRID: 497 000 EAST GRID: 814 000
50 55 57 63

APPROXIMATE DEPTH OF WELL: 300 FEET
24 28

APPROXIMATE DIAMETER OF WELL: 6 INCH NEAREST INCH

METHOD OF DRILLING (circle one)

- BORED (or Augered) JETTED Jetted & DRIVEN
- AIR-ROTary AIR-PERcussion ROTARY (Hydraulic Rotary)
- CABLE REVERSE-ROTary DRIVE-POINT
- other

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 814
N 497

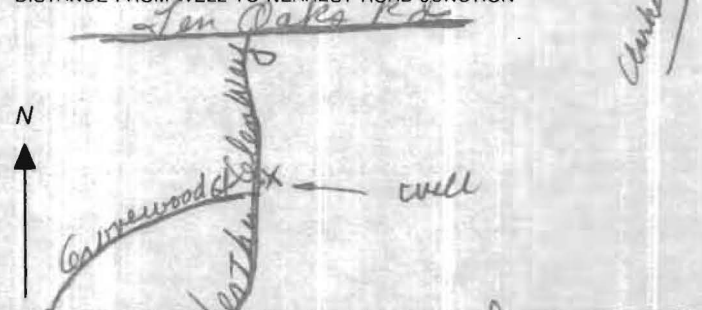
3/27/06
Y.E.G.
Radium & VOC tests done
15 gpm

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 DEEPEM AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 52

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



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

APPROX. PERMIT NUMBER: H02006G003
PERMIT No. H0-95-0266
70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS

NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

This Well must be tested for radium & VOC at the yield test

**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: Fogels Well Drilling Telephone #: 443-609-4195
Address: P.O. Box 203
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): Allen Compton License# MSD 009

***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: Charles A Klein Telephone #: 410-549-6960
Subdivision: Preserves @ Clarksville Lot #: 23 Well Tag #: HO-95-0216
Site Address: 6247 Heather's Glen

Submersible Pump Data

Make: Grundfos
Model #: 1530R07-150
Pump Capacity 15 GPM
Well Yield: 15 GPM

Pitless Adapter

Make: Campbell
Model #: N/A
Depth: 36" (36" min)
NSF/WSC approved: Yes

Well Cap and Electric Conduit

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

Depth of well encountered at time of pump installation: 260 (feet)

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 adapter or other acceptable method inside of well casing N/A

Piping to house

Type: Black Plastic
PSI: 160 (160 psi min)
Depth of supply line: 42" (36" min)

House Connection

PVC sleeve to undisturbed soil at wall penetration: Yes
Length of sleeve(5' minimum from foundation): 5'
Sleeve sealed properly: Yes

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

Signature of company representative responsible for installation: Allen Compton date: 2/22/12

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

Date Insp. Requested: _____ Date Insp. Approved: _____ Inspector: _____
Inspection Data: Pitless adapter watertight & water supply line at least 36" below grade _____
Two piece cap installed and attached to casing securely _____
Elec. conduit extends at least 18" below grade/attached to cap properly _____
Safety rope not outside of well cap/casing _____
Correct well tag attached properly and casing 8" above finished grade _____
Water supply line sleeved adequately at house connection _____
Adequate grout observed below pitless adapter _____

**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: _____ Lot #: 23 Well Tag #: HO-95-0266

Site Address: 6247 Heather Glen Way

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: 10/11/11 kw
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



LOT 23

LOT 6

LOT 22

LOT 7

LOT 21

LOT 8

LOT 20

COUNTY

LOT 19

LOT 5

NON-BUILDABLE PRESERVATION PARCEL
NATURAL WOOD PRESERVATION AREA
HUNTER CREEK LOWER
PRESERVATION DESIGN FIELD

NATURAL AND COMMERCIAL CREEK
CHANNEL

NON-BUILDABLE PRESERVATION PARCEL
DEDICATED TO HUNTER COUNTY
NATURAL WOOD PRESERVATION DESIGN
HUNTER CREEK LOWER PRESERVATION DESIGN FIELD

WINDY HOLLOW ROAD

NATURAL WOOD PRESERVATION CREEK
CHANNEL

LOT 18

NON-BUILDABLE PRESERVATION PARCEL
DEDICATED TO HUNTER COUNTY
NATURAL WOOD PRESERVATION DESIGN
HUNTER CREEK LOWER PRESERVATION DESIGN FIELD

NATURAL WOOD PRESERVATION CREEK
CHANNEL

PUBLIC DRAINAGE
& UTILITY CHANNEL

12' SW ACCESS



3525 H Ellicott Mills Drive, Ellicott City, MD 21043
(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:

- The well site has been staked by Benchmark Engineering
(professional land surveyor or company employing professional land surveyors)
on 12-14-05 (date) and does not require a site inspection.
- 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 6/10/03

*33 Lots for D. R. Horton
Surnbury Grove*



Howard County
Health Department

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

INTERIM CERTIFICATE OF POTABILITY

Expiration Date – October 5, 2012

April 5, 2012

Homeowner
6247 Heather Glen Way
Clarksville, Maryland 21029

RE: The Preserves at Clarksville, Lot# 23
Building Permit: B11001991
Well Permit: HO-95-0266

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 **10/11/2011**. Final approval of the well line connection to the dwelling was granted on **10/11/2011**. The well construction was completed on **03/27/06**. Water samples were collected on **4/2/2012**.

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 **03/27/2006**. Results showed a Gross Alpha level of **1.9 ± 0.6 pCi/L** and Gross Beta level of **4.8 ± 0.7 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-95-0266. 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>

Approving Authority,

Dana Bernard

Dana Bernard, REHS/RS
Environmental Sanitarian
Well & Septic Program

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



TRACE LABORATORIES, INC
 5 North Park Drive
 Hunt Valley, MD 21030 USA
 Telephone: 410/584-9099 / Fax: 410/584-9117
 Website: www.tracelabs.com / Email: info@tracelabs.com

Maryland State Certified Laboratory #318

CERTIFICATE OF ANALYSIS

Requester:

S/O Number: 84785-1

Amy Ferrer
 Compass Homes
 6206 Heather Glen Way
 Clarksville, Maryland 21029

Report Date: April 3, 2012

Potability Testing

Property Sampled: 6247 Heather Glen Way, 21029
Sample Location: Pressure Tank Tap
Residual Chlorine: <0.1 mg/L

Building Permit #: B11001991
Sampler ID #: 0765AR
Samples Iced: Yes

County: Howard
Map: 34

Subdivision: Preserve at Clarksville
Parcel: 77

Map: 23

Date/Time Collected in Field: April 2, 2012 @ 9:30 am
Date/Time Received in Lab: April 2, 2012 @ 2:20 pm *df 4-5-12*

Well Tag #: HO-95-0266
Well Condition: 2-Piece Cap, Satisfactory

Water Treatment/Conditioning: Sediment Filter, Reverse Osmosis (R/O)

PARAMETER	METHOD	MCL/*SMCL	RESULT	PASS/FAIL
Total Coliform	SM 9223B	Absent	Absent	Pass
<i>E. coli</i>	SM 9223B	Absent	Absent	Pass
Nitrate	SM 4500D	10 mg/L as N	3.2 mg/L as N	Pass
Turbidity	EPA 180.1	10 NTU	2.4 NTU	Pass
pH	EPA 150.1	*6.5-8.5 Units	6.2 Units	***
Sand		Absent	Absent	Pass

The results in this report relate only to those items tested. If any additional information or clarification of this report is required, please contact us. This test report shall not be reproduced except in full without the written approval of Trace Laboratories Inc.

Katherine C. Higgs
 Katherine C. Higgs
 Manager – Drinking Water Testing

MCL: Maximum Contamination Level, an enforceable level established by the EPA
 *SMCL: Secondary Maximum Contamination Level, a level recommended by the EPA
 ***A non-enforceable parameter that may cause cosmetic effects or aesthetic effects (such as taste, color or odor) in drinking water.



TRACE LABORATORIES, INC

5 North Park Drive
Hunt Valley, MD 21030 USA
Telephone: 410/584-9099 / Fax: 410/584-9117
Website: www.tracelabs.com / Email: info@tracelabs.com

Maryland State Certified Laboratory #318

CERTIFICATE OF ANALYSIS

Requester:

Amy Ferrer
Compass Homes
6206 Heather Glen Way
Clarksville, Maryland 21029

S/O Number: 84785-1

Report Date: April 16, 2012

Property Sampled: 6247 Heather Glen Way, 21029
Sample Location: Pressure Tank Tap
Residual Chlorine: <0.1 mg/L

Building Permit #: B11001991
Sampler ID #: 0765AR
Samples Iced: Yes

County: Howard
Map: 34

Subdivision: Preserve at Clarksville
Parcel: 77

Map: 23

Date/Time Collected in Field: April 2, 2012 @ 9:30 am
Date/Time Received in Lab: April 2, 2012 @ 2:20 pm

Well Tag #: HO-95-0266
Well Condition: 2-Piece Cap, Satisfactory

Water Treatment/Conditioning: Sediment Filter, Reverse Osmosis (R/O)

Short Term - Raw

PARAMETER	METHOD	MDL (pCi/L)	MCL* (pCi/L)	RESULT (pCi/L)	ACCEPTABILITY
Gross Alpha	EPA 900.0	1.3	15	8.4 ± 2.0	MODERATE
Gross Beta	EPA 900.0	2.1	50	8.2 ± 1.6	Acceptable

Long Term - Raw

PARAMETER	METHOD	MDL (pCi/L)	MCL* (pCi/L)	RESULT (pCi/L)	ACCEPTABILITY
Gross Alpha	EPA 900.0	1.0	15	2.9 ± 1.2	Acceptable
Gross Beta	EPA 900.0	1.8	50	8.4 ± 1.5	Acceptable

*Note: There are no established limits set forth by the EPA for radionuclide particles in private well water. The limits for public water are instead provided as MCLs in this report and the acceptability of this sample is based on these requirements. Gross Alpha levels under 5 pCi/L are acceptable. Levels between 5 and 15 pCi/L are considered moderate, and levels greater than 15 pCi/L are considered high. When levels are moderate or high, treatment or further testing is recommended and in certain cases may be required by the health department.

Katherine C. Higgs
Katherine C. Higgs
Manager - Drinking Water Testing

MDL: Method Detection Limit

MCL: Maximum Contamination Level, an enforceable level established by the EPA

Analysis completed by Laboratory #278



TRACE LABORATORIES, INC

5 North Park Drive
 Hunt Valley, MD 21030 USA
 Telephone: 410/584-9099 / Fax: 410/584-9117
 Website: www.tracelabs.com / Email: info@tracelabs.com

Maryland State Certified Laboratory #318

CERTIFICATE OF ANALYSIS

Requester:

Amy Ferrer
 Compass Homes
 6206 Heather Glen Way
 Clarksville, Maryland 21029

S/O Number: 84785-2

Report Date: April 16, 2012

Property Sampled: 6247 Heather Glen Way, 21029
 Sample Location: Reverse Osmosis (R/O) Tap
 Residual Chlorine: <0.1 mg/L

Building Permit #: B11001991
 Sampler ID #: 0765AR
 Samples Iced: Yes

County: Howard
 Map: 34

Subdivision: Preserve at Clarksville
 Parcel: 77

Map: 23

Date/Time Collected in Field: April 3, 2012 @ 1:47 pm
 Date/Time Received in Lab: April 3, 2012 @ 2:40 pm

Well Tag #: HO-95-0266
 Well Condition: 2-Piece Cap, Satisfactory

Water Treatment/Conditioning: Sediment Filter, Reverse Osmosis (R/O)

Short Term - Treated

PARAMETER	METHOD	MDL (pCi/L)	MCL* (pCi/L)	RESULT (pCi/L)	ACCEPTABILITY
Gross Alpha	EPA 900.0	1.0	15	1.1 ± 0.8	Acceptable
Gross Beta	EPA 900.0	2.0	50	<2.0 ± 1.3	Acceptable

Long Term - Treated

PARAMETER	METHOD	MDL (pCi/L)	MCL* (pCi/L)	RESULT (pCi/L)	ACCEPTABILITY
Gross Alpha	EPA 900.0	0.6	15	1.2 ± 0.7	Acceptable
Gross Beta	EPA 900.0	1.8	50	<1.8 ± 1.1	Acceptable

MDL: Method Detection Limit

MCL: Maximum Contamination Level, an enforceable level established by the EPA

Analysis completed by Laboratory #278



TRACE LABORATORIES, INC
 5 North Park Drive
 Hunt Valley, MD 21030 USA
 Telephone: 410/584-9099 / Fax: 410/584-9117
 Website: www.tracelabs.com / Email: info@tracelabs.com

Maryland State Certified Laboratory #318

CERTIFICATE OF ANALYSIS

PARAMETER	METHOD	MDL (pCi/L)	MCL*	RESULT (pCi/L)	ACCEPTABILITY
Radium 226	EPA 903.1	0.2	5 pCi/L	<0.2 ± 0.1	Acceptable
Radium 228	EPA Ra-05	0.9	Combined	<0.9 ± 0.6	

*Note: There are no established limits set forth by the EPA for radionuclide particles in private well water. The limits for public water are instead provided as MCLs in this report and the acceptability of this sample is based on these requirements. Gross Alpha levels under 5 pCi/L are acceptable. Levels between 5 and 15 pCi/L are considered moderate, and levels greater than 15 pCi/L are considered high. When levels are moderate or high, treatment or further testing is recommended and in certain cases may be required by the health department.

The results in this report relate only to those items tested. If any additional information or clarification of this report is required, please contact us. This test report shall not be reproduced except in full without the written approval of Trace Laboratories Inc.

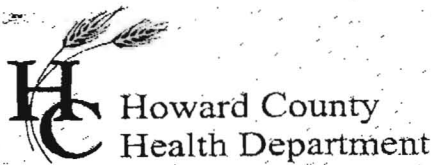
Katherine C. Higgs

 Katherine C. Higgs
 Manager – Drinking Water Testing

MDL: Method Detection Limit

MCL: Maximum Contamination Level, an enforceable level established by the EPA

Analysis completed by Laboratory #278



Bureau of Environmental Health
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.

May 8, 2006

D.R. Horton
1370 Piccard Drive
Rockville, MD 20850

RE: Turnbury Grove Subdivision, Lot ~~22~~ 23

Well Tag: HO-95-0266

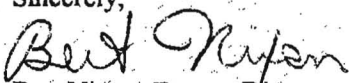
To Whom It May Concern:

A sample was collected from a yield test on March 27, 2006 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 1.9 ± 0.6 picocuries/liter (pCi/L); while the **Gross Beta** level was 4.8 ± 0.7 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 MCL of 50 pCi/L.

Since both the **Gross Alpha** and **Gross Beta** were below their respective MCL's, no additional testing for **Radium** will be necessary prior to occupancy. Keep in mind that standard water tests to satisfy Use & Occupancy requirements will still be necessary.

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, Deputy Director
Bureau of Environmental Health

BN/bn

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

not in RPS

Send Report To:

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

201 W. Preston Street, Baltimore, Maryland 21201
J. Mehsen Joseph, Ph.D., Director

LABORATORY ANALYSIS REQUEST

HOGCTG2232710A

Sample Bottle No. A: _____ No. B: _____ Field Blank Bottle No. 1: _____ No. 2: _____

Plant/Site Name: Turnberry Grove County: HOWARD

Sample Source: Well - Lot 22 Location: HO-95-0266
(well no., lab sink, sample tap, etc.)

County: Plant No.

Collector: GAC Telephone No.: 410-313-1773

Date Collected: 3/27/06 Time Collected: 10 a.m. _____ p.m.

Nitric Acid Preserved: Yes No Iced: Yes No

Submitters Code: Federal Project: S Field Data: _____
pH _____ Chlorine _____

Remarks: Raw H₂O collected @ initial yield test

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Reported
✓	Gross Alpha	4000	603203-012	1.9 ± 0.6	4/21/06
✓	Gross Beta	4100		4.8 ± 0.7	
	Radon-222 Bottle A	4004			
	Radon-222 Bottle B	4004			
	Field Blank #1	4004			
	Field Blank #2	4004			
	Tritium				
	Ra - 226	4020			
	Ra - 228	4030			
	Total Uranium	4006			

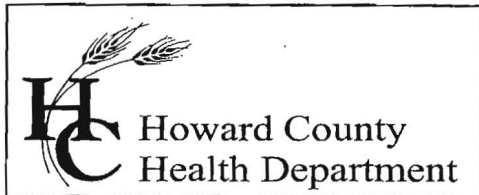
Date Received: _____ / _____ / _____

Section Chief: _____

Analytical Summary Report

Client Name:	Howard County Health Department	Client Sample ID:	HOGCTG22327
Sample Date/Time:	03/27/2006	Lab Sample ID:	603203-012-012-1/1
Receipt Date/Time:	03/28/2006	Sample Matrix:	WATER
Prepared Date/Time:		Analytical Method:	ALPHA/BETA BY METHOD 900.0

Isotope	Result	Uncertainty 1σ	MDA	Q
Gross Alpha	1.8729 pCi/L	± 0.5634 pCi/L	1.9162 pCi/L	U
Gross Beta	4.7931 pCi/L	± 0.6680 pCi/L	2.1971 pCi/L	



Bureau of Environmental Health
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

July 7, 2006

D. R. Horton, Inc.
1370 Picardi Drive
Rockville, Maryland 20850

RE: Water Sample Results
²³ Lot ~~22~~ Turnbury Grove
HO - 95 - 0266

To Whom this May Concern:

During the recent "yield test" of the well serving the future Lot ²³~~22~~ (located on Heather Glen Way), a sample was collected for volatile organic compounds (VOC's) on March 27, 2006. This testing was performed to establish a baseline evaluation of the well water supply due to known VOC ground water contamination concerns previously documented (during the 1990's and earlier) in properties nearby this development.

Results from this sampling were free of all tested VOC's to the limit of detection for the test method employed. Similar findings were noted for the corresponding Field and Trip Blank samples. With respect to these parameters, the future well water supply is **currently** safe for all uses.

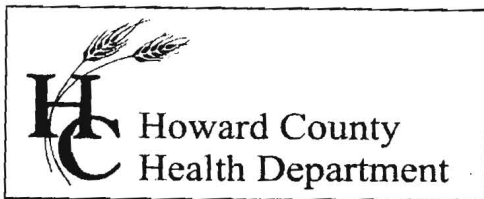
A copy of the VOC test report is enclosed for your records.

If questions should arise, you may contact Stuart Oster of the Well & Septic Program at (410) 313 - 1771 or me at (410) 313 - 1773.

Sincerely,

Bert Nixon, Assistant Director
Bureau of Environmental Health

Enclosure
cc: Lot 22 Turnbury Grove Property File



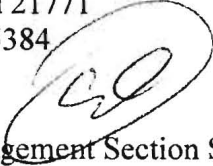
7178 Columbia Gateway Drive, Columbia MD 21046
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

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

February 8, 2006

MEMORANDUM

TO: Joseph L. Mayne Well Drilling
5512 Ridge Road
Mt. Airy, Maryland 21771
Faxed to 301-829-5384

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

RE: File Number: P-05-013
Title: Turnbery Grove

The Health Department requires that all the wells in this subdivision be tested for radium and V.O.C.'s (Volatile Organic Contaminants). The optimum time to sample would be when the yield test is being completed. When contacting this office about the yield test, please mention that these water test need to be collected. Also, attached is a letter dated November 21, 2005 from Bert Nixon further explaining the radium testing.

Cc: D. R. Horton, Inc.
File

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
TRACE ORGANICS SECTION
 201 W. Preston Street, Baltimore, MD 21201
 John M. DeBoy, Dr. P.H., Director

Certificate of Analysis - Volatiles

Sample Name: 961451 HOGCTG2232710AS Method: EPA 524.2
 Date Analyzed: 04/10/06

<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>	<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>
TRICHALOMETHANES				UNREGULATED			
Bromodichloromethane	0.5	na	ND	Dichlorodifluoromethane	0.5	na	ND
Bromoform	0.5	na	ND	Chloromethane	0.5	na	ND
Chloroform	0.5	na	ND	Bromomethane	0.5	na	ND
Dibromochloromethane	0.5	na	ND	Chloroethane	0.5	na	ND
TOTAL THMs	-	80	-	Trichlorofluoromethane	0.5	na	ND
REGULATED				1,1-Dichloroethane	0.5	na	ND
Benzene	0.5	5	ND	1,3-Dichlorobenzene	0.5	na	ND
Carbon Tetrachloride	0.5	5	ND	Dibromomethane	0.5	na	ND
Chlorobenzene	0.5	100	ND	1,1-Dichloropropene	0.5	na	ND
1,4-Dichlorobenzene	0.5	75	ND	trans-1,3-Dichloropropene	0.5	na	ND
1,1-Dichloroethene	0.5	7	ND	1,1,2,2-Tetrachloroethane	0.5	na	ND
1,2-Dichloroethane	0.5	5	ND	1,3-Dichloropropane	0.5	na	ND
1,2-Dichlorobenzene	0.5	600	ND	2,2-Dichloropropane	0.5	na	ND
1,2-Dichloropropane	0.5	5	ND	cis-1,3-Dichloropropene	0.5	na	ND
cis-1,2-Dichloroethene	0.5	70	ND	2-Chlorotoluene	0.5	na	ND
trans-1,2-Dichloroethene	0.5	100	ND	4-Chlorotoluene	0.5	na	ND
Ethylbenzene	0.5	700	ND	Bromobenzene	0.5	na	ND
Styrene	0.5	100	ND	1,3,5-Trimethylbenzene	0.5	na	ND
Tetrachloroethene	0.5	5	ND	1,2,4-Trimethylbenzene	0.5	na	ND
Trichloroethene	0.5	5	ND	1,2,3-Trichlorobenzene	0.5	na	ND
1,1,1-Trichloroethane	0.5	200	ND	n-Propylbenzene	0.5	na	ND
Toluene	0.5	1000	ND	n-Butylbenzene	0.5	na	ND
Vinyl Chloride	0.5	2	ND	Naphthalene	0.5	na	ND
o-Xylene	0.5	na	ND	Hexachlorobutadiene	0.5	na	ND
m+p-Xylene	1.0	na	ND	Isopropylbenzene	0.5	na	ND
Total Xylenes	1.5	10000	ND	1,2,3-Trichloropropane	0.5	na	ND
Methylene Chloride	0.5	5	ND	1,2-Dibromo-3-Chloropropane	0.5	na	ND
1,1,2-Trichloroethane	0.5	5	ND	p-Isopropyltoluene	0.5	na	ND
1,2,4-Trichlorobenzene	0.5	70	ND	tert-Butylbenzene	0.5	na	ND
				sec-Butylbenzene	0.5	na	ND
				Bromochloromethane	0.5	na	ND
				1,1,1,2-Tetrachloroethane	0.5	na	ND
				1,2-Dibromoethane	0.5	na	ND
				Methyl-tert-Butyl Ether (MTBE)	0.5	na	ND
				Ethyl-tert-Butyl Ether (ETBE)	0.5	na	ND
				tert-Amyl Methyl Ether (TAME)	0.5	na	ND

*All results are in parts per billion (ppb)
 ND = Less than the detection limit
 na = not applicable
 e = estimated value

Section Chief: *Richard Miller* Date Approved: 4/12/06

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
TRACE ORGANICS SECTION
 201 W. Preston Street, Baltimore, MD 21201
 John M. DeBoy, Dr. P.H., Director

Certificate of Analysis - Volatiles

Sample Name: 961451 FB
 Date Analyzed: 04/10/06

Method: EPA 524.2

<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>	<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>
TRihalOMETHANES				UNREGULATED			
Bromodichloromethane	0.5	na	ND	Dichlorodifluoromethane	0.5	na	ND
Bromoform	0.5	na	ND	Chloromethane	0.5	na	ND
Chloroform	0.5	na	ND	Bromomethane	0.5	na	ND
Dibromochloromethane	0.5	na	ND	Chloroethane	0.5	na	ND
TOTAL THMs	-	80	-	Trichlorofluoromethane	0.5	na	ND
REGULATED				1,1-Dichloroethane	0.5	na	ND
Benzene	0.5	5	ND	1,3-Dichlorobenzene	0.5	na	ND
Carbon Tetrachloride	0.5	5	ND	Dibromomethane	0.5	na	ND
Chlorobenzene	0.5	100	ND	1,1-Dichloropropene	0.5	na	ND
1,4-Dichlorobenzene	0.5	75	ND	trans-1,3-Dichloropropene	0.5	na	ND
1,1-Dichloroethene	0.5	7	ND	1,1,2,2-Tetrachloroethane	0.5	na	ND
1,2-Dichloroethane	0.5	5	ND	1,3-Dichloropropane	0.5	na	ND
1,2-Dichlorobenzene	0.5	600	ND	2,2-Dichloropropane	0.5	na	ND
1,2-Dichloropropane	0.5	5	ND	cis-1,3-Dichloropropene	0.5	na	ND
cis-1,2-Dichloroethene	0.5	70	ND	2-Chlorotoluene	0.5	na	ND
trans-1,2-Dichloroethene	0.5	100	ND	4-Chlorotoluene	0.5	na	ND
Ethylbenzene	0.5	700	ND	Bromobenzene	0.5	na	ND
Styrene	0.5	100	ND	1,3,5-Trimethylbenzene	0.5	na	ND
Tetrachloroethene	0.5	5	ND	1,2,4-Trimethylbenzene	0.5	na	ND
Trichloroethene	0.5	5	ND	1,2,3-Trichlorobenzene	0.5	na	ND
1,1,1-Trichloroethane	0.5	200	ND	n-Propylbenzene	0.5	na	ND
Toluene	0.5	1000	ND	n-Butylbenzene	0.5	na	ND
Vinyl Chloride	0.5	2	ND	Naphthalene	0.5	na	ND
o-Xylene	0.5	na	ND	Hexachlorobutadiene	0.5	na	ND
m+p-Xylene	1.0	na	ND	Isopropylbenzene	0.5	na	ND
Total Xylenes	1.5	10000	ND	1,2,3-Trichloropropane	0.5	na	ND
Methylene Chloride	0.5	5	ND	1,2-Dibromo-3-Chloropropane	0.5	na	ND
1,1,2-Trichloroethane	0.5	5	ND	p-Isopropyltoluene	0.5	na	ND
1,2,4-Trichlorobenzene	0.5	70	ND	tert-Butylbenzene	0.5	na	ND
				sec-Butylbenzene	0.5	na	ND
				Bromochloromethane	0.5	na	ND
				1,1,1,2-Tetrachloroethane	0.5	na	ND
				1,2-Dibromoethane	0.5	na	ND
				Methyl-tert-Butyl Ether (MTBE)	0.5	na	ND
				Ethyl-tert-Butyl Ether (ETBE)	0.5	na	ND
				tert-Amyl Methyl Ether (TAME)	0.5	na	ND

*All results are in parts per billion (ppb)
 ND = Less than the detection limit
 na = not applicable
 e = estimated value

Section Chief: Deborah Miller-Drew Date Approved: 4/12/06

Send Report To:

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

State of Maryland
DHMH - Laboratories Administration
Division of Environmental Chemistry
TRACE ORGANICS SECTION
201 W. Preston Street, Baltimore, Maryland 21201
J. Mehsen Joseph, Ph.D., Director

Lab No. Date Received

961451 MAR 28 13
Do not write above this line

LABORATORY ANALYSIS REQUEST

Bottle No: HOGCTG2232710AS(A)&(B) Plant/Site Name: Turnberry Grove ^{Lat} 23 County: HOWARD

Sample Source: Heather Glen Way Clarksville Location: HO-95-0266
Street Town or City (well no., lab sink, sample tap, etc.)

Sampler ID: 2774GC PWSID: Plant ID:

Collector: G. Creighton (410) 313-2775
(include telephone number)

Date Collected: 3/27/2006 Time Collected: 10 a.m. p.m.

Field Preserved: Yes No Preservative Used: 1:1 HCl + Ascorbic acid Na₂SO₄ 6 mg NH₄Cl

Sample Type: Drinking Water Landfill Source (Raw Water) Liquid
 Community Stream Distribution (Treated) Solid
 Non-Community Sediment Water Treatment Plant POE Other _____
 Private

Specify Program: SDWA NPDES CWA RCRA Consumer Products Other _____

Test Requested: Trihalomethanes Volatiles Semi-volatiles Haloacetic Acids

FIELD DATA : + + +
pH Free Cl Total Cl

Field Blank Bottle No.: HOGCTG2232710AFB
Trip Blank Bottle No.: HOGCTG2232710ATB

Remarks: RAW WATER COLLECTED AT YIELD TEST
Please Run Full DW Scan incl. MTBE

Section Chief: Delonda Miller-Jud Date Reported: 4/1/06

•Phone: (410) 767 - 5643 •Fax: (410) 333 - 5237