

C1 1162 SEQUENCE NO. (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.

1 2 3 4 5 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

COUNTY NUMBER A516063

ST/CO USE ONLY DATE RECEIVED MM DD YY

DATE WELL COMPLETED MM DD YY

Depth of Well 22 260' 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" Ho-95-0248

OWNER Horton R. D. STREET OR RFD Grove wood ct TOWN Clarksville, Md SUBDIVISION Turnkey Home SECTION LOT 2813

WELL LOG Not required for driven wells

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Rows: Sand (0-65), Gray Mica Rock (65-260)

GROUTING RECORD

WELL HAS BEEN GROUTED (Y) NO (N) TYPE OF GROUTING MATERIAL (C) MENTONITE CLAY (B) C NO. OF BAGS 15 NO. OF POUNDS 1400 GALLONS OF WATER 90 DEPTH OF GROUT SEAL 0 to 60 ft.

CASING RECORD (S) T (C) O (P) L (O) T STEEL CONCRETE PLASTIC OTHER

MAIN CASING TYPE (S) T Nominal diameter 6 inch Total depth 69 feet

OTHER CASING (if used) diameter depth (feet) from to

SCREEN RECORD (S) T (B) R (H) O (P) L (O) T STEEL BRASS BRONZE PLASTIC OPEN HOLE OTHER

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 24 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) (+) above ( ) LAND SURFACE (-) below (nearest) foot 2

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED (Y) (N)

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

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

DRILLERS LIC. NO. 1 M SD 024 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 1 D

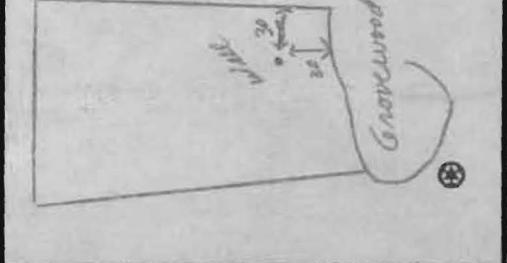
DEPTH (nearest ft.) 67 260 E A C H S R E E N 1 8 9 11 15 17 21 23 24 26 30 32 36 38 39 41 45 47 51 SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH) 56 60 from to

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 70 72 74 75 76

TELESCOPE CASING LOG INDICATOR OTHER DATA

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 1463  
1 2 3 6

SEQUENCE NO.  
(MDE USE ONLY)

STATE OF MARYLAND  
APPLICATION FOR PERMIT TO DRILL WELL  
523944 please type

STATE PERMIT NUMBER  
HO-95-0248  
70 fill in this form completely 79

Date Received (APA) 01 20 06  
8 MM DD YY 13  
OWNER INFORMATION  
15 Last Name: Horton R. D. Owner First Name 34  
36 Street or RFD: 1370 Piccard Drive 55  
57 Town: Rockville Md 70 State: MD 72 Zip: 20850 76

B 3 LOCATION OF WELL  
8 COUNTY: Howard 21  
23 SUBDIVISION: Sunbeam Grove 42  
SECTION 44 46 LOT 48 50: 13  
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 S D 024 76 License No. 81  
Firm Name: Joseph L. Mayne Well Drilling  
Address: 5512 Ridge Rd Mt Airy Md 21771  
Signature: Joseph L. Mayne Date: 1-6-06

B 4 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)  
ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)  
NEAR WHAT ROAD: Grovewood Ct. 11 30  
DISTANCE FROM ROAD: 25 FT 34 37 ENTER FT OR MI 38 39  
TAX MAP: 34 BLK: 17 PARCEL: 72

B 2 WELL INFORMATION  
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)  
 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  
COUNTY NAME: HOWARD COUNTY NO.: 13 A516063  
STATE SIGNATURE: \_\_\_\_\_ INSERT S →  
DATE ISSUED: 2/8/06 CO SIGNATURE: Whit A. Lister EXP. DATE: 2/9/07  
43 MM DD YY 48 NORTH GRID: 497 50 55 EAST GRID: 814 57 63

APPROXIMATE DEPTH OF WELL: 300 FEET 24 28  
APPROXIMATE DIAMETER OF WELL: 6 INCH NEAREST INCH

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

METHOD OF DRILLING (circle one)  
BORED (or Augered) JETTED Jetted & DRIVEN  
30 AIR-ROTary AIR-PERcussion ROTARY (Hydraulic Rotary)  
37 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  
39  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 DEEPEMED 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  
Sunbeam Grove Rd.  
Clarksville  
Grovewood Ct.  
Walter Glen Way  
N ↑

Not to be filled in by driller (MDE OR COUNTY USE ONLY)  
APPROP. PERMIT NUMBER: HO2006G003(01)  
PERMIT No. HO-95-0248  
70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS  
NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET FOR TESTS  
Well Must be tested for Radium & UOC's @ yield test



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 N.C.C.C. (as amended locally) and COMAR 26.04.04 (MD Well Construction) is required prior to Use and Occupancy approval.

Company Name: R & G Water Systems, Inc.
Address: 4322 Opals Choice Drive, Manchester, MD 21102
Phone #: 410-239-0700

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer

Name (Print): RICKEY L. ROOS, SR. License # PF0141
\*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: DALE THOMPSON BURT Telephone #:
Subdivision: PRESERVE AT CLARKSVILLE Lot #: 13 Well Tag #: HO-95-0248
Site Address: 12672 GROVEWOOD COURT

Submersible Pump Data: Make: GRUNDOS Model #: 1538E6T-1P0 Pump Capacity: 15 GPM Well Yield: 15 GPM Depth of well encountered at time of pump installation: 260 (feet)
Pitless Adapter: Make: HANLON Model #: HT-800 Depth: 40" (36" min) NSF approved:
Well Cap and Electric Conduit: Two piece watertight cap: Screened, vented well cap: Cap secured to casing: Conduit min 18" R.G.: Conduit secured to well cap:

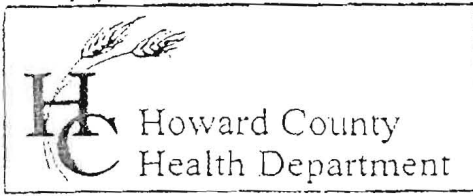
Piping to house: Type: POLYETHYLENE PSI: 160 (160 psi min) Depth of supply line: 40" (36" min)
House Connection: PVC sleeved to undisturbed soil at wall penetration: Approximate length of sleeve: 10' Sleeve caulked and sealed properly: FORNCO.

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: [Signature] date: 7/29/08

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

Date Insp. Requested: Date Insp. Approved: 7/30/08
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 5" above finished grade Water supply line sleeved adequately at house connection Adequate grout observed below pitless adapter



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

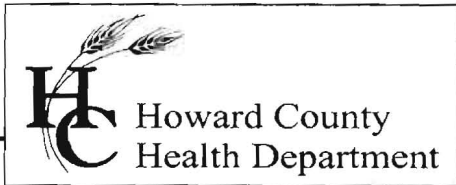
When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

- 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  
Lurnbury Grove



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](http://www.hchealth.org)

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

May 15, 2009

Dale Thompson Builders  
12622 Grovewood Court  
Clarksville, MD 21029

RE: The Preserve at Clarksville, Lot 13  
BP #: B07004765  
Well Permit # HO-95-0248

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 10/10/08. Final approval of the well line connection to the dwelling was approved on 07/30/08.**

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, Beta and VOC samples were also collected on 3/9/06. As reported on 05/08/06, the Gross Alpha and Gross Beta results were both below the maximum limit suggested by the EPA. The VOC samples were free of contaminants to the limit of detection. No additional testing **for these parameters** will be required to secure the future Use and Occupancy.

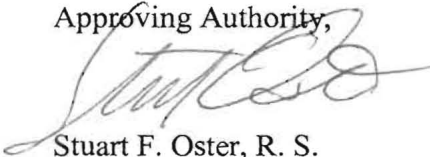
#### **INTERIM CERTIFICATE OF POTABILITY**

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-95-0248. 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) 313-1792 to schedule a final water sample appointment. Currently, there is no charge for this final sampling.**

Date of Water Samples: 03/09/06 & 05/06/09  
Date of Gross Alpha & Beta Samples: 03/09/06  
Date of Well Completion: 03/09/06

Approving Authority,

A handwritten signature in black ink, appearing to read "Stuart F. Oster", written over a light blue horizontal line.

Stuart F. Oster, R. S.  
Well & Septic Program

cc: Building Inspector's Office  
Community Health Services  
File



**CERTIFICATE OF ANALYSIS**

**Requestor:**  
 Ms. Amy Ferrer  
 13717 Springdale Drive  
 Clarksville, MD 21029

**S/O Number:** 72403  
**Report Date:** May 7, 2009

**Property Sampled:** 12622 Grovewood Court, 21029

**County:** Howard  
**Subdivision:** Preserve at Clarksville  
**Lot #:** 13  
**Tax Map #:** 34  
**Parcel #:** 77

**Date/Time Collected:** May 6, 2009 at 11:15 am  
**Date/Time Received:** May 6, 2009 at 2:45 pm

**Sample Location:** Laundry Tub Tap  
**Sampler ID:** 5745KC  
**Samples Iced:** Yes  
**Residual Cl<sub>2</sub> <0.1 mg/L:** Yes

**Well Tag Number:** HO-95-0248  
**Well Condition:** 2-Piece Cap  
 Satisfactory

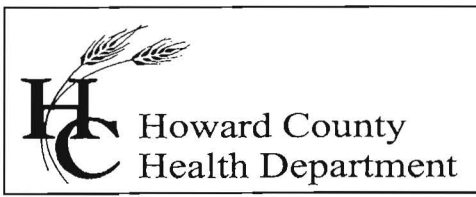
**Water Conditioning/Treatment:** Sediment Filter

PARAMETER	RESULT	METHOD	MCL/*SMCL	
Nitrate	<1.0 mg/L as N	SM 4500D	10 mg/L as N	Pass
Turbidity	<1.0 NTU	EPA 180.1	*10 NTU	Pass
pH	7.0 Units	EPA 150.1	*6.5-8.5 Units	***
Sand	Negative		Negative	
Total Coliform	Absent	SM 9223B	Absent	Pass
E.coli	Absent	SM 9223B	Absent	Pass

*Allison Milburn*

Allison R. Milburn  
 Manager-Drinking Water Testing

MCL=Maximum Contamination Level  
 \*SMCL=Secondary Maximum Contamination Level



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 6, 2006

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

RE: Water Sample Results  
Lot 12 Turnbury Grove  
HO - 95 - 0248

To Whom it May Concern:

13

During the recent "yield test" of the well serving the future Lot 12 (located on Grovewood Court), a sample was collected for volatile organic compounds (VOC's) on March 9, 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 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 12 Turnbury Grove Property File

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

961295 MAR-98

Do not write above this line

**LABORATORY ANALYSIS REQUEST**

Bottle No: HOGCTG1239105(A)&(B) Plant/Site Name: Turnberry Grove <sup>Lot</sup> 13 County: HOWARD

Sample Source: Grovewood (+ Clarksville) Location: H/O-95-0248  
Street Town or City (well no., lab sink, sample tap, etc.)

Sampler ID:  PWSID:  Plant ID:

Collector: GAC (410) 313-2775  
(include telephone number)

Date Collected: 3/9/2006 Time Collected: 10 a.m. \_\_\_\_\_ p.m.

Field Preserved:  Yes  No Preservative Used:  1:1 HCl+Ascorbic acid  Na<sub>2</sub>SO<sub>4</sub>  6 mg NH<sub>4</sub>Cl

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: 6.8 0.0 0.0  
pH Free Cl Total Cl

Field Blank Bottle No.: HOGCTG123910FB  
Trip Blank Bottle No.: HOGCTG123910TB

Remarks: Raw H<sub>2</sub>O from yield test. Full DW. Secu incl

MTBE

Section Chief: Deborah Miller-Jones Date Reported: 3/21/06

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

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: 961295 HOGCTG123910SA Method: EPA 524.2  
 Date Analyzed: 03/20/06

<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>	<u>Contaminants</u>	<u>DL*</u>	<u>MCL*</u>	<u>Result*</u>
<u>TRihalOMETHANES</u>				<u>UNREGULATED</u>			
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
<u>REGULATED</u>				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 Date Approved: 3/22/06

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: 961295 FB  
 Date Analyzed: 03/20/06

Method: EPA 524.2

Contaminants	DL*	MCL*	Result*	Contaminants	DL*	MCL*	Result*
<b>TRihalOMETHANES</b>				<b>UNREGULATED</b>			
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
<b>REGULATED</b>				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

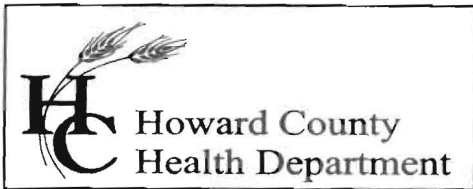
Section Chief: Deborah Miller-Duck

Date Approved: 3/22/06

Phone: (410) 767-5896

Fax: (410) 225-9318





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

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

~~May 18, 2006~~

May 8, 2006

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

RE: Turnbury Grove Subdivision, Lot 1

Well Tag: HO-95-0258

Handwritten notes: *Se* (circled), *12* (circled), *0248*, *It's from log - no letter*, *8/8*, *11.7*

To Whom It May Concern:

A sample was collected from a yield test on April 6, 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. In turn, this can provide information regarding naturally occurring radiation (i.e., Radionuclides) that may exist in your water supply.

Results from this screening revealed a **Gross Alpha** of  $3.5 \pm 0.4$  picocuries/liter (pCi/L), while the **Gross Beta** level was  $4.0 \pm 0.5$  pCi/L. Both the **Gross Alpha** and **Gross Beta** results were both below their respective **maximum contaminant levels (MCL's)** of 15 pCi/L and 50 pCi/L respectively. At the time of testing and with respect to these parameters, the future well water supply appears safe for all uses. Keep in mind that the standard tests for Use & Occupancy will still need to be completed.

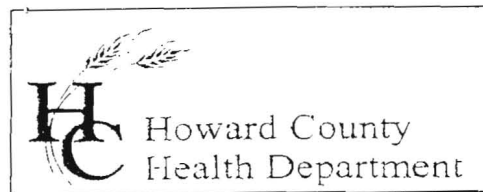
A copy of the test results is enclosed for your information. Please call this office at 410-313-1773 if you have any further questions.

Sincerely,

*Bert Nixon*

Bert Nixon, Deputy Director  
 Bureau of Environmental Health

cc: Eric Dougherty, MDE Water Mgmt., Groundwater Well & Septic Property File



Bureau of Environmental Health  
7178 Columbia Gateway Drive, Columbia, MD 21046  
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TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: [www.hchealth.org](http://www.hchealth.org)

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

November 21, 2005

**RE:**

To Whom It May Concern:

Previous findings from a pilot study conducted by Maryland Geological Survey and Maryland Department of the Environment (MDE) have found elevated levels of naturally occurring radioactive elements in groundwater from and underground rock formation, the Baltimore Gneiss. As a result of this study, we have verified that your subdivision is located within the Baltimore Gneiss testing area. We are in the process of notifying existing properties of this study, plus developers building developments within this formation.

All wells within this area are being sampled for Gross Alpha and Gross Beta particles. These particles measure the alpha and beta activity in a water supply. In turn, this can provide information regarding naturally occurring radiation (i.e. Radionuclides) that may exist in your water supply. These particles are measured in picocuries per liter (pCi/L) and several have EPA established maximum contaminant levels (MCL's). The standards define the maximum permissible level of a contaminant legally allowed in water taking into account the public health risk, available treatment technology and costs of treatment.

From this point forward, we will require that all new subdivisions and properties within this formation to be tested during yield tests or prior to issuance of the Intern Certificate of Potability (ICOP). In the event that elevated levels are detected, appropriate treatment will be needed to help secure the ICOP and occupancy by the resident(s).

Please call this office at (410) 313-1773 if you have any further questions or concerns.

Sincerely,

Bert Nixon, Assistant Director  
Bureau of Environmental Health

Eric Dougherty, MDE, Water Mgmt., Groundwater



Howard County  
Health Department

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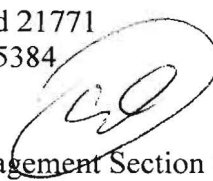
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**Penny E. Borenstein, M.D., M.P.H., Health Officer**

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

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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