

C1 1150 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.

ST/CO USE ONLY
DATE Received
MM DD YY

DATE WELL COMPLETED
MM DD YY

Depth of Well
22 320 26
(TO NEAREST FOOT)

COUNTY NUMBER A516063
PERMIT NO. FROM "PERMIT TO DRILL WELL"
40-95-0237

OWNER Houston R.
STREET OR RFD Heather Glen Way first name last name
SUBDIVISION Sunbury Grove SECTION TOWN Clarksville md LOT 25

WELL LOG
Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed)	FEET		check if water bearing
	FROM	TO	
Sand	0	52	
Gray Mica Rock	52	320	

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box)
yes no
44 44

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT BENTONITE CLAY
45 46 45 46

NO. OF BAGS 19 NO. OF POUNDS 1936
GALLONS OF WATER 114
DEPTH OF GROUT SEAL (to nearest foot)
from 48 TOP 52 ft. to 54 BOTTOM 58 ft.
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

<input checked="" type="checkbox"/> ST STEEL	<input type="checkbox"/> CO CONCRETE
<input type="checkbox"/> PL PLASTIC	<input type="checkbox"/> OT OTHER

MAIN CASING TYPE
Nominal diameter top (main) casing (nearest inch)! Total depth of main casing (nearest foot)
57 6 55
60 61 63 64 66 70

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

SCREEN RECORD
screen type or open hole insert appropriate code below

<input checked="" type="checkbox"/> ST STEEL	<input type="checkbox"/> BR BRASS BRONZE	<input type="checkbox"/> HO OPEN HOLE
<input type="checkbox"/> PL PLASTIC	<input type="checkbox"/> OT OTHER	

DEPTH (nearest ft.)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

PUMPING TEST
HOURS PUMPED (nearest hour) 3
8 9

PUMPING RATE (gal. per min.) 15
11 15

METHOD USED TO MEASURE PUMPING RATE Bucket

WATER LEVEL (distance from land surface)
BEFORE PUMPING 33 ft.
WHEN PUMPING 34 ft.

TYPE OF PUMP USED (for test)
 A air P piston T turbine
 C centrifugal R rotary O other (describe below)
 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. 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 (nearest foot)
 - below }

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes no
Y N

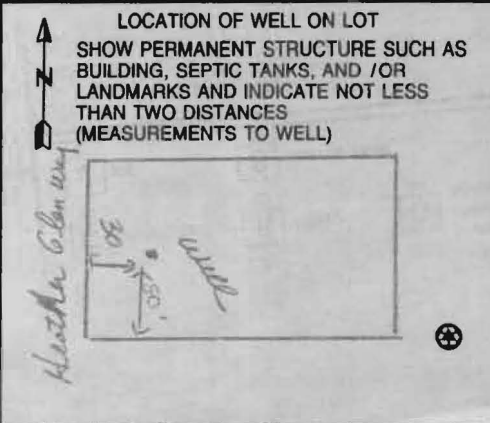
CIRCLE APPROPRIATE LETTER
A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
E ELECTRIC LOG OBTAINED
P TEST WELL CONVERTED TO PRODUCTION WELL

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, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: MSD 024
DRILLERS SIGNATURE
LIC. NO.: D

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

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) (E.R.O.S.) W Q
70 72 74 75 76



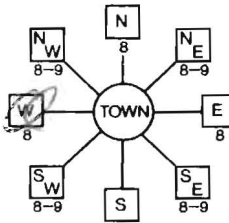

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

TELESCOPE CASING LOG INDICATOR OTHER DATA

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

B 3 LOCATION OF WELL
Howard 8 COUNTY 21
Lumbury Grove 23 SUBDIVISION 42
 SECTION 44 46 LOT 25 48 50
Clarksville 52 NEAREST TOWN 71
 MILES FROM TOWN (enter 0 if in town) 1/2 73 M 76 77 78

DRILLER INFORMATION
Joseph L Mayne M S D 024 76 Driller's Name License No. 81
Joseph L. Mayne Well Drilling Firm Name
5512 Ridge Rd Mt. Airy Md 21771 Address
Joseph L Mayne 1-6-06 Signature Date

B 4 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)

Heather Glen way 11 NEAR WHAT ROAD 30
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

 34 25 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39
 TAX MAP: 34 BLK: 11 PARCEL 77

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

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL
Howard COUNTY NAME COUNTY NO. AS16063
 STATE SIGNATURE _____ INSERT S → 41
 DATE ISSUED 2/6/06 43 MM DD YY 48 CO SIGNATURE Stutts EXP. DATE 2/6/06
 NORTH GRID 498 000 EAST GRID 814 000
 50 55 57 63

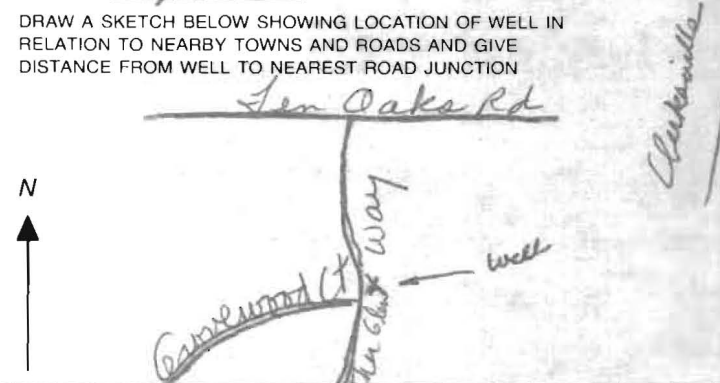
USE FOR WATER (CIRCLE APPROPRIATE BOX)
 D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
 F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
 I INDUSTRIAL, COMMERCIAL, DEWATERING
 P PUBLIC WATER SUPPLY WELL
 T TEST, OBSERVATION, MONITORING
 G GEO-THERMAL

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

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 DEEPEINED 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
 39 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 DEEPEIN AN EXISTING WELL
 PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEINED (IF AVAILABLE) 41 _____ 52

Not to be filled in by driller (MDE OR COUNTY USE ONLY)
 APPROP. PERMIT NUMBER HD 2006G 003
 PERMIT No. HD-95-0237
 70 71 72 73 74 75 76 77 78 79

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 498
 000 000
 3/7/06 Radium ? VOC's TAKEN @ Yield test 15ppm + Yig AM
 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 N.C. Code (Chapter 90A - recorded locally) and COMAR 26.94.04 (MD Well

Construction R & G Water Systems, Inc. is required prior to Use and Occupancy approval.
Company Name 4322 Opals Choice Drive Telephone #: 410-239-0700
Address Manchester, MD 21102

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer
License # and name of individual responsible for the field installation:
Name (Print): RICKEY L. ROOS, SR. License # P.I.0141

*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 Telephone #:
Subdivision: PRESERVE AT CLARKSVILLE Lot #: 25 Well Tag #: HO-95-0237
Site Address: 6239 HETHERINGTON WAY CLARKSVILLE 21029

Submersible Pump Data Pitless Adapter Well Cap and Electric Conduit
Make: GRUNDIGS Make: HARVAR Two piece watertight cap.
Model #: 155QE07-180 Model #: 47800 Screened, vented well cap.
Pump Capacity 15 GPM Depth: 4' (36" min) Cap secured to casing.
Well Yield: GPM NSF approved: YES Conduit min 18" R.G.
Depth of well encountered at time of pump installation: (feet) Conduit secured to well cap.
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 House Connection
Type: PEX Type: FERNCO
PSI: 16 (160 psi min) Approximate length of sleeve: 10'
Depth of supply line: 4' (36" min) Sleeve caulked and sealed properly: FERNCO.

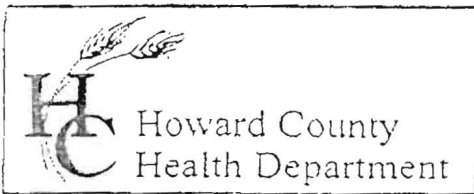
The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Signature of company representative responsible for installation: Rickey L. Roos, SR. date: 7/29/08

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

Date Insp. Requested: Date Insp. Approved: 7/30/09
Inspection Data: Pitless adapter and water supply line at least 36" below grade [check] KW/BB
Two piece cap installed and attached to casing securely [check]
Elec. conduit extends at least 18" below grade/attached to cap properly [check] Conduit Broken
Safety rope installed inside of well casing [check]
Correct well tag attached properly and casing 3" above finished grade [check]
Water supply line sleeved adequately at house connection [check]
Adequate ground observed below pitless adapter [check]

8/5/09
Conduit still loose/ Broken from cap.
KW



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

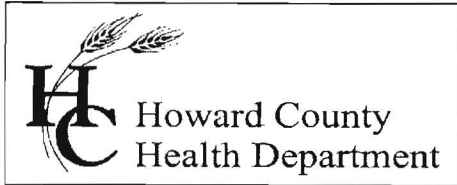
When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

- 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



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

August 11, 2009

Annie Kim
6239 Heather Glen Way
Clarksville, MD 21029

RE: The Preserve at Clarksville, Lot 25
Turnbury Grove
BP #: B07004665
Well Permit # HO-95-0237

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 06/18/2008. Final approval of the well line connection to the dwelling was approved on 08/11/2009.**

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.

TEMPORARY INTERIM CERTIFICATE OF POTABILITY

This is a **Temporary Deviation** to allow additional time for radium testing and for the levels to meet EPA recommendations. **Until the water sample results are obtained or a treatment device is installed it is recommended that all water that is used for cooking or drinking be bottled.**

A Gross Alpha and Beta short term sample was collected on 07/29/2009. Results showed a Gross Alpha of 68.51 +/- 2.7 pCi/L and Gross Beta of 23.76 +/- 1.8 pCi/L. This is explained in more detail from the Radium letter issued 05/08/2006 for the aforementioned property. In addition, a pretreatment device (reverse osmosis, water softener) needs to be installed.

This temporary deviation is good for **45 days** to allow time for radium testing. An Interim Certificate of Potability will be issued upon submission of a water sample report that documents a **Gross alpha, Gross Beta, short and long term (after treatment), and Radium 226 and 228 tests that are within the EPA standards.**

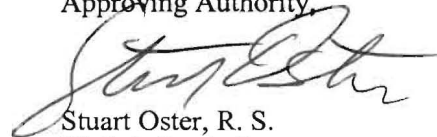
This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit #HO-95-0237. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies. 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.**

The Health Department has no objection to the issuance of temporary Use and Occupancy for the above referenced property.

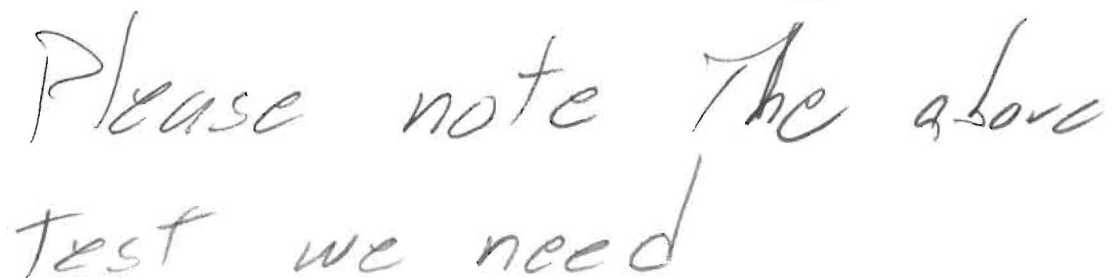
Date of Water Samples: 07/29/2009 & 08/03/2009
Date of Radium Tests: 05/08/2006, 07/29/2009 **GROSS ALPHA, GROSS BETA (Short and Long term pre/post treatment), RADIUM 226 and 228 TESTS PENDING**
Date of Well Completion: 03/07/2006

Approving Authority,



Stuart Oster, R. S.
Well & Septic Program

cc: Building Inspector's Office
Community Health Services
File



Please note The above
test we need

Water Testing Laboratories

of Maryland, Inc.

P.O. Box 712
Stevensville, MD 21666
410-643-7711

Annie Kim
6239 Heather Glen Way
Clarksville, MD 21029

Reporting Date: 8/4/2009
Report #: K 5437

Submitted Sample Address: The Preserve
6239 Heather Glen Way
Clarksville, MD 21029

Submitted Sample Source: Holding tank

Date / Time Collected: 7/29/2009 9:04 AM

Sample Type: Drinking Water

Sampler/Company: D. Pitts 4322, WTL of MD

Field Record: Chlorine residual: Absent Clear when drawn

Well #: HO-95-0237

Analytical Results

Parameter	Result	Units	Detection Level	MCL	Analytical Method
Total Coliforms	Present	Coliforms/100 ml	Present/Absent	Present	SM 9223B
<i>E. Coli</i>	Absent	Coliforms/100 ml	Present/Absent	Present	SM 9223B
Nitrates + Nitrites	ND	mg/L	1.0	10	EPA 353.2
Sand	Absent	P/A	Present/Absent	Present	Visual
Turbidity	2.3	NTU	0.5	10	SM 2130B
pH	8.4	SU	0.1	6.5-8.5 (SMCL)	EPA 150.1
Gross Alpha	68.51	pCi/L	2.76	15	NJAC 7:18.6
Gross Beta	23.76	pCi/L	4.26	50	NJAC 7:18.6

Notes:

- MCL is EPA's maximum contaminant level under primary drinking water regulations. SMCL is secondary maximum contaminant level and is the aesthetic quality only. If your result is above any MCL or SMCL, you may want to consider a water treatment system or a new well. Please check your local regulations for any restrictions or additional limits.
- ND - Not Detected.
- Sample received and examined within EPA's recommended holding time.
- Analyzed by lab 214, 315 Analysis start 07/30/09 @ 7:15 PM.
- EPA considers 50 pCi/L to be the level of concern for beta particles.

Reported by,

Christa Rodgers

C. Rodgers, Customer Service Representative

Reviewed by: *RS*

Water Testing Laboratories

P.O. Box 712
Stevensville, MD 21666
410-643-7711

of Maryland, Inc.

Annie Kim
6239 Heather Glen Way
Clarksville, Md 21029

Reporting Date: 8/4/2009
Report #: K5448

Types: of Treatment

- Neutralizer
- H2O softener

Submitted Sample Address: 6239 Heather Glen Way ,
Clarksville, Md 21029
Submitted Sample Source: Holding tank
Date / Time Collected: 8/3/2009 09:22 AM
Sample Type: Drinking Water
Sampler/Company: D. Pitts 4322DP, WTL of MD
Field Record: Chlorine residual: Absent Clear when drawn
Well #: HO-98-0237

Raw Sample??

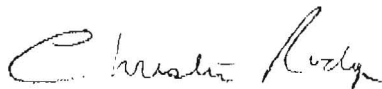
Analytical Results

Parameter	Result	Units	Detection Level	MCL	Analytical Method
✓ Total Coliforms	Absent	Coliforms/100 ml	Present/Absent	Present	SM 9223B
✓ E. Coli	Absent	Coliforms/100 ml	Present/Absent	Present	SM 9223B

Notes:

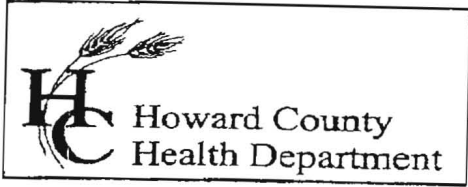
1. Bacteriological analysis of this sample indicates this water is safe for human consumption.
2. MCL is EPA's maximum contaminant level under primary drinking water regulations. SMCL is secondary maximum contaminant level and is the aesthetic quality only. If your result is above any MCL or SMCL, you may want to consider a water treatment system or a new well. Please check your local regulations for any restrictions or additional limits.
3. ND -- Not Detected.
4. Sample received and examined within EPA's recommended holding time
5. Analyzed by Lab 214.
6. SM -- Greenberg, Clesceri and Eaton, *Standard Methods for the Examination of Water and Wastewater*, 21st Ed.

Reported by,



C. Rodgers, Customer Service Representative

Reviewed by: RS



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
AGREEMENT FOR APPROVAL OF AN INDIVIDUAL DRINKING WELL WITH AN ON-SITE TREATMENT SYSTEM

000191

This agreement is entered into by and between the Howard County Health Department ("the Health Department") and Annie Kim ("the Owner").

WHEREAS, the Owner owns a tract of land at street address 6239 Heather Glen Way and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 34, Block # 11, Parcel # 77, Deed Reference # 10880/684 and Tax Account # 05-448395 ("the Property").

WHEREAS, the Property lacks an available public drinking water source and is required to have and individual well as the source of drinking water for the residence of the property.

WHEREAS, the Owner has installed a residential drinking well under well permit HO-95-0237 that has been tested by the Health Department (or a private laboratory certified to perform testing) for radionuclide particles. The results of the tests have shown that the gross alpha particle content and/or the gross beta particle content and/or the combined radium 226/228 levels exceeds the standards of 15 picocuries per liter (pCi/L), 4 millirems per year (mrem/yr) and/or 5pCi/L respectively.

WHEREAS, The Maryland Department of the Environment (MDE) has promulgated rules and regulations under which a Certificate of Potability may be issued and has delegated the authority to issue such Certificate to the Health Department.

WHEREAS, MDE regulations permit the Health Department to issue as a special condition, a permanent deviation to the Certificate of Potability for individual wells where treatment has been installed to meet the maximum contaminate levels (MCL's) for radionuclides.

WHEREAS, MDE has determined that radium can be effectively removed from the drinking water by the use of treatment devices (e.g., ion exchange or reverse osmosis).

WHEREAS, the Owner is requesting that the Health Department issue a Certificate of Potability contingent upon installation and maintenance of a water treatment device to reduce radionuclides.

WHEREAS, neither the Owner nor the Health Department has knowledge of an alternative safe source of water for the Property.

20
20
10
95

NOW THEREFORE, the parties have agreed to the following terms and conditions:

1. The Health Department will record this Agreement among the Land Records of Howard County, Maryland.
2. The Owner agrees to install and maintain a water treatment device, which effectively reduces the gross alpha, gross beta and radium levels to below their respective MCL. The Health Department shall verify that the treatment device is operating effectively and the Owner agrees to allow access to the Health Department to collect a follow-up sample(s).
3. The Health Department shall issue a Certificate of Potability for the well once follow-up sampling shows acceptable gross alpha, gross beta and radium levels.
4. The Owner agrees that there shall be no liability on part of the Health Department for any immediate or long term impacts to health or property, under any circumstance or including, but not limited to, treatment device failure, improper maintenance or installation, or defect. The Health Department does not warrant nor guarantee that the device will adequately or properly function and the Owner agrees to implement and pay for any necessary changes or corrections.
5. The Owner acknowledges and agrees that neither the Health Department nor any of its agents or employees, either officially or individually, underwrites the operation of any system or treatment device.
6. This Agreement shall not be construed to limit any authority of the Health Department to protect the public health, safety or enjoyment of property or to issue any other orders to take any other action, which is now or may hereafter be within its authority.
7. This agreement contains the entire agreement and understanding between the Health Department and the Owner. There are no additional terms other than as contained in this Agreement. This Agreement may not be modified except in writing signed by each of the parties or their authorized representatives.
8. The Agreement shall run with the land and binds the Owner, his heirs, successors, and assigns. The owner agrees to provide a copy of this agreement to any purchaser or lessee of the property.
9. The laws of the State of Maryland govern the provisions of all transactions.

The parties have signed and sealed this Agreement on the dates set forth below.

7/28/09
Date

[Signature]
Owner Annie Kim

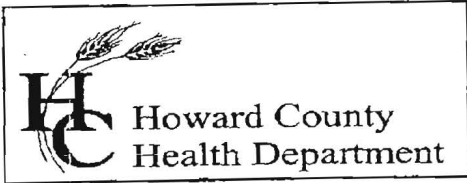
8/5/2009
Date

[Signature]
Owner
Howard County Health Department

Witness

Witness

TAP TO SLAKE \$	20.00
RECORDING FEE	20.00
PHOTOCOPY-A	1.00
TOTA	41.00
Req# CHH	Rept # 51167
Mik KR	Mik # 275
Aug 05, 2009	01:14 PM



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
 Temporary Radium Agreement

A review of records indicates that required sampling for **Gross Alpha & Gross Beta** was not performed during the well yield test for 6239 Heather Glen Way.

Properties not tested or initially found to have an elevated **Gross Alpha** and/or **Gross Beta**, are required to have appropriate treatment installed and additional testing performed.

Pre-treatment sampling for **Gross Alpha, Gross Beta** and **Radium** was conducted on July 29 2009 and the **Radium** sample results are pending.

Since all other sampling, construction and inspection requirements have been satisfied, an **Initial Certificate of Potability (ICOP)** will be issued with the following addendum and agreement:

If the results for the initial **Gross Alpha, Gross Beta** and **Radium** are all within established standards, then the ICOP remains valid and only testing for standard potability parameter(s) will be needed to secure the **Final Certificate of Potability (FCOP)**.

If any of these parameters are found to exceed existing standards, then further measures including the possible need for additional treatment and/or further testing shall occur until the **Gross Alpha, Gross Beta** and **Radium** results are within established standards. At that time, the ICOP will be deemed valid and only testing for standard potability parameter(s) will be needed to secure the **FCOP**.

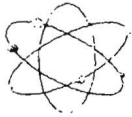
The undersigned have read and agreed with the provisions as established above.

[Signature] 7/28/09
 Owner Date

 Owner Date

 Builder/Representative Date

[Signature] 8/5/2009
 Health Department Representative Date



Florida Radiochemistry Services, Inc.

Analysis Report

Lab Sample I.D. 0603074-01 0603074-02 0603074-03 0603074-04 0603074-05

Client I.D. HW-104-07 HW-248-07 HOGCTG23-3710R HW-7506-3706 HW-13171-3706

Gross Alpha	5.5	32.4	24.1	10.5	1.9
Error +/-	2.0	4.1	2.7	2.3	0.8
MDL	2.0	1.9	1.2	1.9	0.8
EPA Method	900.0	900.0	900.0	900.0	900.0
Prep Date	03/09/06	03/09/06	03/09/06	03/09/06	03/09/06
Analysis Date	03/10/06	03/10/06	03/10/06	03/10/06	03/10/06
Analyst	MJN	MJN	MJN	MJN	MJN
Gross Beta	10.6	17.3	16.5	9.5	4.7
Error +/-	1.7	1.9	1.7	1.7	1.0
MDL	2.0	2.1	1.9	2.2	1.4
EPA Method	900.0	900.0	900.0	900.0	900.0
Prep Date	03/09/06	03/09/06	03/09/06	03/09/06	03/09/06
Analysis Date	03/10/06	03/10/06	03/10/06	03/10/06	03/10/06
Analyst	MJN	MJN	MJN	MJN	MJN
Units	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l

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

HOGCTG23-3710R

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

Plant/Site Name: Turnberry Grove Lot 23 County: _____

Sample Source: see above Location: Well HO-95-0287
Heather Glen Way (well no., lab sink, sample tap, etc.)

County: Plant No.

Collector: GAC Telephone No.: 410 313 1773

Date Collected: 3/7/06 Time Collected: 10 a.m. _____ p.m.

Nitric Acid Preserved: Yes No Iced: Yes No

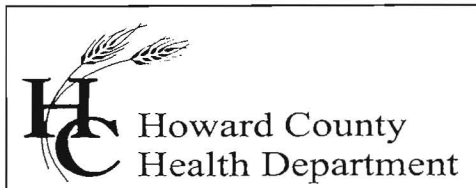
Submitters Code: Federal Project: Field Data: 6.8 N/A
pH Chlorine

Remarks: RAW H₂O from Yield test w/ HNO₃

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Reported
✓	Gross Alpha	4000	<u>0603074-03</u>	<u>29.1 ± 2.7</u>	<u>4/21/06</u>
✓	Gross Beta	4100		<u>16.5 ± 1.7</u>	
	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: _____



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
Lot 25 Turnbury Grove
HO - 95 - 0237

To Whom this May Concern:

During the recent "yield test" of the well serving the future Lot 23 (located on Heather Glen Way), a sample was collected for volatile organic compounds (VOC's) on March 7, 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 Trip Blank sample (though a VOC was detected at a low level in the Field Blank). 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 23 Turnbury Grove Property File



Howard County
Health Department

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

Date Thompson

RE: Turnbury Grove Subdivision, Lot ~~25~~ ²⁵

Well Tag: HO-95-~~0267~~0237

To Whom It May Concern:

A sample was collected from a yield test on March 7, 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 24.1 ± 2.7 picocuries/liter (pCi/L); while the **Gross Beta** level was 16.5 ± 1.7 pCi/L. The **Gross Alpha** result was above its maximum contaminant level (MCL) of 15 pCi/L, while the **Gross Beta** level was below its MCL of 50 pCi/L.

Since the **Gross Alpha** finding exceeded its MCL, additional testing for **Radium** will be necessary prior to occupancy to verify existing levels. Alternatively, you may install treatment designed to reduce **Gross Alpha**, **Gross Beta** and **Radium**, plus provide post treated results confirming that levels are in conformance with existing standards. Treatment devices such as Reverse Osmosis and "softners" are generally effective in addressing this type of contaminant.

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

Bert Nixon, Deputy Director
Bureau of Environmental Health

BN/bn

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

961270123-718

Do not write above this line

LABORATORY ANALYSIS REQUEST

Bottle No: HOEGTG23-37105(A)&(B) Plant/Site Name: Turnberry Grove (Lot 25) County: HOWARD

Sample Source: Heather Glen Way Clarksville Location: HO-95-0237
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: 31 7/2006 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: 6.8 0.0 0.0
pH Free Cl Total Cl

Field Blank Bottle No.: HOEG(TG23-3710 FB(A)&(B))
Trip Blank Bottle No.: HOEG(TG23-3710 TB(A)&(B))

Remarks: Full DW Scan incl MTBE
RAW WATER collected @ yield test

Section Chief: Dobson M... Date Reported: 3/22/06

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

Form Revised 12/00
DHMH 4362

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: 961270 TB
 Date Analyzed: 03/20/06

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>
<u>TRIALOMETHANES</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 M. 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: 961270 HOGCTG23-3710 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>
TRIALOMETHANES				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-Jua

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: 961270 FB
 Date Analyzed: 03/20/06

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>
<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	1.26	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: *Dulorah Miller-Zuer* Date Approved: 3/22/06