STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

C 1 22951 — SEQUENCE NO. (MDE USE ONLY)
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

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

COUNTY NUMBER

ST/CO USE ONLY
DATE Received MM 02 DD 19 YY 14

DATE WELL COMPLETED MM 2 DD 11 YY 14

Depth of Well 775 (TO NEAREST FOOT)

DK gw 3/10/14

PERMIT NO. FROM "PERMIT TO DRILL WELL" 40-95-2629

OWNER Williamsburg Group (last name / first name)
WELL SITE ADDRESS 6228 Heather Glen Way TOWN Clarksville
SUBDIVISION Pressures SECTION LOT A

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 FROM	FEET TO	check if water bearing
MUD & Clay Brown	0	45	
Brown mica	45	46	✓
Gray Schist	46	130	
White & Brown	130	131	✓
Gray & White	131	275	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes [Y] no [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. MD 009
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)
LIC. NO. ___ D ___

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

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 20 NO. OF POUNDS 1880
GALLONS OF WATER 120
DEPTH OF GROUT SEAL (to nearest foot)
from 0 (TOP) ft. to 32 (BOTTOM) ft.
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
[ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
ST	06	54

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below
[ST] STEEL [BR] BRASS BRONZE [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

C 2

DEPTH (nearest ft.)

EACH SCREEN			
1	40	54	275
2			
3			

SLOT SIZE 1 ___ 2 ___ 3 ___
DIAMETER OF SCREEN ___ (NEAREST INCH)
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
TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) 03
PUMPING RATE (gal. per min.) 6.6
METHOD USED TO MEASURE PUMPING RATE Jug
WATER LEVEL (distance from land surface)
BEFORE PUMPING 28 ft.
WHEN PUMPING 109 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.
CAPACITY: GALLONS PER MINUTE (to nearest gallon)
PUMP HORSE POWER
PUMP COLUMN LENGTH (nearest ft.)
CASING HEIGHT (circle appropriate box and enter casing height)
[+] above [−] below LAND SURFACE
01 (nearest foot)

LATITUDE 39.203945
LONGITUDE 76.949516
(DEFAULT COORD. WGS 84)
NOTES:

MDE/WMA/PER.071

COUNTY

Page ____ of ____ Review ____

Date 2-11-14

FIELD DATA SHEET
HOWARD COUNTY WELL YIELD TEST

Well Permit No. HO - 95-2629
Location of property (road) 6228 Heather Glen Way
Subdivision ____ Lot A Block ____ Plat ____ Sec. ____
Well Driller Fogles Owner Bob Corbitt

Depth of well 275'
Distance of measuring point (M.P.) above ground 1'
Static water level (S.W.L.) below M.P. 28

I. High rate pumping -- reservoir drawdown

Time pump started 9:30 Pumping rate 12
Total time 30 MIN to reach pumping water level 109 ft. below M.P.

II. Recovery pump test data - observations to be recorded every 15 minutes

TIME (in 15 minute intervals	WATER LEVEL below M.P.	PUMPING RATE time to fill 5 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
9:30	28	5		12
9:45	77	5		12
10:00	109	9		6.6
10:15	107	9		6.6
10:30	105	9		6.6
10:45	103	9		6.6
11:00	101	9		6.6
11:15	99	9		6.6
11:30	97	9		6.6
11:45	95	9		6.6
12:00	93	9		6.6
12:15	91	9		6.6
12:30	89	9		6.6
12:45	87	9		6.6
1:00	86	9		6.6

HD-224

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

WATER WELL ABANDONMENT-SEALING REPORT FORM

- SUBMIT COPIES OF COMPLETED FORM TO:
  - * COUNTY ENVIRONMENTAL AGENCY (contact MDE, WMA if address needed)
  - * WELL OWNER
  - * MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 2-11-14 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) HO-95-0247

* PERMIT NUMBER OF REPLACEMENT WELL: HO-95-2629

* PERSON ABANDONING WELL: Allen Compton WELL DRILLER'S LICENSE NUMBER: 009
CIRCLE: MWD / (MSD) / MGD

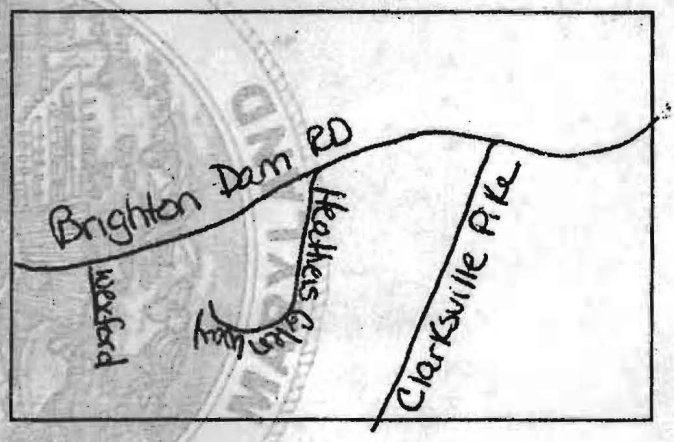
* OWNER'S NAME: Williamsburg Group

* WELL LOCATION:
COUNTY: Howard
NEAREST TOWN: Clarksville
TAX MAP 0034 BLOCK 004 PARCEL 0077
SUBDIVISION: Preserves @ Clarksville
SECTION: LOT: Parcel A
STREET ADDRESS: 6228 Heathers Glen Way

LATITUDE 39.20 49332

LONGITUDE 76.95 13626

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:
  - ✓ DRILLED
  - ____ BORED
  - ____ OTHER (specify)
  - ____ JETTED
  - ____ HAND DUG

* USE CODE:
  - ✓ DOMESTIC
  - ____ IRRIGATION
  - ____ TEST/OBSERVATION
  - ____ MUNICIPAL/PUBLIC
  - ____ INDUSTRIAL
  - ____ GEOTHERMAL

* TYPE OF CASING:
  - ✓ STEEL
  - ____ CONCRETE
  - ____ PLASTIC
  - ____ OTHER (specify) ____

SIZE OF CASING: 6 INCHES IN DIAMETER

DEPTH OF WELL: 165 FEET DEEP

WAS ANY CASING REMOVED? ____ YES ✓ NO
If yes, length removed, in feet: ____

WAS CASING RIPPED OR PERFORATED? ____ YES ✓ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Cement	0	165

VOLUME OF MATERIAL USED: 2.5 yards Cement

Allen Compton — SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN

009 — LICENSE#

MWD (MSD) MGS — CIRCLE ONE

2-11-14 — DATE

ORIGINAL

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #:	96957	Account #:	4470
Reference:	Preserve at Clarksville Parcel A	Company:	Williamsburg Homes LLC
Location:	6226 Heather Glen Way Clarksville, MD 21029	Requested By:	Bob Corbett
		Source:	Well Water
Date/ Time Collected:	10/14/2014 1239	Site:	Pressure Tank
Date/Time Rec'd:	10/14/2014 1412	Treatment:	None
Chlorine ppm:	Free: ND Total: ND	pH:	6.0
Collected By:	J. Yeager 6176JY	Well #:	HO-95-2629

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	10/15/2014 / 0900 / BCD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	10/15/2014 / 0900 / BCD
Nitrate	11.7	mg/L	10	601	10/14/2014 / 1445 / CRS
Turbidity	7.40	NTU	<10	SM18 2130B	10/14/2014 / 1540 / CRS
Sand	NS	mg/L	5	Visual/Gravimetric	10/14/2014 / 1540 / CRS

Nitrate FAILS
Others 'OK'
MB 11/18/2014

NOTES

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

Reason for Test : Use & Occupancy
Building Permit # : 1400178

Date Reported: 10/15/2014

MD State Certification # 133

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #:	96340	Account #:	4470
Reference:	Preserve at Clarksville Parcel A	Company:	Williamsburg Homes LLC
Location:	6226 Heather Glen Way	Requested By:	Bob Corbett
	Clarksville, MD 21029	Source:	Well Water
Date/ Time Collected:	9/22/2014 1100	Site:	Pressure Tank
Date/Time Rec'd:	9/22/2014 1315	Treatment:	None
Chlorine ppm:	Free: ND Total: ND	pH:	6.0
Collected By:	C. Mooshian 7268CM	Well #:	HO-95-2629

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Short Term	16.6	pCi/L	15	900.0	9/25/2014 / 0646 / MJN
Gross Beta, Short Term	12.0	pCi/L	50	900.0	9/25/2014 / 0646 / MJN
Radium-226	1.5	pCi/L	****	903.1	10/1/2014 / 0959 / MJN
Radium-228	1.7	pCi/L	****	Ra-05	10/1/2014 / 1027 / SN
Gross Alpha, Long Term	10.4	pCi/L	15	900.0	9/30/2014 / 0656 / MJN
Gross Beta, Long Term	9.8	pCi/L	50	900.0	9/30/2014 / 0656 / MJN

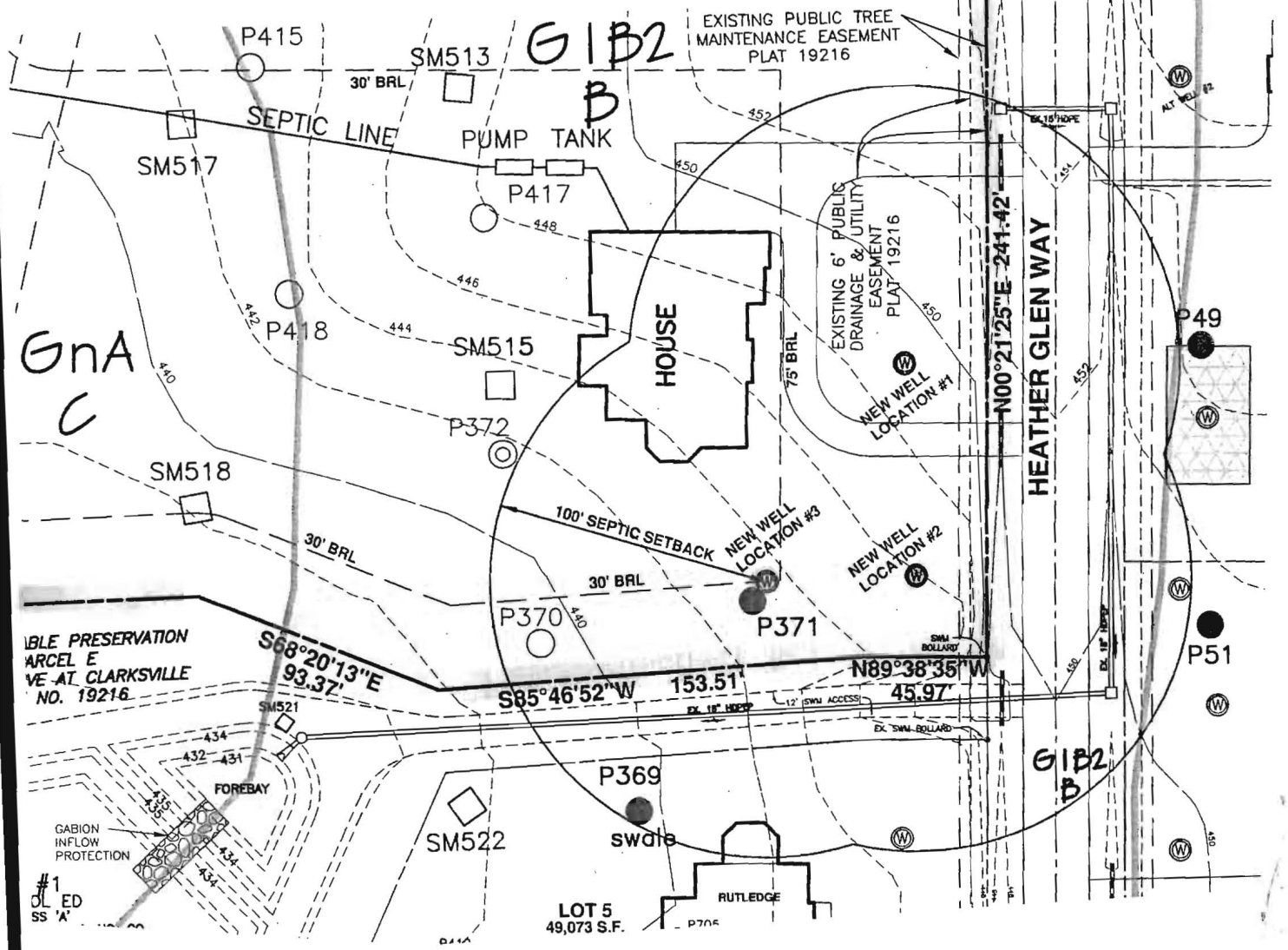
NOTES

1. ****Radium 226 and Radium 228 combined have a reference of 5 piC/L
2. Long Term Gross Alpha Detection Limit: 1.6 pCi/L; Long Term Gross Beta Detection Limit: 2.0 pCi/L
3. pCi/L = picocuries per liter
4. Radium 226 Detection Limit: 0.1 pCi/L; Radium 228 Detection Limit: 0.9 pCi/L
5. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
6. Short Term Gross Alpha Detection Limit: 1.2 pCi/L; Short Term Gross Beta Detection Limit: 1.7 pCi/L
7. ND:None Detected
8. Visual well check: Sealed, vented cap
9. pH & Chlorine level tested on site

Reason for Test : HoCHD

Date Reported: 10/10/2014

MD State Certification # 133



well sites ok
RP 1/13/14

Driller will start with Location #3

Scale 1" = 60'

IEREON
ME OR

AND

3/2013

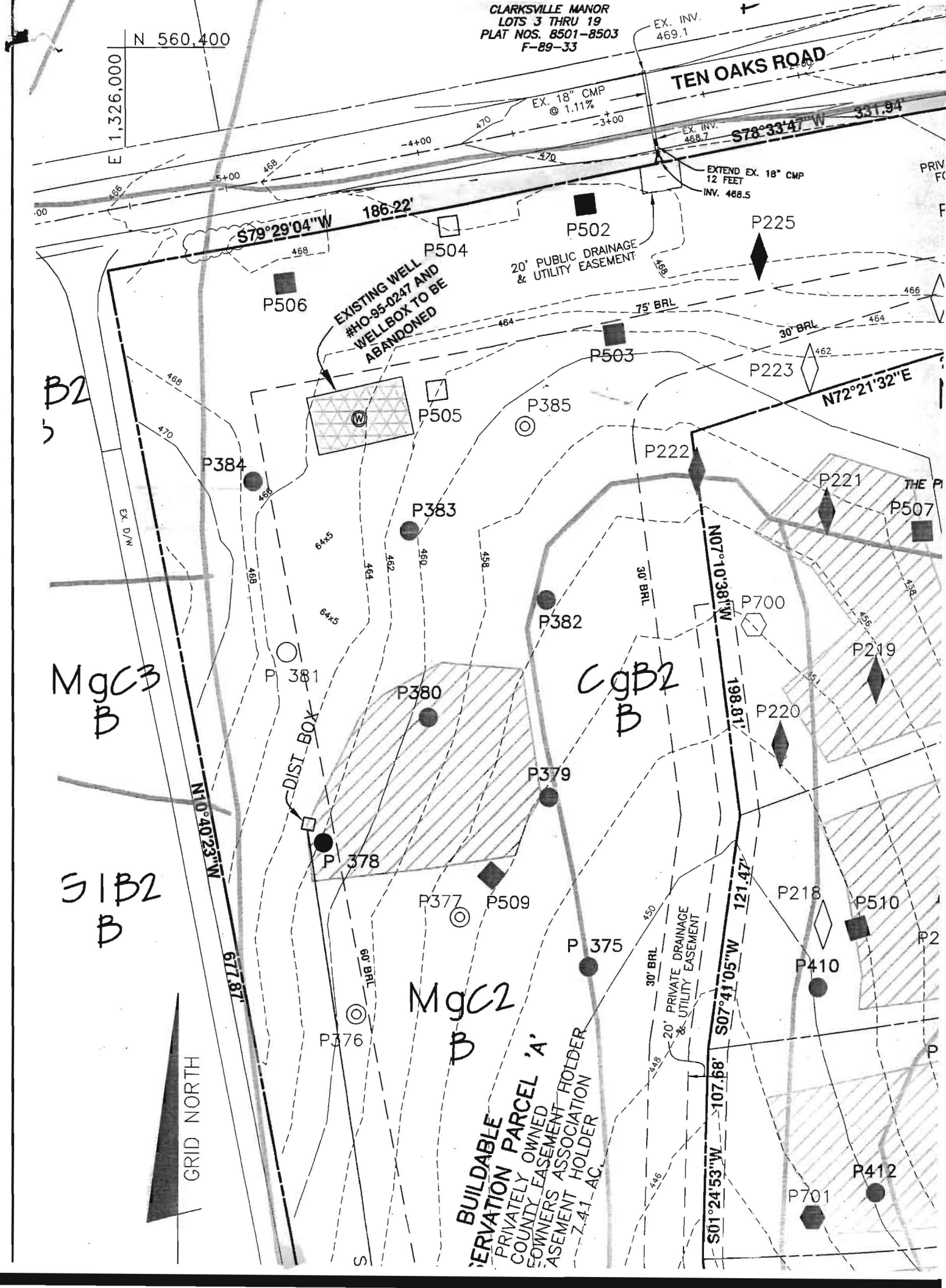
BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.

BUILDER:
WILLIAMSBURG HOMES, INC
5485 HARPERS FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
410-997-8800

THE PRESERVE AT CLARKSVILLE PARCEL 'A'

HEATHER GLEN WAY
TAX MAP: 34 GRID: PARCEL: 77
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

REVISED PERCOLATION CERTIFICATION PLAN


CLARKSVILLE MANOR
LOTS 3 THRU 19
PLAT NOS. 8501-8503
F-89-33
N 560,400
E 1,326,000
TEN OAKS ROAD
EX. INV. 469.1
EX. 18" CMP @ 1.11%
EX. INV. 468.7
S78°33'47"W 331.94'
EXTEND EX. 18" CMP 12 FEET
INV. 468.5
S79°29'04"W 186.22'
P502
P504
P225
20' PUBLIC DRAINAGE & UTILITY EASEMENT
P506
EXISTING WELL #HO-95-0247 AND WELLBOX TO BE ABANDONED
75' BRL
30' BRL
P503
P223
N72°21'32"E
P505
P385
P222
P384
P221
P507
P383
N07°10'38"W 198.81'
P700
P382
P219
P381
P380
P220
DIST BOX
P379
N10°40'23"W 677.87'
P378
P377
P509
P218
P510
P375
P410
60' BRL
P376
20' PRIVATE DRAINAGE & UTILITY EASEMENT
S07°41'05"W 121.47'
S01°24'53"W 107.68'
P412
P701
MgC3
B
CgB2
B
MgC2
B
BUILDABLE
PRIVATELY OWNED
COUNTY EASEMENT HOLDER
OWNERS ASSOCIATION
EASEMENT HOLDER
2.41 AC.
GRID NORTH

C	1	1149

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

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.

COUNTY NUMBER A 516063

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

DATE WELL COMPLETED
MM DD YY
4 6 06
15 20

Depth of Well
22 165' 26
(TO NEAREST FOOT)

OK (JS) 4/20/06

PERMIT NO. FROM "PERMIT TO DRILL WELL"
Ho - 95 - 0247
28 29 30 31 32 33 34 35 36 37

OWNER Horton (last name) R. O. (first name)
STREET OR RFD Heather Glen Way TOWN Clarksville Md
SUBDIVISION Turnbury Grove SECTION ______ LOT Parcel A

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 FROM	FEET TO	check if water bearing
Sand	0	76	
Gray Mica Rock	76	165	•

Well Sealed 2/11/2014

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y no N (circled)

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. M S D 024

Joseph L. Mayne
DRILLERS SIGNATURE
(MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. __ __ D __ __ __

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

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

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

NO. OF BAGS 20 NO. OF POUNDS 1880
GALLONS OF WATER 120
DEPTH OF GROUT SEAL (to nearest foot)
from 0 ft. (48 TOP 52) to 74 ft. (54 BOTTOM 58)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
S T STEEL; C O CONCRETE; P L PLASTIC; O T OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
St (60 61)	6 (63 64)	80 (66 70)

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

SCREEN RECORD
screen type or open hole insert appropriate code below
S T STEEL; B R BRASS BRONZE; H O OPEN HOLE; P L PLASTIC; O T OTHER

C	2

1 2

DEPTH (nearest ft.)

EACH SCREEN
1. Ho (8 9) 78 (11 15) 165 (17 21)
2. (23 24) (26 30) (32 36)
3. (38 39) (41 45) (47 51)

SLOT SIZE 1 ____ 2 ____ 3 ____

DIAMETER OF SCREEN ______ (56 60) (NEAREST INCH)

from to

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

C	3

1 2

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 32 ft. (17 20)
WHEN PUMPING 32 ft. (22 25)

TYPE OF PUMP USED (for test)
A air; P piston; T turbine; C centrifugal; R rotary; O other (describe below); J jet; S submersible (circled) — 27

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO (circled)

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

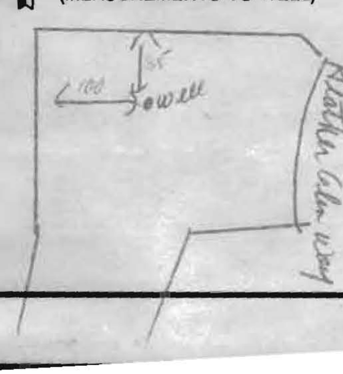
CAPACITY: GALLONS PER MINUTE (to nearest gallon) ___ 31 35

PUMP HORSE POWER ___ 37 41

PUMP COLUMN LENGTH (nearest ft.) ___ 43 47

CASING HEIGHT (circle appropriate box and enter casing height)
+ above (circled) 49; − below 49 — LAND SURFACE 2 (50 51) (nearest) foot)

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)



ENV-CR00

COUNTY

EMERGENCY/TEMP NO. IF ANY

B 1 13862 — SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

W546216 please type

STATE PERMIT NUMBER: HO - 95 - 2629

fill in this form completely

Date Received (APA): 12 19 13

OWNER INFORMATION

Last Name / Owner / First Name: Williamsburg Group

Street or RFD: 5485 Harpers Farm Rd Suite 200

Town: Columbia State: md. Zip: 21044

DRILLER INFORMATION

Driller's Name: Allen Compton License No.: M S D 609

Firm Name: Fogles Well Drilling, LLC

Address: P.O. Box 202 Woodbine 21797

Signature: [signature] Date: 12-18-13

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): 5

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): 500

B 3 LOCATION OF WELL

COUNTY: Howard

SUBDIVISION: Preserves at Clarksville

SECTION: ____ LOT: ____ Parcel A

NEAREST TOWN: Clarksville

B 4

SOURCES OF DRILLING WATER
1.
2.
3.

STREET ADDRESS: 6228 Heather Glen Way

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX): NORTH N / W 32 E / WEST EAST / S SOUTH

DISTANCE FROM ROAD: 100 ENTER FT OR MI: FT

TAX MAP: 0034 BLK: 0014 PARCEL: 0027

USE FOR WATER (CIRCLE APPROPRIATE BOX)

22
- (D) DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION — circled
- F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
- I INDUSTRIAL, COMMERCIAL, DEWATERING
- P PUBLIC WATER SUPPLY WELL
- T TEST, OBSERVATION, MONITORING
- O OPEN LOOP GEOTHERMAL
- C CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME: Howard A516063 COUNTY NO.: 13

STATE SIGNATURE ____________ INSERT S ⟶ ____

DATE ISSUED: 01/10/2014 CO SIGNATURE: [signature] EXP. DATE: 1/10/15

APPROXIMATE DEPTH OF WELL: 300 FEET

APPROXIMATE DIAMETER OF WELL: 6 NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered)	JETTED	Jetted & DRIVEN
(AIR-ROTary) — circled	AIR-PERcussion	ROTARY (Hydraulic Rotary)
CABLE	REVerse-ROTary	DRive-POINT

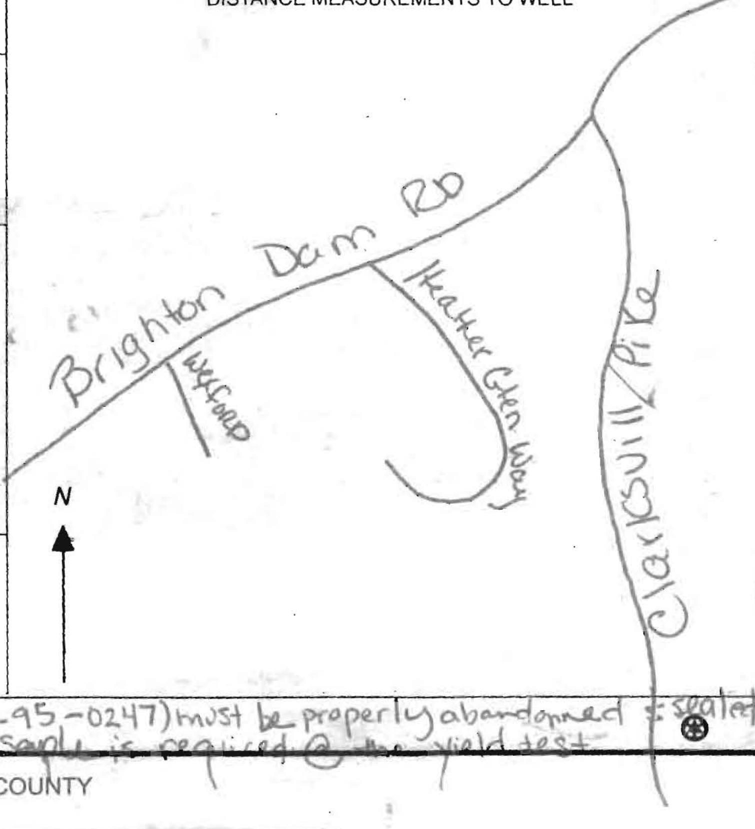
other ____________

REPLACEMENT OR DEEPENED 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 — circled
- S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- D THIS WELL WILL DEEPEN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENED (IF AVAILABLE) 41 __ __ - __ __ - __ __ __ __ 52

PROPOSED LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL



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

APPROP. PERMIT NUMBER _ _ _ _ _ _ G _ _ _

PERMIT No. HO - 95 - 2629

SPECIAL CONDITIONS Existing well on the property (HO-95-0247) must be properly abandoned & sealed and a radium sample is required @ the yield test

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

WMA/PER.071 ② COUNTY

Page ____ of ____ Review ____

Date 4-6-06

FIELD DATA SHEET
HOWARD COUNTY WELL YIELD TEST

Well Permit No. HO - 95 0247
Location of property (road) Heather Glen Way
Subdivision Tyrnbury Grove Lot parcel A Block ____ Plat ____ Sec. ____
Well Driller Joseph Mayne Owner O.R. Horton

Depth of well 165'
Distance of measuring point (M.P.) above ground 2'
Static water level (S.W.L.) below M.P. 32'

I. High rate pumping -- reservoir drawdown

Time pump started 7:15 Pumping rate 15 gpm
Total time 0 min to reach pumping water level 32 ft. below M.P.

II. Recovery pump test data - observations to be recorded every 15 minutes

TIME (in 15 minute intervals	WATER LEVEL below M.P.	PUMPING RATE time to fill 5 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
7:30	32'	4 sec	N/A	15 gpm
7:45	32	4		15
8:00	32	4		15
8:15	32	4		15
8:30	32	4		15
8:45	32	4		15
9:00	32	4		15
9:15	32	4		15
9:30	32	4		15
9:45	32	4		15
10:00	32	4		15
10:15	32	4		15

HD-224

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: Fogle's Well Drilling LLC Telephone #: 410 795 5670
Address: PO Box 202
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): David C Fogle License# MSP226
*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: Williamsburg Group Telephone #: 410-977-3345
Subdivision: Preserves @ Clarksville Lot #: Well Tag #: HO-95-2629
Site Address: 6729 Heather Glen Way Parcel A

Submersible Pump Data	Pitless Adapter	Well Cap and Electric Conduit
Make: Grundfos	Make: Campbell	Two piece watertight cap: YES
Model #: 15SQE07-180	Model#: N/A	Screened, vented well cap: YES
Pump Capacity 7 GPM	Depth: 36" (36" min)	Cap secured to casing: YES
Well Yield: 6.6 GPM	NSF/WSC approved: YES	Conduit min 18" B.G.: YES

Depth of well encountered at time of pump installation: 275' (feet) Conduit secured to well cap: YES
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	House Connection
Type: 1" poly pipe	PVC sleeve to undisturbed soil at wall penetration: YES
PSI: ~~160~~ (160 psi min)	Length of sleeve (5' minimum from foundation): 6'
Depth of supply line: 36" (36" min)	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.

Dave Fogle 8-11-14
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: _____ 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

Good Copy

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 #: A Well Tag # : HO-95-2629
Site Address: 6228 Heather Glen Way
_____

Submersible Pump Data	**Pitless Adapter**	**Well Cap and Electric Conduit**
Make: _____	Make: _____	Two piece watertight cap:_____
Model #: _____	Model#:_____	Screened, vented well cap:_____
Pump Capacity _____ GPM	Depth:____ (36" min)	Cap secured to casing:_____
Well Yield:_____GPM	NSF approved:____	Conduit min 18" B.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: _____	PVC sleeved to undisturbed soil at wall penetration:_____
PSI: _____(160 psi min)	Approximate length of sleeve (5 foot minimum):_____
Depth of supply line: ___(36" min)	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: 8/14/2014 BB

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 ✓

Covered

Howard County Health Department

Bureau of Environmental Health
8930 Stanford Blvd., Columbia, MD 21045
Main: 410-313-1771 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
Facebook: www.facebook.com/hocohealth
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

REQUEST FOR PERMANENT DEVIATION TO NITRATE STANDARDS FOR CERTIFICATE OF POTABILITY

DATE: 11-7-14 WELL PERMIT # : HO - 95 - 2629

PROPERTY OWNER: Williamsburg Group

SUBDIVISION & LOT #: Reserve @ Clarks

PROPERTY ADDRESS: 6226 Heather Glen Way.

CONDITIONS:

1) The well installed under permit # HO - 95 - 2629 has been documented to have a nitrate level of 11.7 ppm, which exceeds the MCL of 10 ppm.
2) After installation and operation of a nitrate filtration system, water samples collected on 10/27 indicated that the nitrate contamination has been reduced to <1.0 ppm at the primary drinking tap.

I hereby request that a Permanent Deviation to COMAR 26.04.04.09 be granted for the well installed under permit HO -95 -2629 I am fully aware of the conditions under which this deviation will be granted, and of my responsibilities as the well owner, which include advising any future buyer/ tenant of the installation, condition and maintenance responsibilities of the nitrate removal device.

Prospective Owner's Original Signature(s) **[Person(s) that intend to live in the dwelling]**

x _____ x _____

Prospective Owner's Day Time Phone Number(s)

410 746 3687 410 746 3688

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #:	97212		Account #:	4470
Reference:	Preserve at Clarksville Parcel A		Company:	Williamsburg Homes LLC
Location:	6226 Heather Glen Way		Requested By:	Bob Corbett
	Clarksville, MD 21029		Source:	Well Water
Date/ Time Collected:	10/27/2014	1212	Site:	R/O @ Kitchen Sink
Date/Time Rec'd:	10/27/2014	1301	Treatment:	Neutralizer/Softener/Reverse Osmosis
Chlorine ppm:	Free: ND	Total: ND	pH:	6.3
Collected By:	J. Yeager	6176JY	Well #:	HO-95-2629

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Nitrate	<1.0	mg/L	10	601	10/28/2014 / 1300 / CRS

OK MB 11/18/2014

NOTES

1. mg/L = milligrams per liter (also, parts per million)
2. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
3. ND:None Detected
4. Visual well check: Sealed, vented cap
5. pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : 1400178

Date Reported: 10/28/2014

MD State Certification # 133

Howard County Health Department

Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
Main: 410-313-2640 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
Facebook: www.facebook.com/hocohealth

Maura J. Rossman, M.D., Health Officer

May 12, 2014

Williamsburg Group
5485 Harpers Farm Road
Suite 200
Columbia, Maryland 21046

RE: Preservation at Clarksville P. A
6226 Heather Glen Way
Well Tag: HO - 95 – 2629

To Whom it May Concern:

A sample was collected during a yield test on February 12, 2014 and submitted to the Department of Health & Mental Hygiene 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 **23.7 ± 3.2 picocuries/liter (pCi/L),** while the **Gross Beta** level was **13.0 ± 2.6 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 targeted value of **50 pCi/L** (roughly equivalent to the **annual dose rate** of **4 millirems/year**).

At the time of testing and with respect to these parameters, the future well water supply **does not** meet EPA regulatory standards. Additional testing **for these parameters, plus Radium 226 and Radium 228** will be required to secure the future Use & Occupancy. Given the elevated finding for **Gross Alpha**, the installation of a water softener system and / or a reverse osmosis system may likely be necessary. If treatment is installed, **pre and post short and long term Gross Alpha and Beta, plus a post Radium 226 / 228** will be needed to properly evaluate the effectiveness of the installed treatment(s). Alternatively, you may collect raw water samples for **short and long term Gross Alpha and Beta, plus Radium 226 / 228** to see if all values are below existing standards. Given that it typically takes up to one month to perform and receive back the **Radium** analyses, plan accordingly. Please also note that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

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, Director
Bureau of Environmental Health

Enclosure
cc: Well & Septic Property File

Howard County Health Department

Bureau of Environmental Health
8930 Stanford Blvd., Columbia, MD 21045
Main: 410-313-1771 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
Facebook: www.facebook.com/hocohealth
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

INTERIM CERTIFICATE OF POTABILITY
PERMANENT DEVIATION FOR NITRATES
Expiration Date – MAY 18, 2015

November 18, 2014

Homeowner
6226 Heather Glen Way
Clarksville, MD 21029

RE: The Preserve at Clarksville, Preservation Parcel 'A'
6226 Heather Glen Way
Building Permit: B14000178
Well Permit: HO-95-2629

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 **11/13/2014.** Final approval of the well line connection to the dwelling was granted on **8/14/2014.** The well construction was completed on **2/11/2014.** Water samples were collected on **10/14/2014 and 10/17/2014.**

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 **2/12/2014**. Results showed a Gross Alpha level of **23.7 ± 3.2 pCi/L** and **Gross Beta** level of **13.0 ± 2.6 pCi/L. This exceeds the maximum contaminant level (MCL) of 15 pCi/L and/or 50 pCi/L, respectively.**

Raw water samples were collected on **9/22/2014** and indicated a Gross Alpha level of **16.6 pCi/L**, a Gross Beta level of **12.0 pCi/L**, and a Radium 226/228 level of **3.2 pCi/L**. While the Gross Alpha result still exceeds the maximum contaminant level (MCL) of **15 pCi/L, the sum of Radium 226 and Radium 228 is 3.2 which is below the corresponding MCL of 5 pCi/L.** Therefore, the Department will neither require installation of a radionuclide removal device (such as a water softener) that would lower the radionuclide concentrations at water taps other than the kitchen tap, nor issue a deviation for the radium standard. Water drawn from the kitchen tap reverse osmosis system is expected to have very low concentrations of radionuclides as that device is installed to remove the highly soluble nitrate compound.

The untreated water sample collected on **10/14/2014** indicated a nitrate level of **11.7 mg/L. This exceeds the maximum contaminant limit of 10 mg/L set forth in COMAR 26.04.04.09.** After installation of a nitrate removal device (kitchen tap reverse osmosis system), a post-treatment water sample was collected on **10/17/2014** and indicated a nitrate level of **<1.0 mg/L.**

This Department will grant a **permanent deviation** to the Interim Certificate of Potability on condition that the nitrate removal system effectively maintains a nitrate-nitrogen contaminant level of **10 mg/L or less.**

Furthermore, it will be necessary for you to comply with the following conditions:

1. The system must be properly operated and maintained continuously in accordance with the service contract for the life of the residence.

2. It is recommended that a Maryland certified water laboratory certified for nitrates analysis perform a yearly nitrate analysis.

3. If you decide to sell or rent your home in the future, you must make any potential buyer/tenant aware of this permanent deviation. **A person who fails to make this disclosure is subject to the penalties set out in COMAR 26.04.04.12F *Enforcement* and Environment Article 9-1311, Annotated Code of Maryland.**

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-95-2629. 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 Maryland 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,

Robert Bricker, REHS/R.S., L.E.H.S.
Environmental Sanitarian
Well & Septic Program

cc: Howard County Dept. of Inspections, Licenses, and Permits
Community Hygiene Program
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 15, 2006

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

RE: Turnbury Grove Subdivision, P.P.A.

Well Tag: HO-95-0247

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 **less than 0.004 ± 0.2 picocuries/liter (pCi/L),** while the **Gross Beta** level was **3.2 ± 0.6 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

D.R. Horton 301-670-6144
1370 Piccard Drive 410-939-8793
Rockville, MD 20850

Send Report To:
Howard County Environmental Health

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

HOTG ParA BB950247

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

Site Name: Turnberry Grove - P.P. A **County:** Howard

Sample Source: HeatherGlen Way **Location:** Well # HO-95-0247
(well no., lab sink, sample tap, etc.)

County: 1 3 **Plant No.** ☐☐☐☐☐☐☐☐☐☐

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

Date Collected: 4 / 6 / 2006 **Time Collected:** 10:00 **a.m.** _____ **p.m.**

Nitric Acid Preserved: Yes ☒ No ☐ **Iced:** Yes ☐ No ☒

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

Remarks: Taken During Well Yield Test

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Reported
✓	Gross Alpha	4000	604039-007	-.004 ± 0.2	4/11/06
✓	Gross Beta	4100		3.2 ± 0.6	
	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:	HOTGParABB950247
Sample Date/Time:	4/6/2006	Lab Sample ID:	604039-007-007-1/1
Receipt Date/Time:	4/6/2006	Sample Matrix:	WATER
Prepared Date/Time:		Analytical Method:	ALPHA/BETA BY METHOD 900.0

Isotope	Result	Uncertainty 1σ	MDA	Q
Gross Alpha	-0.004 pCi/L	± 0.2246 pCi/L	1.3538 pCi/L	U
Gross Beta	3.2132 pCi/L	± 0.5713 pCi/L	2.1525 pCi/L	

Howard County
Health Department

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:

- [x] The well site has been staked by Benchmark (start w/ well site #3)
  (professional land surveyor or company employing professional land surveyors)
  on 12/3/13 (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

RECEIVED
JAN 10 2014
HOWARD COUNTY HEA
BUREAU OF ENVIRONMENT

EMERGENCY/TEMP NO. IF ANY

B 1 (1 2 3) 1479 (6) — SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

please type

523944

STATE PERMIT NUMBER (70) HO-95-0247 (79)

fill in this form completely

Date Received (APA) (8) 01 20 06 (13) MM DD YY

OWNER INFORMATION

(15) Horton (Last Name) R. D. (Owner First Name) (34)

(36) 1370 Piccard Drive (Street or RFD) (55)

(57) Rockville (Town) Md (70 State) 20850 (72 Zip) (76)

DRILLER INFORMATION

Driller's Name: Joseph L Mayne — M SD 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 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) (8) 5 (12)

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) (14) 500 (20)

USE FOR WATER (CIRCLE APPROPRIATE BOX)

(22)
- (D) DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
- (F) FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION
- (I) INDUSTRIAL, COMMERICIAL, DEWATERING
- (P) PUBLIC WATER SUPPLY WELL
- (T) TEST, OBSERVATION, MONITORING
- (G) GEO-THERMAL

APPROXIMATE DEPTH OF WELL (24) 300 (28) FEET

APPROXIMATE DIAMETER OF WELL 6 NEAREST INCH

METHOD OF DRILLING (circle one)

(30) BORED (or Augered) — JETTED — Jetted & DRIVEN

AIR-ROTary — AIR-PERcussion — ROTARY (Hydraulic Rotary)

(37) CABLE — REVerse-ROTary — DRive-POINT

other

REPLACEMENT OR DEEPENED 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 DEEPEN AN EXISTING WELL

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

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

APPROP. PERMIT NUMBER 4 02 00 6 G 02 3

PERMIT No. HO-95-0247 (70 71 72 73 74 75 76 77 78 79)

B 3 LOCATION OF WELL

(8 COUNTY) Howard (21)

(23 SUBDIVISION) Turnbury Grove (42)

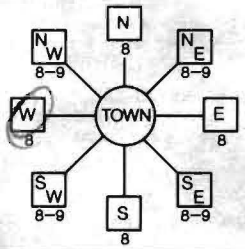
SECTION (44 46) — LOT (48 50) Parcel A

(52 NEAREST TOWN) Clarksville (71)

MILES FROM TOWN (enter 0 if in town) (73) ½ (76 77 78) MI

B 4

DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



(11) Heather Glen Way (NEAR WHAT ROAD) (30)

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

(34 37) 400 DISTANCE FROM ROAD

ENTER FT OR MI (38 39) FT

TAX MAP: 34 BLK: ____ PARCEL 77

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard — COUNTY NAME — 15 16063 — COUNTY NO.

STATE SIGNATURE _____ INSERT S → (41)

DATE ISSUED (43) 2/6/06 (MM DD YY 48) — CO SIGNATURE — EXP. DATE 2/6/07

NORTH GRID (50) 500 000 (55) — EAST GRID (57) 814 000 (63)

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

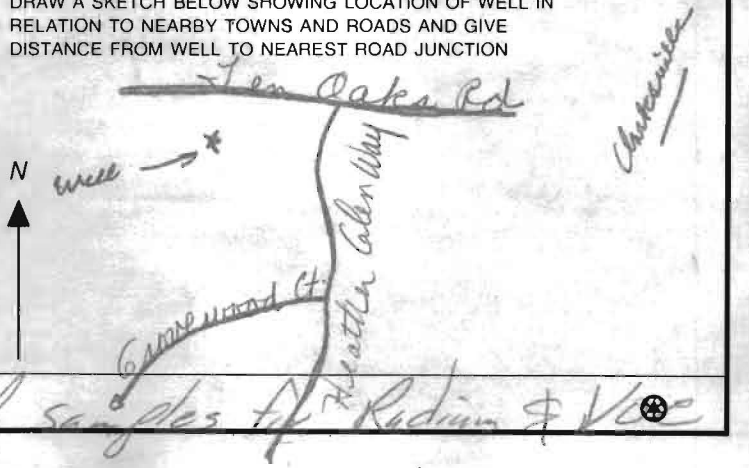
E 814

500 N 490

× 4/6/06
Voc + Radium Samples
Taken During Yield
Test. BR

000
000

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

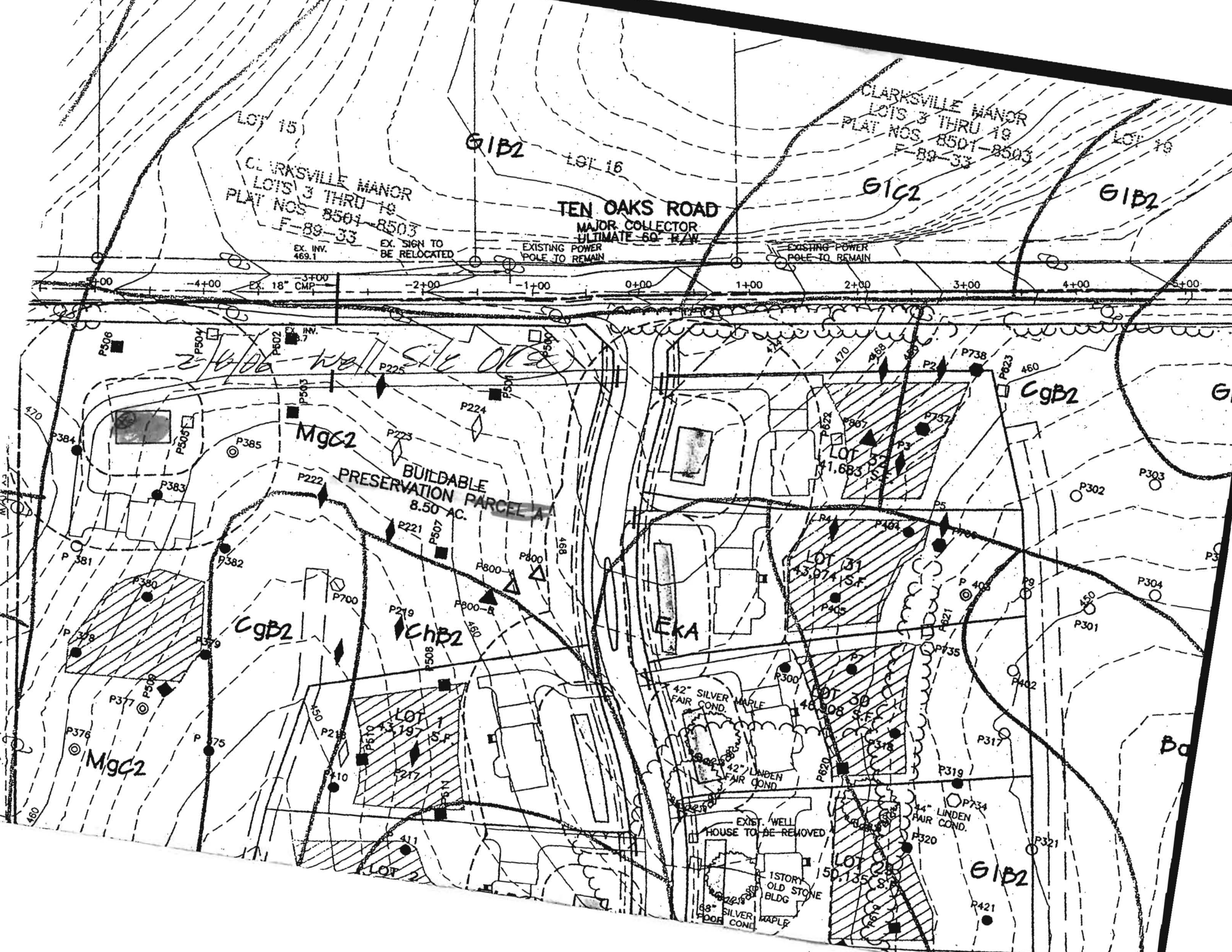


SPECIAL CONDITIONS
NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

At yield test, need samples for Radium & Voc

DENV-Permit 97

② COUNTY


TEN OAKS ROAD
MAJOR COLLECTOR
ULTIMATE 60' R/W
CLARKSVILLE MANOR
LOTS 3 THRU 19
PLAT NOS. 8501-8503
F-89-33
LOT 15
LOT 16
LOT 19
EX. INV. 469.1
EX. SIGN TO BE RELOCATED
EXISTING POWER POLE TO REMAIN
EX. 18" CMP
BUILDABLE PRESERVATION PARCEL A
8.50 AC.
LOT 32 41,683 S.F.
LOT 31 43,974 S.F.
LOT 30 46,908 S.F.
LOT 29 50,135 S.F.
LOT 1 43,179 S.F.
LOT 2
42" SILVER MAPLE FAIR COND.
42" LINDEN FAIR COND.
44" LINDEN FAIR COND.
68" SILVER MAPLE POOR COND.
EXIST. WELL HOUSE TO BE REMOVED
1STORY OLD STONE BLDG
GIB2
GIC2
MgC2
CgB2
ChB2
EkA

Howard County
Health Department

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:

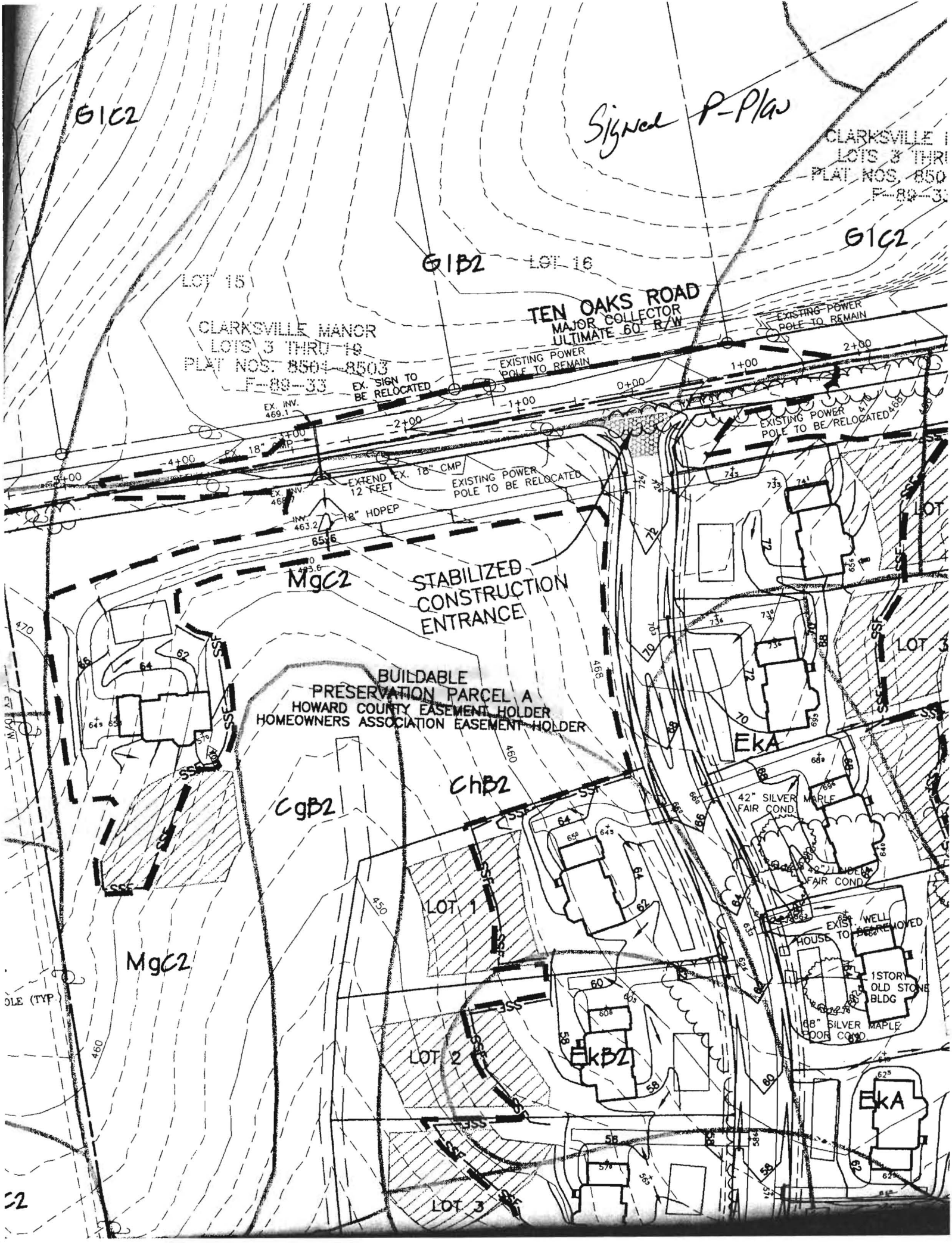
☑ The well site has been staked by Benchmark Engineering
(professional land surveyor or company employing professional land surveyors)
on 12-14-05 (date) and does not require a site inspection.

☐ 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
Sunbury Grove


Signed P-Plan
GIC2
GIB2
LOT 16
LOT 15
TEN OAKS ROAD
MAJOR COLLECTOR
ULTIMATE 60' R/W
CLARKSVILLE MANOR
LOTS 3 THRU 19
PLAT NOS. 8501-8503
F-89-33
CLARKSVILLE
LOTS 3 THRU
PLAT NOS. 850
F-89-3
EX. SIGN TO BE RELOCATED
EXISTING POWER POLE TO REMAIN
EXISTING POWER POLE TO BE/RELOCATED
EXISTING POWER POLE TO BE RELOCATED
EX. INV. 469.1
EX. 18" CMP
EXTEND EX. 18" CMP 12 FEET
INV. 463.2
18" HDPEP
MgC2
STABILIZED CONSTRUCTION ENTRANCE
BUILDABLE PRESERVATION PARCEL A
HOWARD COUNTY EASEMENT HOLDER
HOMEOWNERS ASSOCIATION EASEMENT HOLDER
ChB2
CgB2
EkA
EkB2
42" SILVER MAPLE FAIR COND.
42" [illegible] FAIR COND.
EXIST. WELL TO BE REMOVED
HOUSE
1 STORY OLD STONE BLDG
68" SILVER MAPLE POOR COND.
LOT 1
LOT 2
LOT 3
LOT
SSF
SS
0+00
1+00
2+00
-1+00
-2+00
-3+00
-4+00
5+00

Howard County
Health Department

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

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

July 7, 2006

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

RE: Water Sample Results
P.P.A. Turnbury Grove
HO – 95 – 0247

To Whom it May Concern:

During the recent "yield test" of the well serving the future P.P.A. (located on Heather Glen Way), a sample was collected for volatile organic compounds (VOC's) on April 6, 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 Blank sample. 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

Bert Nixon, Assistant Director
Bureau of Environmental Health

Enclosure
cc: P.P.A. Turnbury Grove Property File

Send Report To:
Howard County
Environmental
Health

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

96156 APR 10 8
Do not write above this line

LABORATORY ANALYSIS REQUEST

HOTG Par ABB950247 Well

Bottle No: 1 **Plant/Site Name:** Turnberry Grove-P.P.A **County:** Howard

Sample Source: Heather Glen Way (Street) Clarksville (Town or City) **Location:** Well #10-95-0247 (well no., lab sink, sample tap, etc.)

Sampler ID: 7 4 8 5 B B **PWSID:** ☐☐☐☐☐☐☐ **Plant ID:** ☐☐

Collector: Brian Baker (410) 313-2643 (include telephone number)

Date Collected: 4/6/2006 **Time Collected:** 10:30 a.m. _____ p.m.

Field Preserved: ☒Yes ☐No **Preservative Used:** ☒ ~~HCl~~ ~~Ascorbic acid~~ ☐ Na_2SO_4 ☐ 6 mg NH_4Cl

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

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.: HOTG Par ABB950247 Field
Trip Blank Bottle No.: HOTG Par ABB950247 Trip

Remarks: Sample Taken During Yield Test
Please Run Full Drinking Water Scan Including MTBE
* Sample analyzed past holding time due to instrument malfunction.

Section Chief: Deborah Nichols **Date Reported:** 5/3/06

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

Form Revised 12/00
DHMH 4362

SUBMITTER'S COPY

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: 961561 HOTGParABB950247Well **Method:** EPA 524.2
Date Analyzed: 05/01/06

Contaminants	DL*	MCL*	Result*
TRIHALOMETHANES			
Bromodichloromethane	0.5	na	ND
Bromoform	0.5	na	ND
Chloroform	0.5	na	ND
Dibromochloromethane	0.5	na	ND
TOTAL THMs	-	80	-
REGULATED			
Benzene	0.5	5	ND
Carbon Tetrachloride	0.5	5	ND
Chlorobenzene	0.5	100	ND
1,4-Dichlorobenzene	0.5	75	ND
1,1-Dichloroethene	0.5	7	ND
1,2-Dichloroethane	0.5	5	ND
1,2-Dichlorobenzene	0.5	600	ND
1,2-Dichloropropane	0.5	5	ND
cis-1,2-Dichloroethene	0.5	70	ND
trans-1,2-Dichloroethene	0.5	100	ND
Ethylbenzene	0.5	700	ND
Styrene	0.5	100	ND
Tetrachloroethene	0.5	5	ND
Trichloroethene	0.5	5	ND
1,1,1-Trichloroethane	0.5	200	ND
Toluene	0.5	1000	ND
Vinyl Chloride	0.5	2	ND
o-Xylene	0.5	na	ND
m+p-Xylene	1.0	na	ND
Total Xylenes	1.5	10000	ND
Methylene Chloride	0.5	5	ND
1,1,2-Trichloroethane	0.5	5	ND
1,2,4-Trichlorobenzene	0.5	70	ND

Contaminants	DL*	MCL*	Result*
UNREGULATED			
Dichlorodifluoromethane	0.5	na	ND
Chloromethane	0.5	na	ND
Bromomethane	0.5	na	ND
Chloroethane	0.5	na	ND
Trichlorofluoromethane	0.5	na	ND
1,1-Dichloroethane	0.5	na	ND
1,3-Dichlorobenzene	0.5	na	ND
Dibromomethane	0.5	na	ND
1,1-Dichloropropene	0.5	na	ND
trans-1,3-Dichloropropene	0.5	na	ND
1,1,2,2-Tetrachloroethane	0.5	na	ND
1,3-Dichloropropane	0.5	na	ND
2,2-Dichloropropane	0.5	na	ND
cis-1,3-Dichloropropene	0.5	na	ND
2-Chlorotoluene	0.5	na	ND
4-Chlorotoluene	0.5	na	ND
Bromobenzene	0.5	na	ND
1,3,5-Trimethylbenzene	0.5	na	ND
1,2,4-Trimethylbenzene	0.5	na	ND
1,2,3-Trichlorobenzene	0.5	na	ND
n-Propylbenzene	0.5	na	ND
n-Butylbenzene	0.5	na	ND
Naphthalene	0.5	na	ND
Hexachlorobutadiene	0.5	na	ND
Isopropylbenzene	0.5	na	ND
1,2,3-Trichloropropane	0.5	na	ND
1,2-Dibromo-3-Chloropropane	0.5	na	ND
p-Isopropyltoluene	0.5	na	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-Tuck Date Approved: 5/5/06

Phone: (410) 767-5896 Fax: (410) 225-9318

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: 961561 HOTGParABB950247Field **Method:** EPA 524.2
Date Analyzed: 05/01/06

Contaminants	DL*	MCL*	Result*
TRIHALOMETHANES			
Bromodichloromethane	0.5	na	ND
Bromoform	0.5	na	ND
Chloroform	0.5	na	ND
Dibromochloromethane	0.5	na	ND
TOTAL THMs	-	80	-
REGULATED			
Benzene	0.5	5	ND
Carbon Tetrachloride	0.5	5	ND
Chlorobenzene	0.5	100	ND
1,4-Dichlorobenzene	0.5	75	ND
1,1-Dichloroethene	0.5	7	ND
1,2-Dichloroethane	0.5	5	ND
1,2-Dichlorobenzene	0.5	600	ND
1,2-Dichloropropane	0.5	5	ND
cis-1,2-Dichloroethene	0.5	70	ND
trans-1,2-Dichloroethene	0.5	100	ND
Ethylbenzene	0.5	700	ND
Styrene	0.5	100	ND
Tetrachloroethene	0.5	5	ND
Trichloroethene	0.5	5	ND
1,1,1-Trichloroethane	0.5	200	ND
Toluene	0.5	1000	ND
Vinyl Chloride	0.5	2	ND
o-Xylene	0.5	na	ND
m+p-Xylene	1.0	na	ND
Total Xylenes	1.5	10000	ND
Methylene Chloride	0.5	5	ND
1,1,2-Trichloroethane	0.5	5	ND
1,2,4-Trichlorobenzene	0.5	70	ND

Contaminants	DL*	MCL*	Result*
UNREGULATED			
Dichlorodifluoromethane	0.5	na	ND
Chloromethane	0.5	na	ND
Bromomethane	0.5	na	ND
Chloroethane	0.5	na	ND
Trichlorofluoromethane	0.5	na	ND
1,1-Dichloroethane	0.5	na	ND
1,3-Dichlorobenzene	0.5	na	ND
Dibromomethane	0.5	na	ND
1,1-Dichloropropene	0.5	na	ND
trans-1,3-Dichloropropene	0.5	na	ND
1,1,2,2-Tetrachloroethane	0.5	na	ND
1,3-Dichloropropane	0.5	na	ND
2,2-Dichloropropane	0.5	na	ND
cis-1,3-Dichloropropene	0.5	na	ND
2-Chlorotoluene	0.5	na	ND
4-Chlorotoluene	0.5	na	ND
Bromobenzene	0.5	na	ND
1,3,5-Trimethylbenzene	0.5	na	ND
1,2,4-Trimethylbenzene	0.5	na	ND
1,2,3-Trichlorobenzene	0.5	na	ND
n-Propylbenzene	0.5	na	ND
n-Butylbenzene	0.5	na	ND
Naphthalene	0.5	na	ND
Hexachlorobutadiene	0.5	na	ND
Isopropylbenzene	0.5	na	ND
1,2,3-Trichloropropane	0.5	na	ND
1,2-Dibromo-3-Chloropropane	0.5	na	ND
p-Isopropyltoluene	0.5	na	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: 5/3/06

Phone: (410) 767-5896 ***Fax: (410) 225-9318***

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: 961561 HOTGParABB950247Trip **Method:** EPA 524.2
Date Analyzed: 04/24/06

Contaminants	DL*	MCL*	Result*
TRIHALOMETHANES			
Bromodichloromethane	0.5	na	ND
Bromoform	0.5	na	0.66
Chloroform	0.5	na	ND
Dibromochloromethane	0.5	na	ND
TOTAL THMs	-	80	0.66
REGULATED			
Benzene	0.5	5	ND
Carbon Tetrachloride	0.5	5	ND
Chlorobenzene	0.5	100	ND
1,4-Dichlorobenzene	0.5	75	1.23
1,1-Dichloroethene	0.5	7	ND
1,2-Dichloroethane	0.5	5	ND
1,2-Dichlorobenzene	0.5	600	ND
1,2-Dichloropropane	0.5	5	ND
cis-1,2-Dichloroethene	0.5	70	ND
trans-1,2-Dichloroethene	0.5	100	ND
Ethylbenzene	0.5	700	ND
Styrene	0.5	100	ND
Tetrachloroethene	0.5	5	ND
Trichloroethene	0.5	5	ND
1,1,1-Trichloroethane	0.5	200	ND
Toluene	0.5	1000	ND
Vinyl Chloride	0.5	2	ND
o-Xylene	0.5	na	ND
m+p-Xylene	1.0	na	ND
Total Xylenes	1.5	10000	ND
Methylene Chloride	0.5	5	ND
1,1,2-Trichloroethane	0.5	5	ND
1,2,4-Trichlorobenzene	0.5	70	ND

Contaminants	DL*	MCL*	Result*
UNREGULATED			
Dichlorodifluoromethane	0.5	na	ND
Chloromethane	0.5	na	ND
Bromomethane	0.5	na	ND
Chloroethane	0.5	na	ND
Trichlorofluoromethane	0.5	na	ND
1,1-Dichloroethane	0.5	na	ND
1,3-Dichlorobenzene	0.5	na	ND
Dibromomethane	0.5	na	ND
1,1-Dichloropropene	0.5	na	ND
trans-1,3-Dichloropropene	0.5	na	ND
1,1,2,2-Tetrachloroethane	0.5	na	ND
1,3-Dichloropropane	0.5	na	ND
2,2-Dichloropropane	0.5	na	ND
cis-1,3-Dichloropropene	0.5	na	ND
2-Chlorotoluene	0.5	na	ND
4-Chlorotoluene	0.5	na	ND
Bromobenzene	0.5	na	ND
1,3,5-Trimethylbenzene	0.5	na	ND
1,2,4-Trimethylbenzene	0.5	na	ND
1,2,3-Trichlorobenzene	0.5	na	ND
n-Propylbenzene	0.5	na	ND
n-Butylbenzene	0.5	na	ND
Naphthalene	0.5	na	ND
Hexachlorobutadiene	0.5	na	ND
Isopropylbenzene	0.5	na	ND
1,2,3-Trichloropropane	0.5	na	ND
1,2-Dibromo-3-Chloropropane	0.5	na	ND
p-Isopropyltoluene	0.5	na	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	2.01
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: 5/7/06

Phone: (410) 767-5896 ***Fax: (410) 225-9318***