

app 8-14-70 56997A
P 13464

8/13/70

PERMIT

SEWAGE DISPOSAL SYSTEM

MARYLAND STATE DEPARTMENT OF HEALTH

HOWARD COUNTY

A 56997A

INDEXED

ELLICOTT CITY

DISTRICT 4

DATE 8/13/70

04-330528

Herman Sirk

IS PERMITTED TO INSTALL ☐ ALTER ☒

ADDRESS Annapolis Rock Road, Woodbine, Md.

PHONE HU 9-4724

A SEWAGE DISPOSAL SYSTEM LOCATED AT

SUBDIVISION

1999 Route 94
ROAD Corner of Florence Rd.
& A. E. Mullinix Rd. LOT

PROPERTY OWNER Donald Warfield

ADDRESS

SPECIFICATIONS

DRAIN FIELD DEPTH FEET, BOTTOM AREA SQ. FT.

SEEPAGE PITS ABSORBENT SIDE-WALL AREA SQ. FT.

SEPTIC TANK CAPACITY GALLONS

FOR GARBAGE GRINDER, INCREASE DISPOSAL AREA 22% & TANK CAPACITY 50%.

OTHER REPAIR - Sanitarian will inspect hole and recommend repair system.

8/13/70 - turn up dig - 42" long - 5" gravel under pipe

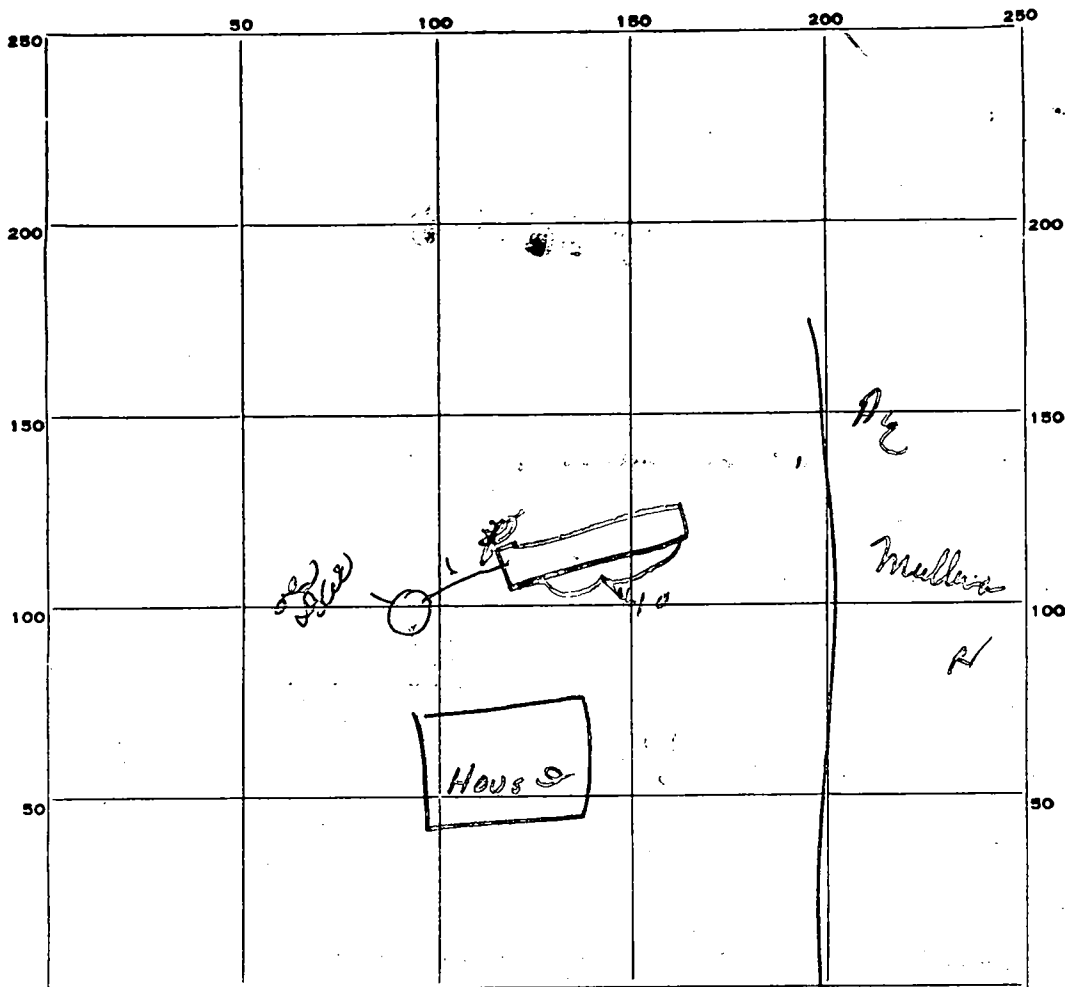
PLANS APPROVED BY Palmer F. Wine

DATE 8/13/70

FILL SEPTIC TANK AND DISTRIBUTION BOX WITH WATER BEFORE CALLING FOR AN INSPECTION. COVER NO WORK UNTIL INSPECTED AND APPROVED.

NEITHER THE HOWARD COUNTY COMMISSIONERS NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.

8/13/70
P56997A



INDICATE NORTH. - NAME ADJOINING ROADWAY AS BASE LINE.

Florence Rd - RT94

PERMIT CARD 02

SEPTIC TANK, LEVEL _____

CLEANOUTS _____

DISTRIBUTION BOX, LEVEL _____

TILE FIELD, DEPTH 8 FT. TRENCH WIDTH 2 FT.

GRAVEL DEPTH 5 ft IN. TOTAL LENGTH 40 FT.

NUMBER OF TRENCHES _____ TOTAL BOTTOM AREA 80

SEEPAGE PITS, INSIDE DIAMETER _____ FT. DEPTH BELOW INLET _____ FT.

ABSORBENT AREA 400 SQ. FT.

REMARKS 8/13/70 - ok to put gravel in trench due

DATE SYSTEM APPROVED 8/24/70

INSPECTOR Jim Monegh

Howard County Health Department

To: 4/4/01

No Building Permits
Are To Be Issued
Until Abandoned Well
Is Sealed.

BB

From: _____

Date: _____

HD-170

C1 5190	SEQUENCE NO. (DENV USE ONLY)	STATE OF MARYLAND WELL COMPLETION REPORT FILL IN THIS FORM COMPLETELY PLEASE PRINT OR TYPE	THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)		COUNTY NUMBER	
ST/CO USE ONLY DATE Received	DATE WELL COMPLETED	Depth of Well	PERMIT NO. FROM "PERMIT TO DRILL WELL"
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	22 200 26 (TO NEAREST FOOT)	40-74-C1-C6 28 29 30 31 32 33 34 35 36 37

OWNER	last name	first name	TOWN
STREET OR RFD			
SUBDIVISION	SECTION	LOT	

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 TO	Check if water bearing
Top Soil	0 2	
Brown Shale	2 45	✓
Tan slate	45 50	
Brown slate	50 52	✓
Tan slate	52 55	
Clay slate	55 65	
Brown slate	65 66	✓
Blue slate	66 90	
Brown slate	90 91	✓
Clay slate	91 200	
Continued on next page		

GROUTING RECORD	
WELL HAS BEEN GROUTED (Circle Appropriate Box)	
TYPE OF GROUTING MATERIAL	
CEMENT C	BENTONITE CLAY B
NO. OF BAGS	NO. OF POUNDS
GALLONS OF WATER	
DEPTH OF GROUT SEAL (to nearest foot)	
from <div><div></div><div></div><div></div><div></div></div> ft. to <div><div></div><div></div><div></div><div></div></div> ft.	
(enter 0 if from surface)	
CASING RECORD	
casing types insert appropriate code below	
ST CO STEEL CONCRETE PL OT PLASTIC OTHER	
MAIN CASING TYPE	
Nominal diameter top (main) casing (nearest inch)	
Total depth of main casing (nearest foot)	
57 6 80	
OTHER CASING (if used)	
diameter depth (feet)	
inch from to	
EACH CASING	
screen type or open hole	
insert appropriate code below	
ST BR HO STEEL BRASS OPEN HOLE PL OT PLASTIC OTHER	
SCREEN RECORD	
DEPTH (nearest ft.)	
40 78 200	
EACH SCREEN	
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	
OEP USE ONLY (NOT TO BE FILLED IN BY DRILLER)	
T (E.R.O.S.)	
W Q	
TELESCOPE CASING	
LOG INDICATOR	
OTHER DATA	

PUMPING TEST	
HOURS PUMPED (nearest hour)	
PUMPING RATE (gal. per min. to nearest gal.)	
METHOD USED TO MEASURE PUMPING RATE	
WATER LEVEL (distance from land surface)	
BEFORE PUMPING	
WHEN PUMPING	
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 WILL INSTALL PUMP YES NO	
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS EXCEPT HOME USE	
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX - SEE ABOVE:	
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 } LAND SURFACE	
below } (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)	
Each lot line	
Route 94	

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 IDENT. NO.
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GRAVEL PACK
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68
OEP USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (E.R.O.S.)
W Q
TELESCOPE CASING
LOG INDICATOR
OTHER DATA

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)
Each lot line
Route 94

6/20/94

JANE

PLEASE BE ALERT TO
INCOMING REPLACEMENT WORK PERMIT

WILLIAM APPEGATE - 1999 ROUTE 94

FROM EASTERN

SPECIAL TEST REQUIREMENTS BECAUSE
NEAR ANOTHER CONTAMINATED SITE.

SEE BENI.

THANKS

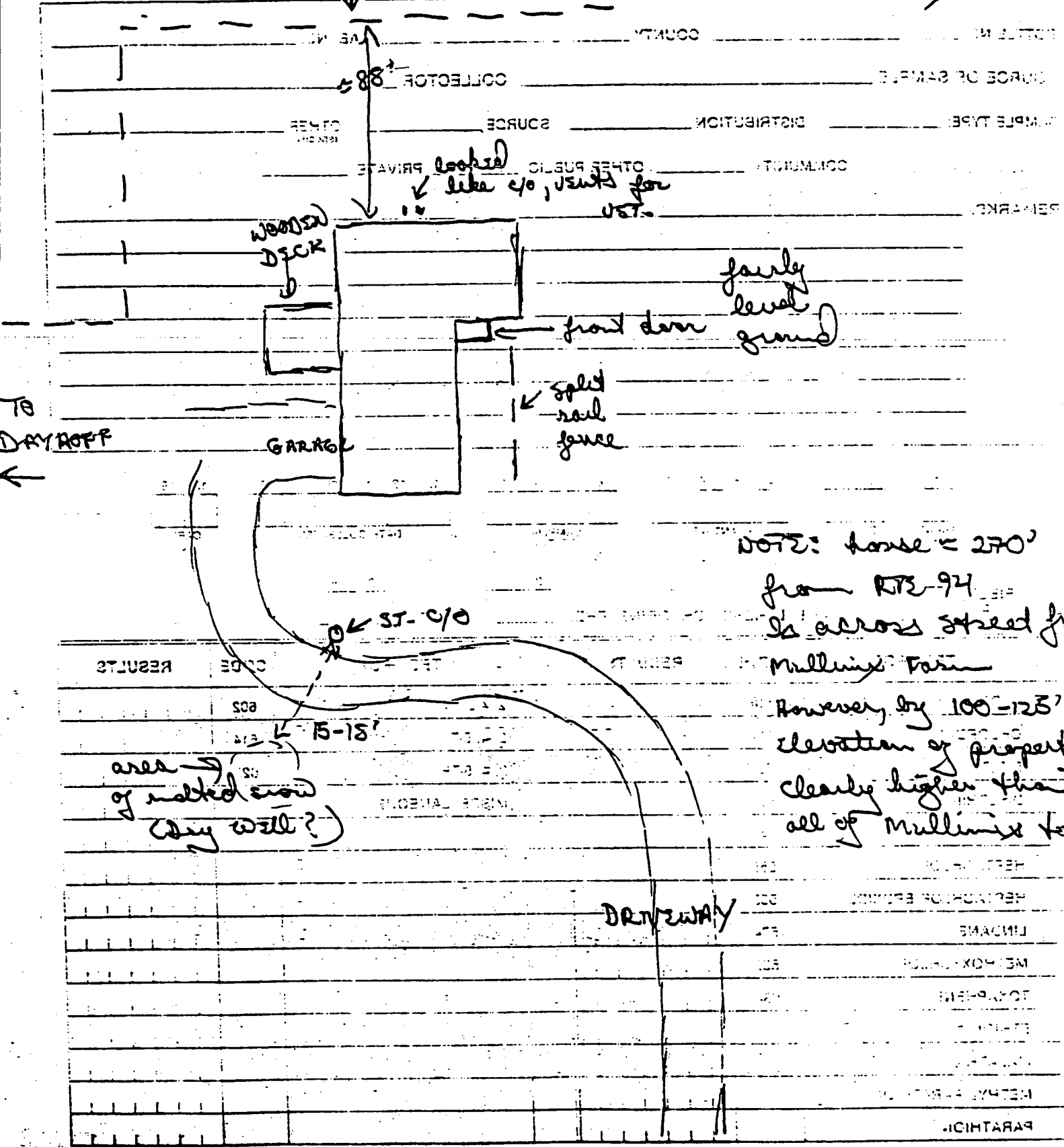
CW

LABORATORY OF HEALTH AND MEDICAL INVESTIGATION
 201 W. Preston St.
 P.O. Box 2322, Baltimore, Maryland 21203
 J. Michael Joseph, D. V.
 1989 RTE 94

property fence

PESTICIDES - DRINKING WATER

D. WARFIELD



RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

CHEMIST

DATE REPORTED

RECEIVED



HOWARD COUNTY HEALTH DEPARTMENT

Diane L. Matuszak, M.D., M.P.H., County Health Officer

August 17, 2000

Gene Mullinix
1999 Woodbine Road
Woodbine, MD 21797

RE: **Well Abandonment**
1999 Woodbine Road

Dear Mr. Mullinix:

File review indicates that a replacement well, with permit #HO-94-1281, was drilled on the above referenced property in October of 1997. A condition of the well drilling permit was that the original well be properly abandoned and sealed. Currently there is no evidence of compliance with this requirement. This abandonment process is important in that it helps to restore the subsurface geologic conditions which existed before the well was drilled, and more importantly, to protect the groundwater resource from potential contamination. This procedure should be completed as soon as possible.

The well abandonment process can best be accomplished by a licensed well driller. They may perform the work without inspection. However, the driller must then file an abandonment report with this office. **If the abandonment is performed by any other party, the materials and procedures must be inspected and approved by a sanitarian from this office before any work is initiated.**

Failure to confirm the proper abandonment of the existing well could result in the issuance of an order to abandon and seal the replacement well in accordance with COMAR 26.04.04.

If you have any questions, or would like to discuss this matter further, please call me directly at (410) 313-2643. Thank you for your attention to this important matter.

Respectfully,

Brian Baker, Sanitarian
Water and Sewerage Program

cc: File

C1	1046	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND WELL COMPLETION REPORT FILL IN THIS FORM COMPLETELY PLEASE PRINT OR TYPE		THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.	
1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)				COUNTY NUMBER <u>A56997 A</u>		
ST/CO USE ONLY DATE RECEIVED <u>10/16/97</u>		DATE WELL COMPLETED <u>10-10-97</u>		Depth of Well <u>300</u> (TO NEAREST FOOT)		
				PERMIT NO. FROM "PERMIT TO DRILL WELL" <u>HD-94-1281</u>		

OWNER <u>MULLINIX GENE</u>		TOWN <u>LISBON</u>	
STREET OR RFD <u>1999 Route 99</u>		SECTION <u>LOT</u>	
SUBDIVISION		LOT	

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	
top soil	0	2	
shale	2	55	
Brown slate	55	70	✓
gray mica	70	82	✓
Brown mica	82	84	
gray mica	84	125	✓
Quartz			
gray mica	125	300	

GROUTING RECORD			
WELL HAS BEEN GROUTED (Circle Appropriate Box) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
TYPE OF GROUTING MATERIAL (Circle one) CEMENT <input checked="" type="checkbox"/> BENTONITE CLAY <input type="checkbox"/>			
NO. OF BAGS <u>19</u> NO. OF POUNDS <u>1700</u>			
GALLONS OF WATER <u>95</u>			
DEPTH OF GROUT SEAL (to nearest foot) from <u>0</u> ft. to <u>72</u> ft. (enter 0 if from surface)			
CASING RECORD			
casing types insert appropriate code below	<input checked="" type="checkbox"/> STEEL	<input type="checkbox"/> CONCRETE	
	<input type="checkbox"/> PLASTIC	<input type="checkbox"/> OTHER	
	MAIN CASING TYPE <u>ST</u>		
	Nominal diameter top (main) casing (nearest inch) <u>6</u> Total depth of main casing (nearest foot) <u>80</u>		
OTHER CASING (if used) diameter inch _____ depth (feet) from _____ to _____			
SCREEN RECORD			
screen type or open hole (insert appropriate code below)	<input checked="" type="checkbox"/> STEEL	<input type="checkbox"/> BRASS	<input type="checkbox"/> OPEN HOLE
	<input type="checkbox"/> PLASTIC	<input type="checkbox"/> BRONZE	<input type="checkbox"/> OTHER
	DEPTH (nearest ft.) <u>78</u> <u>300</u>		
	Diameter of screen (nearest inch) <u>56</u> <u>60</u>		

PUMPING TEST		
HOURS PUMPED (nearest hour)	<u>3</u>	
PUMPING RATE (gal. per min.)	<u>6</u>	
METHOD USED TO MEASURE PUMPING RATE	<u>Buchot</u>	
WATER LEVEL (distance from land surface)		
BEFORE PUMPING	<u>50</u> ft.	
WHEN PUMPING	<u>300</u> ft.	
TYPE OF PUMP USED (for test)		
<input checked="" type="checkbox"/> air	<input type="checkbox"/> piston	<input type="checkbox"/> turbine
<input type="checkbox"/> centrifugal	<input type="checkbox"/> rotary	<input type="checkbox"/> other (describe below)
<input type="checkbox"/> jet	<input type="checkbox"/> submersible	

NUMBER OF UNSUCCESSFUL WELLS: <u>0</u>
WELL HYDROFRACTURED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
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. <u>MWD 040</u> <u>Gene F. Easterday</u> DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)
LIC. NO. <u>MWD 481</u> <u>Gene F. Easterday</u>
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

C2	
DEPTH (nearest ft.) <u>78</u> <u>300</u>	
Diameter of screen (nearest inch) <u>56</u> <u>60</u>	
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	

PUMP INSTALLED	
DRILLER WILL INSTALL PUMP (CIRCLE) (YES or NO)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> 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) <u>31</u> <u>35</u>	
PUMP HORSE POWER <u>37</u> <u>41</u>	
PUMP COLUMN LENGTH (nearest ft.) <u>43</u> <u>47</u>	
CASING HEIGHT (circle appropriate box and enter casing height) <input checked="" type="checkbox"/> above } LAND SURFACE <input type="checkbox"/> below } <u>2</u> (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)	

B 1	3039	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND PERMIT TO DRILL WELL please print or type	STATE PERMIT NUMBER HO-94-1281 <small>fill in this form completely</small>
THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS				
Date Received (APA) 9/15/97		OWNER INFORMATION RN 7203		
8 MM DD YY 13 9/15/97				
15 Last Name Mullinix		34 First Name Gene		
36 Street or RFD 1990 Route 94		55		
57 Town Woodbine, Md. 21797		76 Zip 21797		
DRILLER INFORMATION				
Driller's Name George F. Easterday				
Firm Name L. Franklin Easterday, Inc.				
Address 9265 Brown Church Rd., MT. Airy, Md. 21771				
Signature <i>George F. Easterday</i> Date 9/17/97				
B 2 WELL INFORMATION				
APPROX. PUMPING RATE (GAL. PER MIN.) 8 500 12				
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 500 20				
USE FOR WATER (CIRCLE APPROPRIATE BOX)				
<input checked="" type="checkbox"/> HOME (SINGLE OR DOUBLE HOUSEHOLD UNIT ONLY)				
<input type="checkbox"/> FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)				
<input type="checkbox"/> INDUSTRIAL, COMMERCIAL, STATE AND FEDERAL GOV. OTHER (REQUIRES APPROPRIATION PERMIT)				
<input type="checkbox"/> PUBLIC OR PRIVATE WATER COMPANY (REQUIRES APPROPRIATION PERMIT AND STATE APPROVAL)				
<input type="checkbox"/> TEST, OBSERVATION, MONITORING (MAY REQUIRE APPROPRIATION PERMIT)				
APPROXIMATE DEPTH OF WELL 300 FEET				
APPROXIMATE DIAMETER OF WELL 6 INCH				
METHOD OF DRILLING (circle one)				
<input checked="" type="checkbox"/> BORED (or Augered) <input type="checkbox"/> JETTED <input type="checkbox"/> Jetted & DRIVEN				
<input checked="" type="checkbox"/> AIR-ROTARY <input type="checkbox"/> AIR-PERCussion <input type="checkbox"/> ROTARY (Hydraulic Rotary)				
<input type="checkbox"/> CABLE <input type="checkbox"/> REverse-ROTary <input type="checkbox"/> Drive-POINT				
other _____				
REPLACEMENT OR DEEPEINED WELLS (CIRCLE APPROPRIATE BOX)				
<input type="checkbox"/> THIS WELL WILL NOT REPLACE AN EXISTING WELL				
<input checked="" type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED				
<input type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS				
<input type="checkbox"/> 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)				
APPROX. PERMIT NUMBER _____ G A P _____				
FORCE Km WRITE INITIALS IN BOX HO-94-1281 PERMIT No. HO-94-1281				
SPECIAL CONDITIONS Regarding notification, construction, and sampling; see attached.				
NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED -				



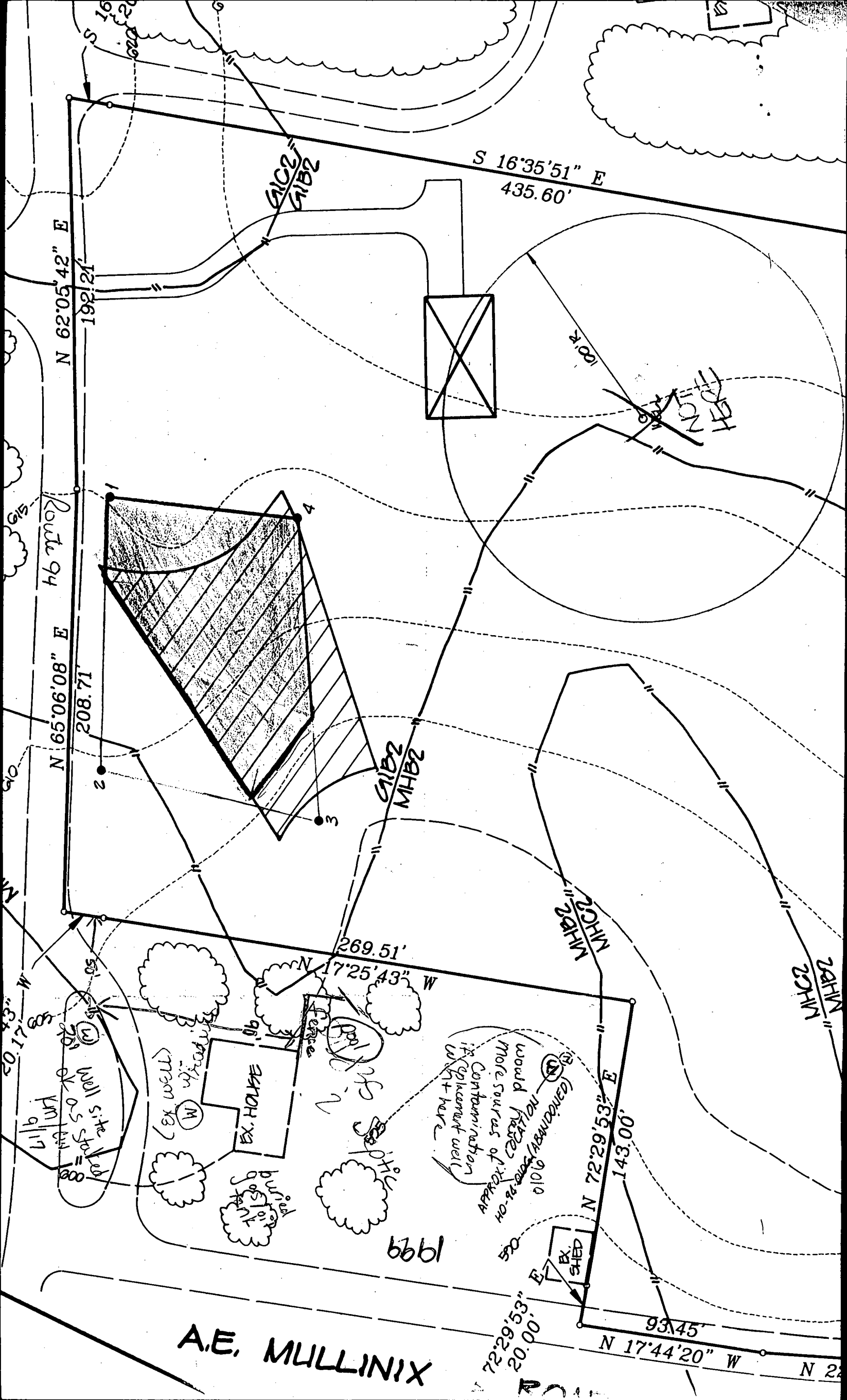
N

(144)

LISBON

(94)

X





file

HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

September 26, 1997

L. Franklin Easterday, Inc.
9265 Brown Church Road
Mount Airy, Maryland 21771
Attn: George Easterday

RE: Replacement Well
Well Permit #HO-94-1281
1999 Route 94
Tax Map: 7 Parcel: 249

Dear Mr. Easterday:

The above referenced well construction permit was issued subject to special conditions. It is expected that the following conditions will be met during the construction of the above referenced well:

- Please notify this office 24 hours prior to the start of drilling
- Please see the highlighted areas on the enclosed sheet for specific construction standards

If you anticipate any difficulty in satisfying these conditions, or have any questions please do not hesitate to contact this office at the address below or by calling (410) 313-2640.

Very truly yours,

Kimberly Maiste

Kimberly Maiste, Sanitarian
Water and Sewerage Program

KM:km

cc: file
owner

MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

William Donald Schaefer
Governor

David A.C. Carroll
Secretary

MEMORANDUM

TO: Dave Kerr, Regional Consultant
Individual Septic Systems and Wells Program

FROM: Eric Dougherty, geologist
Individual Septic Systems and Wells Program *CAP*

SUBJECT: Applegate Property, Route 94 & Mullinix Road, Howard County

DATE: 27 May 1994

On 24 May 1994, I met with Bert Nixon, Director, Community Environmental Health Services, Howard County Health Department, and you to discuss the Applegate Property domestic water well and the possibility of drilling a replacement well. My meeting and field notes are attached.

Bert Nixon was interested in receiving guidance in three areas: 1) where on the property could a replacement well be considered; 2) any special well construction requirements; and, 3) acceptable water quality standards for contaminants of concern. My recommendations follow:

1. My recommendation would be to consider siting a replacement well along the north property line (where the pool is) to the back corner of the property.
2. I cannot find any well permit data for Eldred Donald Warfield or combinations thereof, for the period of 1945 to 1980. Therefore, if a permit was obtained, the owners name is not as indicated above. Other well permits for Warfield in the general area of the property range in depth from 58 feet to 102 feet. One well in Daisy to Warfield, drilled in 1973, is 250 feet. Since the actual depth is unknown (reported between 65 to 85 feet) and records are not available, the actual depth will need to be determined.

~~My recommendation would be to drill to the depth of the existing well and ease off and grout. Then after the grout has set, continue drilling with washed tools, until desired depth is reached and add additional casing if needed.~~

3. ~~COMAR 26.04.04.09 Approval of Well for Use as Potable Water Supply states that the water shall meet the maximum contaminant limits of COMAR 26.04.01 therefore the water produced from any replacement well should be sampled for the contaminants of concern and the concentrations should be below the MCLs prior to a certificate of potability being issued. The State lab should be contacted to determine if the lab can analyze the water for the contaminants of concern. If the lab cannot analyze the water, the property owner would have to supply the needed analytical results.~~

If you have any questions, please feel free to contact me at 1-800-633-6101 x3784 or 410-631-3784.
Thank you.

"Together We Can Clean Up"

HOWARD COUNTY HEALTH DEPARTMENT
Completed Septic System

P 15464 A 56997A
DATE 8/13/70

LOCATION 1999 Route 94

APPLICATION

HOLD ()
APPROVED (☒)
REJECTED ()

LOT _____

APPLICANT _____

INSTALLATION

OWNER Donald Wakfield

HOLD ()
APPROVED (☒)

PERMITTEE Herman Sirk

APPROVED
DATE 8/14/70

HD-11 Replacement Well drilled - 6/21/74

**UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS**

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.



PENALTY FOR PRIVATE
USE, \$300

RETURN



Print Sender's name, address, and ZIP Code in the space below.

Bureau of Environmental Health

3525-H Ellicott Mills Drive

Ellicott City, MD 21043

HOWARD COUNTY
HEALTH DEPARTMENT

APR 13 10 50 AM '90

ELICOTT CITY
HEALTH DEPARTMENT

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery.

3. Article Addressed to:

*Mr. William Applegate
1999 Route 94
Woobine, MD 21797*

4. Article Number

P 489 653 905

Type of Service:

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee

X

6. Signature — Agent

X

Applegate

7. Date of Delivery

3-12-90

8. Addressee's Address (*ONLY if requested and fee paid*)

SEND REPORT TO:

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
3525-N ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD 21043
Invoice No. _____

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

Lab No. / Date Received

A980753 8-8 5

Do not write above this line

Data Category Code

4F

PESTICIDES—DRINKING WATER

Bottle Number: HO-Applegate-8 Name: Applegate-replacement well County: Howard
Source of Sample: 1999 Route 94 Woodbine Collector: [Signature]
Street Town or City (Include Sanitarian ID Number)

- ☒ Private
☐ Community
☐ Non-Community

13

County

[Diagram]

Plant No.

[Diagram]

Sampling Station

10 0897

Date Collected

Date & Time are Required for Valid Samples

9:10 A.M.

Time Collected

SAMPLE TYPE

- ☒ Source (Raw Water)
☐ Distribution (Treated)
☐ Water Treatment Plant
(P.O.E. to Distribution)

Field Data:

63

pH

Chlorine Residual

0.0 0.0

Free

Total

PRESERVATIVE USED

Ice

(Preservation Information on Back)

Remarks: Please Run Scan For Aldrin, Atrazine, + Metolachlor

METHOD 515.1

DATE EXTRACTED _____

DATE ANALYZED _____

X	EPA ID	MCL**	CONTAMINANT	RESULTS'
	2105	70	2,4-D	
	2031	200	Dalapon	
			2,4-DB	
	2440		Dicamba	
	2041	7.0	Dinoseb	
	2326	1.0	Pentachlorophenol	
	2040	500	Picloram	
	2111		2,4,5-T	
	2110	50	2,4,5-TP (Silvex)	

METHOD 507

DATE EXTRACTED 10-15-97DATE ANALYZED 10-20-97

LC

X	EPA ID	MCL**	CONTAMINANT	RESULTS'
X	2051	2.0	Alachlor	5.60
X	2050	3.0	Atrazine	13.90
			Butachlor	
	2056		Diazinon	
X	2045		Metolachlor	185.3
			Metribuzin	
			Propachlor	
	2037	1.0	Simazine	

'—Micrograms per liter

*—Maximum Contaminant Level
Regulated Contaminant

METHOD 508

DATE EXTRACTED _____

DATE ANALYZED _____

X	EPA ID	MCL**	CONTAMINANT	RESULTS'
	2356		Aldrin	
	2959	2.0	Chlordane	
	2057		Chlorpyrifos (Dursban)	
	2070		Dieldrin	
	2005	2.0	Endrin	
	2065	0.4	Heptachlor	
	2067	0.2	Heptachlor Epoxide	
	2274	1.0	Hexachlorobenzene	
	2010	0.2	Lindane	
	2015	40	Methoxychlor	
	2020	3.0	Toxaphene	
	2384	0.5	PCB (Decachlorobiphenyl)	

Supervisory Chemist [Signature]Date Reported 10/28/97

ABC

10/28/97



HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

June 14, 1995

Mr. & Mrs. William Applegate
1999 Route 94
Woodbine, MD 21797

RE: Request to sample

Dear Mr. & Mrs. Applegate:

To further evaluate the current effectiveness of existing in house treatment due to area herbicide groundwater contamination concerns, the Health Department would like to sample your well water supply. This request is also intended to corroborate more recent sample analyses provided by Ciba Geigy via Mr. Gene Mullinix, as well as Maryland Department of the Environment.

To make the evaluation complete as possible, a sample prior to and following the treatment device is preferable. The post-treatment location should be a point of discharge utilized for consumption (i.e, kitchen or bathroom faucet).

Sampling is currently scheduled for the mornings of July 5th and July 12th (between 8:30 a.m. and 10 a.m.). If you are interested, contact this office at (410) 313-2644 to schedule the date and time for sampling. Ask for Vicki. Should neither of these dates be suitable, an alternate date can be scheduled following confirmation with the laboratory.

If you have any other questions involving the upcoming sampling, contact me at the aforementioned number.

Very truly yours,

Bert Nixon, Director
Community Env. Health Program

BN/vf

cc: Mr. Gene Mullinix
Peggy Smith, MDE, Site Assessment Division

Bureau of Environmental Health
3525-H Ellicott Mills Drive Ellicott City, Maryland 21043-4544
Water and Sewerage, Permits (410) 313-2640 Community Environmental Health (410) 313-2644
Food Protection Program (410) 313-2642 TDD (410) 313-2323

6/6/95

Rec'd t/c from Mr Applegate, who was asking for a letter "guaranteeing" that the ^{water} supply was safe. Stated that no real estate agent would touch the property w/out such a letter.

Told Mr Applegate that I could not provide such a guarantee, because current conditions & functioning of treatment system could change with time.

Mr Applegate stated he felt that the Health Dept. & not Mr. Mullinix should be monitoring his water supply - that's he's not paying TAXES for Mr Mullinix. He also stated that he never entered into an agreement w/ Mr Mullinix (though the system was installed in Sept 1990).

Told Mr Applegate that I could schedule w/ him a follow up post treatment sample to verify that the system is currently functioning correctly. If he wanted a letter to that effect I could provide that. Whether this would suffice as a "guarantee" & still be valid 6 months from now I couldn't say.

I did agree with Mr Applegate that copies of the results (not just a letter stating what results were) should also be included w/ letter.

Mr Applegate stated that a new house was being built & this house would be vacated in 90 days. He did not at this time accept my offer to take a follow up sample.

ROLAND H. MULLINIX & SON, INC.

DEALER IN HAY, STRAW & GRAINS

SUPER BLENN FERTILIZER

SUPER-GRO SEEDS

1990 ROUTE 94

WOODBINE, MD. 21797

May 22, 1995

Howard County Environmental Health Dept.
3523 Suite H, Ellicott Mills Drive
Ellicott City, Maryland 21043
Attn: Greg Mellon

This letter is to let you know, that we received the results back from the water monitoring samples taken on March 23, 1995.

The results indicate that all filters are operating properly and maintaining levels under .0. This merits not changing the filters at this time.

We will continue to monitor all systems yearly, and schedule, if needed filter changes.

Thank you,



Gene W. Mullinix

cc: Dayhoff's
Wyants's
Applegates's

These samples not done by H.D. Most likely p/o of ongoing agreement with Mullinix (Ciba-Geigy?) + affected parties

Ciba Crop Protection



May 4, 1995

Ciba-Geigy Corporation
P.O. Box 18300
Greensboro, NC 27419-8300
Telephone: 910 632 6000

Mr. Gene Mullinix
R. H. Mullinix & Son, Inc.
1990 Route 94
Woodbine, MD 21797

Dear Gene:

Here are the results of the water samples taken by you and received in our offices on March 28, 1995.

-- PPB --

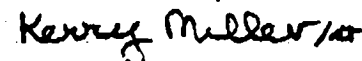
<u>Sample ID</u>	<u>Parent Atrazine</u>	<u>Metolachlor</u>	<u>Cyanazine</u>	<u>Nitrates (ppm)</u>
New Well Lot	2.3	66.0	0.22	32
Applegate (w/filter)	<0.10	8.8	<0.10	29
Applegate (w/out filter)	12.0	105.	1.2	27
Wyant (w/filter)	<0.10	<0.10	<0.10	28
Wyant (w/out filter)	2.5	66.	<0.10	26
Dayhoff (w/filter)	<0.10	<0.10	<0.10	45
Dayhoff (w/out filter)	13.0	88.	0.11	40

We have also analyzed for metabolites of atrazine and they are as follows.

-- PPB --

	<u>Diamino Atrazine</u>	<u>Deisopropyl Atrazine</u>	<u>Deethyl Atrazine</u>
New Well Lot	0.24	<0.10	1.9
Applegate (w/filter)	<0.10	<0.10	<0.10
Applegate (w/out filter)	2.3	<0.10	3.5
Wyant (w/filter)	<0.10	<0.10	<0.10
Wyant (w/out filter)	0.25	<0.10	0.25
Dayhoff (w/filter)	<0.10	<0.10	<0.10
Dayhoff (w/out filter)	1.3	<0.10	2.4

Sincerely,



Kerry Miller
Regional State Government Relations Manager

0503C3KM (Ltrs./MS) cb(bpt:5/4/95)

cc: M. Boyd

FAXED BY GENE M. ON 6/9/95
FOLLOWING T/C.

Culligan. (301)797-0311

WATER CONDITIONING
STONER ENTERPRISES INC
 501 MARYLAND AVE
 HAGERSTOWN MD 21740

FORWARDING AND ADDRESS CORRECTION REQUESTED

ACCOUNTS ARE SUBJECT TO A LATE PAYMENT FINANCE CHARGE			
FINANCE CHARGE SCHEDULE			
OVER	PERIODIC RATE	ANNUAL RATE	PLEASE PAY "NEW BALANCE" BEFORE:
\$ 0	1.50%	18.00%	Jul 10
10	1.50%	18.00%	MIN. Charge 0.25
Previous Bal ->			0.00
0614MISC MONTXEL			- 606.00
0614NT LABOR			- 69.00
0615AUTO RENTAL			25.00
0615INSTALL CHG			150.00
0615Payment			183.75
0625AR-ACCOUNT			25.00
Sales Tax			10.00
21 JUL 07 1994			
14851			
Service 06/25-07/25			
NOTE: REVERSE SIDE FOR IMPORTANT INFORMATION		FINANCE CHARGE	
		0.00	
		NEW BALANCE 675.00	
		701.25	
		0.00	
06/25/1994		ACCOUNT NO	
		151530	

Apple gates replacement cartridges

Ciba Plant Protection

ciba

Ciba-Geigy Corporation
P.O. Box 18300
Greensboro, NC 27419-8300
Telephone 919 632 6000

February 4, 1993

Mr. Gene Mullinix
1990 Rt. 94
Woodbine, MD 21797

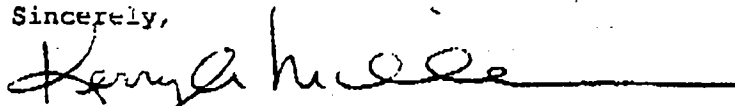
Dear Gene:

Results of water samples taken by you and received by us on December 18, 1992, are as follows:

Sample	- ppb - <u>Atrazine</u>	<u>Metolachlor</u>	ppm <u>Nitrate</u>
Applegate w/out Filter	16.	119.	31
Applegate w/ Filter	< 0.10	0.14	30
Dayhoff w/out Filter	15.	106.	51
Dayhoff w/ Filter	< 0.10	0.13	54
Wyant w/out Filter	4.2	70.	29
Wyant w/ Filter	< 0.10	< 0.10	30

I am glad we could be of assistance.

Sincerely,



Kerry A. Miller
Environmental Specialist

F4CB0204:KM

RS-WM-045-93, Inventory Number 14229.1

— METABOLITES —

Numeric ID#	Sample Description	RESULTS IN ppb			PARENT Atrazine
		G-28273	G-28279	G-30033	
98076	Applegate w/ Filter	<0.10	<0.10	<0.10	0.12
98077	Applegate w/o Filter	2.6	0.92	4.7	12 & 13 *
98078	Wyant w/ Filter	<0.10	<0.10	<0.10	<0.10
98079	Wyant w/o Filter	0.21	<0.10	1.1	1.8
98080	Dayhoff w/ Filter	<0.10	<0.10	<0.10	<0.10
98081	Dayhoff w/o Filter	1.1	0.44	3.6	12 & 12 *
98082	Mullinex Feed Lot	0.94	0.40	2.1	1.4
98083	Mullinex	2.5	0.47	2.3	1.6
-----	Control	<0.10	<0.10	<0.10	<0.10

* These residues were confirmed by injection of a diluted sample (use the first number if only reporting one)

Numeric ID#	Sample Description	RESULTS IN ppb	
		Metolachlor	Cyanazine
98076	Applegate w/ Filter	8.8	<0.10
98077	Applegate w/o Filter	100	1.1
98078	Wyant w/ Filter	<0.10	<0.10
98079	Wyant w/o Filter	59	<0.10
98080	Dayhoff w/ Filter	<0.10	<0.10
98081	Dayhoff w/o Filter	116	0.14
98082	Mullinex Feed Lot	1.7	<0.10
98083	Mullinex	0.87	<0.10
-----	Control	<0.10	<0.10

8/18/84

Had rec'd call from G. Easterday on 8/17 suggesting that this well be used as possible monitoring well for future state/EPA investigation.

Called Mark Cox (MDE 631-4888) & ran scenario by him. He would confer w/ Peggy Smith & check w/ EPA to see if there was an interest.

Called Easterdays - spoke w/ Sarah. Told them to hold off for now on the abandonment, would let them know when I heard from MDE.

9/8/84

Follow up call to Peggy Smith. She mentioned a couple of calls to EPA - she would check again today & get a final answer.

Peggy Smith called back - said EPA was NOT interested in using the well for monitoring purposes.

9/9/84

Spoke w/ Sarah & Easterdays. Told her EPA not interested in well. She said they'd go ahead and abandon well.



HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

August 5, 1994

Mr. & Mrs. William Applegate
1999 Route 94
Woodbine, MD. 21797

RE: Water Sample Results

Dear Mr. & Mrs. Applegate:

Enclosed are the test results for pesticide analyses and an evaluation for Nitrate concentration from samples taken on July 21st and July 22nd, 1994.

The pesticide samples were taken to evaluate current contamination levels in the existing well and examine whether the new well would be free of known contaminants. An initial sample was collected from both wells shortly after the pump test was started. This would allow for a baseline comparison of both wells. A follow-up sample of the new well was taken a little more than 24 hours later to examine the potential impact that extended pumping would have on the level(s) of known pesticides.

The Nitrate sample was from the new well and again, was intended to compare previously known elevated levels in the existing well with that of the new well.

The samples from the new well, as well as the sample from the existing well all revealed the presence of Atrazine, Alachlor and Metolachlor. Though levels of Atrazine and Alachlor were lower in the new well, levels of Metolachlor were higher than those detected in the existing well. Both Metolachlor levels in the new well also exceeded the current proposed level of 100 parts per billion (ppb). Additionally, test results for both new well samples were very similar, indicating that pumping had virtually no effect on influencing these levels. Meanwhile, the Atrazine level in the existing well (7.6 ppb) remains above the current maximum contaminant level (MCL) of 3 ppb. This means that appropriate water treatment remains necessary.

The Nitrate level also remained high - 31 parts per million (ppm). The current MCL for this parameter is 10 ppm. This finding was similar to previous Nitrate sample results of your existing well.

As we discussed in our telephone conversation earlier today, one of these wells (presumably the new one), will have to be abandoned. The abandonment can be performed by the well driller. This office should be notified when this is to occur.

A copy of each test report is enclosed for your records.

August 5, 1994

If you have further questions regarding this matter, please contact me at 313-2644.

Very Truly Yours,



Bert Nixon, Director
Community Env. Health Program

BN/bn

cc: Eric Dougherty, MDE, Ind. Septic Systems & Wells Program
Dave Kerr, MDE, Regional Consultant
Peggy Smith, MDE, Waste Mgmt., Env. Response & Restoration Program

enclosures

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehnen Joseph, Ph.D., Director.

89500006 521 8

LAB. NO. _____

PESTICIDES - DRINKING WATER

BOTTLE
NUMBER

L303:1111A 2-DUA #2

HOWARD

NAME OF COUNTY

SOURCE OF SAMPLE

1999 ROUTE 94
WOODBRIDGE MD

COLLECTOR

B NIXON (313-2644)

SAMPLE TYPE:

DISTRIBUTION

SOURCE

FRONT OUTSIDE
FAUCET

OTHER
(specify)

COMMUNITY

OTHER PUBLIC

PRIVATE

X

REMARKS:

SAMPLED FROM FRONT OUTSIDE FAUCET. FAUCET DOES
NOT APPEAR TO BE HOOKED UP TO EXISTING TREATMENT
IN BASEMENT.

SAMPLE INTENDED TO ESTABLISH COMPARISON BASELINE
FOR EXISTING & NEW WELLS. EXISTING WELL W/ PREVIOUS
PESTICIDE DETECTION

SAMPLE COLLECTED \approx 950 pm

1
TRANS
TYPE

2 3
13
COUNTY

4 5 6 7
PLANT NO.

8 9 10 11
SAMPLING
STATION

12 13 14 15 16 17
07 21 94
DATE COLLECTED

18 19
CARD
NO.

20 21 22
FIELD
PH

FIELD RESID. CHLORINE:FREE

23 24

25 26
TOTAL

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504			2, 4-D	602	
	CHLORDANE	514			2, 4, 5-T	614	
	D D T	523			2, 4, 5-TP	623	
	DIELDRIN	534			TOXAPHENE	634	
	ENDRIN	545		✓	ATRAZINE		0.007.6
	HEPTACHLOR	555		✓	ALACHLOR		0.001.59
	HEPTACHLOR EPOXIDE	565		✓	METOLACHLOR		0.089.3
	LINDANE	574					
	METHOXYCHLOR	582					
	ORGANOPHOSPHATE	592					
	ETHION						
	MALATHION						
	METHYL PARATHION						
	PARATHION						

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED

7-21-94

DATE REPORTED

8-2-94

CHEMIST

Berta H. TSIMERMAN

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

LAB. NO. 1950005 21
5 8

PESTICIDES - DRINKING WATER

BOTTLE
NUMBER

2-0106
L32

HOWARD
NAME OF COUNTY

SOURCE OF SAMPLE

1999 ROUTE 94
WOODBINE MD

COLLECTOR

B NIXON

SAMPLE TYPE:

DISTRIBUTION

SOURCE

PUMP
TEST

OTHER
(specify)

COMMUNITY

OTHER PUBLIC

PRIVATE

X

REMARKS:

REPLACEMENT WELL (HO-94-0106) WITH LOCATION +
WELL CONSTRUCTION INTENDED TO ELIMINATE PREVIOUSLY
DETECTED PESTICIDES IN EXISTING WELL

SAMPLE COLLECTED ^{NEAR} AT START OF EXTENDED WELL
PURGE FOR BASELINE LEVELS. PUMP TEST STARTED
830 am, SAMPLE TAKEN 930 am

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐
TRANS COUNTY PLANT NO. SAMPLING STATION DATE COLLECTED CARD NO.

20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐
FIELD pH FIELD RESID. CHLORINE:FREE TOTAL

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504			2, 4-D	602	
	CHLORDANE	514			2, 4, 5-T	614	
	D D T	523			2, 4, 5-TP	623	
	DIELDRIN	534			TOXAPHENE	634	
	ENDRIN	545		✓	ATRAZINE		0.0015
	HEPTACHLOR	555		✓	ALACHLOR		0.000364
	HEPTACHLOR EPOXIDE	565		✓	METOLACHLOR		0.1093
	LINDANE	574					
	METHOXYCHLOR	582					
	ORGANOPHOSPHATE	592					
	ETHION						
	MALATHION						
	METHYL PARATHION						
	PARATHION						

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED

July 21 1994

DATE REPORTED

8-2-1994

CHEMIST

Berta M. - Tsimerman

Send Report to: B. Nixon

Bureau of Environ. Health

STATE OF MARYLAND

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration

201 W. Preston St.

P.O. Box 2355, Baltimore, Maryland 21203

J. Mehser Joseph, Ph.D., Director

A950007 422 8

3525-H Elliott Mills Dr.

Ellicott City 21043

PESTICIDES - DRINKING WATER

BOTTLE NO. L29 COUNTY HOWARD LAB. NO. _____

SOURCE OF SAMPLE 1999 ROUTE 94 WOODBINE COLLECTOR B NIXON 313-2644

SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE PUMP OTHER (specify) _____

COMMUNITY _____ OTHER PUBLIC _____ PRIVATE ☒

REMARKS: FOLLOW UP SAMPLE - END OF EXTENDED WELL PURGE
SAMPLE TO SEE IF ANY IMPACT OF USE ON EXISTING
AREA PESTICIDE DETECTION
SAMPLE COLLECTED 955 AM
HO 94 0106

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐

TRANS. TYPE 13 COUNTY 13 PLANT NO. 07 22 94 SAMPLING STATION 07 22 94 DATE COLLECTED 07 22 94 CARD NO. _____

FIELD pH 20 21 22 FIELD RESID. CHLORINE: FREE 23 24 TOTAL 25 26

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504			2, 4-D	602	
	CHLORDANE	514			2, 4, 5-T	614	
	D D T	523			2, 4, 5-TP	623	
	DIELDRIN	534			MISCELLANEOUS		
	ENDRIN	545		✓	ATRAZINE		0.00102
	HEPTACHLOR	555		✓	ALACHLOR		0.0003
	HEPTACHLOR EPOXIDE	565		✓	METOLACHLOR		0.1109
	LINDANE	574					
	METHOXYCHLOR	582					
	TOXAPHENE	634					
	ETHION						
	MALATHION						
	METHYL PARATHION						
	PARATHION						

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED 7-22-1994 DATE REPORTED 8-2-94 CHEMIST Berta M. Tsimerhau

0300339 426

WATER ANALYSIS

Do not write above this line.

CS:11MA 1-30A

S A M P L E I D	Bottle Number	HO-APP-1		Name	APPLEGATE, WILLIAM		County	HOWARD	County Code	13	
	Source	1999 ROUTE 94 WOODBINE, MD 21797						Date Category Code	4F		
	Collected: Date	7/22/94		Time	955		Collector & Phone	B NIXON 313-2644		Submitter Code	
	CHECK (one per box)										
	Drinking Water	<input checked="" type="checkbox"/>	Community Non-community Private Other	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Source (raw water) Distribution (treated) MCL	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Emergency Routine Recheck Special	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Federal Project	<input type="checkbox"/>	

F I E L D	Plant No.		Sampling Station		Preservation: Iced	<input checked="" type="checkbox"/>	Acid	<input checked="" type="checkbox"/>	Type of Acid	H ₂ SO ₄
	pH	6.4	Chlorine: Free		Total		Specific Conductance			
	Notes to Lab/Remarks: HC-94 0106 REPLACEMENT WELL									
	END OF EXTENDED PURGE OF WELL									

CHECK TESTS	TESTS	CODES	ERROR CODE	G/L	RESULTS	DATE ANALYZED	ANALYST INITIALS
	Alkalinity (Total)	00410					
	Alkalinity, Ca CO ₃ Sat.	74023					
	Ammonia - N	00608					
	Chloride	00940					
	Color*	00081					
	Conductance*, spec.	00095					
	Dissolved Solids	70300					
	Hardness	00900					
	Fluoride	00951					
	Nitrite, N	00615					
<input checked="" type="checkbox"/>	Nitrate - Nitrate, N	00630			31.0	7-26-94	BR
	pH*, Ca CO ₃ SAT	70311					
	Sulfate	00945					
	Total Solids	00500					
	Turbidity*	00076					
	Other:						
	Result phoned to Mr. Nixon on 7/26/94.						
	W.F. Rencche						

Results reported in Units, all others in milligrams per liter (ppm)

Asoka I. Katumuluwa

Date Reported

JUL 28 1994

Number of Tests Requested 01

Section Chief

RECEIVED
HOWARD COUNTY
HEALTH DEPT.

94 AUG -1 AM 11:25

Partial List of Submitter Codes

Code Description

1-30 County Codes
41 Individual Septics & Wells Program
42 Water Supply Program
43 Recreational Sanitation & Migrant
Camps, DHMH
44 STP Inspection Division
45 Hazardous & Solid Waste Admin.
(Landfill Samples)
46 Pre-Treatment Enforcement Division
48 Licensing and Certification, DHMH
52 Water Quality Monitoring Program

Code Description

53 Chesapeake Bay & Special Projects
59 Standard & Certification Program
63 Division of Food Control
64 Engineering & Maintenance, DHMH
65 Division of Community Services
66 Office of Attorney General
67 Dept. of General Services
77 E.P.A.
91 State Highway Administration
96 L.U.S.T./U.S.T./CERCLA
99 Unknown

Codes for Federally Funded Projects (leave box blank if not federal)

Code Description

S Safe Drinking Water Act (SDWA)

R Resource Conservation and
Recovery Act (RCRA)

Code Description

N National Pollution Discharge
Elimination System (NPDES)

M Miscellaneous (Other)

Partial List of Data Category Codes

Code Description

1F Sediment Samples
2A Industrial Effluents/Compliance
2B Industrial Grab
2C Municipal Compliance
2D Municipal Grab
4A MCL Surveys
4B Routine Monitoring & Other
Communities
4D Potable - County Community
4E Potable - Non Community
4F Potable - Private Wells
4G Real Estate Trans./Charge Samples

Code Description

2F Innovative Disposal
5A Solid Waste/Landfills
5B Kidney Dialysis
5C Commercial Bottled Waters
5D Misc. Wastewaters
5E Misc. River/Stream
5F Misc. Drinking Water
5G Swimming Pools
5H Marine or Estuarine Natural Bathing
Areas

Partial List of Error Codes

Code Description

A -Laboratory Accident
C Mechanical/Materials failure
D Insufficient Sample
E Sample past holding time

Code Description

J Wrong sample type
RR No sample received
X Improper preservation
LL Mislabelled sample



MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

William Donald Schaefer
Governor

David A.C. Carroll
Secretary

MEMORANDUM

TO: Dave Kerr, Regional Consultant
Individual Septic Systems and Wells Program

FROM: Eric Dougherty, geologist
Individual Septic Systems and Wells Program *CAD*

SUBJECT: Applegate Property, Route 94 & Mullinix Road, Howard County

DATE: 27 May 1994

On 24 May 1994, I met with Bert Nixon, Director, Community Environmental Health Services, Howard County Health Department, and you to discuss the Applegate Property domestic water well and the possibility of drilling a replacement well. My meeting and field notes are attached.

Bert Nixon was interested in receiving guidance in three areas: 1) where on the property could a replacement well be considered; 2) any special well construction requirements; and, 3) acceptable water quality standards for contaminants of concern. My recommendations follow:

1. My recommendation would be to consider siting a replacement well along the north property line (where the pool is) to the back corner of the property.
2. I cannot find any well permit data for Eldred Donald Warfield or combinations thereof, for the period of 1945 to 1980. Therefore, if a permit was obtained, the owners name is not as indicated above. Other well permits for Warfield in the general area of the property range in depth from 58 feet to 102 feet. One well in Daisy to Warfield, drilled in 1973, is 250 feet. Since the actual depth is unknown (reported between 65 to 85 feet) and records are not available, the actual depth will need to be determined.

My recommendation would be to drill to the depth of the existing well and case off and grout. Then after the grout has set, continue drilling with washed tools, until desired depth is reached and add additional casing if needed.

3. COMAR 26.04.04.09 - Approval of Well for Use as Potable Water Supply - states that the water shall meet the maximum contaminant limits of COMAR 26.04.01, therefore the water produced from any replacement well should be sampled for the contaminants of concern and the concentrations should be below the MCLs prior to a certificate of potability being issued. The State lab should be contacted to determine if the lab can analyze the water for the contaminants of concern. If the lab cannot analyze the water, the property owner would have to supply the needed analytical results.

If you have any questions, please feel free to contact me at 1-800-633-6101 x3784 or 410-631-3784.
Thank you.

Howard County

24 May 1994
MULNICK Property Well

WELL STUFF

Computer: DBase Administration III+

Inspection:

BERT Nixon, Ho Co

Director, Community Envir Health

- MDE has file Peggy Smith, MDE WAS

- Applegate property - he wants replacement well for existing house

- MULLINX FARM source of pesticide (been determined)

- Atrachlor MCL - 2ppb

- Atrazine MCL - 3ppb

- Metalachlor MCL - HA 100ppb

HISTORY

- on farm small house - daughter lived there - son-in-law worked farm, sampled well through Co - Co found 2 Bact (Pesticide / NO₃) (pit well)

County did initial sampling, sampled neighbor (4) properties found Pesticides / NO₃

Applegate + 3 others → 2+, 2-; more rounds, more houses, 3 total properties affected →

24 May - 16:35

- Dept Ag involved early on (1989 - 1990 work)
regulate pesticides →

= 2 =

24 MAY 94

Howard County Pesticide Well Contamination
Applegate Property - MULLINIX FARM

MULLINIX Farm sort of distribution center { mix ctr.
i.e. found in 1980 ± had spill - par clean up expected
also spill on Rt 94

- Ag & direct help { limited \$ confersent

- Stopped pesticide work @ site

- UST petroleum tanks on property - pulled leak found

- new well on Mullinix Farm for house to replace
p.t. well

- new well samples - ok (think)

- other properties → 9-10 homes total sampled; Cercus,
GW Investigator Group, Central Prairie, Marylin
Adams;

- Public Meeting w/ Frank Henderson { home owners, talk of new
of NPL site etc. - old site where burn
old pesticide boxes of concern

- Manufactures → brought in - GAC units installed in
affected homes { pesticide monitoring

Mullinix Farm /
Applegate Property

= 3 =

24 May 94

December 1993 → USEPA, { WAS CALLED } wanted information
on site - WAS thinking about doing something in
yr. or two -

- Applegate wants to sell property & move i.e. wants new
well to possibly miss pesticides/VOC etc.

- Ho Co. concerned about enough room on property, specially
contaminated - called in Dave Kerr

OLD WELL - in basement of house, 65 ft ± TD ?
- 1 ac lot 85 ft ± TD ?
- house 30 yrs ±
- 1988 VOC - P.D.

- Ho County looking for:

- construction guidance
- water quality stds - acceptance.

[EASEMENTS → other properties appear not affected, but not sure of
relation & potential of easements]

Rt 94 { AE Mullinix ^{CR 201} - corner, Woodbine Po.
6.4 3.51

1999 Kt 94 (WOODBINE ROAD)

K+ 94 (WOODBINE ROAD)

Applegate Property

1954 owner (new) ^{EID RED} Donald Whitefield

Eldred D. WARFIELD original owner

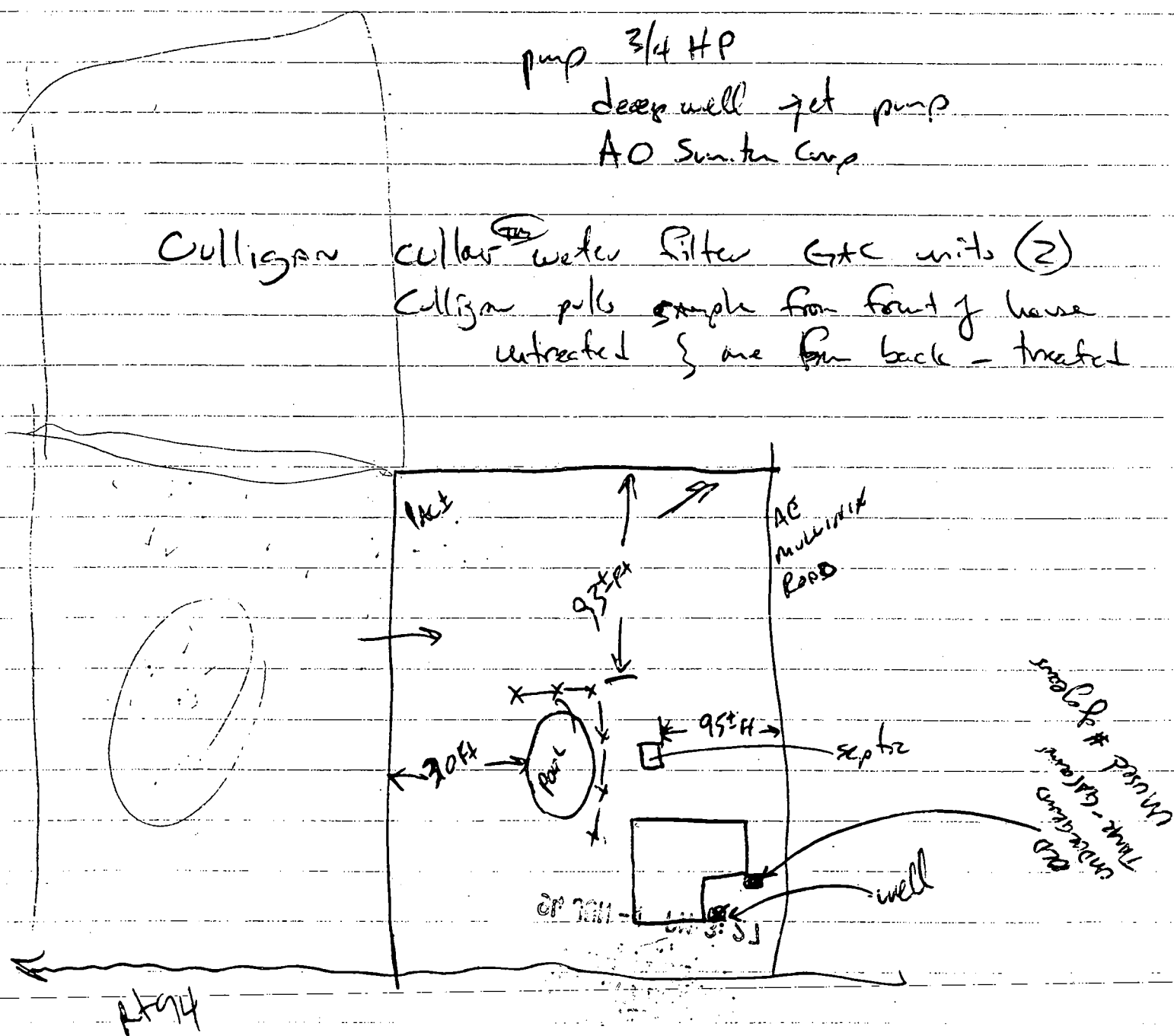
imp 3/4 HP

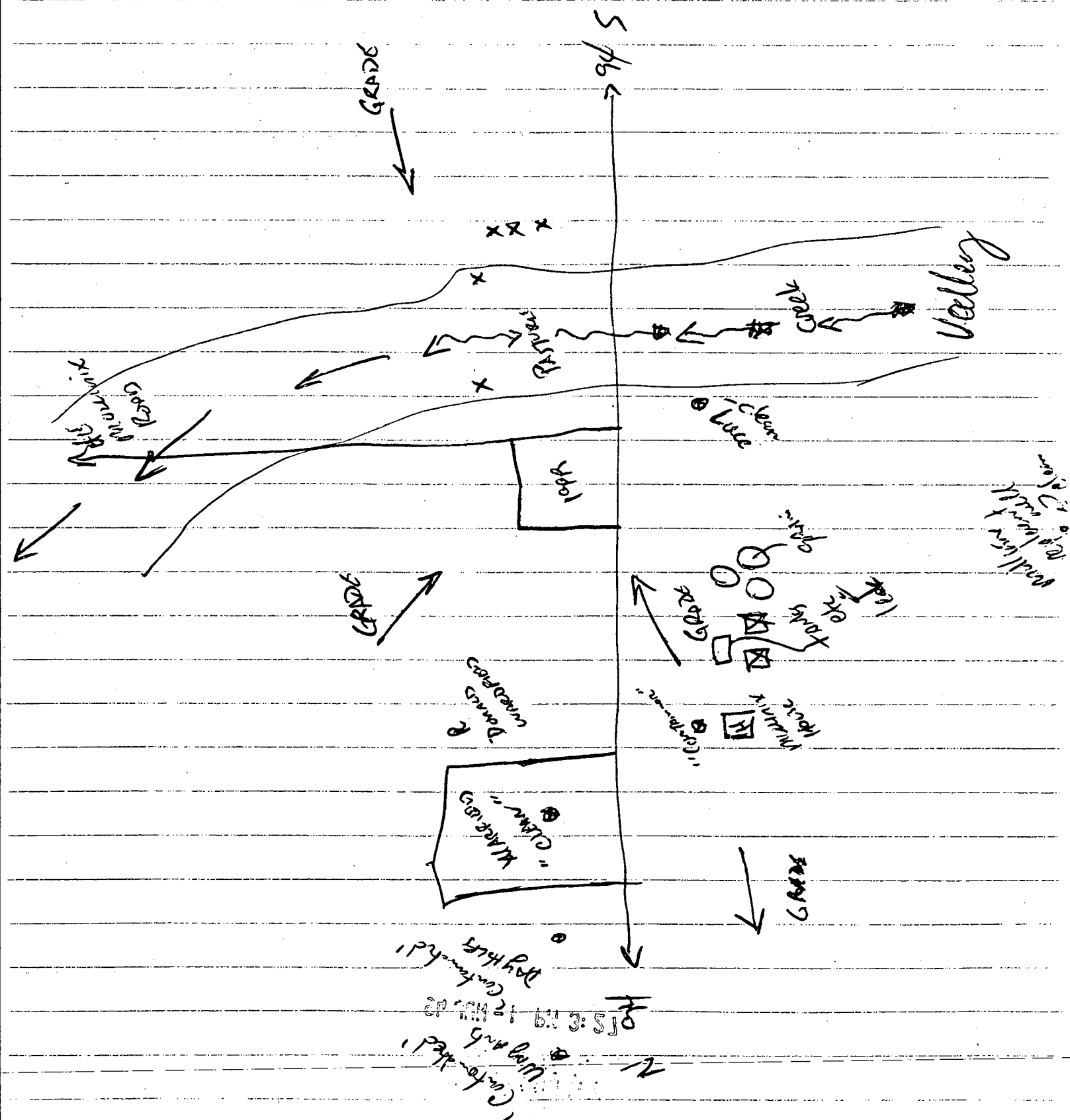
deep well get pump

AO Summer Camp

Culligan collar ^{TR} water filter GAC units (2)

Collagen pulp sample from front of horse
untreated } are for back - treated





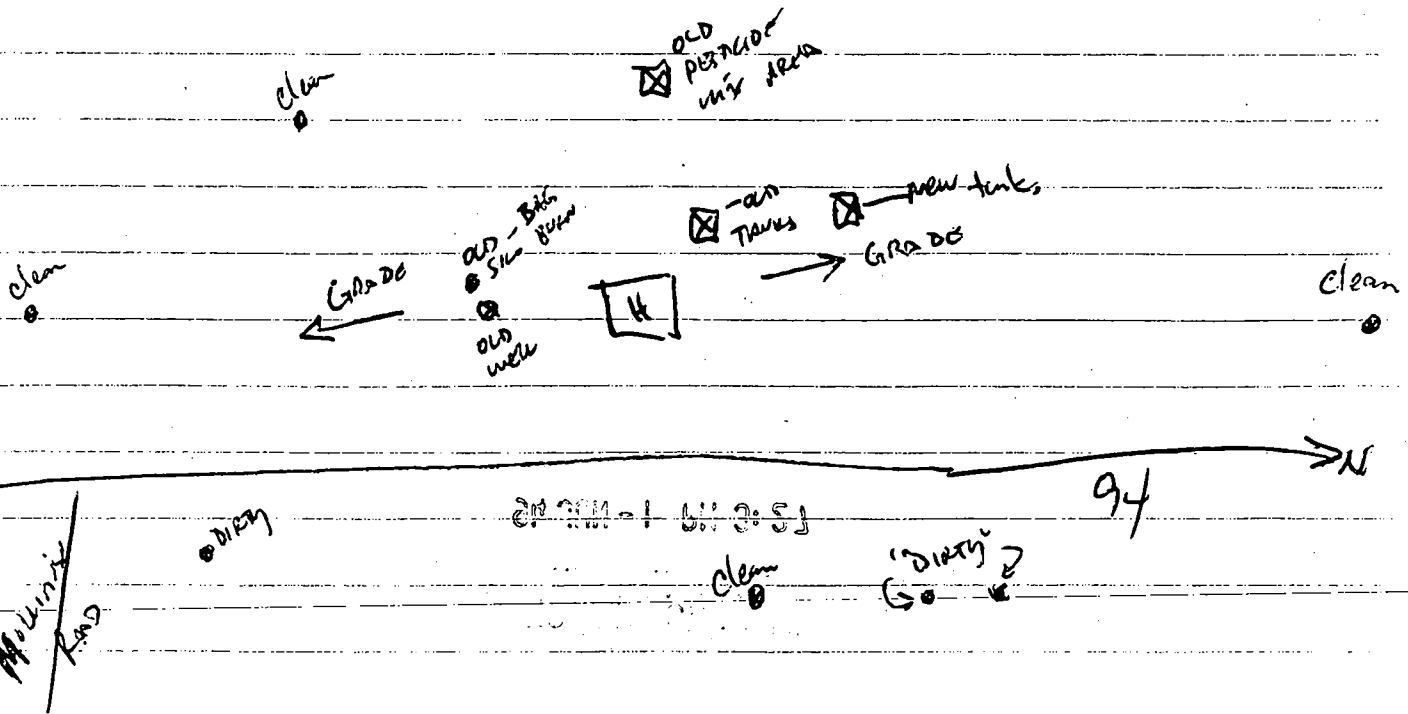
Appropriate Cell data -

JUN 1992 DATA (Sept 91)

Row: CO.1 ATRAZINE prob
 0.23 Methaldoln prob
 1.9 ALACHOR

Row Dec 92 sample

16 ppb ATRACINE
119 ppb METOLADOLIN



Howard County Health Department

To: _____

		Raw	Med	Treat
9/25/91	Ciba Geigy			
	?(sample error	4.1	11	4.1 AT
	w/ raw & med)	1.9	ND	4.1 AL
		0.23	163	0.12
2/91	? (RAW)	14.3	RT	
		3	AL	
		118	MET	
10/2/90	H.D. (POST)	4.0008		
		4.00008		
		4.0002		

From: _____

Date: _____

HD-170

Sample Date	Sampled by	Results
6/2/94	MDE	≈ 6 ppb AT ≈ 1 AL 53 M (RAW WATER)

3/23/95 (Mullinix)

(TREATED WATER)

7/21 + 22/94	H.D.	7/21	7/22
NEW WELL (RAW)		1.5 AT	1 AT
		0.36 AL	0.3 AL
		109.3 M	110 M
EXISTING (RAW)		7.6 AT	
		1.5 AL	
N = 31 ppm		89.3 M	

12/17/92	CISA 68167	RAW	TREATED
		4.6 AT	2.1 AT
		129 M	0.14 M

7/8/96

345

Peggy Smith

631-3493

MDE

Wants to talk about

Pesticides

Asking if we knew last time
wells were sampled.

Told her we sampled last
summer - things (levels) appeared
consistent w/ past tests
Not aware of any recent sampling.

HOWARD COUNTY HEALTH DEPARTMENT

Date _____

To: _____

From: _____

- | | |
|--|--|
| <input type="checkbox"/> For your information | <input type="checkbox"/> Please handle |
| <input type="checkbox"/> Please note & file | <input type="checkbox"/> Please circulate |
| <input type="checkbox"/> Please note & return | <input type="checkbox"/> Please distribute |
| <input type="checkbox"/> Please comment | <input type="checkbox"/> Please see me |
| <input type="checkbox"/> Please sign & return | <input type="checkbox"/> As requested |
| <input type="checkbox"/> Please prepare reply for my signature | |
| <input type="checkbox"/> Please answer, sending me copy of your letter | |

REMARKS:

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

LAB. NO. _____

PESTICIDES - DRINKING WATER

BOTTLE NUMBER L32

HOWARD
NAME OF COUNTY

SOURCE OF SAMPLE 1999 ROUTE 94 WOODBINE MD COLLECTOR B NIXON

SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE PUMP TEST OTHER (specify) _____

COMMUNITY _____ OTHER PUBLIC _____ PRIVATE X

REMARKS: REPLACEMENT WELL (HO-94-0106) WITH LOCATION & WELL CONSTRUCTION INTENDED TO ELIMINATE PREVIOUS DETECTED PESTICIDES IN EXISTING WELL

SAMPLE COLLECTED NEAR START OF EXTENDED WELL PURGE FOR BASELINE LEVELS. PUMP TEST STARTED 830 am, SAMPLE TAKEN 930 am

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐
TRANS COUNTY PLANT NO. SAMPLING STATION DATE COLLECTED CARD NO.

20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐
FIELD PH FIELD RESID. CHLORINE:FREE TOTAL

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504	_____		2, 4-D	602	_____
	CHLORDANE	514	_____		2, 4, 5-T	614	_____
	D D T	523	_____		2, 4, 5-TP	623	_____
	DIELDRIN	534	_____		TOXAPHENE	634	_____
	ENDRIN	545	_____	✓	ATRAZINE		_____
	HEPTACHLOR	555	_____	✓	ALACHLOR		_____
	HEPTACHLOR EPOXIDE	565	_____	✓	METOLACHLOR		_____
	LINDANE	574	_____				_____
	METHOXYCHLOR	582	_____				_____
	ORGANOPHOSPHATE	592	_____				_____
	ETHION		_____				_____
	MALATHION		_____				_____
	METHYL PARATHION		_____				_____
	PARATHION		_____				_____

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED _____ DATE REPORTED _____ CHEMIST _____

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehseu Joseph, Ph.D., Director

LAB. NO. _____

PESTICIDES - DRINKING WATER

BOTTLE
NUMBER

L33

SOURCE OF SAMPLE

1999 ROUTE 94
WARRING MD

COLLECTOR

B NIXON

NAME OF COUNTY

HOWARD
(313-2644)

SAMPLE TYPE:

DISTRIBUTION

SOURCE

FRONT OUTSIDE
FAUCET

OTHER
(specify)

COMMUNITY

OTHER PUBLIC

PRIVATE

X

REMARKS:

SAMPLED FROM FRONT OUTSIDE FAUCET. FAUCET DOES
NOT APPEAR TO BE HOOKED UP TO EXISTING TREATMENT
IN BASEMENT.

SAMPLE INTENDED TO ESTABLISH COMPARISON BASELINE
FOR EXISTING & NEW WELLS. EXISTING WELL W/ PREVIOUS
PESTICIDE DETECTION

SAMPLE COLLECTED \approx 950 AM

1
☐
TRANS
TYPE

2 3
13
COUNTY

4 5 6 7
☐☐☐☐
PLANT NO.

8 9 10 11
☐☐☐☐
SAMPLING
STATION

12 13 14 15 16 17
07 21 94
DATE COLLECTED

18 19
☐☐
CARD
NO.

FIELD
PH 20 21 22
☐☐☐

23 24
☐☐
FIELD RESID. CHLORINE:FREE

25 26
☐☐
TOTAL

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504	_____		2, 4-D	602	_____
	CHLORDANE	514	_____		2, 4, 5-T	614	_____
	D D T	523	_____		2, 4, 5-TP	623	_____
	DIELDRIN	534	_____		TOXAPHENE	634	_____
	ENDRIN	545	_____	✓	ATRAZINE		_____
	HEPTACHLOR	555	_____	✓	ALACHLOR		_____
	HEPTACHLOR EPOXIDE	565	_____	✓	MITOZACHLOR		_____
	LINDANE	574	_____				_____
	METHOXYCHLOR	582	_____				_____
	ORGANOPHOSPHATE	592	_____				_____
	ETHION		_____				_____
	MALATHION		_____				_____
	METHYL PARATHION		_____				_____
	PARATHION		_____				_____

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED

DATE REPORTED

CHEMIST

TODAY

829-1640

MON ☐ TUE ☐ WED ☐ THU ☐ FRI ☐ SAT ☐ SUN ☐

IMPORTANT TODAY

DATE

TIME	APPOINTMENTS	ACTION RECORD	5 HOURS	A BC
	CHECK ✓ MEMO-RY			
6 AM		Howard County Health Dept.		
7				
8		Don't turn valve off at pump.		
9		Hose belongs to owners - contaminated H ₂ O has been in it		
10		If need to disconnect, turn off breaker then disconnect hose for sample.		
11		(Bottom Right breaker in basement) Come in back door, go to room on left.		
12 NOON		Pump has been running since 8 ³⁰ A		
1				
2				
3				
4				
5				
6 EVE				
7				
8				

SUMMARY MONEY / EXPENSES / ETC.

SEE TOMORROW'S SCHEDULE

TOTAL

TODAY

IMPORTANT TODAY

DATE

MON ☐ TUE ☐ WED ☐ THU ☐ FRI ☐ SAT ☐ SUN ☒

TIME ↓

APPOINTMENTS

ACTION RECORD

5 HOURS

A
BC ☒

6 AM

CHECK
MEMORY

7

8

9

10

11

12 NOON

1

2

3

4

5

6 EVE

7

8

SUMMARY MONEY / EXPENSES / ETC.

SEE TOMORROW'S SCHEDULE

TOTAL



HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

August 24, 1995

Mr. & Mrs. William Applegate
1999 Route 94
Woodbine, MD 21797

RE: Water Sample Results

Dear Mr. & Mrs. Applegate:

Back on July 5, 1995, the Health Department collected pre and post-treatment samples for herbicides previously shown to be affecting your well water supply. These samples were collected to provide independent assessment of the existing carbon treatment, as well as ascertain current levels of contamination of the ground water supply.

Results (received by our office on August 24, 1995) revealed the following:

	Pre-Treatment (ppb)*	Post Treatment (ppb)
Atrazine	12.8	<0.4
Alachlor	2.22	<0.6
Metolachlor	98.2	<2.0

*ppb = parts per billion

Test results of the raw water show that at the time of testing, both Atrazine and Alachlor were above their respective maximum contaminant levels (MCL's). For Atrazine, the MCL is 3.0 ppb, while Alachlor is 2.0 ppb. Metalachlor was found at a level just below the 100 ppb benchmark established by the Environmental Protection Agency as protective of human health. Finally, Toxaphene (a compound added to the analysis at your request), was found below the limit of detection for the test method employed.

Bureau of Environmental Health

3525-H Ellicott Mills Drive Ellicott City, Maryland 21043-4544
Water and Sewerage, Permits (410) 313-2640 Community Environmental Health (410) 313-2644
Food Protection Program (410) 313-2642 TDD (410) 313-2323

August 24, 1995

Test results for the post-treatment sample were all below the limit of detection for the test methods employed. Therefore, at the time of testing, the carbon treatment was effective in the removal of these compounds.

A copy of each test report is enclosed for your records.

If you should have any questions, you may contact me at 313-2644 between 8:30 a.m. and 5:00 p.m..

Very truly yours,



Bert Nixon, Director
Community Env. Health Program

BN/vf

cc: Wade Gallagher, Esq.
Gene Mullinix

SEND REPORT TO:

STATE OF MARYLAND

Lab No. / Date Received

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
3525-N ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD 21043

DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

PESTICIDES—DRINKING WATER

Do not write above this line

Data Category Code

4F

Bottle Number: HO-APPELATE-PRE Name: WM APPELATE County: HOWARD

Source of Sample: OUTSIDE FRONT-1999 ROUTE 94, WOODBINE, MD Collector: B. MORTON
Street Town or City (Include Sanitarian ID Number)

- ☒ Private
☐ Community
☐ Non-Community

13

County

—

Plant No.

—

Sampling Station

070595

Date Collected

Date & Time are Required for Valid Samples

0830

Time Collected

SAMPLE TYPE

- ☒ Source (Raw Water)
☐ Distribution (Treated)
☐ Water Treatment Plant (P.O.E. to Distribution)

Field Data

6.3

pH

Chlorine Residual

0.000

Free Total

PRESERVATIVE USED

(Preservation Information on Back)

Remarks:

PRE-SAMPLE - MULLINIX SURVEY

METHOD

DATE EXTRACTED

DATE ANALYZED

X	EPA ID	MCL ¹ *	CONTAMINANT	RESULTS ¹
	2105	70	2,4-D	
	2031	200	Dalapon	
			2,4-DB	
	2440		Dicamba	
	2041	7.0	Dinoseb	
	2326	1.0	Pentachlorophenol	
	2040	500	Picloram	
	2111		2,4,5-T	
	2110	50	2,4,5-TP (Silvex)	

METHOD

507

DATE EXTRACTED

7-12-95

DATE ANALYZED

8-11-95

X	EPA ID	MCL ¹ *	CONTAMINANT	RESULTS ¹
X	2051	2.0	Alachlor	2.22
X	2050	3.0	Atrazine	12.8
			Butachlor	
	2056		Diazinon	
X	2045		Metolachlor	98.2
			Metribuzin	
			Propachlor	
	2037	1.0	Simazine	

—Micrograms per liter

—Maximum Contaminant Level
Regulated Contaminant

METHOD

508

DATE EXTRACTED

7-12-95

DATE ANALYZED

8-3-95

X	EPA ID	MCL ¹ *	CONTAMINANT	RESULTS ¹
	2356		Aldrin	
	2959	2.0	Chlordane	
	2057		Chlorpyrifos (Dursban)	
	2070		Dieldrin	
	2005	2.0	Endrin	
	2065	0.4	Heptachlor	
	2067	0.2	Heptachlor Epoxide	
	2274	1.0	Hexachlorobenzene	
	2042	50	Hexachlorocyclopentadiene	
	2010	0.2	Lindane	
X	2015	40	Methoxychlor	
X	2020	3.0	Toxaphene	<1.0
	2384	0.5	PCB (Decachlorobiphenyl)	
X			CYANAZINE	NA

Supervisory Chemist

Date Reported

8-24-95

PHILADELPHIA POLICE DEPARTMENT
LABORATORY DIVISION
PHILADELPHIA, PENNSYLVANIA
19104-4000

Samples must be preserved as follows:

1. Use a 4 liter glass bottle with a teflon-lined lid.
2. Determine if residual chlorine is present.
3. If residual chlorine is present, add sufficient sodium thiosulfate to the bottle to reduce the chlorine prior to collecting the sample.
4. Add 1 vial of mercuric chloride (2 ml of 20 mg/ml) to the sample.
5. Shake bottle to mix sample and preservatives.
6. Samples must be iced or refrigerated at 4°C during shipping. Coolers and ice must be used. Cold packs are not acceptable.

95 AUG 24 PM 3:11

SEND REPORT TO:

STATE OF MARYLAND

Lab No. / Date Received

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
3525-H ELLICOTT HILLS DRIVE
ELLICOTT CITY, MD 21043

DEPARTMENT OF HEALTH AND MENTAL HYGIENE
 Laboratories Administration
 201 W. Preston St.
 P.O. Box 2355, Baltimore, Maryland 21203
 J. Mehnen Joseph, Ph.D., Director

4960036 3-5 19
 Do not write above this line

Invoice No. _____

PESTICIDES—DRINKING WATER

Data Category Code **4F**

Bottle Number: **HO-APPLEGATE** Name: **WM. APPEL GATE** County: **HOWARD**

Source of Sample: **KITCHEN • 1999 ROUTE 94, WOODBINE, Md** Collector: **B. MORTON**
Street Town or City (Include Sanitarian ID Number)

- ☒ Private
☐ Community
☐ Non-Community

13
 County

 Plant No.

 Sampling Station

070595
 Date Collected

Date & Time are Required for Valid Samples
0830
 Time Collected

SAMPLE TYPE

- ☒ Source (Raw Water)
☐ Distribution (Treated)
☐ Water Treatment Plant
 (P.O.E. to Distribution)

Field Data: **6.6** pH
 Chlorine Residual: **0.9** Free **0.0** Total

PRESERVATIVE USED

(Preservation Information on Back)

Remarks: _____

POST SAMPLE - MULLINIX SURVEY

METHOD _____

DATE EXTRACTED _____

DATE ANALYZED _____

X	EPA ID	MCL ¹ *	CONTAMINANT	RESULTS ¹
	2105	70	2,4-D	
	2031	200	Dalapon	
			2,4-DB	
	2440		Dicamba	
	2041	7.0	Dinoseb	
	2326	1.0	Pentachlorophenol	
	2040	500	Picloram	
	2111		2,4,5-T	
	2110	50	2,4,5-TP (Silvex)	

METHOD **507**DATE EXTRACTED **7-12-95**DATE ANALYZED **8-11-95**

X	EPA ID	MCL ¹ *	CONTAMINANT	RESULTS ¹
X	2051	2.0	Alachlor	<0.6
X	2050	3.0	Atrazine	<0.4
			Butachlor	
	2056		Diazinon	
X	2045		Metolachlor	<2.0
			Metribuzin	
			Propachlor	
	2037	1.0	Simazine	

METHOD **508**DATE EXTRACTED **7-12-95**DATE ANALYZED **8-3-95**

X	EPA ID	MCL ¹ *	CONTAMINANT	RESULTS ¹
	2356		Aldrin	
	2959	2.0	Chlordane	
	2057		Chlorpyrifos (Dursban)	
	2070		Dieldrin	
	2005	2.0	Endrin	
	2065	0.4	Heptachlor	
	2067	0.2	Heptachlor Epoxide	
	2274	1.0	Hexachlorobenzene	
	2042	50	Hexachlorocyclopentadiene	
	2010	0.2	Lindane	
	2015	40	Methoxychlor	
X	2020	3.0	Toxaphene	<1.0
	2384	0.5	PCB (Decachlorobiphenyl)	
X			CYANAZINE	NA

¹—Micrograms per liter

^{*}—Maximum Contaminant Level
 Regulated Contaminant

Supervisory Chemist **Jonathan P. Smith**Date Reported **8-24-95**

Samples must be preserved as follows:

1. Use a 4 liter glass bottle with a teflon-lined lid.
2. Determine if residual chlorine is present.
3. If residual chlorine is present, add sufficient sodium thiosulfate to the bottle to reduce the chlorine prior to collecting the sample.
4. Add 1 vial of mercuric chloride (2 ml of 20 mg/ml) to the sample.
5. Shake bottle to mix sample and preservatives.
6. Samples must be iced or refrigerated at 4°C during shipping. Coolers and ice must be used. Cold packs are not acceptable.

55 AUG 24 PM 3:11

07765

SEQUENCE NO
(DP USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please print or type

STATE PERMIT NUMBER
40-94-0706
fill in this form completely

Date Received (APA)
06/21/94

OWNER INFORMATION
APPROPRIATE WILLIAM
1999 ROUTE 94
WOODBRIDGE MD 21792

DRILLER INFORMATION
George F. Easterday
L. F. Easterday, Inc.
Mr. Amy Md 21721
George F. Easterday 6-20-94

WELL INFORMATION
APPROX. PUMPING RATE (GAL PER MIN.)
AVERAGE DAILY QUANTITY NEEDED (GAL PER DAY)

USE FOR WATER (CIRCLE APPROPRIATE BOX)
HOME (SINGLE OR DOUBLE HOUSEHOLD UNIT ONLY)
FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
INDUSTRIAL, COMMERCIAL, STATE AND FEDERAL GOV. OTHER (REQUIRES APPROPRIATION PERMIT)
PUBLIC OR PRIVATE WATER COMPANY (REQUIRES APPROPRIATION PERMIT AND STATE HEALTH DEPARTMENT APPROVAL)
TEST OBSERVATION MONITORING (MAY REQUIRE APPROPRIATION PERMIT)

APPROXIMATE DEPTH OF WELL
APPROXIMATE DIAMETER OF WELL

METHOD OF DRILLING (circle one)
BORED TO AUGERED
JETTED
JETTED & DRIVEN
AIR ROTARY
AIR PERCUSSION
ROTARY (Hydraulic Rotary)
CABLE
REVERSE ROTARY
DRIVE POINT
Other

REPLACEMENT OR DEEPENDING WELLS
(CIRCLE APPROPRIATE BOX)
THIS WELL WILL NOT REPLACE AN EXISTING WELL
THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY
THIS WELL WILL DEEPEN AN EXISTING WELL
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENDING (IF AVAILABLE)

Not to be filled in by driller (QEP USE ONLY)
APPROX. PERMIT NUMBER
FORCE MAJEURE PERMITTING

SPECIAL CONDITIONS
DETAILED PUMP TEST, SELECT SAMPLING PARAMETERS

LOCATION OF WELL
Howard
COUNTY
SUBDIVISION
SECTION
LOT
LISBON
62 NEAREST TOWN
MILES FROM TOWN (enter 0 if in town)
DIRECTION OF WELL FROM TOWN (CIRCLE BOX)
NEAR WHAT ROAD
ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
DISTANCE FROM ROAD
ENTER FT. or MI.

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL
Howard
COUNTY NAME
STATE SIGNATURE
DATE ISSUED
NORTH GRID
EAST GRID

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X
SOURCES OF DRILLING WATER
WRITE THE BOX NUMBER FROM THE MAP HERE
DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION

ORIGINAL



HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

June 8, 1994

TO: Peggy Smith
MDE Waste Management Admin.

FROM: Bert Nixon *(Signature)*
Howard County Env. Health

SUBJECT: Replacement Well for William Applegate Residence

On May 24, 1994, a site visit was performed at the Applegate residence in an effort to determine a possible replacement well site for this property. Mr. Dave Kerr (Regional Consultant for MDE's Individual Septic Systems and Wells Program) along with Mr. Eric Dougherty (Geologist for the same program) accompanied me to the site.

Based upon this visit, a proposed well site was determined. Additionally, Mr. Dougherty has forwarded some recommendations regarding well construction of the replacement well.

Earlier today, I spoke with Mr. Applegate and apprised him of things. Apparently, he has selected a driller (though did not have his name readily available) and based upon final site selection, will likely plan to move ahead. I suggested one last site meeting to verify septic issues and to discuss with the driller, the recommendations for well construction. I anticipate this action to occur soon.

Mr. Applegate is aware that even with our best efforts to provide for a "clean" water supply, drilling this well will not necessarily accomplish this. But I wanted you to know, that by all indications, a replacement well will be drilled. Depending upon the timing of these events, sampling of the new supply will occur during a pump test of this well.

If you have any questions regarding this matter, contact me at 313-2644.

BN/bn

cc: Dave Kerr
Eric Dougherty
Kim Soe

5/24/94 cont'd

particularly since they were planning to sell property.

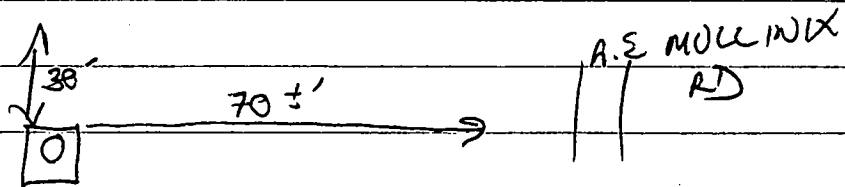
Eric + Dave felt ^{left} rear corner (behind the pool when facing from Rts 94) may be best spot. Final decision will be based on additional septic info as well as info on adjacent field to ^{possible} proposed new site. Suppose to hear back from Mrs Applegate. Eric to prepare report w/ recommendations.

6/1/94

rec'd info from Eric D.

6/2

Spoke w/ Bill Applegate. Told me there were 2 trenches off septic tank. Coming off at 90° to tank. This complicates to some extent,



the proposed location of replacement well as ~~so~~ recommended by Eric.

6/7

Spoke briefly w/ Dave Ken @ septic update as provided by Mr Applegate. He will discuss

w/ Eric @ possible change of recommendation

6/8

T/C from Mr. Applegate, Reviewed w/ him recommendations by state & problems w/ location given septic. However, was still inclined to choose site as proposed by state. Mr. Applegate has driller (didn't recall name). Told him I should speak w/ driller &/or meet on site to confirm.

6/20

T/C from Sarah Easterday. Reviewed general issues w/ her @ new well. Scheduled on site visit at Applegate at 9³⁰ am 6/21

5/5/92

Rec'd call from William Applegate (301) 854 6065
He was contemplating having a new well drilled
on his property in hopes of eliminating the
existing pesticide &/or Nitrate problems.

Per Mr. Applegate, well was 30+ years old &
he thought approx 75' deep. His lot is approx
1 acre in size.

Discussed logistics of siting new well on his
property (distance from septic & existing con-
taminated well) plus concern over introducing
contamination into deeper level aquifer.

Reviewed w/ him my belief that some disclosure
to new owners/potential owners would be needed.
Recommended he discuss w/ legal counsel to
clarify to what extent.

Told Mr Applegate that I would attempt to
contact MDE & find out what (if any) future
plans they have for this (Mullinix) site. I would
let him know those findings.

5/6/92

Called & left message for Peg Smith (Waste
Mgmt) 631-4888 @ Mullinix site / rel.

✓ Env Response
✓ Rept

Spoke w/ P. Smith @ status of project. Seems
MDE is planning area sampling on 6/2/92 (9 homes
plus couple of streams).

She expressed similar concerns about drilling a
new well @ introducing contamination into

lower aquifers. She was having a meeting later in the day w/ her boss (Mark Cox) & would discuss matter

5/10

Mr. Applegate called for update. Gave him Psg Smith's # & referenced concerns if new well is drilled & then have to ~~re~~ abandon if contaminated

5/24

Dave Kern & Eric Dougherty were briefed on general background & history of Mullinix site & contamination. Met w/ Mrs. ~~Mullinix~~ ^{Applegate}. Eric Dougherty & Dave Kern accompanied.

Well is in basement of house - per Dave & Eric it's a jet pump. 2 chamber carbon filter was in place & operational. A second filter (treatment system) at one time was in use, but had since been disconnected. Not clear what that use was for. Jet pump serves well.

Walked property to evaluate possible replacement site location. Applegates have lived in house since 1979. House built in 1954 by Warfields. Septic c/o located - believed to be for septic tank. Since info on the septic installation likely unavailable, Mrs. Applegate will contact Mr. Warfield for additional info on system.

Also noted was a gas pump dispenser near the driveway. A UST of unknown size was still in the ground. Though not actively used for a # of years, never was officially "pumped out". Recommended that the tank be removed.

VENABLE, BAETJER AND HOWARD

ATTORNEYS AT LAW

A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

SUITE 400
2010 CORPORATE RIDGE
MCLEAN, VA 22102-7804
(703) 760-1600
FAX (703) 821-8949

SUITE 1000
1201 NEW YORK AVENUE, N.W.
WASHINGTON, D.C. 20005-3917
(202) 962-4800
FAX (202) 962-8300

BRIGID E. KENNEY

1800 MERCANTILE BANK & TRUST BUILDING
2 HOPKINS PLAZA
BALTIMORE, MARYLAND 21201-2978
(410) 244-7400
FAX (410) 244-7742
TELEX 898032

WRITER'S DIRECT NUMBER IS
(410) 244-7487

SUITE 500
ONE CHURCH STREET
P.O. BOX 1906
ROCKVILLE, MD 20849-1906
(301) 217-5600
FAX (301) 217-5617

210 ALLEGHENY AVENUE
P.O. BOX 5517
TOWSON, MD 21285-5517
(410) 823-4111
FAX (410) 821-0147

11 SOUTH MAIN STREET
P.O. BOX 1776
BEL AIR, MD 21014-7776
BEL AIR (410) 838-8664
BALTIMORE (410) 879-1551
FAX (410) 879-6271

March 17, 1993

Mr. and Mrs. William Applegate
1999 Route 94
Woodbine, Maryland 21797

Dear Mr. and Mrs. Applegate:

As you probably recall, on December 17, 1992, water samples were taken at your home to verify that the carbon filtration units were removing pesticide contaminants from the water. The data demonstrate that the filters are removing the pesticide contaminants and that the levels of pesticides in your drinking water are below the Maximum Contaminant Levels (MCLs) or Health Advisory Levels. The data are reported below.

	<u>parts per billion</u> <u>atrazine</u>	<u>metolachlor</u>
MCL or Health Advisory	3	100
Finished Water	<0.1	0.14
Raw Water	16	119

Ciba Geigy, which analyzed the samples for atrazine and metolachlor, also analyzed them for nitrate. It is not unusual for nitrate to be elevated in farming areas and we know of no reason to suspect that the level of nitrate in your water is related in any way to the Mullinix facility. The level of nitrate (as nitrogen) in your tap water was 30 to 31 parts per million, while the MCL is 10 parts per million.

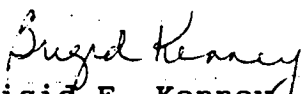
Mr. Mullinix will arrange with Culligan to replace your filter at the appropriate time, which will not be for some

Mr. and Mrs. William Applegate
March 17, 1993
Page 2

time. Should you have any questions, please feel free to call me or Mr. Mullinix.

Thank you.

Very truly yours,


Brigid E. Kenney

BEK:mtf

3082(13)/BLUENV

cc: Wade J. Gallagher, Esquire
Asst. Attorney General Susan M. Carrier
Mr. Gene Mullinix
Mr. Gregory Mellon

F ✓

VENABLE, BAETJER AND HOWARD
ATTORNEYS AT LAW

A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

SUITE 400
2010 CORPORATE RIDGE
MCLEAN, VA 22102-7804
(703) 760-1600
FAX (703) 821-8949

SUITE 1000
1201 NEW YORK AVENUE, N.W.
WASHINGTON, D.C. 20005-3917
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FAX (202) 962-8300

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BEL AIR (410) 838-8664
BALTIMORE (410) 879-1551
FAX (410) 879-6271

January 29, 1992

Mr. and Mrs. William Applegate
1999 Route 94
Woodbine, Maryland 21797

Dear Mr. and Mrs. Applegate:

As you probably recall, on September 25, 1991, water samples were taken at your home to verify that the carbon filtration units were removing pesticide contaminants from the water. At the same time, the first of the carbon filters was removed, the second filter was moved to the first position, and a new second filter was installed. The data demonstrate that the filters are removing the pesticide contaminants and that the levels of pesticides in your drinking water are below the Maximum Contaminant Levels (MCLs) or Health Advisory Levels. The data are reported below.

	<u>atrazine</u>	parts per billion <u>metolachlor</u>	<u>alachlor</u>
MCL or Health Advisory	3	100	2
Finished Water	<0.1	0.12	<0.1
Between Filters	11	163	ND
Raw Water	<0.1	0.23	1.9


Ciba Geigy analyzed the samples for atrazine and metolachlor, and Monsanto analyzed for alachlor. The data for atrazine and metolachlor are confusing in that the raw water is reported to be cleaner than the water between the filters. Ciba Geigy has suggested that the labels on these two samples may have been switched inadvertently by the sampler.

Ciba Geigy also analyzed them for nitrate. It is not unusual for nitrate to be elevated in farming areas and we know of no reason to suspect that the level of nitrate in your water is related in any way to the Mullinix facility. The level of nitrate (as nitrogen) in your tap water was 28 parts per million, while the MCL is 10 parts per million. Attached is the text of a notice that public water supply companies send out to their customers when the nitrate level is exceeded. You may wish to consider the information contained in the notice.

Mr. Mullinix will arrange with Culligan to replace your filter at the appropriate time, which will not be for several months. Should you have any questions, please feel free to call me or Mr. Mullinix.

Thank you.

Very truly yours,


Brigid E. Kenney

BEK:mtf

Enclosure

1526(26)/BLUENV

cc: Wade J. Gallagher, Esquire
Assistant Attorney General Susan M. Carrier
Mr. Gene Mullinix
Mr. Gregory Mellon

NOTICE CONCERNING NITRATE

The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that nitrate poses an acute health concern at certain levels of exposure. Nitrate is used in fertilizer and is found in sewage and wastes from human and/or farm animals and generally gets into drinking water from those activities. Excessive levels of nitrate in drinking water have caused serious illness and sometimes death in infants under six months of age. The serious illness in infants is caused because nitrate is converted to nitrite in the body. Nitrite interferes with the oxygen carrying capacity of the child's blood. This is an acute disease in that symptoms can develop rapidly in infants. In most cases, health deteriorates over a period of days. Symptoms include shortness of breath and blueness of the skin. Clearly, expert medical advice should be sought immediately if these symptoms occur. The purpose of this notice is to encourage parents and other responsible parties to provide infants with an alternate source of drinking water. Local and State health authorities are the best source for information concerning alternate sources of drinking water for infants. EPA has set the drinking water standard at 10 parts per million (ppm) for nitrate to protect against the risk of these adverse effects. EPA has also set a drinking water standard for nitrite at 1 ppm. To allow for the fact that the toxicity of nitrate and nitrite are additive, EPA has also established a standard for the sum of nitrate and nitrite at 10 ppm. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to nitrate.



DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway, Baltimore, Maryland 21224

Area Code 301 • 631-

William Donald Schaefer
GovernorRobert Perciasepe
~~ADMINISTRATIVE~~
SecretaryFAX COVER SHEET

Hazardous and Solid Waste Management Administration

Telecopier Number (301) 631-3321

DATE:

~~January~~ 1/27/92

TO:

Gregory S. Mellon

DEPARTMENT:

Howard Co. Health Dept.

TELECOPIER NUMBER:

310-461-5738

FROM:

Tatle DeShane

DEPARTMENT:

Hazardous & Solid Waste Management
Administration
Department of the Environment

TELEPHONE NUMBER:

301-631-~~4340~~ 1440

NUMBER OF PAGES:

2

R. Mullinix Case
L ucl
W go. 1
Applegate
L ucl

01.22.92 04:46 PM *V. B. H. BALTIMORE

P02

VENABLE, BAETJER AND HOWARD
ATTORNEYS AT LAW

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SUITE 400
2010 CORPORATE RIDGE
MCLEAN, VA 22102-7804
(703) 760-1600
FAX (703) 821-89491800 MERCANTILE BANK & TRUST BUILDING
2 HOPKINS PLAZA
BALTIMORE, MARYLAND 21201-2878
(410) 244-7400
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ROCKVILLE, MD 20848-1808
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1301 NEW YORK AVENUE, N.W.
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(202) 868-4800
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(410) 244-7487210 ALLEGHENY AVENUE
P.O. BOX 8617
TOWSON, MD 21205-8617
(410) 822-4111
FAX (410) 821-0147

BRIGID E. KENNEY

11 SOUTH MAIN STREET
P.O. BOX 1776
BEL AIR, MD 21014-7776
BEL AIR (410) 888-8884
BALTIMORE (410) 878-1551
FAX (410) 878-8871

January 22, 1992

VIA TELECOPYSusan M. Carrier, Esquire
Assistant Attorney General
MD Department of the Environment
2500 Broening Highway
Baltimore, Maryland 21224Re: Informing Residents of Results of Sampling

Dear Susan:

You'll recall that on December 20, 1991 I sent you the results of the September sampling of five wells. Enclosed are drafts of letters which I propose to use to notify the residents of the results of that sampling. Please call me promptly with any comments or suggestions you may have; I would like to send the letters soon.

Very truly yours,


Brigid E. KenneyBEK:ltm
Enclosures
612(102)/BLUENV

NOTICE CONCERNING NITRATE

The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that nitrate poses an acute health concern at certain levels of exposure. Nitrate is used in fertilizer and is found in sewage and wastes from human and/or farm animals and generally gets into drinking water from those activities. Excessive levels of nitrate in drinking water have caused serious illness and sometimes death in infants under six months of age. The serious illness in infants is caused because nitrate is converted to nitrite in the body. Nitrite interferes with the oxygen carrying capacity of the child's blood. This is an acute disease in that symptoms can develop rapidly in infants. In most cases, health deteriorates over a period of days. Symptoms include shortness of breath and blueness of the skin. Clearly, expert medical advice should be sought immediately if these symptoms occur. The purpose of this notice is to encourage parents and other responsible parties to provide infants with an alternate source of drinking water. Local and State health authorities are the best source for information concerning alternate sources of drinking water for infants. EPA has set the drinking water standard at 10 parts per million (ppm) for nitrate to protect against the risk of these adverse effects. EPA has also set a drinking water standard for nitrite at 1 ppm. To allow for the fact that the toxicity of nitrate and nitrite are additive, EPA has also established a standard for the sum of nitrate and nitrite at 10 ppm. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to nitrate.

Dear Mr. and Mrs. Wyant:

As you probably recall, on September 25, 1991, water samples were taken at your home to verify that the carbon filtration units were removing pesticide contaminants from the water. At the same time, the first of the carbon filters was removed, the second filter was moved to the first position, and a new second filter was installed. The data demonstrate that the filters are removing the pesticide contaminants and that the levels of pesticides in your drinking water are below the Maximum Contaminant Levels (MCLs) or Health Advisory Levels. In fact, the data suggest that even without the carbon filtration units your water would now be within acceptable levels. In addition, the data show that the capacity of the first filter had not been exhausted, and that it could have remained in service longer. The data are reported below.

	<u>atrazine</u>	parts per billion <u>metolachlor</u>	<u>alachlor</u>
MCL or Health Advisory	3	100	2
Finished Water	<0.1	<0.1	<0.1
Between Filters	<0.1	<0.1	<0.1
Raw Water	1.4	60	0.1

Ciba Geigy, which analyzed the samples for atrazine and metolachlor, also analyzed them for nitrate. It is not unusual for nitrate to be elevated in farming areas and we know of no reason to suspect that the level of nitrate in your water is related in any way to the Mullinix facility. The level of nitrate (as nitrogen) in your tap water was 22 parts per million, while the MCL is 10 parts per million. Attached is the text of a notice that public water supply companies send out to their customers when the nitrate level is exceeded. You may wish to consider the information contained in the notice.

Mr. Mullinix will arrange with Culligan to replace your filter at the appropriate time, which will not be for several months. Should you have any questions, please feel free to call me or Mr. Mullinix.

Thank you.

Very truly yours,

Brigid E. Kenney

BEK:mtf

Enclosure

1526(23)/BLUENV

cc: Assistant Attorney General Susan M. Carrier
Mr. Gene Mullinix

01. 22. 92 04:46 PM *V. B. H. BALTIMORE

P05

Dear Mr. and Mrs. Applegate:

As you probably recall, on September 25, 1991, water samples were taken at your home to verify that the carbon filtration units were removing pesticide contaminants from the water. At the same time, the first of the carbon filters was removed, the second filter was moved to the first position, and a new second filter was installed. The data demonstrate that the filters are removing the pesticide contaminants and that the levels of pesticides in your drinking water are below the Maximum Contaminant Levels (MCLs) or Health Advisory Levels. The data are reported below.

	atrazine	parts per billion metolachlor	alachlor
MCL or Health Advisory	3	100	2
Finished Water	<0.1	0.12	<0.1
Between Filters	11	163	ND
Raw Water	<0.1	0.23	1.9

QAC
initial
reversed

Ciba Geigy analyzed the samples for atrazine and metolachlor, and Monsanto analyzed for alachlor. The data for atrazine and metolachlor is confusing in that the raw water is cleaner than the water between the filters. Ciba Geigy has suggested that the labels on these two samples may have been switched inadvertently by the sampler.

Ciba Geigy also analyzed them for nitrate. It is not unusual for nitrate to be elevated in farming areas and we know of no reason to suspect that the level of nitrate in your water is related in any way to the Mullinix facility. The level of nitrate (as nitrogen) in your tap water was 28 parts per million, while the MCL is 10 parts per million. Attached is the text of a notice that public water supply companies send out to their customers when the nitrate level is exceeded. You may wish to consider the information contained in the notice.

Mr. Mullinix will arrange with Culligan to replace your filter at the appropriate time, which will not be for several months. Should you have any questions, please feel free to call me or Mr. Mullinix.

Thank you.

Very truly yours,

Brigid E. Kenney

BEK:mtf

Enclosure

1526(24)/BLUENV

cc: Assistant Attorney General Susan M. Carrier
Mr. Gene Mullinix

01. 22. 82 04:46 PM *V. B. H. BALTIMORE

P06

Dear Mr. and Mrs. Luce:

As you probably recall, on September 25, 1991, a water sample was taken at your home to verify that the levels of pesticides in your water are below the Maximum Contaminant Levels (MCLs) or Health Advisory Levels. We are pleased to advise you that the levels remain below the MCLs and Health Advisories. The data are reported below.

	<u>atrazine</u>	parts per billion <u>metolachlor</u>	<u>alachlor</u>
MCL or Health Advisory	3	100	2
Your Water	1.6	0.54	0.1

Ciba Geigy, which analyzed the samples for atrazine and metolachlor, also analyzed them for nitrate. It is not unusual for nitrate to be elevated in farming areas and we know of no reason to suspect that the level of nitrate in your water is related in any way to the Mullinix facility. The level of nitrate (as nitrogen) in your tap water was 18 parts per million, while the MCL is 10 parts per million. Attached is the text of a notice that public water supply companies send out to their customers when the nitrate level is exceeded. You may wish to consider the information contained in the notice.

Should you have any questions, please feel free to call me or Mr. Mullinix. Thank you.

Very truly yours,

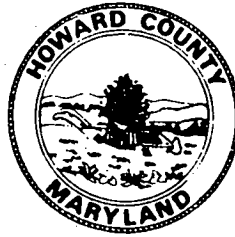
Brigid E. Kenney

BEK:mtf

Enclosure

1526(25)/BLUENV

cc: Assistant Attorney General Susan M. Carrier
Mr. Gene Mullinix



HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

Reply to:

July 8, 1991

Mr. William Applegate
1999 Route 94
Woodbine, MD. 21797

Re: Pesticide Sample Results

Dear Mr. Applegate:

Post-filtration resampling of your well water supply was performed June 18, 1991. Testing was conducted to confirm that carbon filtration is still effectively removing pesticides present in your water supply.

Results of this retest indicate that the system is still functioning as all three tested pesticides were below the limit of detection. A copy of the test results is enclosed for your records.

As mentioned at the time of sampling, a letter of intent was forwarded to Mr. James Pittman (M.D.E.) in which Mr. Mullinix agreed to continue the contract with Culligan to service and maintain the water filtration system installed for pesticide/herbicide removal. Further, arrangements for periodic verification that the installed system is properly functioning (presumably through sample analysis) will be made. Therefore, you are referred at this time to the Culligan representative for these specifics.

If you should have any questions you may contact me at 461-9955 between 8:30 a.m. and 4:30 p.m.

Very truly Yours,

Bert Nixon

Bert Nixon, Director
Technical Services Program

BN/bn

Bureau of Environmental Health

3525-H Ellicott Mills Drive Ellicott City, Maryland 21043-4544
Water and Sewerage, Permits 461-9933 Community Environmental Health 461-9944
Technical Services 461-9955 Director 461-9956 TDD 313-2323

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

8911896 518 5
LAB. NO.

PESTICIDES - DRINKING WATER

BOTTLE
NUMBER

(AS 8)

H-APPLE-1

HOWARD

NAME OF COUNTY

SOURCE OF SAMPLE KITCHEN SINK COLLECTOR BERT NIXON

SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE WELL OTHER (specify) _____

COMMUNITY _____ OTHER PUBLIC _____ PRIVATE X

REMARKS: WILLIAM APPELGATE

1999 ROUTE 94

WOODRIDGE, MD 21797

TO CONFIRM CARBON FILTER TREATMENT SYSTEM IS STILL
PROPERLY FUNCTIONING, LAST SAMPLE (10/90)
PLEASE SET LAB STANDARDS TO SATISFY DRINKING WATER
PARAMETERS

1 ☐ 2 3 ☐ 4 5 6 7 ☐ 8 9 10 11 ☐ 12 13 14 15 16 17 ☐ 18 19 ☐
TRANS COUNTY PLANT NO. SAMPLING STATION DATE COLLECTED CARD NO.

FIELD PH 20 21 22 ☐ ☐ ☐ 23 24 ☐ ☐ 25 26 ☐ ☐
FIELD RESID. CHLORINE:FREE TOTAL

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504			2, 4-D	602	
	CHLORDANE	514			2, 4, 5-T	614	
	D D T	523			2, 4, 5-TP	623	
	DIELDRIN	534			TOXAPHENE	634	
	ENDRIN	545		X	ATRAZINE		4.00008
	HEPTACHLOR	555		X	ALACHLOR		40.00008
	HEPTACHLOR EPOXIDE	565		X	METOLACHLOR		40.00002
	LINDANE	574					
	METHOXYCHLOR	582					
	ORGANOPHOSPHATE	592					
	ETHION						
	MALATHION						
	METHYL PARATHION						
	PARATHION						

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED _____ DATE REPORTED 8-1-91 CHEMIST K. Woodland

VENABLE, BAETJER AND HOWARD

ATTORNEYS AT LAW

A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

WASHINGTON, D. C.

ALEXANDRIA, VA

ROCKVILLE, MD

TOWSON, MD

BEL AIR, MD

1800 MERCANTILE BANK & TRUST BUILDING

2 HOPKINS PLAZA

BALTIMORE, MARYLAND 21201-8978

(301) 244-7400

FAX (301) 244-7749

TELEX 608032

RICHARD W. VENABLE (1938-1981)
EDWIN G. BAETJER (1928-1981)
CHARLES M. HOWARD (1915-1981)

ERIC D. KENNEY

WRITING DIRECT NUMBER 2

(301) 244-7487

February 22, 1991

VIA TELECOPY

Mr. James J. Fittman
Acting Deputy Director
Hazardous and Solid Waste Management Admin.
MD Department of the Environment
2500 Broening Highway
Baltimore, Maryland 21224

Re: Mullinix Farm, 1990 Route 94,
Woodbine, Maryland 21792

Dear Mr. Fittman:

On behalf of Gene and Charlotte Mullinix and myself, let me express our appreciation to you and your staff for the meeting on February 13, 1991. I thought that it was a productive meeting and that we all gained in our understanding of the site and the positions of the various parties. We write now to explain what Mr. Mullinix is willing to commit to do at this time. Please keep in mind that we appreciate that the situation will need to be reevaluated periodically as more data are developed. Mr. Mullinix fully intends to continue the open, cooperative relationship already established with the Maryland Department of the Environment.

First, Mr. Mullinix agrees to continue at his expense a contract with Culligan to service and maintain the water filtration systems at the three homes where he arranged for their installation: Applegate, Wyant and Dayhoff. He will also request that Culligan furnish these families with information regarding the systems and the service and maintenance. Further, he will arrange for periodic verification that the water produced by these water filtration systems is below the applicable proposed Maximum Contaminant Level (or, if there is no proposed MCL, the Health Advisory Level) for the herbicides of concern. We are consulting with Culligan and with others to determine exactly how this verification can be accomplished.

part of letter from
Bridget Kenny

Applegate
1999 Ln #94
Woodbine, MD

10/2/90 pesticide water sample was taken from
the kitchen faucet at 8:45 AM / ECB (bottle # 680)

6/10/91

(854-6065)

Received a call from Mrs Applegate. She was inquiring
as to when our next H₂O sample (post filtration)
time would be. The only post sample taken to date
was last Oct 2. At that time all was fine.

Results from the 2/91 sample were as follows:

Atrazine 14.3 ppb

Alachlor 3 ppb

M-solachlor 118 ppb

} all higher than previous
samples

Told her I would contact the lab & arrange a time
& be back in touch in the next few days.

6/12/91 called pesticide lab - sample OK for early next
week

6/12/91

called & left message on machine for Tues (6/18) AM sample

6/18/91 9⁴⁰ am

Sample for post treatment pesticide taken from kitchen faucet. RD run 5-10 minutes prior to sampling. Examined Culligan system located in basement. It is hooked up in series following a water softener unit (Mrs Applegate believes they use NaCl to add to system).

There are 2 carbon filter tanks w/ midway valve to check for breakthrough of 1st tank. Applegates also have a nitrate device in the basement but currently is not hooked up. They are not currently drinking the water.

She recently spoke to Culligan inst who installed the carbon system. He told her that she should contact them for future sampling needs. I also told her that we had just become aware of an agreement w/ MDE & Mullinix & hopefully can include some of the info when we send RD results. Left her a card if she had any questions.



HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

Reply to:

November 19, 1990

Mr. William Applegate
1999 Route 94
Woodbine, MD 21797

Dear Mr. Applegate:

Post filtration sampling to verify the efficiency of the recently installed Culligan Pesticide Treatment System was performed October 2, 1990. Test results for Altrazine, Metolachlor and Alachlor were all below detection limits and all below existing guidelines or standards for these pesticides. Therefore, the treatment system is currently functioning properly, and the tested water supply is safe for consumption.

A copy of the results is enclosed for your records.

If you should have any questions, you may contact me at 461-9955 between 8:30 a.m. and 4:30 p.m.

Very truly yours,

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

Bert Nixon, Director
Technical Services Program

BN:vf

cc: Mr. Gene Mullinix
Mr. Bill Nesgood, MDE CERCLA

Bureau of Environmental Health

3525 Ellicott Mills Drive Ellicott City, Maryland 21043-4544
Director 461-9956 Water and Sewerage, Permits 461-9933 Community Environmental Health 461-9944
Technical Services 461-9955

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehser Joseph, Ph.D., Director

AG 10522 8-2 5
LAB. NO.

PESTICIDES - DRINKING WATER

BOTTLE NUMBER 67-80

HOWARD
NAME OF COUNTY

SOURCE OF SAMPLE KITCHEN FAUCET COLLECTOR ROBERT C. BAWES
461-9955

SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE _____ OTHER (specify) _____

COMMUNITY _____ OTHER PUBLIC _____ PRIVATE ☒

REMARKS: POST TREATMENT SAMPLE FOLLOWING
INSTALLATION OF CILLIGAN SYSTEM
TO REMOVE PESTICIDES FROM PRIVATE
WELL BELONGING TO:
WILLIAM ADDEGATE
1999 ROUTE #94
WOODBINE, MD 21797

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐
TRANS COUNTY PLANT NO. SAMPLING STATION DATE COLLECTED CARD NO.

20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐
FIELD PH FIELD RESID. CHLORINE:FREE TOTAL

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504			2, 4-D	602	
	CHLORDANE	514			2, 4, 5-T	614	
	D D T	523			2, 4, 5-TP	623	
	DIELDRIN	534			TOXAPHENE	634	
	ENDRIN	545		✓	ATRAZINE		4.0.0008
	HEPTACHLOR	555		✓	METOLACHLOR		4.0.0002
	HEPTACHLOR EPOXIDE	565		✓	ALACHLOR		40.00008
	LINDANE	574					
	METHOXYCHLOR	582					
	ORGANOPHOSPHATE	592					
	ETHION						
	MALATHION						
	METHYL PARATHION						
	PARATHION						

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED _____ DATE REPORTED 10/9/90 CHEMIST K. Woodland

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehse Joseph, Ph.D., Director

LAB. NO. _____

PESTICIDES - DRINKING WATER

BOTTLE NUMBER G-80

HOWARD
NAME OF COUNTY

SOURCE OF SAMPLE KITCHEN FAUCET COLLECTOR ROBERT C. BANES
461-9955

SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE _____ OTHER (specify) _____

COMMUNITY _____ OTHER PUBLIC _____ PRIVATE ☒

REMARKS: POST TREATMENT SAMPLE, FOLLOWING
INSTALLATION OF CULLIGAN SYSTEM
TO REMOVE PESTICIDES FROM PRIVATE
WELL BELONGING TO:
WILLIAM APLEGATE
1999 ROUTE #94
WOODBINE, MD 21797

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐
TRANS COUNTY PLANT NO. SAMPLING STATION DATE COLLECTED CARD NO.

20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐
FIELD PH FIELD RESID. CHLORINE:FREE TOTAL

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504			2, 4-D	602	
	CHLORDANE	514			2, 4, 5-T	614	
	D D T	523			2, 4, 5-TP	623	
	DIELDRIN	534			TOXAPHENE	634	
	ENDRIN	545			✓ ATRAZINE		
	HEPTACHLOR	555			✓ METOLACHLOR		
	HEPTACHLOR EPOXIDE	565			✓ ALACHLOR		
	LINDANE	574					
	METHOXYCHLOR	582					
	ORGANOPHOSPHATE	592					
	ETHION						
	MALATHION						
	METHYL PARATHION						
	PARATHION						

RESULTS REPORTED IN MILLIGRAMS PER LITER (ppm)

DATE RECEIVED _____ DATE REPORTED _____ CHEMIST _____

ROLAND H. MULLINIX & SON, INC.

DEALER IN HAY, STRAW & GRAINS

SUPER BLENN FERTILIZER

SUPER-GRO SEEDS

1990 ROUTE 94

WOODBINE, MD. 21797

September 17, 1990

G.S. Mellon

3525 Ellicott Mills Drive

Ellicott City, Maryland 21043-4544

Dear G.S. Mellon,

This letter is to inform your department that we have contracted Culligan Water Systems to install water filtration systems in the homes of Carl Dayhoff, William Applegate, and Donald Wyant.

The instalation of the systems will acur on Monday September 17, 1990. Apon instalation we would like to have your department take water samples to verify Culligan Water Systems is removing all inpuritys from the water as guaranteed. 7C

If there are any questions in regards to our request, or there are any problems please feel free to call my office at 442-2292.

Thank You

Gene W. Mullinix
President

cc: Mary Lynn Adams

Burt Nickson

Wade J. Gallagher

9/26/90

called G. Mullinix; Secretary verified systems have been installed. Told her we would initiate contacts w/ lab & individuals w/ systems & try to accomplish sampling w/in next 2 weeks.

9/26/90 3³⁰ pm

called pesticide lab - left message for M.E. Schutt
Mary Ellen Schutt returned call. She indicated next week
(10/1) would be fine since they already have 1 schedule
from Bald Co.

Bill to pick up bottles

I'll be back in touch to give her final days of sampling

9/28/90

Letters drafted @ upcoming sampling. Letters to be hand
delivered due to short notice.

REC'D 9/29/90



HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

Reply to:

September 28, 1990

Mr. William Applegate
1999 Route 94
Woodbine, MD 21797

Dear Mr. Applegate:

This Department was recently notified by Mr. Mullinix that a water treatment system for pesticide removal was installed in your residence. To confirm the effectiveness of this system, a follow-up pesticide sample is planned. We have arranged with the State Lab for this sampling. The lab is in a position to accept and begin analysis of this sample the week of October 1, 1990.

Please contact this Department at 461-9955 as soon as possible to schedule a time for sampling. To ensure that the sample is of treated water, an inside sample will very likely be necessary. Due to the short notice, efforts will be made to accommodate your work schedules. Thank you for your continued cooperation in this matter.

Very truly yours,

Bert Nixon, Director
Technical Services Program

BN:vf

cc: Mr. Gene Mullinix



HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

Reply to:

March 6, 1990

Mr. William Applegate
1999 Route 94
Woodbine, MD 21797

Dear Mr. Applegate:

The Maryland Department of Health and Mental Hygiene's Laboratory Administration was able to analyze the January 10, 1990 samples of your well water at a confidence level below the EPA's Health Advisory Levels. The results are as follows:

EPA's Health Advisory Limit		1/4/89	1/10/90
0.4ppb*	Alachlor	1.4	0.82
100ppb	Metolachlor	97.0	60.2
3.0ppb	Atrazine	11.0	7.1

EPA = U.S. Environmental Protection Agency

* ppb = parts per billion

The most recent test results indicate your well water supply is still unsafe for consumption because the Atrazine and Alachlor concentrations are greater than the Health Advisory Levels. This report only shows the results of the latest test results compared with results from one year previous. The other test results were supplied in earlier correspondence.

Please advise if you are considering the use of a treatment device for these contaminants. You should refer to our past correspondence that addressed treatment devices in your selection.

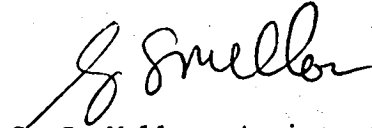
Bureau of Environmental Health

3525 Ellicott Mills Drive Ellicott City, Maryland 21043-4544

Director 461-9956 Water and Sewerage, Permits 461-9933 Community Environmental Health 461-9944
Technical Services 461-9955

If you have any questions, you may contact me at 461-9955 between 8:30 a.m. and 4:30 p.m.

Sincerely,

A handwritten signature in cursive script, appearing to read "G. S. Mellon".

G. S. Mellon, Assistant Director
Bureau of Environmental Health

GSM:vf

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

PESTICIDES - DRINKING WATER

BOTTLE NO. I 51 COUNTY Howard LAB. NO. A9000843 310 5

SOURCE OF SAMPLE Applegate 1999 Rk 94 Woodbine COLLECTOR L. Andratny (461-9955)
21797

SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE well OTHER (specify) _____

COMMUNITY _____ OTHER PUBLIC _____ PRIVATE X

REMARKS: _____

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐

TRANS COUNTY PLANT NO. SAMPLING STATION DATE COLLECTED CARD NO.

011090

20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐

FIELD pH FIELD RESID. CHLORINE: FREE TOTAL

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504			2, 4-D	602	
	CHLORDANE	514			2, 4, 5-T	614	
	D D T	523			2, 4, 5-TP	623	
	DIELDRIN	534			MISCELLANEOUS		
	ENDRIN	545		✓	ALACHLOR		0.00082
	HEPTACHLOR	555		✓	ATRAZINE		0.0071
	HEPTACHLOR EPOXIDE	565		✓	METOLACHLOR		0.0602
	LINDANE	574					
	METHOXYCHLOR	582					
	TOXAPHENE	634					
	ETHION						
	MALATHION						
	METHYL PARATHION						
	PARATHION						

RESULTS REPORTED IN MILLIGRAMS-PER-LITER (PPM)

DATE RECEIVED _____ DATE REPORTED 1-22-90 CHEMIST K. Woodland



HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

Reply to:

November 7, 1989

Mr. William Applegate
1999 Route 94
Woodbine, MD 21797

Dear Mr. Applegate:

The concentrations of all three pesticides found in the September 19, 1989 sample were found to be less than the last time your well water was sampled.

EPA's # Health Advisory Limit	11/16/88	1/4/89	9/19/89
0.4 ppb Alachlor	1.3	1.4	<0.8
100 Metolachlor	94.6	97.0	14.0
3.0 Atrazine	16.9	11.0	<8.0

U.S. Environmental Protection Agency

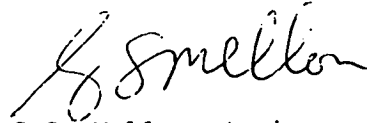
* All results expressed as parts per billion which equal micrograms per liter.

The Metolachlor level is well below the health Advisory Level of 100 ppb's and its concentration is now considered safe. The laboratory was not able to analyze for Alachlor and Atrazine at levels below the Health Advisory's but the results were still below the last sample results. This indicates a decreasing concentration trend.

It is still advised not to consume to water.

If our laboratory is again able to analyze for these pesticides in well water at a level below the Health Advisory's (enclosed), we will contact you for further sampling.

Sincerely,

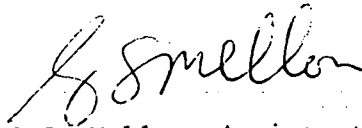
A handwritten signature in cursive script, appearing to read "G.S. Mellon".

G.S. Mellon, Assistant Director
Bureau of Environmental Health

GSM:vf

If our laboratory is again able to analyze for these pesticides in well water at a level below the Health Advisory's (enclosed), we will contact you for further sampling.

Sincerely,

A handwritten signature in cursive script, appearing to read "G.S. Mellon".

G.S. Mellon, Assistant Director
Bureau of Environmental Health

GSM:vf

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehnen Joseph, Ph.D., Director

PESTICIDES - DRINKING WATER

BOTTLE NO. P 37 COUNTY Howard LAB. NO. A900215

SOURCE OF SAMPLE Applegate 1999 Rte 94 COLLECTOR B Morton
Woodbine, MD

SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE outside OTHER (specify) _____
Faucett

COMMUNITY _____ OTHER PUBLIC _____ PRIVATE ☒

REMARKS: Follow up sample

TRANS TYPE ☐ COUNTY 13 PLANT NO. 4 5 6 7 SAMPLING STATION 8 9 10 11 DATE COLLECTED 09 19 89 CARD NO. 18 19

FIELD PH 20 21 22 FIELD RESID. CHLORINE: FREE 23 24 TOTAL 25 26

TEST FOR	CODE	RESULTS	TEST FOR	CODE	RESULTS
ALDRIN	504		2, 4-D	602	
CHLORDANE	514		2, 4, 5-T	614	
D D T	523		2, 4, 5-TP	623	
DIELDRIN	534		MISCELLANEOUS		
ENDRIN	545		✓ ALACHLOR		40.0008
HEPTACHLOR	555		✓ ATRAZINE		0.0008
HEPTACHLOR EPOXIDE	565		✓ METOLACHLOR		0.0142
LINDANE	574			1/4	0.9
METHOXYCHLOR	582				
TOXAPHENE	634				
ETHION					
MALATHION					
METHYL PARATHION					
PARATHION					

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED _____

DATE REPORTED 10-18-89

CHEMIST K. Woodland

HOWARD COUNTY HEALTH DEPARTMENT

JOYCE M. BOYD, M.D., M.P.H.
COUNTY HEALTH OFFICER



Bureau of Environmental Health
3525 Ellicott Mills Drive
Ellicott City, Maryland 21043

Director - 461-9956
Water & Sewerage, Permits - 461-9933
Community Environmental Health - 461-9944
Technical Services - 461-9955

May 3, 1989

Mr. William Applegate
1999 Route 94
Woodbine, MD 21797

Dear Mr. Applegate:

I am enclosing the latest publications of the U.S. Environmental Protection Agency that apply to your well water supply.

The pamphlet covers the radon in water issue as it was understood at the time of publication, September 1987. It generally describes the sample collection technique and the radon in water situation. Studies and developments subsequent to the publication date indicate an alternative treatment technique for Radon in water known as aeration. This technique may impact your situation should your well water contain high radon concentrations.

The other handouts cite the evolution of the safe levels designated for those pesticides of interest in your drinking water from U.S. E.P.A. publications dated February 1988 (Alachlor), July 18, 1988 (Alachlor, Atrazine, Metolachlor), August 1988 (Atrazine, Metolachlor), and January 1989 (Alachlor, Atrazine, Metolachlor).

I hope this information is helpful.

Sincerely,

G. S. Mellon, Assistant Director
Bureau of Environmental Health

GSM:vff

HOWARD COUNTY HEALTH DEPARTMENT

JOYCE M. BOYD, M.D., M.P.H.
COUNTY HEALTH OFFICER



Bureau of Environmental Health
3525 Ellicott Mills Drive
Ellicott City, Maryland 21043

Director - 461-9956
Water & Sewerage, Permits - 461-9933
Community Environmental Health - 461-9944
Technical Services - 461-9955

April 24, 1989

Mr. William Applegate
1999 Route 94
Woodbine, MD 21797

Dear Mr. Applegate:

Over the past several months we have been in contact with you in regard to the pesticide contamination of your well water supply by letter, over the phone and possibly in person at the time of sample collection.

The fact is your well water supply exceeds or approaches the levels for long term exposure for Atrazine, Metolachlor and Alachlor. For this reason, we do want to recommend that you seek an alternative water source for drinking and cooking. At this time, bottled water is the recommended alternative.

Another option may be treatment with a Granular Activated Carbon (GAC) filter. It has been recently pointed out that if the well water is, also, contaminated with high concentrations of radon, the GAC filter may concentrate the radiation producing another health hazard. Therefore, it is recommended that before acquiring a GAC filter that the water be tested for radon.

Two sources for the Radon in Water test are:

Kutztown University Kutztown, PA Phone # (215) 683-6443

Radon Laboratories, Inc. Abingdon, MD Phone # (301) 679-6494

If you have any further questions, please contact me at 461-9955 between 8:30 a.m. and 4:30 p.m.

Very truly yours,

G.S. Mellon, Assistant Director
Bureau of Environmental Health

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

**RETURN
TO**



Print Sender's name, address, and ZIP Code in the space below.

BUREAU OF ENVIRONMENTAL HEALTH

3525-H ELLICOTT MILLS DRIVE

ELLICOTT CITY, MD 21043

11-14-89



PENALTY FOR PRIVATE
USE: \$300

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery.

3. Article Addressed to:

WILLIAM APPLIGATE
1999 Route 94
Woodbine, MD 21797

4. Article Number

P 923680097

Type of Service:

☐ Registered
☒ Certified
☐ Express Mail

☐ Insured
☐ COD

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee

X

6. Signature — Agent

X

John Appligate

7. Date of Delivery

11/13/89

8. Addressee's Address (*ONLY if requested and fee paid*)

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.



PENALTY FOR PRIVATE
USE, \$300

RETURN
TO



Print Sender's name, address, and ZIP Code in the space below.

BUREAU OF ENVIRONMENTAL HEALTH

3525-H Ellicott Mills Drive

Ellicott City, MD 21043

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery.

3. Article Addressed to:

MR. WILLIAM APPLGATE
1999 Route 94
Woodbine, MD 21797

4. Article Number

P 923 680 060

Type of Service:

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee

X *Joe Applegate*

6. Signature — Agent

X

7. Date of Delivery

4-28-89

8. Addressee's Address (*ONLY if requested and fee paid*)

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery.

3. Article Addressed to:

WILLIAM APPLGATE
1999 ROUTE 94
WOODBINE, MD 21797

4. Article Number

P 923-680-053

Type of Service:

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee

X *Will Applegate*

6. Signature — Agent

X

7. Date of Delivery

3-22-89

8. Addressee's Address (*ONLY if requested and fee paid*)

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.



Thelton sent
3-20-89



PENALTY FOR PRIVATE
USE, \$300

RETURN
TO



RECEIVED
HOWARD COUNTY
HEALTH DEPT.
ELLICOTT CITY, MD

MAR 23 9 13 AM '89

Print Sender's name, address, and ZIP Code in the space below.

BUREAU OF ENVIRONMENTAL HEALTH

P.O. BOX 476

ELLICOTT CITY, MD 21043

HOWARD COUNTY HEALTH DEPARTMENT

JOYCE M. BOYD, M.D., M.P.H.
COUNTY HEALTH OFFICER



Bureau of Environmental Health
3525 Ellicott Mills Drive
Ellicott City, Maryland 21043

Director - 461-9956
Water & Sewerage, Permits - 461-9933
Community Environmental Health - 461-9944
Technical Services - 461-9955

March 17, 1989

Mr. William Applegate
1999 Route 94
Woodbine, MD 21797

Dear Mr. Applegate:

We have conducted tests on samples of your well water supply collected on November 16, 1988 and January 4, 1989. The November sample was tested for trace organics (e.g. gasoline) and pesticides. The sample was positive for pesticides and negative for trace organics. The resampling of the supply in January confirmed our earlier positive results for pesticides. The results are as follows:

EPA		11/16/88	1/4/89
.002ppm	Alachlor	0.0013 μ g/l (ppm)	0.0014 ppm
.100ppm	Metolachlor	0.0946 μ g/l (ppm)	0.097 ppm
.002ppm	Atrazine	0.0169 μ g/l (ppm)	0.011 ppm

The health significance of these values is the designation the EPA places on the level of concentration. Both Alachlor and Atrazine have pending regulated limits assigned to their concentration in public water supplies known as Maximum Contaminant Levels (MCL) and both are 0.002 Mg/l (ppm).

This level is calculated and based on the consumption of 2 liters of this water a day for seventy years as well as the availability/performance of treatment systems, the extra expense incurred and the health effects.

In the case of Metolachlor, it has a non-enforceable level which is considered protective of non-carcinogenic adverse health effects over a life-time exposure.

The literature cites Granular Activated Carbon (GAC) as the most common and successful treatment technique for the three chemicals noted above.

Mr. Applegate
Page 2
March 17, 1989

This office has requested the assistance of the Maryland Department of the Environment's (MDE) Special Groundwater Contamination Division in identifying this situation.

Sincerely,

A handwritten signature in dark ink, appearing to read "G Mellon", is written over the typed name.

Gregory S. Mellon, Assistant Director
Bureau of Environmental Health

GSM:vf

enclosure

EPA list 7/1/88
Metolachlor H/A 8/88
copies of test results

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration
201 W. Preston Street
J. Mehsen Joseph, Ph.D., Director

TRACE ORGANICS LABORATORY
VOLATILE ORGANICS ANALYSIS

BOTTLE NUMBER 116 COLLECTOR Singer Howard
County

SOURCE OF SAMPLE WM. Applegate - 1999 Rt. 94 - Woodbine 21797
(Include Address)

SAMPLE TYPE: Community _____ Noncommunity _____ Domestic X STP Station _____
Observation Well _____ Stream _____ Tidal Waters _____ Industrial Effluent _____
Other (Specify) _____
Preservative Used _____

IMPORTANT: First time sampled yes Last known sampling date _____
Reason for submitting sample: Survey _____ Suspected Petroleum Contamination _____
Suspected Industrial Chemical Contamination _____ Other (Specify) _____

CHAIN OF CUSTODY: From: Singer To: Morris
From: Morris To: VOC LAB

REMARKS: _____

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	1	3									1	1	1	6	8	8		
TRANS TYPE	COUNTY		PLANT NO.				SAMPLING STATION				DATE COLLECTED						CARD NO.	
20	21	22	FIELD RESID. CHLORINE: FREE										23	24	25		26	
FIELD PH																		

Purgeable Halocarbons (EPA) 6011

Chloromethane <5
Bromomethane <1
Dichlorodifluoromethane
Vinyl chloride
Chloroethane
Methylene chloride
Trichlorofluoromethane
1,1-Dichloroethene
1,1-Dichloroethane
trans-1,2-Dichloroethene
Chloroform
1,2-Dichloroethane
1,1,1-Trichloroethane
Carbon Tetrachloride
Bromodichloromethane
1,2-Dichloropropane

trans-1,3-Dichloropropene <1
Trichloroethene
Dibromochloromethane
1,1,2-Trichloroethane
cis-1,3-Dichloropropene
2-Chloroethylvinylether <10
Bromoform <1
1,1,2,2-Tetrachloroethene
Tetrachloroethene
Chlorobenzene
Total Trihalomethanes

Other Purgeable Organics: N.D.

Other Purgeables

Benzene <1
Toluene
Ethylbenzene
Total Xylenes <2
Total Purgeable Hydrocarbons N.D.
Tetrahydrofuran
(2-Butanone MEK)
Methylisobutylketone (MIBK)
Acrolein
Acrylonitrile
Carbon Disulfide
Vinyl Acetate
Acetone
2-Hexanone
Styrene

Results reported in micrograms per (parts per million/billion)

DATE RECEIVED 11/1/99
DHMH 749 (10/87)

DATE REPORTED

CHEMIST J. Cormier

LAB. NO. 892136

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehser Joseph, Ph.D., Director

PESTICIDES - DRINKING WATER

BOTTLE NO. R4 COUNTY HOWARD LAB. NO. 8890711 / 3-4 8
SOURCE OF SAMPLE 1999 RTE 94 WOODBINE MD COLLECTOR B NIXON
SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE _____ OTHER (specify) _____
COMMUNITY _____ OTHER PUBLIC _____ PRIVATE ☒
REMARKS: REPEAT SAMPLE, 1ST SAMPLE SHOWED CONTAMINATION
SAMPLED FROM OUTSIDE FAUCET; BY PASSING

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐
TRANS. TYPE COUNTY PLANT NO. SAMPLING STATION DATE COLLECTED CARD NO.
FIELD PH 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐
FIELD RESID. CHLORINE: FREE TOTAL

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504			2, 4-D	602	
	CHLORDANE	514			2, 4, 5-T	614	
	D D T	523			2, 4, 5-TP	623	
	DIELDRIN	534			MISCELLANEOUS		
	ENDRIN	545		✓	ALACHLOR		0.0014
	HEPTACHLOR	555		✓	ATRAZINE		0.011
	HEPTACHLOR EPOXIDE	565		✓	METOLACHLOR		0.097
	LINDANE	574					
✓	METHOXYCHLOR	582	0.01				
	TOXAPHENE	634					
	ETHION						
	MALATHION						
	METHYL PARATHION						
	PARATHION						

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED _____

DATE REPORTED 1-10-89

CHEMIST Mary Ellen Schatz

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehse Joseph, Ph.D., Director

PESTICIDES - DRINKING WATER

BOTTLE NO. A21 COUNTY HOWARD LAB. NO. 1090531 216 8
 SOURCE OF SAMPLE WM. Applegate 1999 Rt. 94 - Woodbine 21797 COLLECTOR SINGER
 SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE _____ OTHER (specify) _____
 COMMUNITY _____ OTHER PUBLIC _____ PRIVATE X
 REMARKS: _____

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐
 TRANS COUNTY PLANT NO. SAMPLING STATION DATE COLLECTED CARD NO.
 1 3 1 1 1 6 8 8
 FIELD pH 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐
 FIELD RESID. CHLORINE: FREE TOTAL

TEST FOR	CODE	RESULTS	TEST FOR	CODE	RESULTS
ALDRIN	504		2, 4-D	602	
CHLORDANE	514		2, 4, 5-T	614	
D D T	523		2, 4, 5-TP	623	
DIELDRIN	534		MISCELLANEOUS		
ENDRIN	545		ATRAZINE MEL-002	0.0169	
HEPTACHLOR	555		METHOXYCHLOR	0.0946	
HEPTACHLOR EPOXIDE	565		ALACHLOR MEL-002	0.0013	
LINDANE	574				
METHOXYCHLOR	582				
TOXAPHENE	634				
ETHION					
MALATHION					
METHYL PARATHION					
PARATHION					

DATE RECEIVED _____ DATE REPORTED 12-7-88 CHEMIST Manfred Schatz
 DHMH-98 12/87 SUBMITTER COPY

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

Lab No. _____

WATER ANALYSIS

Bottle Number: HAP1999 Name: APPLEGATE County: NORMAN

Source of Sample: 1999 RTE 94 NORMAN Collector: A NIXON
Street Town or City

Sample Type (Circle): Community Source Non-Community Distribution Private MCL Emergency Recheck Routine

Remarks: CITIZEN SAMPLE / BYPASS FILTER

County: 13 Plant No. Sampling Station Date Collected 010489 Time 12 PM Acid ☐ Iced ☐
Field Data: pH* Chlorine Residual Free Total Specific Conductance

✓	ANALYSIS	CODE	RESULTS	✓	ANALYSIS	CODE	RESULTS
✓	pH*	00403	<u>6.8</u>		Arsenic	01002	<u> </u>
✓	Alkalinity (Total)	00410	<u>36</u>		Barium	01007	<u> </u>
✓	pH*, Ca CO ₃ SAT.	70311	<u>7.6</u>		Cadmium	01027	<u> </u>
	Alkalinity, Ca CO ₃ SAT.	74023	<u>7.4</u>		Chromium	01034	<u> </u>
	Hardness	00900	<u>305</u>		Lead	01051	<u> </u>
	Ammonia-N	00608	<u> </u>		Mercury	71900	<u> </u>
✓	Nitrate-Nitrate N	00630	<u>35.5</u>		Selenium	01147	<u> </u>
	Nitrite N	00615	<u> </u>		Silver	01077	<u> </u>
	MBAS	38260	<u> </u>				<u> </u>
✓	Chloride	00940	<u>179</u>		Aluminum	01105	<u> </u>
	Fluoride	00951	<u> </u>		Calcium	00916	<u> </u>
	Color*	00081	<u> </u>		Copper	01042	<u> </u>
	Turbidity*	00076	<u> </u>		Iron	01045	<u> </u>
	Conductance*, SPEC	00095	<u> </u>		Magnesium	00927	<u> </u>
	Sulfate	00945	<u> </u>		Manganese	01055	<u> </u>
	Total Solids	00500	<u> </u>		Nickel	01067	<u> </u>
	Dissolved Solids	70300	<u> </u>		Potassium	00937	<u> </u>
			<u> </u>	✓	Sodium	00929	<u>49.2</u>
			<u> </u>		Zinc	01092	<u> </u>
			<u> </u>				<u> </u>
			<u> </u>				<u> </u>
			<u> </u>				<u> </u>
			<u> </u>				<u> </u>
			<u> </u>				<u> </u>

*Results reported in units, all others in milligrams per liter (ppm)

Date Received _____ Date Reported FEB 01 1989 Chemist DAVID A. SEVDALIAN

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
201 W. Preston St.
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

COG 116 F15 8
Lab No.

WATER ANALYSIS

Bottle Number: A17 Name: Wm. Applegate County: Howard

Source of Sample: 1999 R+ 94 Woodbine 21777 Collector: Singer
Street Town or City

Sample Type (Circle): Community Source Non-Community Distribution Private MCL Emergency Recheck Routine

Remarks:

County: 13 Plant No. Sampling Station Date Collected 11/16/88 Time 1230 Acid ☐ Iced ☒
Field Data: pH* 7.1 Chlorine Residual Free Total Specific Conductance

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	00403	<u>6.9</u>	Arsenic	01002	<u> </u>
Alkalinity (Total)	00410	<u>20</u>	Barium	01007	<u> </u>
pH*, Ca CO ₃ SAT.	70311	<u> </u>	Cadmium	01027	<u> </u>
Alkalinity, Ca CO ₃ SAT.	74023	<u> </u>	Chromium	01034	<u> </u>
Hardness	00900	<u> </u>	Lead	01051	<u> </u>
Ammonia-N	00608	<u> </u>	Mercury	71900	<u> </u>
Nitrate-Nitrate N	00630	<u>345</u>	Selenium	01147	<u> </u>
Nitrite N	00615	<u> </u>	Silver	01077	<u> </u>
MBAS	38260	<u> </u>			
Chloride	00940	<u> </u>	Aluminum	01105	<u> </u>
Fluoride	00951	<u> </u>	Calcium	00916	<u> </u>
Color*	00081	<u> </u>	Copper	01042	<u> </u>
Turbidity*	00076	<u> </u>	Iron	01045	<u><0.05</u>
Conductance*, SPEC	00095	<u> </u>	Magnesium	00927	<u> </u>
Sulfate	00945	<u> </u>	Manganese	01055	<u> </u>
Total Solids	00500	<u> </u>	Nickel	01067	<u> </u>
Dissolved Solids	70300	<u> </u>	Potassium	00937	<u> </u>
			Sodium	00929	<u> </u>
			Zinc	01092	<u> </u>

*Results reported in units, all others in milligrams per liter (ppm)

Date Received DEC 1 1988 Date Reported DEC 1 1988 Chemist DAVID A. SEVDALIAN

see draft proposal's

		Dayhoff 11/29	Applegate 11/10	Velisek 7/1/88
2 ppb	Atrazine	13	16.9 ppb	39.0 ppb
2 ppb	Alachlor	0.14	1.4 1.3	6.4
unk	Metolachlor	108.4	97. 94.6	231.0
	Methoxychlor		0.0	
	Benzene	none	0/11/16	12

1/18/89 Tel call from Jane Applegate 854-6065
 Gave her the results and
 significance of 2 ppb levels
 and the 1000 ft (at this time) sampling
 area and the fact others are affected
 and informed her results are public
 info but we are not publicizing. J. S. M.
 will be informing her of treatment if possible

Following 1/10-1/11/89 SAMPLING

= 2 ~~attempts~~
 level.

LUCE

MULLINIX

AL	-	(2.0008) / 1/10/89	1/31/89	RZ	.0004	1ST (1/11/88)	2ND (1/11/89)
MET	-	(2.0002)	.0003	MET	.231	.0064	.007
ATRA	.0013	.0014	ATRA	.039	.214	.038	

EIDING - no BTX

AL	1/10/89	<	1/31/89
MET	.004	<	.0008
ATRA	< .0004 (at)		.000

← RTE 94 → LISBON

APPELÖATIE

AL	1/10	1/4
MET	.0946	.097
ATRA	.0169	.011

WARFIELD

AL	-	1/10/89	1/31/89
MET	.025	.019	.05
ATRA	.0002	.0005	

DAYHOFF

AL	.0002	1/10/89	1/29/88
MET	.223	.1084	.00014
ATRA	.009	.013	

WYANT

AL	-	1/10/89	1/31/89
MET	.092	.00008	
ATRA	.004	.0025	

MORINGSTAR

ALA	-	1/10/89	1/31/89
MET	.018	.014	
ATRA	< .0004 (at)	.0006	

AL = ALAC
 MET = MET
 ATRA = ATR

PP

SUMMARY SHEET
FOLLOWING 1/10-11/89 SAMPLING

- = < detectable
level.

LUCE

MULLINIX

EIDING

		1 ST (9/1/89)	2 ND (11/1/89)
AL - (.00008)	AL	.0064	.007
MET - (.00002)	MET	.231	.214
ATRA .0013	ATRA	.039	.038

AL -
MET .004
ATRA .0004 (-?)

← RTE 94 → LISBON

APPELLOATE

WARFIELD

DAYHOFF

WYANT

AL 11/16 11/14
AL .0013 .0014
MET .0946 .097
ATR .0169 .011

AL -
MET .025
ATRA .0002

AL .0002
MET .223
ATRA .009

AL -
MET .092
ATRA .004

MORINGSTAR

ALA -
MET .018
ATRA .0004 (-?)

AL = ALACHLOR
MET = METOLACHLOR
ATRA = ATRAZINE

LAGOON

BASICALLY CLEAN

11-16 9:00 a.m.

PROPERTY OWNER William J. Applegate DATE OF REQUEST 11 / 09 / 88

TELEPHONE 854-6065 NEW WELL NUMBER _____

DIRECTIONS OR INSTRUCTIONS _____

N-N removal

ADDRESS

NAME

William J. Applegate

1999 Rt. 94

Woodbine, Md. 21797

SAMPLE TYPE

REASON FOR REQUEST

☐ Health Hazard
☐ U & O
☐ Real Estate
☐ Pond or Stream
☐ Sewage
☒ Other Survey

☐ Physician's Advice
☐ New Residence
☐ Nitrate Monitoring
☐ Taste or Odor
☐ Treatment System Necessity
☐ Plumbing or Well Repair
☐ Replacement Well
☐ Curiosity

SETTLEMENT DATE / /

SEPTIC SYSTEM: Approved Disapproved DATE / /

CONDITION: _____

SUPPLY TYPE: Drilled Well Hand Dug Spring Public

CONDITION: _____

FIRST SAMPLE COLLECTOR Singer TIME 12:15 DATE 11 / 16 / 88

 BACTERIA , pH , Free Cl⁻ , Res. Cl⁻ , Xvoc 116

 CHEMICAL , LEAD & COPPER , NITRATES A17, XPESTICIDE A21

ACTION: Called 1/3/89 w/ results of 1st test, talked w/ M's Applegate
cited high Atrazine & request to resample confirm on 1/4/89

RESAMPLE COLLECTOR DATE / /

 BACTERIA , pH , Free Cl⁻ , Res. Cl⁻ , TIME

 CHEMICAL , Other

ACTION: Well in basement (24 yrs old), jet pump, to resample
1/4/89

RESAMPLE COLLECTOR DATE / /

 BACTERIA , pH , Free Cl⁻ , Res. Cl⁻ , TIME

ACTION: _____

RESAMPLE COLLECTOR DATE / /

 BACTERIA , pH , Free Cl⁻ , Res. Cl⁻ , TIME

ACTION: _____

7C14

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Laboratories Administration
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P.O. Box 2355, Baltimore, Maryland 21203
J. Mehse Joseph, Ph.D., Director

PESTICIDES - DRINKING WATER

BOTTLE NO. P 37 COUNTY Howard LAB. NO. 1500215 819 8

SOURCE OF SAMPLE Applegate 1999 Rte 94 COLLECTOR B. Morton
Wheaton, MD

SAMPLE TYPE: _____ DISTRIBUTION _____ SOURCE outside OTHER _____
faucet (specify)

COMMUNITY _____ OTHER PUBLIC _____ PRIVATE ☒

REMARKS: Follow-up sample

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

TRANS. TYPE 1 COUNTY 13 PLANT NO. _____ SAMPLING STATION _____ DATE COLLECTED 091989 CARD NO. _____

20 21 22 23 24 25 26

FIELD pH _____ FIELD RESID. CHLORINE: FREE _____ TOTAL _____

✓	TEST FOR	CODE	RESULTS	✓	TEST FOR	CODE	RESULTS
	ALDRIN	504			2, 4-D	602	
	CHLORDANE	514			2, 4, 5-T	614	
	D D T	523			2, 4, 5-TP	623	
	DIELDRIN	534			MISCELLANEOUS		
	ENDRIN	545		✓	ALACHLOR		< 0.0008
	HEPTACHLOR	555		✓	ATRAZINE		< 0.008
	HEPTACHLOR EPOXIDE	565		✓	METOLACHLOR		0.0142
	LINDANE	574					
	METHOXYCHLOR	582					
	TOXAPHENE	634					
	ETHION						
	MALATHION						
	METHYL PARATHION						
	PARATHION						

RESULTS REPORTED IN MILLIGRAMS PER LITER (PPM)

DATE RECEIVED _____ DATE REPORTED 10-18-89 CHEMIST K. Woodland

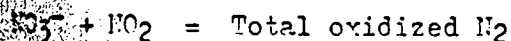
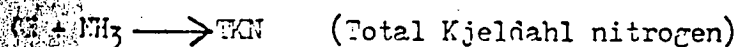
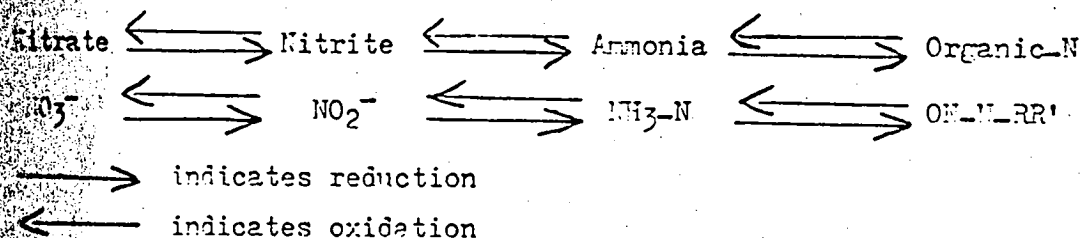
Nitrate (NO_3^-)

Nitrogen is essential for plant growth, but the presence of excessive amounts in water supplies presents a major pollution problem. Nitrogen compounds may enter water as nitrates or be converted to nitrates from agricultural fertilizers, sewage, industrial and packing house wastes, drainage from livestock feeding areas, farm manures and legumes. Nitrates in large amounts (above 10 ppm) can cause "blue babies" (methemoglobinemia) in infants less than six months of age. The nitrate is converted to nitrite by nitrate-reducing flora in the intestinal tract, which in turn interferes with oxygen-carrying capability of the blood. It is an important factor to be considered in livestock production, where, in addition to causing methemoglobinemia, it is responsible for many other symptoms arising from the presence of high levels of nitrates in water supplies. Nitrates in conjunction with phosphate, stimulate the growth of algae with all of the related difficulties associated with excessive algae growth. In boiler waters, sodium nitrate is introduced to control embrittlement.

United States Public Health Service Drinking Water Standards state that 10 ppm nitrate nitrogen is a limit which should not be exceeded. To the sanitary and industrial engineer, the concentration which is of concern is less than 1 ppm.

Nitrite (NO_2^-)

Nitrite is an intermediate product in the nitrogen cycle, may occur in trace amounts in natural waters as the result of biological decomposition. Nitrite is a key test in control of aquarium waters. Sodium Nitrite is used as a corrosion inhibitor in cooling water systems. Oxidation and reduction of nitrite occurs in wastewater treatment plants, water distribution systems, and natural waters. It is the etiologic agent of methemoglobinemia. Nitrous acid (nitrite + acid solution) can react with secondary amines to form nitrosamines ($\text{RR}'\text{N}-\text{NO}$) a potent carcinogens.



CN - includes proteins, peptides, nucleic acids, urea, synthetic organic materials.

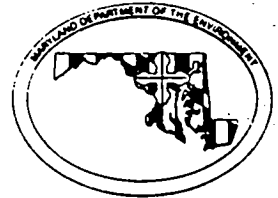


William Donald Schaefer
Governor

STATE OF MARYLAND
Department of the Environment

2500 BROENING HIGHWAY BALTIMORE, MARYLAND 21224

(301) 631- 3493



Martin W. Walsh, Jr.
Secretary

March 28, 1989

Mr. Bert Nixon
Howard County Health Department
3525 Ellicott Mills Drive
Ellicott City, Maryland 21043

Dear Mr. Nixon:

As we discussed in our recent phone conversation, enclosed is the fracture trace analysis for the Mullinex farm and vicinity. Generally, fractures in this area are located in topographic lows i.e., streambeds and valleys. The primary trending fractures are 40-45 degrees N.W. to S.E. with a secondary set of fractures trending almost perpendicular to the primary at 40-45 degrees N.E. to S.W. These fractures have been proven in the field and are good indicators of the regional groundwater flow patterns. Of particular interest is a fracture which trends 8 degrees N.E. across the Mullinex property which may explain the high yield of the newly drilled well at the farm.

Please keep me current with any additional sampling and/or investigative work including water level and well casing elevation measurements which may be determined by Roux Consultant as discussed in the February 23, 1989 meeting.

Due to limited personnel and workload, the Groundwater Investigations Division cannot be responsible for conducting an investigation at Mullinex farm. However, if any specific hydrogeological questions arise, please contact Ms. Cintra Fricke or myself at 631-3493.

Sincerely,

Arlene G. Weiner, Chief
Groundwater Investigations Division

AGW/dlf^h
Enclosure

cc: Joyce M. Boyd, M.D., MPH
Mr. Ronald Nelson
Mr. James J. Pittman