

C1 5070

SEQUENCE NO.
(MDE USE ONLY)STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPETHIS 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)

ST/CO USE ONLY

DATE Received

MM DD YY
8 13

DATE WELL COMPLETED

MM DD YY
3/30/07 15 20

Depth of Well

22 600 26
(TO NEAREST FOOT)COUNTY
NUMBERPERMIT NO.
FROM "PERMIT TO DRILL WELL"H0-95-1001
28 29 30 31 32 33 34 35 36 37

OWNER

last name first name
DRACHENBERG HAROLD D 6851 SANTA MARIA AVE TOWN HIGHLAND

SUBDIVISION

SECTION

LOT 3

WELL LOG

Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR
COLOR, DEPTH, THICKNESS AND IF WATER BEARINGDESCRIPTION (Use
additional sheets if needed)

FEET

check
if water
bearing

DESCRIPTION (Use additional sheets if needed)	FROM	TO	check if water bearing
Top Soil	0	2	
Brown Sand	2	15	
Brown Mica	15	50	
Gray Mica	50	55	
Brown Mica	55	70	✓
Gray Mica	70	90	
Brown Mica	90	91	
Gray Mica	91	140	
Sand Stone	140	150	
Gray Mica	150	190	
Sand Stone	190	200	
Gray Mica	200	600	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED

yes no
Y N

CIRCLE APPROPRIATE LETTER

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

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

DRILLERS LIC. NO. 1

MW D 040

DRILLERS SIGNATURE

(MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 1

39 D 038

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

GROUTING RECORD

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

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT CM BENTONITE CLAY BC

NO. OF BAGS 24 NO. OF POUNDS 2400

GALLONS OF WATER 144

DEPTH OF GROUT SEAL (to nearest foot)

from 48 TOP 52 ft. to 54 BOTTOM 58 ft.
(enter 0 if from surface)

CASING RECORD

casing
types
insert
appropriate
code
below

ST

STEEL

CO

CONCRETE

PL

PLASTIC

OT

OTHER

MAIN
CASING
TYPENominal diameter
top (main) casing
(nearest inch)Total depth
of main casing
(nearest foot)

60 61 63 64 65 70

OTHER CASING (if used)

EACH CASING
diameter depth (feet)
inch from toscreen type
or open hole

SCREEN RECORD

(insert
appropriate
code
below)

ST

STEEL

BR

BRASS

HO

OPEN

PL

PLASTIC

OT

OTHER

C 2

DEPTH (nearest ft.)

1 2 18 600

EACH CASING

1 8 9 11 15 17 21

2 23 24 26 30 32 36

3 38 39 41 45 47 51

SLOT SIZE 1 2 3

DIAMETER OF SCREEN (NEAREST INCH)

56 60

from to

GRAVEL PACK IF WELL DRILLED

WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY
(NOT TO BE FILLED IN BY DRILLER)

T (E.R.O.S.) W Q

70 72 74 75 76

TELESCOPE CASING LOG INDICATOR OTHER DATA

C 3

PUMPING TEST

HOURS PUMPED (nearest hour)

3

PUMPING RATE (gal. per min.)

10

METHOD USED TO
MEASURE PUMPING RATE

Bucket

WATER LEVEL (distance from land surface)

BEFORE PUMPING 50 ft.

WHEN PUMPING 600 ft.

TYPE OF PUMP USED (for test)

A air P piston T turbine

C centrifugal R rotary O other (describe below)

J jet S submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION
MUST BE COMPLETED FOR ALL WELLS.TYPE OF PUMP INSTALLED
PLACE (A,C,J,P,R,S,T,O)
IN BOX 29.CAPACITY:
GALLONS PER MINUTE
(to nearest gallon) 31 35

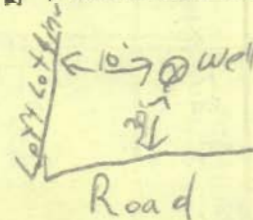
PUMP HORSE POWER

PUMP COLUMN LENGTH
(nearest ft.) 37 41CASING HEIGHT (circle appropriate box
and enter casing height)

+ above LAND SURFACE

- below 2 (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	8606	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 526294 please type	STATE PERMIT NUMBER HO - 95-1001 fill in this form completely
1 2 3 6				
Date Received (APA) 8 MM DD YY 13			1053 B 3	
OWNER INFORMATION			LOCATION OF WELL	
15 Last Name DRACHENBERG Owner First Name HAROLDO 34 36 Street or RFD 5550 STRERRTT PLACE SUITE 308 55 57 Town COLUMBIA, MD 21044 70 State 72 Zip 76			8 COUNTY Howard 21 CC# 23 SUBDIVISION Lands of Highland Oaks 42 SECTION Highland 44 46 LOT 3 48 50 52 NEAREST TOWN 71 MILES FROM TOWN (enter 0 if in town) 1 73 M I 76 77 78	
DRILLER INFORMATION			1 2 DIRECTION OF WELL FROM TOWN (CIRCLE BOX) 11 NEAR WHAT ROAD 6851 Santa Maria Ave 30 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) 34 10 37 DISTANCE FROM ROAD Ft. ENTER FT OR MI 38 39 TAX MAP: 40 BLK: 3 PARCEL 36	
Driller's Name George F. Easterday M D W 76 License No. 81 Firm Name L. Franklin Easterday, Inc. Address 9265 Brown Church Rd., MT. Airy, Md. 21771 Signature George F. Easterday Date 3-20-07				
WELL INFORMATION				
APPROX. PUMPING RATE (GAL. PER MIN.) 8 12 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 20				
USE FOR WATER (CIRCLE APPROPRIATE BOX)			NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL	
22 <input checked="" type="checkbox"/> D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION <input type="checkbox"/> F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) <input type="checkbox"/> I INDUSTRIAL, COMMERCIAL, DEWATERING <input type="checkbox"/> P PUBLIC WATER SUPPLY WELL <input type="checkbox"/> T TEST, OBSERVATION, MONITORING <input type="checkbox"/> G GEO-THERMAL			COUNTY NAME Howard COUNTY NO. 9543923 STATE SIGNATURE _____ INSERT S _____ 41 DATE ISSUED 3/23/07 CO SIGNATURE Stuart EXP. DATE 3/23/08 43 MM DD YY 48 NORTH GRID 491 000 EAST GRID 808 000 57 63	
APPROXIMATE DEPTH OF WELL 300 FEET APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST INCH			SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X SOURCES OF DRILLING WATER 1. wells 2. 3.	
METHOD OF DRILLING (circle one)			WRITE THE BOX NUMBER FROM THE MAP HERE E 808 N 491 DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION 14A12	
30 <input checked="" type="checkbox"/> BORED (or Augered) <input checked="" type="checkbox"/> JETTED <input type="checkbox"/> Jetted & DRIVEN 37 <input 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 DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)				
39 <input checked="" type="checkbox"/> N THIS WELL WILL NOT REPLACE AN EXISTING WELL <input type="checkbox"/> Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED <input type="checkbox"/> S 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"/> D THIS WELL WILL DEEPEEN AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 _____ 52				
Not to be filled in by driller (MDE OR COUNTY USE ONLY)				
APPROP. PERMIT NUMBER _____ G _____ PERMIT No. HO - 95 - 1001 70 71 72 73 74 75 76 77 78 79				
SPECIAL CONDITIONS				
NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED - Please send well abandonment report				

**HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
WATER AND SEWERAGE PROGRAM
TEL: (410)313-2640 FAX: (410)313-2648**

Information Form for the Installation of the Well Pump, Pitless Adapter, and Supply Piping

NOTE: The installer is responsible for requesting an inspection prior to 9 am on the day of the desired inspection. No work is to be covered until approved by the Health Department. All installations must comply with the National Standard Plumbing Code (NSPC, as amended locally) and COMAR 26.04.04 (MD Well Construction Regulations). Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: NATIONAL WATER SERVICE Telephone #: 301-854-1323
Address: P.O. BOX 139
ASHTON, MD 20861

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer
License # and name of individual responsible for the field installation:

Name (Print): DAVID RYCKE License# P1 0145

*A licensed individual must perform the actual installation. Apprentices must be under the supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification. Unlicensed individuals may be reported to the appropriate licensing agency.

Name of Property Owner: LUCASO Telephone #: 240-882-9728
Subdivision: 6937 SANTA MARIA Lot #: 3 Well Tag #: HO-95-1001
Site Address: HIGHLAND

Submersible Pump Data

Make: Grundfos
Model #: P1074315 P10637
Pump Capacity: 15 GPM
Well Yield: 10 GPM

Depth of well encountered at time of pump installation: 6.00 (feet)

If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4

Torque arrestors, Cable guards, or other acceptable method used- Must circle one

Safety rope, if used, attached to brass rope adapter or other acceptable method inside of well casing NO

Pitless Adapter

Make: CAMPBELL
Model#: _____
Depth: 37 (36" min)
NSF/WSC approved: ✓

Well Cap and Electric Conduit

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

Piping to house

Type: POLY
PSI: 160 (160 psi min)
Depth of supply line: ✓ (36" min)

House Connection

PVC sleeve to undisturbed soil at wall penetration: YES
Approximate length of sleeve: 5'
Sleeve caulked and sealed properly: YES

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

Signature of company representative responsible for installation

date

1/29/08

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

Date Insp. Requested: 10/4/07

Date Insp. Approved: _____

Inspection Data: Pitless adapter and water supply line at least 36" below grade

Two piece cap installed and attached to casing securely

Elec. conduit extends at least 18" below grade/attached to cap properly

Safety rope installed inside of well casing

Correct well tag attached properly and casing 8" above finished grade

Water supply line sleeved adequately at house connection

Adequate grout observed below pitless adapter

✓
NO
NO
✓
✓
✓
✓

10/9/07 (Kw)
Need to fill 1' gap below pitless w/ gravel or tightly packed fill

OK per homeowner
mlb
Re-inspected about 12/10/07

1/23/08
Per owner, is green sticker on well

SANTA MARIA AVE.
HIGHLAND OAKS

SANTA MARIA AVE.

2010

STORM DRAIN
EASEMENT

EXISTING
WELL

100' RADIUS

EXISTING
WELL

100' RADIUS

100' RADIUS

PROPOSED SEPTIC
AREA #1
6030 S.F.

3/23/07
well s.to

15" IN HDPE

3" PVC
MANIFOLD

EXISTING SEPTIC
RESERVE AREA

1500 GALLON
PUMP CHAMBER
WITH DUAL
ALTERNATING PUMPS

*E1
*F1

3" PVC FORCE MAIN
2" PVC MICROFAST
AEROBIC
TREATMENT
(SHEET 3)

WOODEN
SHED

PROPOSED SEPTIC
AREA #2
2950 S.F.

PROPOSED SEPTIC
AREA #3
2930 S.F.

LOT-2
6845 SANTA MARIA AVE.
HIGHLAND OAKS

25% SLOPES

PROPOSED
HOUSE
F.F. EL.=485.0

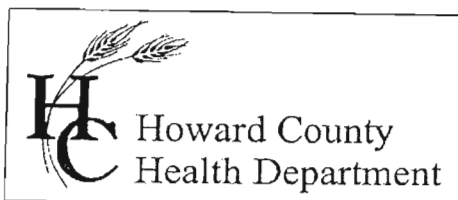
EXISTING SEPTIC
RESERVE AREA

ALT #3

G1C2

M1C2





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

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

January 29, 2008

Mr. & Mrs. Joseph Lucado
11930 Queen Street
Fulton, MD 20759

RE: Highland Oaks, Lot 3
6851 Santa Maria Avenue
Highland, MD 20777
BP #: B07001806
Well Permit # HO-95-1001

Dear Sir:

This is to advise you that the septic system for the above referenced property has been installed and inspected. **Final approval of the septic system was granted on 10/24/2007. Final approval of the well line connection to the dwelling was approved on 12/11/2007.**

The water sample results indicate that the water samples submitted for testing were free of coliform and fecal coliform bacteria at the time of sampling and are bacteriologically safe for drinking. The water sample results were found to be in compliance with COMAR water quality standards.

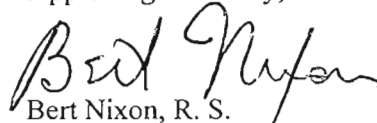
INTERIM CERTIFICATE OF POTABILITY

This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit #HO-95-1001. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies. Based upon satisfactory investigation and evaluation, the Howard County Health Department as authorized by the Maryland Department of the Environment accepts this well system as required by COMAR 26.04.04.

This certificate may become final upon completion of the second bacteriological test, which is to be taken by the county health department within six months of receipt of this letter. **Please contact (410) 313-1773 to schedule a final water sample appointment. Currently, there is no charge for this final sampling.**

Date of Water Samples: 01/23/2008 & 01/28/2008
Date of Well Completion: 03/30/2007

Approving Authority,


Bert Nixon, R. S.
Well & Septic Program

cc: Building Inspector's Office
Community Health Services
File

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD 21157 (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	66469	Account #:	3123
Reference:	Lucado	Company:	National Water Servicing
Location:	6851 Santa Maria Avenue	Requested By:	Dave Rycke
	Highland, MD 20777	Source:	Well Water
Date/ Time Collected:	1/23/2008 1240	Site:	Pressure Tank
Date/Time Rec'd:	1/23/2008 1352	Treatment:	None
Chlorine ppm:	Free: ND Total: ND	pH:	6.5
Collected By:	J.Yeager 6176JY	Well #:	HO-95-1001

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	3.1	MPN/ 100 ml	<1.0	SM18 9223 B.	1/24/2008 / 0820 / AD/BD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223 B.	1/24/2008 / 0820 / AD/BD
Nitrate	<1.0	mg/L	10	601	1/23/2008 / 1430 / BCD
Turbidity	28.3	NTU	<10	SM18 2130B	1/24/2008 / 0835 / AD/BD
Sand	NS	mg/L	5	Visual/Gravimct	1/24/2008 / 0835 / AD/BD
Iron	2.79	mg/L	0.3	FR, 45 (126)	1/24/2008 / 0840 / AD/BD

NOTES

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

Reason for Test : Use & Occupancy
 Building Permit # : B07001806

Date Reported: 1/24/2008

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (800) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	66507	Account #:	3123
Reference:	Lucado	Company:	National Water Servicing
Location:	6851 Santa Maria Avenue Highland, MD 20777	Requested By:	Dave Rycke
Date/ Time Collected:	1/28/2008 1130	Source:	Well Water
Date/Time Rec'd:	1/28/2008 1250	Site:	Pressure Tank
Chlorine ppm:	Free: ND Total: ND	Treatment:	Sediment Filter**
Collected By:	B. Dutterer 4717BD	pH:	7.3
		Well #:	HO-95-1001

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Turbidity	13.5	NTU	<10	SM18 2130B	1/28/2008 / 1300 / AD/BD

NOTES

- 1 **Sample collected prior to treatment
- 2 NTU = Nephelometric Turbidity Units
- 3 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 4 ND:None Detected
- 5 Visual well check: Sealed, vented cap
- 6 pH tested on-site

Reason for Test : Use & Occupancy retest 66469

Building Permit # : B07001806

Date Reported: 1/28/2008

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

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

REPORT OF ANALYSIS

Laboratory ID #:	66505	Account #:	3123
Reference:	Lucado	Company:	National Water Servicing
Location:	6851 Santa Maria Avenue Highland, MD 20777	Requested By:	Dave Rycke
Date/ Time Collected:	1/28/2008 1130	Source:	Well Water
Date/Time Rec'd:	1/28/2008 1250	Site:	Pressure Tank
Chlorine ppm:	Free: ND Total: ND	Treatment:	Sediment Filter**
Collected By:	B. Dutterer 4717BD	pH:	7.3
		Well #:	HO-95-1001

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223 B.	1/29/2008 / 0900 / AD/BD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223 B.	1/29/2008 / 0900 / AD/BD

NOTES:

- 1 **Sample collected prior to treatment
- 2 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 3 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 4 ND:None Detected
- 5 Visual well check: Sealed, vented cap
- 6 pH tested on-site

Reason for Test : Use & Occupancy retest 66469

Building Permit # : B07001806

Date Reported: 1/29/2008

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Fareytown Rd. Westminster, MD (410) 848-1034 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	66508	Account #:	3123
Reference:	Lucado	Company:	National Water Servicing
Location:	6851 Santa Maria Avenue Highland, MD 20777	Requested By:	Dave Rycke
Date/ Time Collected:	1/28/2008 1130	Source:	Well Water
Date/Time Rec'd:	1/28/2008 1250	Site:	Kitchen Sink Tap
Chlorine ppm:	Free: ND Total: ND	Treatment:	Sediment Filter
Collected By:	B. Dutterer 4717BD	pH:	7.3
		Well #:	HO-95-1001

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Turbidity	4.49	NTU	<10	SM18 2130B	1/28/2008 / 1346 / BCD

NOTES

- 1 NTU = Nephelometric Turbidity Units
- 2 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 3 ND:None Detected
- 4 Visual well check: Sealed, vented cap
- 5 pH tested on-site

Reason for Test : Use & Occupancy retest 66469

Building Permit # : B07001806

Should Test For Iron Before
and After Treatment

Date Reported: 1/28/2008

**L. FRANKLIN EASTERDAY, INC.****WELL DRILLING - TRENCHING - PUMPS & SERVICE**

9266 Brown Church Rd., Mt. Airy, Maryland 21771

PHONE: 301-829-1640 • FAX: 301-829-2867

3/23/07

Honau County Health Dept - 410-312-2648
Mike Davis
Re: 6851 Santa Maria

Mr. Drachenberg has my permission
to pick up the state permit on
Monday to hand carry it to
my office. Call if questions.

Thanks

George F. Easterday CWD/P.I.
President

MWD 040