ATTACHMENT A

Earth Data INCORPORATED
EARTH DATA INCORPORATED
131 COMET DRIVE
CENTREVILLE, MD 21617
Phone: (410) 758-8160
Fax: (410) 758-8168
www.earthdatainc.com

LETTER OF TRANSMITTAL

DATE	JOB NO.
	4816

RE: 6 well permit applications for UMD Shore Medical Center at Chestertown

TO: John Beskid
Kent Co. Environmental Health Dept
125 S. Lynchburg
Chestertown, MD 21620

WE ARE SENDING YOU ☒ ATTACHED ☐ Under separate cover ☒ VIA Hand delivery (TST)

- ☐ Copy of letter
- ☐ Reports
- ☐ Specifications
- ☐ Invoices
- ☐ Prints
- ☐ Maps
- ☐ Data
- ☐ Proposals
- ☐ Video Tapes
- ☐ Well Permits
- ☐ CD / DVD
- ☐ Photos
- ☐ Water Samples
- ☐ Geophysical Logs
- ☐ Other Samples
- ☐ _____
- ☐ _____
- ☐ Drawing/Sketch
- ☒ well permit applications

COPIES	DATED	DESCRIPTION
1	05.12.16	6 well permit applications
1		

THESE ARE TRANSMITTED as checked below:

- ☐ For your use
- ☐ As requested
- ☐ For review and comment
- ☐ For analysis
- ☒ For Processing
- ☐ _____
- ☐ To be returned
- ☐ To forward

REMARKS _____

COPIES TO: EDI

SIGNED: Ted Trumbull

John Beskid

1485

EMERGENCY/TEMP NO. IF ANY

B 1 — SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER — —

fill in this form completely

Date Received (APA) — 8 MM DD YY 13

OWNER INFORMATION

15 Last Name: UNIV. OF MD. SHORE MEDICAL CENTER AT CHESTERTOWN — Owner First Name 34

36 Street or RFD: 100 BROWN ST. — 55

57 Town: CHESTERTOWN — 70 State: MD — 72 Zip: 21620 — 76

DRILLER INFORMATION

Driller's Name: THEODORE TRUMBULL — 76 License No.: MGD 134 — 81

Firm Name: EARTH DATA INC.

Address: 131 COMET DR. CENTREVILLE, MD 21617

Signature: Theodore S Trumbull — Date: 5/12/16

B 2 — 1 2

WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): N/A — 8 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): N/A — 14 20

B 3

LOCATION OF WELL

8 COUNTY: KENT — 21

23 SUBDIVISION — 42

SECTION — 44 46

LOT — 48 50

52 NEAREST TOWN: CHESTERTOWN — 71

B 4

SOURCES OF DRILLING WATER

1. POTABLE
2.
3.

11 STREET ADDRESS: 100 BROWN ST. — 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

NORTH N / WEST W 32 E EAST / S SOUTH

34 DISTANCE FROM ROAD: 60 — 37 ENTER FT OR MI: FT — 38 39

TAX MAP: 202 BLK: ____ PARCEL 1644

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME — COUNTY NO.

STATE SIGNATURE — INSERT S → 41

DATE ISSUED

43 MM DD YY 48 — CO SIGNATURE — EXP. DATE

APPROXIMATE DEPTH OF WELL: 65 FEET — 24 28

APPROXIMATE DIAMETER OF WELL: 2 NEAREST INCH

METHOD OF DRILLING (circle one)

30
- BORED (or Augered)
- JETTED
- Jetted & DRIVEN
- AIR-ROTary
- AIR-PERcussion
- ROTARY (Hydraulic Rotary)

37
- CABLE
- REVerse-ROTary
- DRive-POINT

other

REPLACEMENT OR DEEPENED WELLS
(CIRCLE APPROPRIATE BOX)

- N THIS WELL WILL NOT REPLACE AN EXISTING WELL
- Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED

39
- S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- D THIS WELL WILL DEEPEN AN EXISTING WELL

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

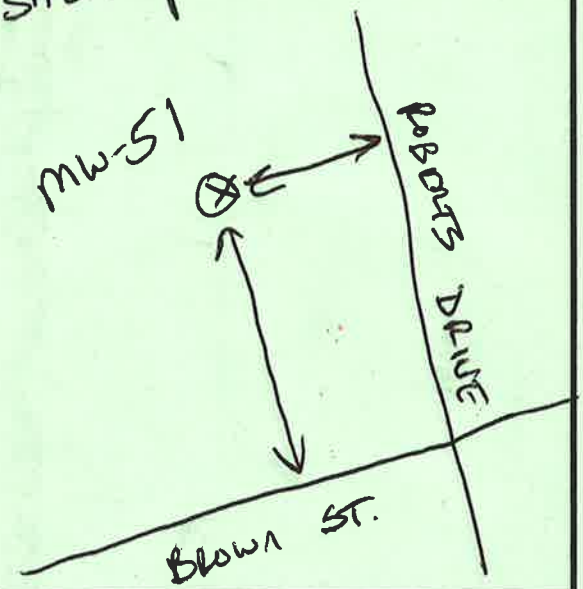
Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROP. PERMIT NUMBER — — — — — G — — —

PERMIT No. — — 70 71 72 73 74 75 76 77 78 79

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

*PLEASE SEE ATTACHED SITE MAP.



SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED=

MDE/WMA/PER.071

① ORIGINAL

MW-51

EMERGENCY/TEMP NO. IF ANY

B 1 1457 (1 2 3 6) SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER — — (70 79)
fill in this form completely

Date Received (APA) (8 MM DD YY 13)

OWNER INFORMATION

Univ. of MD. Shore Medical Center at Chestertown (15 Last Name Owner First Name 34)

100 Brown St. (36 Street or RFD 55)

Chestertown MD 21620 (57 Town 70 State 72 Zip 76)

DRILLER INFORMATION

Theodore Trumbull M G D 134 (Driller's Name 76 License No. 81)

Earth Data Inc (Firm Name)

131 Comet Dr. Centreville MD 21617 (Address)

Signature Theodore S Trumbull Date 5/12/16

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) N/A (8 12)

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) N/A (14 20)

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

APPROXIMATE DEPTH OF WELL 55 (24 28) FEET

APPROXIMATE DIAMETER OF WELL 4 NEAREST INCH

METHOD OF DRILLING (circle one)

(BORED (or Augered)) JETTED Jetted & DRIVEN

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

37 CABLE REVerse-ROTary DRive-POINT

other

REPLACEMENT OR DEEPENED WELLS
(CIRCLE APPROPRIATE BOX)

- (N) THIS WELL WILL NOT REPLACE AN EXISTING WELL
- Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- 39 S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- D THIS WELL WILL DEEPEN AN EXISTING WELL

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

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

APPROP. PERMIT NUMBER — — — — — G — — —

PERMIT No. — — (70 71 72 73 74 75 76 77 78 79)

B 3 LOCATION OF WELL

Kent (8 COUNTY 21)

23 SUBDIVISION 42

SECTION (44 46) LOT (48 50)

Chestertown (52 NEAREST TOWN 71)

B 4

SOURCES OF DRILLING WATER
1. Potable
2.
3.

100 Brown St (11 STREET ADDRESS 30)

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

NORTH (N) WEST (W) (E) EAST (S) SOUTH

34 140 37 DISTANCE FROM ROAD Ft

ENTER FT OR MI 38 39

TAX MAP 202 BLK: ____ PARCEL 1644

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME COUNTY NO.

STATE SIGNATURE INSERT S → 41

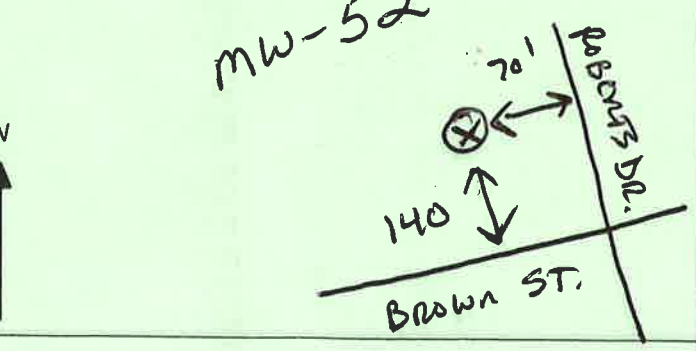
DATE ISSUED

43 MM DD YY 48 CO SIGNATURE EXP. DATE

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

* Please see attached site map with well locations.

MW-52



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

MDE/WMA/PER.071

EMERGENCY/TEMP NO. IF ANY

B 1 — 1458 — SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER — —

fill in this form completely

Date Received (APA)

OWNER INFORMATION

8 MM DD YY 13

UNIV. OF MD. SHORE MEDICAL CENTER AT CHESTERTOWN
15 Last Name Owner First Name 34

100 BROWN ST.
36 Street or RFD 55

CHESTERTOWN MD 21620
57 Town 70 State 72 Zip 76

DRILLER INFORMATION

THEODORE TRUMBULL M GD 134
Driller's Name 76 License No. 81

EARTH DATA INC.
Firm Name

131 COMET DR. CENTREVILLE MD 21620
Address

Signature 5/12/16 Date

B 2 — 1 2

WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) N/A
8 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) N/A
14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

B 3

LOCATION OF WELL

KENT
8 COUNTY 21

23 SUBDIVISION 42

SECTION 44 46 LOT 48 50

CHESTERTOWN
52 NEAREST TOWN 71

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

100 BROWN ST
11 STREET ADDRESS 30

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

34 100 37 DISTANCE FROM ROAD FT
ENTER FT OR MI 38 39

TAX MAP: 202 BLK: ____ PARCEL 644

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME COUNTY NO.

STATE SIGNATURE INSERT S 41

DATE ISSUED

43 MM DD YY 48 CO SIGNATURE EXP. DATE

APPROXIMATE DEPTH OF WELL 56 FEET
24 28

APPROXIMATE DIAMETER OF WELL 4 NEAREST INCH

METHOD OF DRILLING (circle one)

30
- BORED (or Augered)
- JETTED
- Jetted & DRIVEN
- AIR-ROTary
- AIR-PERcussion
- ROTARY (Hydraulic Rotary)

37
- CABLE
- REVerse-ROTary
- DRive-POINT

other

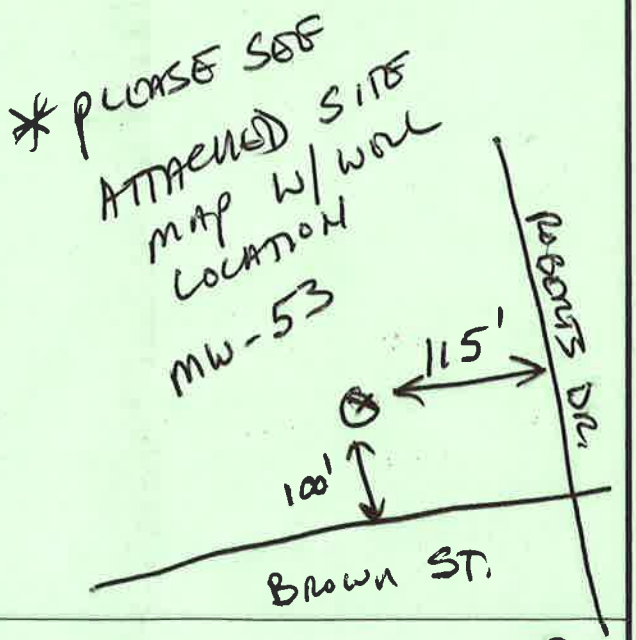
REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX)

- N THIS WELL WILL NOT REPLACE AN EXISTING WELL
- Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED

39
- S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- D THIS WELL WILL DEEPEN AN EXISTING WELL

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

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



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

APPROP. PERMIT NUMBER — — — — — G — — —

PERMIT No. — — 70 71 72 73 74 75 76 77 78 79

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

MDE/WMA/PER.071

MW-53

EMERGENCY/TEMP NO. IF ANY

B 1 1459 — SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER — — —

fill in this form completely

Date Received (APA)

OWNER INFORMATION

UNIV. OF MD SHORE MEDICAL CENTER AT CHESTERTOWN (Last Name / Owner / First Name)

100 BROWN ST (Street or RFD)

CHESTERTOWN MD 21620 (Town / State / Zip)

LOCATION OF WELL

B 3

KENT (COUNTY)

SUBDIVISION

SECTION — LOT —

CHESTERTOWN (NEAREST TOWN)

DRILLER INFORMATION

THEODORE TRUMBULL MG D 134 (Driller's Name / License No.)

EARTH DATA INC. (Firm Name)

131 COMET DR. CENTREVILLE, MD 21617 (Address)

Signature: Theodore S Trumbull 5/12/16 (Date)

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

100 BROWN ST (STREET ADDRESS)

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX): NORTH / WEST / EAST / SOUTH

DISTANCE FROM ROAD 50 FT (ENTER FT OR MI)

TAX MAP 202 BLK: — PARCEL 1644

B 2

WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) N/A

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) N/A

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME — COUNTY NO.

STATE SIGNATURE — INSERT S

DATE ISSUED

CO SIGNATURE — EXP. DATE

APPROXIMATE DEPTH OF WELL 451 FEET

APPROXIMATE DIAMETER OF WELL 4 NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) — JETTED — Jetted & DRIVEN

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

CABLE — REVerse-ROTary — DRive-POINT

other —

REPLACEMENT OR DEEPENED WELLS
(CIRCLE APPROPRIATE BOX)

- N THIS WELL WILL NOT REPLACE AN EXISTING WELL
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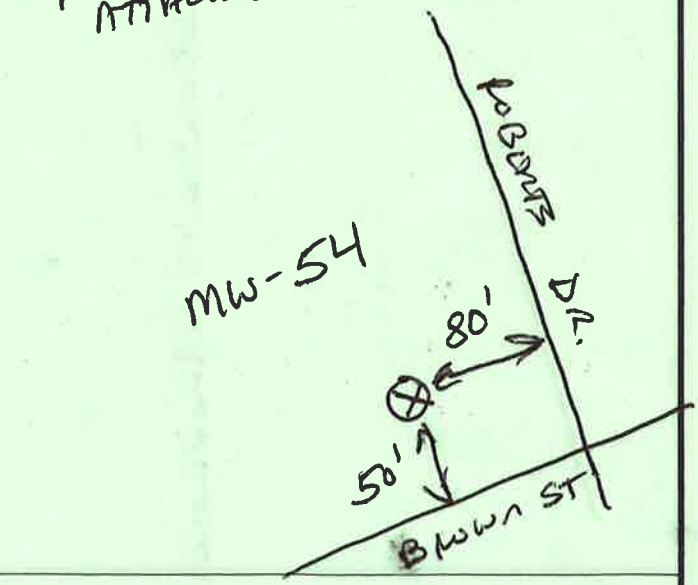
- S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- D THIS WELL WILL DEEPEN AN EXISTING WELL

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

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

* PLEASE SEE ATTACHED SITE MAP



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

APPROP. PERMIT NUMBER — — — — — G — — —

PERMIT No. — —

SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED=

MW-54

EMERGENCY/TEMP NO. IF ANY

B 1 | 1486 | SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER — —

fill in this form completely

Date Received (APA)

OWNER INFORMATION

8 MM DD YY 13

UNIV. OF MD. SHORE MEDICAL CENTER AT CHESTERTOWN
15 Last Name Owner First Name 34

100 BROWN ST.
36 Street or RFD 55

CHESTERTOWN MD 21620
57 Town 70 State 72 Zip 76

DRILLER INFORMATION

THEODORE TRUMBULL MGD 134
Driller's Name 76 License No. 81

EARTH DATA INC
Firm Name

131 COMET DR. CENTREVILLE, MD 21617
Address

Signature Date 5/12/16

B 2 | WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) N/A
1 2 8 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) N/A
14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

B 3 | LOCATION OF WELL

KENT
8 COUNTY 21

23 SUBDIVISION 42

SECTION 44 46 LOT 48 50

CHESTERTOWN
52 NEAREST TOWN 71

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

100 BROWN ST
11 STREET ADDRESS 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

NORTH N, WEST W, EAST E, SOUTH S

34 50 37 DISTANCE FROM ROAD FT
ENTER FT OR MI 38 39

TAX MAP: 202 BLK: ____ PARCEL 1644

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME COUNTY NO.

STATE SIGNATURE INSERT S → 41

DATE ISSUED

43 MM DD YY 48 CO SIGNATURE EXP. DATE

APPROXIMATE DEPTH OF WELL 48 FEET
24 28

APPROXIMATE DIAMETER OF WELL 4 NEAREST INCH

METHOD OF DRILLING (circle one)

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

REPLACEMENT OR DEEPENED WELLS
(CIRCLE APPROPRIATE BOX)

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

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

* PLEASE SEE ATTACHED SITE MAP.

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

APPROP. PERMIT NUMBER — — — — — G — — —

PERMIT No. — —
70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS

NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED=

MDE/WMA/PER.071

ORIGINAL

MW-55

EMERGENCY/TEMP NO. IF ANY

B 1 1487 — SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER — —

fill in this form completely

Date Received (APA)

OWNER INFORMATION

UNIV. OF MD SHORE MEDICAL CENTER AT CHESTERTOWN (Last Name / Owner / First Name)

100 BROWN ST (Street or RFD)

CHESTERTOWN MD 21620 (Town / State / Zip)

DRILLER INFORMATION

THEODORE TRUMBULL MGD 134 (Driller's Name / License No.)

EARTH DATA INC (Firm Name)

131 COMET DR. CENTREVILLE, MD 21617 (Address)

Theodore S Trumbull 5/12/16 (Signature / Date)

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) N/A

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) N/A

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

APPROXIMATE DEPTH OF WELL 46 FEET

APPROXIMATE DIAMETER OF WELL 4 NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN

AIR-ROTary AIR-PERcussion ROTARY (Hydraulic Rotary)

CABLE REVerse-ROTary DRive-POINT

other

REPLACEMENT OR DEEPENED WELLS
(CIRCLE APPROPRIATE BOX)

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

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

APPROP. PERMIT NUMBER — — — — — G — — —

PERMIT No. — —

B 3 LOCATION OF WELL

KENT (COUNTY)

SUBDIVISION

SECTION LOT

CHESTERTOWN (NEAREST TOWN)

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

100 BROWN ST (STREET ADDRESS)

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) NORTH WEST EAST SOUTH

DISTANCE FROM ROAD 35 FT. (ENTER FT OR MI)

TAX MAP: 202 BLK: — PARCEL 1644

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

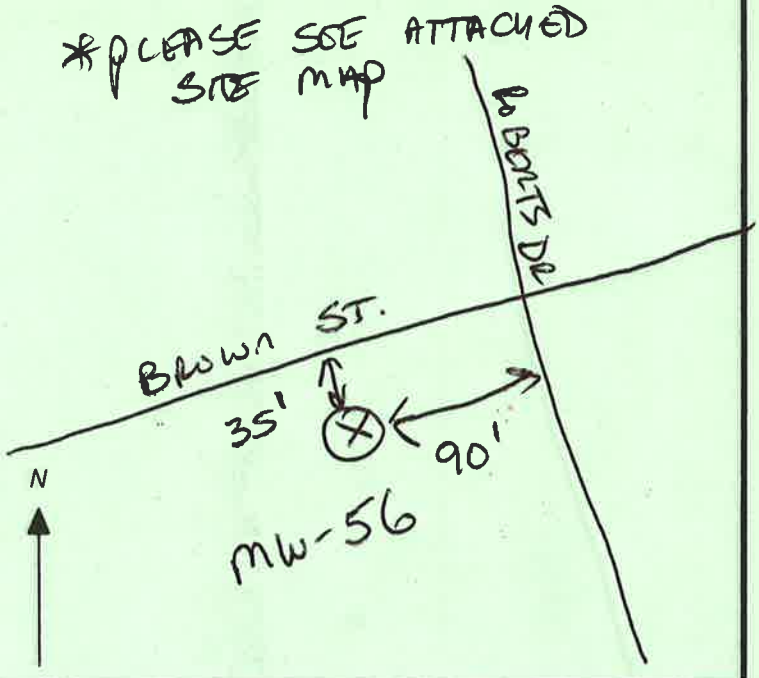
COUNTY NAME COUNTY NO.

STATE SIGNATURE INSERT S

DATE ISSUED

MM DD YY CO SIGNATURE EXP. DATE

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



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

MDE/WMA/PER.071

MW-56

New Well I.D.	Closest Existing Well I.D.	Historic High Water Level (ft.)	Historic Low Water Level (ft.)	Average Depth to Water (ft.)	March 2016 Depth to Water (ft.)	Proposed Well Total Depth (ft.)	Proposed Screen Interval (ft.)	Estimated Pumping Influence
MW-51	MW-5	49.18	55.05	52.12	50.73	65	40' to 60'	Low
MW-52	MW-42	36.68	43.21	39.95	39.36	55	30' to 50'	Low
MW-53	MW-43	37.44	43.64	40.54	41.09	56	31' to 51'	Low-Mod.
MW-54	MW-41	33.04	40.39	36.72	36.44	51	26' to 46'	Low
MW-55	MW-45	30.66	36.03	33.35	33.02	48	23' to 43'	Low
MW-56	MW-20	29.24	35.58	32.41	31.62	46	21' to 41'	Low

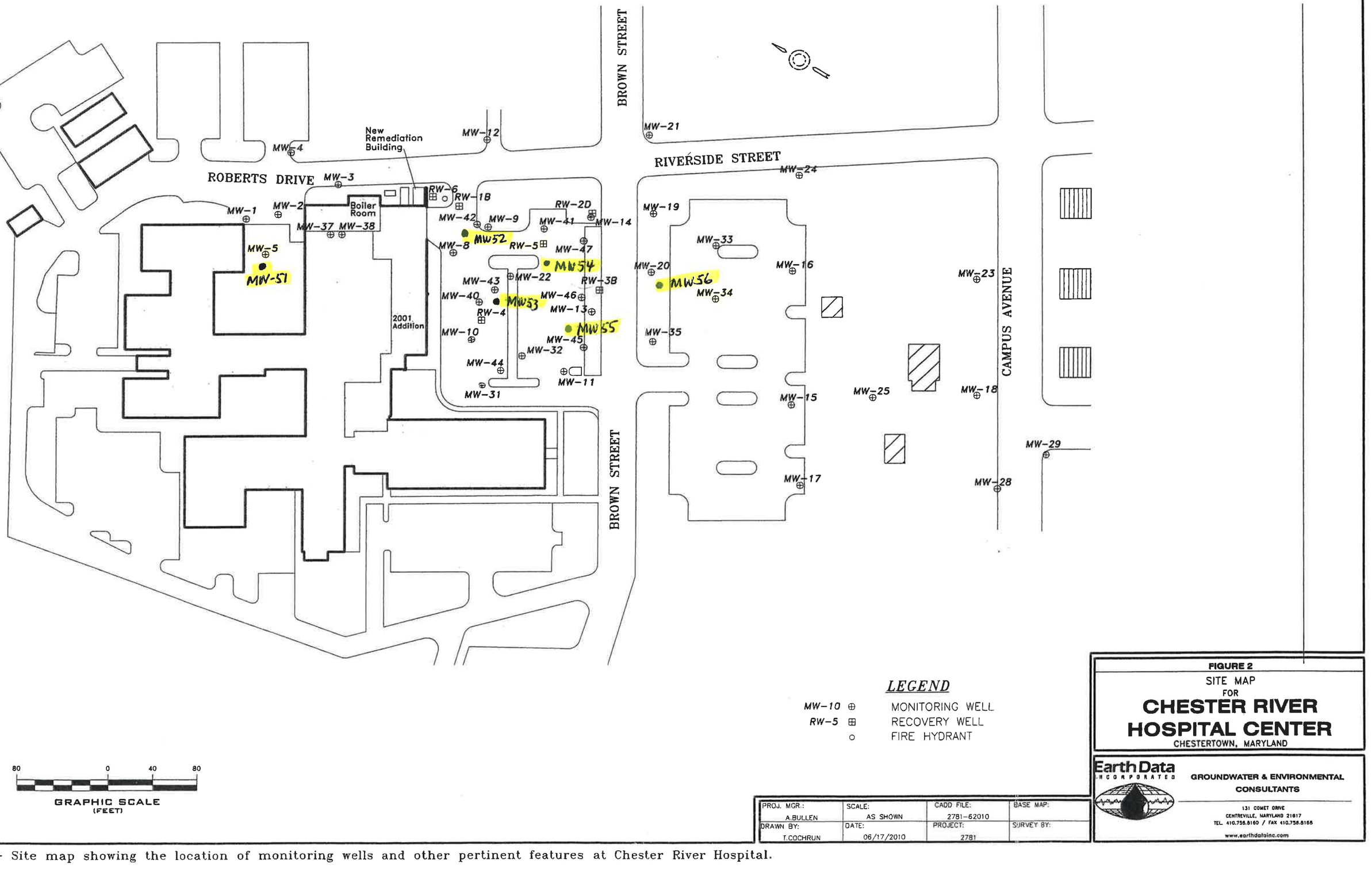


Figure 2 – Site map showing the location of monitoring wells and other pertinent features at Chester River Hospital.

1485

EMERGENCY/TEMP NO. IF ANY

RECEIVED
MAY 16 2016

B 1 — SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

please type

STATE PERMIT NUMBER: KT - 14 - 0236

fill in this form completely

Date Received (APA)

OWNER INFORMATION

8 MM DD YY 13

15 Last Name: UNIV. OF MD. SHORE MEDICAL CENTER AT CHESTERTOWN — Owner First Name 34

36 Street or RFD: 100 BROWN ST. — 55

57 Town: CHESTERTOWN — 70 State: MD — 72 Zip: 21620 — 76

DRILLER INFORMATION

Driller's Name: THEODORE TRUMBULL — 76 License No.: M G D 134 — 81

Firm Name: EARTH DATA INC.

Address: 131 COMET DR. CENTREVILLE, MD 21617

Signature: Theodore S Trumbull — Date: 5/12/16

B 2 WELL INFORMATION

1 2

APPROX. PUMPING RATE (GAL. PER MIN.): N/A — 8 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): N/A — 14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

APPROXIMATE DEPTH OF WELL: 65 FEET — 24 28

APPROXIMATE DIAMETER OF WELL: 2 NEAREST INCH

METHOD OF DRILLING (circle one)

30
- BORED (or Augered)
- JETTED
- Jetted & DRIVEN
- AIR-ROTary
- AIR-PERcussion
- ROTARY (Hydraulic Rotary)

37
- CABLE
- REVerse-ROTary
- DRive-POINT

other

REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX)

- N THIS WELL WILL NOT REPLACE AN EXISTING WELL
- Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED

39
- S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- D THIS WELL WILL DEEPEN AN EXISTING WELL

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

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

APPROP. PERMIT NUMBER - - - - - - G - - -

PERMIT No. KT - 14 - 0236 — 70 71 72 73 74 75 76 77 78 79

B 3 LOCATION OF WELL

8 COUNTY: KENT — 21

23 SUBDIVISION — 42

SECTION 44 46 — LOT 48 50

52 NEAREST TOWN: CHESTERTOWN — 71

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

11 STREET ADDRESS: 100 BROWN ST. — 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

NORTH N / W 32 E WEST / S SOUTH / EAST

34 DISTANCE FROM ROAD: 60 — 37 ENTER FT OR MI: FT — 38 39

TAX MAP: 202 BLK: ____ PARCEL 164

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME: Kent — COUNTY NO.: 14

STATE SIGNATURE — INSERT S → 41

DATE ISSUED: 5/16/16 — 43 MM DD YY 48 — CO SIGNATURE — EXP. DATE

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

* PLEASE SEE ATTACHED SITE MAP.

SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED=

EMERGENCY/TEMP NO. IF ANY

B 1 — SEQUENCE NO. (MDE USE ONLY): 1459

RECEIVED MAY 16 2016

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

please type

STATE PERMIT NUMBER: KE-14-0324

fill in this form completely

Date Received (APA): 8 MM DD YY 13

OWNER INFORMATION

15 Last Name: UNIV. OF MD SHORE MEDICAL CENTER AT CHESTERTOWN — Owner — First Name 34

36 Street or RFD: 100 BROWN ST 55

57 Town: CHESTERTOWN — 70 State: MD — 72 Zip: 21620 76

DRILLER INFORMATION

Driller's Name: THEODORE TRUMBULL — 76 M G D — License No. 134 81

Firm Name: EARTHDATA INC.

Address: 131 COMET DR. CENTREVILLE, MD 21617

Signature: Theodore S Trumbull — Date: 5/12/16

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): N/A — 8 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): N/A — 14 20

B 3 LOCATION OF WELL

8 COUNTY: KENT 21

23 SUBDIVISION 42

SECTION 44 46 — LOT 48 50

52 NEAREST TOWN: CHESTERTOWN 71

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

11 STREET ADDRESS: 100 BROWN ST 30

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

34 50 37 DISTANCE FROM ROAD

ENTER FT OR MI: FT 38 39

TAX MAP: 202 BLK: ____ PARCEL 644

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME: KENT — COUNTY NO. 14

STATE SIGNATURE _____ INSERT S → 41

DATE ISSUED: 5/17/16 — 43 MM DD YY 48 — CO SIGNATURE — EXP. DATE

APPROXIMATE DEPTH OF WELL: 51 FEET (24 28)

APPROXIMATE DIAMETER OF WELL: 4 NEAREST INCH

METHOD OF DRILLING (circle one)

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

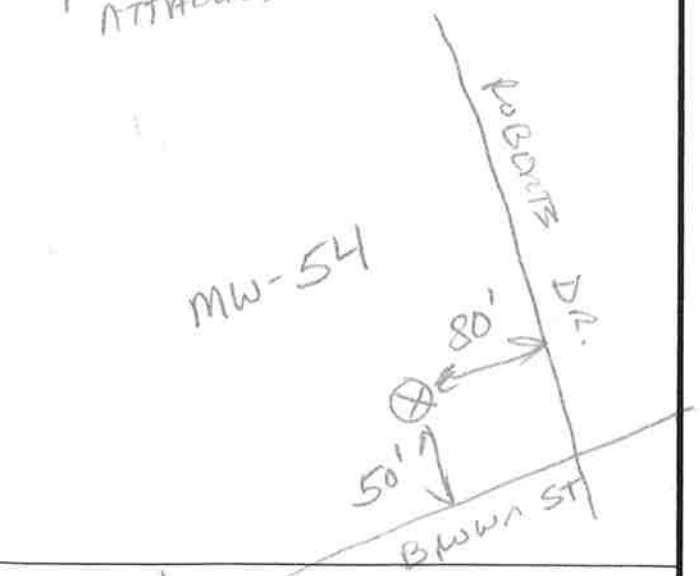
REPLACEMENT OR DEEPENED WELLS
(CIRCLE APPROPRIATE BOX)

- [N] THIS WELL WILL NOT REPLACE AN EXISTING WELL
- [Y] THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- 39 [S] THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- [D] THIS WELL WILL DEEPEN AN EXISTING WELL

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

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

* PLEASE SEE ATTACHED SITE MAP.



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

APPROP. PERMIT NUMBER - - - - - - G - - -

PERMIT No. KE - 14 - 0324
70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED=

MDE/WMA/PER.071

④ DRILLER

MW-54

EMERGENCY/TEMP NO. IF ANY

B 1 — 1 2 3 — SEQUENCE NO. (MDE USE ONLY): 1457

RECEIVED MAY 16 2016

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER: KE – 14 – 0027 (70 … 79)

fill in this form completely

Date Received (APA) (8 MM DD YY 13)

OWNER INFORMATION

Univ of MD. Shore Medical Center at Chestertown (15 Last Name — Owner — First Name 34)

100 Brown St. (36 Street or RFD 55)

Chestertown MD 21620 (57 Town 70 State 72 Zip 76)

DRILLER INFORMATION

Theodore Trumbull M 6 D 134 (Driller's Name 76 License No. 81)

Earth Data Inc (Firm Name)

131 Comet Dr. Centreville MD 21617 (Address)

Signature: Theodore S Trumbull Date: 5/12/16

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): N/A (8 12)

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): N/A (14 20)

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

APPROXIMATE DEPTH OF WELL: 55 FEET (24 28)

APPROXIMATE DIAMETER OF WELL: 4 NEAREST INCH

METHOD OF DRILLING (circle one)

30
- BORED (or Augered) — JETTED — Jetted & DRIVEN
- AIR-ROTary — AIR-PERcussion — ROTARY (Hydraulic Rotary)

37
- CABLE — REVerse-ROTary — DRive-POINT
- other

REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX)

- N THIS WELL WILL NOT REPLACE AN EXISTING WELL
- Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED

39
- S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- D THIS WELL WILL DEEPEN AN EXISTING WELL

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

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

APPROP. PERMIT NUMBER: – – – – – – G – – –

PERMIT No. KE – 14 – 0027 (70 71 72 73 74 75 76 77 78 79)

B 3 LOCATION OF WELL

Kent (8 COUNTY 21)

(23 SUBDIVISION 42)

SECTION (44 46) LOT (48 50)

Chestertown (52 NEAREST TOWN 71)

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

100 Brown St (11 STREET ADDRESS 30)

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

34 140 37 DISTANCE FROM ROAD

ENTER FT OR MI: FT (38 39)

TAX MAP: 202 BLK: ____ PARCEL 1644

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

Kent (COUNTY NAME) 14 (COUNTY NO.)

STATE SIGNATURE _____ INSERT S → 41

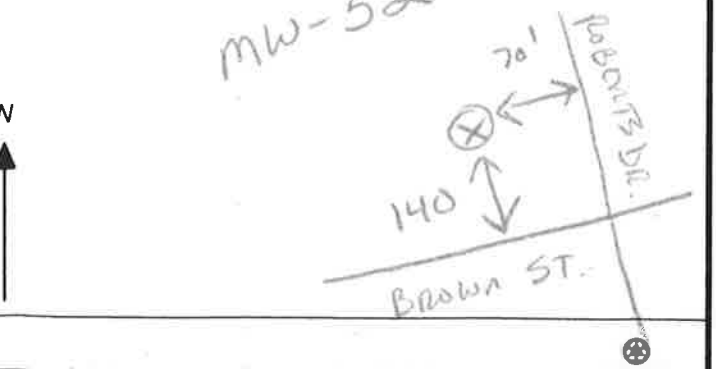
DATE ISSUED 5/16/16 _____ 5/16/21

43 MM DD YY 48 CO. SIGNATURE EXP. DATE

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

* Please see attached site map. with well locations.

MW-52



SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED=

MDE/WMA/PER.071

④ DRILLER

MW-52

EMERGENCY/TEMP NO. IF ANY

B 1 — SEQUENCE NO. (MDE USE ONLY) 1459

RECEIVED
MAY 16 2016

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER: KF - 14 - (illegible)
fill in this form completely

Date Received (APA)

OWNER INFORMATION

UNIV. OF MD. SHORE MEDICAL CENTER AT CHESTERTOWN
Last Name / Owner / First Name

100 BROWN ST.
Street or RFD

CHESTERTOWN MD 21620
Town / State / Zip

DRILLER INFORMATION

THEODORE TUMBULL M GD 134
Driller's Name / License No.

EARTH DATA INC.
Firm Name

131 COMET DR. CENTREVILLE, MD 21620
Address

Signature: Theodore J Tumbull Date: 5/12/16

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): N/A

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): N/A

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

APPROXIMATE DEPTH OF WELL: 56 FEET

APPROXIMATE DIAMETER OF WELL: 4 NEAREST INCH

METHOD OF DRILLING (circle one)

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

REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX)

- [N] THIS WELL WILL NOT REPLACE AN EXISTING WELL
- [Y] THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- [S] THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- [D] THIS WELL WILL DEEPEN AN EXISTING WELL

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

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

APPROP. PERMIT NUMBER ------G---

PERMIT No. KF - 14 - (illegible)

B 3 LOCATION OF WELL

KENT
COUNTY

SUBDIVISION

SECTION / LOT

CHESTERTOWN
NEAREST TOWN

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

100 BROWN ST
STREET ADDRESS

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX): NORTH / WEST / EAST / SOUTH

DISTANCE FROM ROAD: 100 ENTER FT OR MI: Ft

TAX MAP: 202 BLK: ____ PARCEL 1644

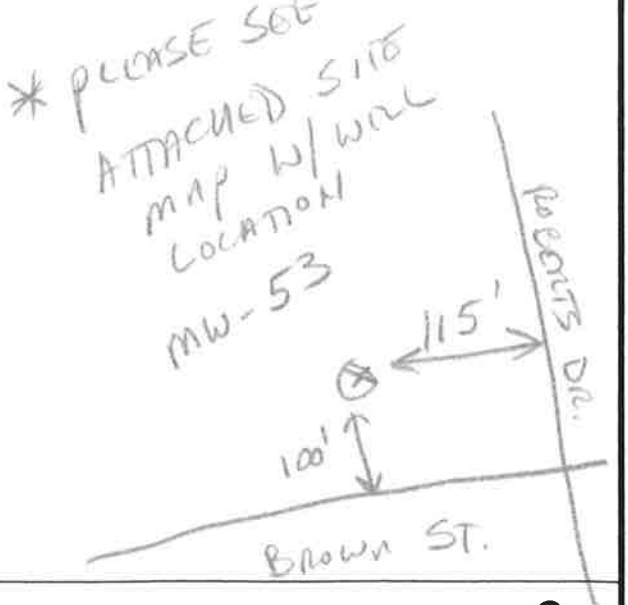
NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

KENT — 14
COUNTY NAME / COUNTY NO.

STATE SIGNATURE _____ INSERT S

DATE ISSUED 5/16/16 — CO. SIGNATURE — EXP. DATE

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



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

MDE/WMA/PER.071

④ DRILLER

MW-53

EMERGENCY/TEMP NO. IF ANY

B 1 — SEQUENCE NO. (MDE USE ONLY): 1485 — RECEIVED MAY 10 2016

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER: KT – 14 – 0040

fill in this form completely

Date Received (APA): 5/10/16

OWNER INFORMATION

UNIV. OF MD. SHORE MEDICAL CENTER AT CHESTERTOWN
Last Name — Owner — First Name

100 BROWN ST.
Street or RFD

CHESTERTOWN MD 21620
Town — State — Zip

DRILLER INFORMATION

THEODORE TRUMBULL M G D 134
Driller's Name — License No.

EARTH DATA INC
Firm Name

131 COMET DR. CENTREVILLE, MD 21617
Address

Theodore S Trumbull 5/12/16
Signature — Date

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): N/A

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): N/A

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

APPROXIMATE DEPTH OF WELL: 48 FEET

APPROXIMATE DIAMETER OF WELL: 4 NEAREST INCH

METHOD OF DRILLING (circle one)

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

REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX)

- [N] THIS WELL WILL NOT REPLACE AN EXISTING WELL
- [Y] THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- [S] THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- [D] THIS WELL WILL DEEPEN AN EXISTING WELL

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

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

APPROP. PERMIT NUMBER ---G---

PERMIT No. KT – 14 – 0040

B 3 LOCATION OF WELL

Kent
COUNTY

SUBDIVISION

SECTION — LOT

CHESTERTOWN
NEAREST TOWN

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

100 BROWN ST
STREET ADDRESS

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX): NORTH, WEST, EAST, SOUTH

DISTANCE FROM ROAD: 50 FT

ENTER FT OR MI

TAX MAP: 202 BLK: ____ PARCEL 1244

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

Kent — 14
COUNTY NAME — COUNTY NO.

STATE SIGNATURE — INSERT S

DATE ISSUED: 5/10/16 — CO SIGNATURE — EXP. DATE: 5/10/17

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

* PLEASE SEE ATTACHED SITE MAP.

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

MDE/WMA/PER.071

④ DRILLER

MW-55

EMERGENCY/TEMP NO. IF ANY

B 1 | 1487 | SEQUENCE NO. (MDE USE ONLY) | RECEIVED MAY 16 2016

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

STATE PERMIT NUMBER: KE - 14 - 0241 (70–79)

fill in this form completely

Date Received (APA) 8 MM DD YY 13

OWNER INFORMATION

15 Last Name: UNIV. OF MD SHORE MEDICAL CENTER AT CHESTERTOWN | Owner | First Name 34

36 Street or RFD: 100 BROWN ST (55)

57 Town: CHESTERTOWN | 70 State: MD | 72 Zip: 21620 (76)

DRILLER INFORMATION

Driller's Name: THEODORE TRUMBULL | M G D 134 | 76 License No. 81

Firm Name: EARTH DATA INC

Address: 131 COMET DR. CENTREVILLE, MD 21617

Signature: Theodore S Trumbull | Date: 5/12/16

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): N/A (8–12)

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): N/A (14–20)

USE FOR WATER (CIRCLE APPROPRIATE BOX)

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

APPROXIMATE DEPTH OF WELL: 46 (24–28) FEET

APPROXIMATE DIAMETER OF WELL: 4 NEAREST INCH

METHOD OF DRILLING (circle one)

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

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

37 CABLE | REVerse-ROTary | DRive-POINT

other

REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX)

- [N] THIS WELL WILL NOT REPLACE AN EXISTING WELL
- [Y] THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- 39 [S] THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- [D] THIS WELL WILL DEEPEN AN EXISTING WELL

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

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

APPROP. PERMIT NUMBER – – – – – G – – –

PERMIT No. KE - 14 - 0241 (70 71 72 73 74 75 76 77 78 79)

B 3 LOCATION OF WELL

8 COUNTY: KENT (21)

23 SUBDIVISION (42)

SECTION (44–46) LOT (48–50)

52 NEAREST TOWN: CHESTERTOWN (71)

B 4

SOURCES OF DRILLING WATER
1. POTABLE
2.
3.

11 STREET ADDRESS: 100 BROWN ST (30)

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

34 35 37 DISTANCE FROM ROAD: FT.

ENTER FT OR MI (38–39)

TAX MAP: 202 BLK: ____ PARCEL 644

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME: Kent | COUNTY NO. 14

STATE SIGNATURE ____ INSERT S → 41

DATE ISSUED: 5/10/16 | CO SIGNATURE | EXP. DATE: 5/10/17 (43 MM DD YY 48)

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

SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED=

MDE/WMA/PER.071

④ DRILLER

MW-56

C 1 | 13658 | SEQUENCE NO. (MDE USE ONLY)

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

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

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

COUNTY NUMBER

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

DATE WELL COMPLETED MM DD YY: 06 08 12 (15 20)

Depth of Well (22 26): 64 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" (28 29 30 31 32 33 34 35 36 37): KE - 14 - 0236

OWNER (last name / first name): UNIVERSITY OF MARYLAND SHORE MEDICAL CENTER AT CHESTERTOWN

WELL SITE ADDRESS: 100 BROWN ST TOWN: CHESTERTOWN

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	FEET TO	check if water bearing
DK. BROWN TOPSOIL	0	0.6	
BROWN VF SANDY SILT	0.6	1.6	
BROWN TAN VF SILTY SAND	1.6	2.9	
LT TAN VF SILT	2.9	5.7	
BROWN CLAYEY SILT	5.7	7.8	
BROWN-ORANGE VF SILTY SAND	7.8	14	
TAN-BROWN VF-C GRAVELLY SAND	14	18.5	
RED-BROWN-ORANGE VF-MED SAND	18.5	23.6	
RED-BROWN-TAN F SILTY SAND	23.6	28.6	
BROWN F CLAYEY SAND	28.6	29	
RED/BROWN/ORANGE F-M SILTY SAND	29	31.8	
BROWN F CLAYEY SAND	31.8	32.8	
RED-BROWN-ORANGE F-M SILTY SAND	32.8	50	✓
GREEN-GRAY M-F SAND-SILTY	50	52.5	✓
GRAY-BROWN F SILTY CLAYEY SAND	52.5	65	✓

NUMBER OF UNSUCCESSFUL WELLS:

WELL HYDROFRACTURED: yes [Y] no [N]

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

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

DRILLERS LIC. NO.: MD 134

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: MD 135

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

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

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT [CM] (45 46) BENTONITE CLAY [BC] (45 46)

NO. OF BAGS: 12 NO. OF POUNDS: 600

GALLONS OF WATER: 150

DEPTH OF GROUT SEAL (to nearest foot)

from: 2 (48 TOP 52) ft. to: 34 (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 TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	4 (63 64)	39 (66 70)

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to
PL	4	59	64

SCREEN RECORD
screen type or open hole insert appropriate code below

[ST] STEEL [BR] BRASS BRONZE [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN			
1	PL (8 9)	39 (11 15)	59 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1: 010 2: 3:

DIAMETER OF SCREEN: 4 (56 60) (NEAREST INCH)

	from	to
GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68	34	64 (68)

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

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour): 1 (8 9)

PUMPING RATE (gal. per min.): 0.5 (11 15)

METHOD USED TO MEASURE PUMPING RATE: BUCKET

WATER LEVEL (distance from land surface)

BEFORE PUMPING: 51 (17 20) ft.

WHEN PUMPING: 52 (22 25) ft.

TYPE OF PUMP USED (for test)

[A] air (27) [P] piston (27) [T] turbine (27)

[C] centrifugal (27) [R] rotary (27) [O] other (describe below) (27)

[J] jet (27) [S] submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES [NO]

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

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

PUMP HORSE POWER (37 41)

PUMP COLUMN LENGTH (nearest ft.) (43 47)

CASING HEIGHT (circle appropriate box and enter casing height)

[+] (49) above [−] (49) below LAND SURFACE 0 (50 51) (nearest foot)

LATITUDE 39.212511

LONGITUDE 76.064606

(DEFAULT COORD. WGS 84)

NOTES:

MW-51

OWNER

C 1 | 13659 | SEQUENCE NO. (MDE USE ONLY)

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

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

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

COUNTY NUMBER

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

DATE WELL COMPLETED MM DD YY: 06 07 16 (15 20)

Depth of Well (22 26): 55 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": KE-14-023 (28 29 30 31 32 33 34 35 36 37)

OWNER (last name first name): UNIVERSITY OF MARYLAND SHORE MEDICAL CENTER AT CHESTERTOWN

WELL SITE ADDRESS: 100 BROWN ST. TOWN: CHESTERTOWN

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	FEET TO	check if water bearing
BROWN M-C GRAVELLY SAND	0.8	2	
BROWN F-M SANDY CLAYEY SILT	2	5.8	
RED-BROWN/YELLOW FINE SILTY SAND	5.8	10	
BROWN F-M CLAYEY SAND	10	11.2	
RED-BROWN/YELLOW FINE SILTY SAND	11.2	18.4	
BROWN F-M SILTY CLAYEY SAND	18.4	23.5	
RED-BROWN F-M SILTY SAND	23.5	37.6	
GREEN GRAY F-M SILTY SAND	37.6	41	✓
SAND GRAY F SILTY CLAYEY SAND	41	43	✓
GREEN GRAY F-M SAND	43	46	✓
RED-ORANGE F-M SILTY SAND	46	48.6	✓
RED-BROWN FINE SILTY SAND	48.6	52	✓
BROWN-RED-ORANGE F-M SILTY SAND	52	58	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes [Y] no [N]

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

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

DRILLERS LIC. NO.: M D 134

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: D

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

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

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT [CM] (45 46) BENTONITE CLAY [BC] (45 46)

NO. OF BAGS 14 NO. OF POUNDS 308

GALLONS OF WATER 200

DEPTH OF GROUT SEAL (to nearest foot)

from 2 (48 TOP 52) ft. to 25 (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 TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	4 (63 64)	30 (66 70)

EACH CASING — OTHER CASING (if used)

	diameter inch	depth (feet) from	to
PL	4	50	55

SCREEN RECORD
screen type or open hole insert appropriate code below

[ST] STEEL [BR] BRASS BRONZE [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

C 2 (1 2)

EACH SCREEN — DEPTH (nearest ft.)

1	PL (8 9)	30 (11 15)	50 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1 010 2 ____ 3 ____

DIAMETER OF SCREEN 4 (56 60) (NEAREST INCH)

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

from	to
25	55

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

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) 1 (8 9)

PUMPING RATE (gal. per min.) 10.0 (11 15)

METHOD USED TO MEASURE PUMPING RATE: BUCKET

WATER LEVEL (distance from land surface)

BEFORE PUMPING 39 (17 20) ft.

WHEN PUMPING 48 (22 25) ft.

TYPE OF PUMP USED (for test)

[A] air (27) [P] piston (27) [T] turbine (27)

[C] centrifugal (27) [R] rotary (27) [O] other (describe below) (27)

[J] jet (27) [S] submersible (27)

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

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

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

PUMP HORSE POWER (37 41)

PUMP COLUMN LENGTH (nearest ft.) (43 47)

CASING HEIGHT (circle appropriate box and enter casing height)

[+] (49) above LAND SURFACE

[−] (49) below 0 (50 51) (nearest foot)

LATITUDE 39.217374

LONGITUDE 76.064343

(DEFAULT COORD. WGS 84)

NOTES:

MW-52

MDE/WMA/PER.071

OWNER

C 1 | 13660 | SEQUENCE NO. (MDE USE ONLY)

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

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

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

COUNTY NUMBER

ST/CO USE ONLY
DATE Received MM DD YY

DATE WELL COMPLETED: MM 06 DD 14 YY 16

Depth of Well: 55 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": KC - 14 - 0238

OWNER: UNIVERSITY OF MARYLAND SHORE MEDICAL CENTER AT CHESTERTOWN (last name / first name)

WELL SITE ADDRESS: 100 BROWN ST. TOWN: CHESTERTOWN

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	FEET TO	check if water bearing
ASPHALT	0	0.5	
BROWN M-UC GRAVELLY SAND	0.5	4	
BROWN SILTY CLAY	4	12.5	
ORANGE MED. SILTY SAND	12.5	15	
ORANGE M-C SAND	15	20	
ORANGE F-M SILTY SAND	20	24	
ORANGE F CLAYEY SILTY SAND	24	25	
ORANGE F SILTY SAND	25	36.2	
BROWN F-C QUARTZ GRAVELLY SAND	36.2	36.5	
BROWN F SANDY SILT	36.5	40	
BROWN F-M SILTY SAND	40	44	✓
BROWN SILTY CLAY	44	45	
BROWN F SILTY SAND	45	55	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes [Y] no [N]

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

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

DRILLERS LIC. NO.: M D 134

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: ___ D ___

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

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes [Y] no [N]

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT [CM] BENTONITE CLAY [BC]

NO. OF BAGS: 13 NO. OF POUNDS: 650

GALLONS OF WATER: 195

DEPTH OF GROUT SEAL (to nearest foot)

from 2 TOP ft. to 25 BOTTOM ft.

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

[ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL	4	30

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to
PL	4	50	55

SCREEN RECORD
screen type or open hole insert appropriate code below

[ST] STEEL [BR] BRASS BRONZE [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

C 2

DEPTH (nearest ft.)

EACH SCREEN			
1	PL	30	50
2			
3			

SLOT SIZE 1: 010 2: ___ 3: ___

DIAMETER OF SCREEN: 4 (NEAREST INCH)

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

from	to
25	55

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

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

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour): 1

PUMPING RATE (gal. per min.): 0.5

METHOD USED TO MEASURE PUMPING RATE: BUCKET

WATER LEVEL (distance from land surface)

BEFORE PUMPING: 40 ft.

WHEN PUMPING: 50 ft.

TYPE OF PUMP USED (for test)

[A] air [P] piston [T] turbine

[C] centrifugal [R] rotary [O] other (describe below)

[J] jet [S] submersible

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

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.

CAPACITY: GALLONS PER MINUTE (to nearest gallon)

PUMP HORSE POWER

PUMP COLUMN LENGTH (nearest ft.)

CASING HEIGHT (circle appropriate box and enter casing height)

[+] above [−] below LAND SURFACE

0 (nearest) foot

LATITUDE 39.217260

LONGITUDE 76.064429

(DEFAULT COORD. WGS 84)

NOTES:

MW-53

OWNER

C 1 | 13661 | SEQUENCE NO. (MDE USE ONLY)

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

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

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

COUNTY NUMBER

ST/CO USE ONLY
DATE Received MM DD YY

DATE WELL COMPLETED: 06 13 16

Depth of Well: 52 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": KE-14-0239

OWNER: UNIVERSITY OF MARYLAND SHORE MEDICAL CENTER AT CHESTERTOWN (last name / first name)

WELL SITE ADDRESS: 100 BROWN ST. TOWN: CHESTERTOWN

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	FEET TO	check if water bearing
ASPHALT	0	0.3	
STONE	0.3	0.6	
ORANGE M-C GRAVELLY CLAYEY SAND	0.6	2	
ORANGE SILTY CLAY	2	5.5	
GRAY-ORANGE VF-F SILTY CLAY	5.5	9	
BROWN VF-F SILTY CLAY	9	12	
RED-ORANGE F-M SAND W/IRONSTONE	12	15	
DK ORANGE F-M SAND W/IRONSTONE	15	31	
GREEN/RED F-M SAND W/GRAVEL	31	34	
GREEN-BROWN F-M CLAYEY SAND	34	40	✓
GREEN RED F-M SAND	40	45	✓
BROWN-RED F-M CLAYEY SAND W/GRAVEL	45	50	✓
BROWN-RED F-M SILTY SAND	50	55	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED: yes [Y] no [N]

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

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

DRILLERS LIC. NO.: MD 134

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: MD [illegible]

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

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box): yes [Y] no [N]

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT [CM] BENTONITE CLAY [BC]

NO. OF BAGS 16 NO. OF POUNDS 880

GALLONS OF WATER 240

DEPTH OF GROUT SEAL (to nearest foot)

from 2 ft. (TOP) to 22 ft. (BOTTOM)

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

[ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL	4	27

OTHER CASING (if used) — EACH CASING

diameter (inch)	depth (feet) from	to
PL	4	47	52

SCREEN RECORD
screen type or open hole — insert appropriate code below

[ST] STEEL [BR] BRASS BRONZE [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER

EACH SCREEN

	DEPTH (nearest ft.)	
1	PL 27	47
2		
3		

SLOT SIZE 1 010 2 ____ 3 ____

DIAMETER OF SCREEN 4 (NEAREST INCH)

from 22 to 52

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

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

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

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3 — PUMPING TEST

HOURS PUMPED (nearest hour): 1

PUMPING RATE (gal. per min.): 5.0

METHOD USED TO MEASURE PUMPING RATE: BUCKET

WATER LEVEL (distance from land surface)

BEFORE PUMPING: 40 ft.

WHEN PUMPING: 46 ft.

TYPE OF PUMP USED (for test)

[A] air [P] piston [T] turbine

[C] centrifugal [R] rotary [O] other (describe below)

[J] jet [S] submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP (CIRCLE) (YES or NO): YES / NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29.

CAPACITY: GALLONS PER MINUTE (to nearest gallon)

PUMP HORSE POWER

PUMP COLUMN LENGTH (nearest ft.)

CASING HEIGHT (circle appropriate box and enter casing height)

[+] above [−] below LAND SURFACE

0 (nearest foot)

LATITUDE 39.217194

LONGITUDE 76.064262

(DEFAULT COORD. WGS 84)

NOTES:

MW-54

OWNER

C 1 | 13681 | SEQUENCE NO. (MDE USE ONLY)

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

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

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

COUNTY NUMBER

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

DATE WELL COMPLETED MM 06 DD 02 YY 16 (15 20)

Depth of Well 22 45 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" KE - 14 - 0240 (28 29 30 31 32 33 34 35 36 37)

OWNER (last name) UNIVERSITY OF MARYLAND SHORE MEDICAL CENTER AT CHESTERTOWN (first name)

WELL SITE ADDRESS 100 BROWN ST. TOWN CHESTERTOWN

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	FEET TO	check if water bearing
ASPHALT	0	0.3	
LT ORANGE M-C GRAVELLY SAND	0.3	3.8	
DK GRAY/ORANGE SILTY CLAY	3.8	6	
GRAY/ORANGE FAT SILTY SANDY CLAY	6	8.4	
DK GRAY-BROWN SILTY CLAY	8.4	10	
ORANGE SILTY CLAY	10	11.5	
ORANGE RED F-M SAND - SILTY SAND	11.5	14	
RED-ORANGE F-M SILTY SAND	14	28.2	
RED ORANGE FINE SILTY SAND	28.2	29.5	
BROWN-RED F-VF SAND	29.5	33.7	
DK RED-ORANGE FINE SILTY SAND	33.7	37	
RED-BROWN FINE SILTY CLAYEY SAND	37	39	✓
BROWN-RED F-C SILTY SAND	39	49	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y / no N

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

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

DRILLERS LIC. NO.: MD 124

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: __ __ D __ __ __

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

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

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT CM (45 46) BENTONITE CLAY BC (45 46)

NO. OF BAGS 9 NO. OF POUNDS 450

GALLONS OF WATER 125

DEPTH OF GROUT SEAL (to nearest foot)

from 2 (48 TOP 52) ft. to 20 (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 TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	4 (63 64)	25 (66 70)

EACH CASING — OTHER CASING (if used)

	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below

ST STEEL; BR BRASS BRONZE; HO OPEN HOLE; PL PLASTIC; OT OTHER

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN

		from	to
1	PL (8 9)	25 (11 15)	45 (17 21)
2		(23 24)	(26 30) (32 36)
3		(38 39)	(41 45) (47 51)

SLOT SIZE 1 010 2 ____ 3 ____

DIAMETER OF SCREEN 4 (56 60) (NEAREST INCH)

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

from	to
20	50

(68)

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

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) 1 (8 9)

PUMPING RATE (gal. per min.) 8.0 (11 15)

METHOD USED TO MEASURE PUMPING RATE BUCKET

WATER LEVEL (distance from land surface)

BEFORE PUMPING 35 (17 20) ft.

WHEN PUMPING 42 (22 25) ft.

TYPE OF PUMP USED (for test)

A air (27); P piston (27); T turbine (27); C centrifugal (27); R rotary (27); O other (describe below) (27); J jet (27); S submersible (27)

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

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

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

PUMP HORSE POWER (37 41)

PUMP COLUMN LENGTH (nearest ft.) (43 47)

CASING HEIGHT (circle appropriate box and enter casing height)

+ above / − below (49) LAND SURFACE 0 (nearest foot) (50 51)

LATITUDE 39.217105

LONGITUDE 76.064479

(DEFAULT COORD. WGS 84)

NOTES:

MW-55

MDE/WMA/PER.071

OWNER

C 1 | 13682 | SEQUENCE NO. (MDE USE ONLY)

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

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

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

COUNTY NUMBER

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

DATE WELL COMPLETED MM 05 DD 19 YY 16
15 20

Depth of Well 22 47 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" KE-14-0241
28 29 30 31 32 33 34 35 36 37

OWNER UNIVERSITY OF MARYLAND SHORE MEDICAL CENTER CHESTERTOWN (last name first name)

WELL SITE ADDRESS 100 BROWN ST TOWN CHESTERTOWN

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	FEET TO	check if water bearing
BROWN VF SANDY CLAYEY SILT	0	1.2	
LT. BROWN CLAYEY SILT	1.2	5.6	
DK GRAY FINE SILTY CLAYEY SAND	5.6	6.1	
TAN - CLAY	6.1	7.1	
ORANGE - RED - BROWN F-M SILTY SAND	7.1	32	
BROWN/ORANGE F-M CLAYEY SAND	32	35	✓
LT. BROWN F SILTY SAND	35	37.5	✓
BROWN/RED/GREEN FINE SILTY SAND	37.5	40	✓
TAN VF SAND	40	47	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes [Y] no [N]

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

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

DRILLERS LIC. NO.: MGD 134

Helen S Zell
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: __ __ D __ __ __

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

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

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT [CM] BENTONITE CLAY [BC] 45 46

NO. OF BAGS 10 NO. OF POUNDS 500

GALLONS OF WATER 150

DEPTH OF GROUT SEAL (to nearest foot)

from 2 ft. (48 TOP 52) to 13 ft. (54 BOTTOM 58)

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

[ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL	4	22
60 61	63 64	66 70

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to
PL	4	42	47

SCREEN RECORD
screen type or open hole insert appropriate code below

[ST] STEEL [BR] BRASS [HO] OPEN HOLE [PL] PLASTIC [OT] OTHER BRONZE

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN			
1	PL	22	42
2			
3			

SLOT SIZE 1 010 2 ____ 3 ____

DIAMETER OF SCREEN 4 (NEAREST INCH) (56 60)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68: from 18 to 47 (68)

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

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) 1 (8 9)

PUMPING RATE (gal. per min.) 2.0 (11 15)

METHOD USED TO MEASURE PUMPING RATE BUCKET

WATER LEVEL (distance from land surface)

BEFORE PUMPING 32 ft. (17 20)

WHEN PUMPING 45 ft. (22 25)

TYPE OF PUMP USED (for test)

[A] air (27) [P] piston (27) [T] turbine (27)

[C] centrifugal (27) [R] rotary (27) [O] other (describe below) (27)

[J] jet (27) [S] submersible (27)

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

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

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

PUMP HORSE POWER (37 41)

PUMP COLUMN LENGTH (nearest ft.) (43 47)

CASING HEIGHT (circle appropriate box and enter casing height)

[+] above [−] below (49) LAND SURFACE 0 (nearest foot) (50 51)

LATITUDE 39.216914

LONGITUDE 76.064142

(DEFAULT COORD. WGS 84)

NOTES:

MW-56

MDE/WMA/PER.071

OWNER

UMD Shore Health- Chestertown
Summary of Monitoring Well Construction
May-June, 2016; Earth Data File 4816

Well I.D.	Permit No.	Start Date	Compl. Date	Boring Depth (ft.)	Well Depth (ft.)	Static Water Level (ft.)	Casing Interval	Screen Interval	Casing/screen Size (in.)	Casing/screen Material	Date Developed	Pumping Rate (gpm)	Pumping Duration (hr.)	Laboratory Soil Sample Intervals
MW-51	KE-14-0236	6.07.2016	6.08.2016	70.0	64'	51	0'-39'	39'-59'	2"	PVC	6.09.2016	0.5	1.0	50'-51'; 54'-55'; 69'-70'
MW-52	KE-14-0237	6.06.2016	6.07.2016	58.0	55'	39.5	0'-30'	30'-50'	4"	PVC	6.09.2016	10	1.0	33'-34'; 42'-43'; 57'-58'
MW-53	KE-14-0238	6.13.2016	6.14.2016	55.0	55	39.5	0'-30'	30'-50'	4"	PVC	6.15.2016	0.5	1.0	40'-41'; 54'-55'
MW-54	KE-14-0239	6.10.2016	6.13.2016	55.0	52'	36	0'-27'	27'-47'	4"	PVC	6.15.2016	5	1.0	36'-37'; 54'-55'
MW-55	KE-14-0240	6.01.2016	6.02.2016	49.0	50'	35.3	0'-25'	25'-45'	4"	PVC	6.03.2016 & 6.28.2016	10	2.0	37'-38'
MW-56	KE-14-0241	5.18.2016	5.19.2016	45.0	47	31	0'-22'	22'-42'	4"	PVC	5.19.2016	2	1.0	31.5'-32.5'

Project: UMD Shore Health- Chestertown

Earth Data File No. 4816 **Soil Boring I.D.:** MW-51
Static Water Level: 51.0'

DETAILED DESCRIPTION OF CUTTINGS

Earth Data Sample Number : n/a
Described By : K. Livingston
Date Described : 6.7.2016 & 6.08.2016

DEPTH INTERVAL FROM	TO	COLOR	SIZE	TYPE MATERIAL	SPECIAL FEATURES	OVM/PID CONCENTRATION
0	0.6	dark brown		topsoil		0 ppm
0.6	1.6	brown	very fine	sandy silt		0 ppm
1.6	2.9	brown-tan	very fine	silty sand		0 ppm
2.9	5.7	light tan	very fine	silty sand		0 ppm
5.7	7.8	brown		clayey silt		0 ppm
7.8	14.0	brown-orange	very fine	silty sand		0 ppm
14.0	18.5	tan-brown	very fine-coarse	gravelly sand		0 ppm
18.5	23.6	red-brown-orange	very fine-medium	sand		0 ppm
23.6	28.6	red-brown-tan	fine	silty sand		0 ppm
28.6	29.0	brown	fine	clayey sand		0 ppm
29.0	31.8	red-brown-orange	fine	silty sand		0 ppm
31.8	32.8	brown	fine	clayey sand		3.5 ppm @38'
32.8	50.0	red-brown-orange	fine-medium	silty sand		5.5 ppm @40'
50.0	52.5	green-gray	medium-fine	silty sand		1.5-2 ppm @43'
52.5	70.0	gray-brown	fine	silty clayey sand		10 ppm @ 45'
						38 ppm @47'
						31 ppm @ 50'
						38 ppm @52'
					lab soil sample @ 50'-51'	160 ppm @55'
					lab soil sample @ 54'-55'	3.3 ppm @ 58'
					lab soil sample @ 69'-70'	9.5 ppm @ 60'
						0.9 ppm @ 62'
						1.4 ppm @64'
						0 ppm @ 65'-70'

*ppm = parts per million

Project: UMD Shore Health- Chestertown

Earth Data File No. 4816 **Soil Boring I.D.:** MW-52 **Static Water Level:** 39.5'

DETAILED DESCRIPTION OF CUTTINGS

Earth Data Sample Number : n/a
Described By : K. Livingston
Date Described : 6.06.2016 & 6.07.2016

DEPTH INTERVAL FROM	TO	COLOR	SIZE	TYPE MATERIAL	SPECIAL FEATURES	OVM/PID CONCENTRATION
0	0.8	-	-	asphalt		0 ppm
0.8	2.0	brown	Medium-Very Coarse	gravelly sand/fill		0 ppm
2.0	5.8	brown	Fine-Medium	sandy clayey silt		0 ppm
5.8	10.0	reddish brown to yellow	Fine	silty sand	weathered ironstone @ 8' and 9'	0 ppm
10.0	11.2	brown	Fine-Medium	clayey sand		0 ppm
11.2	18.4	reddish brown to yellow	Fine	silty sand	weathered ironstone @ 11.2', 12.5', and 15.5'-18.4'	0 ppm
18.4	23.5	brown	Medium-Fine	silty clayey sand	weathered ironstone @ from 18.4' to 20.6'	0 ppm
23.5	26.7	reddish brown	Fine	silty sand	weathered ironstone @ 24.8'	0 ppm
26.7	37.6	reddish brown	Very Fine-Medium	sand-silty sand	weathered ironstone @ from 35' to 37.6'	3-5 ppm @ 28-35'
						22 ppm @ 35'
37.6	41.0	greenish gray	Fine-Medium	silty sand		80 ppm @ 38'
						50-60 ppm @ 38-41'
41.0	43.0	greenish gray	Fine	silty clayey sand		130-150 ppm @ 43'
43.0	46.0	dark green-gray	medium-fine	sand	reddish gray lens 45'-45.5'	120 ppm @ 45'
46.0	48.6	red-orange	Medium-Fine	silty sand		30-50 ppm @ 46-47'
48.6	52.0'	red-brown	fine	silty sand	clayey ironstone@ 48.6'	9 ppm @ 48'
52.0	53.0	brown-red-orange	medium-fine	silty sand		9-11 ppm @ 48-53'
53.0	58.0	red-brown	medium- fine	silty sand		8.2-1.5 ppm @ 53-58'
					lab soil sample @ 33-34'	
					lab soil sample @ 42-43'	
					lab soil sample @ 57-58'	

*ppm = parts per million

Project:	**UMD Shore Health- Chestertown**			**DETAILED DESCRIPTION OF CUTTINGS**	**Earth Data Sample Number :**	**n/a**
					Described By :	**JP Stokes**
Earth Data File No.	**4816**	**Soil Boring I.D.:**	**MW-53**		**Date Described :**	**6.14.2016**
		Static Water Level:	**39.5'**			

DEPTH INTERVAL		**COLOR**	**SIZE**	**TYPE MATERIAL**	**SPECIAL FEATURES**	**OVM/PID CONCENTRATION**
FROM	**TO**					
0	**0.8**	-	-	asphalt		0 ppm
0.8	**4.0**	brown	Medium-Very Coarse	gravelly sand/fill		0 ppm
4.0	**12.8**	brown	-	silty clay		0 ppm
12.8	**15.0**	orange	Medium	silty sand	some weathered ironstone; moist	0 ppm
15.0	**16.0**	orange	Medium - Coarse	sand	some weathered ironstone	0 ppm
16.0	**20.0**				No Recovery	
20.0	**24.0**	orange	Fine - Medium	silty sand	weathered ironstone	0 ppm
24.0	**25.0**	orange	Fine	clayey silty sand		0 ppm
25.0	**36.2**	orange	Fine	silty sand; some clay	some weathered ironstone	0 ppm
36.2	**36.5**	brown	Fine - Coarse	Qtrz gravelly sand		0 ppm
36.5	**40.0**	brown	fine	sandy silt		14 ppm @ 39-40ft
40.0	**44.0**	brown	Fine - Medium	silty sand	water at 40 feet	32 ppm @40ft
					lab soil sample @ 40-41'	28 ppm @ 41ft
						130ppm @ 42ft
						86 ppm @ 43 ft
44.0	**45.0**	brown	-	silty clay		60 ppm @ 44 ft
						28 ppm @ 45 ft
45.0	**55.0**	brown	Fine	silty sand w/ orange mottles		7.5 ppm @ 46 ft
						3.9 ppm @ 47 ft
						2.7 ppm @ 48 ft
						1.0 ppm @ 49 ft
					lab soil sample @ 40'-41'	1.1 ppm @ 50 ft
					lab soil sample @ 54-55'	0 ppm @ 51 - 55 ft

***ppm = parts per million**

Project: UMD Shore Health- Chestertown

Earth Data File No. 4816 **Soil Boring I.D.:** MW-54 **Static Water Level:** 36.0'

DETAILED DESCRIPTION OF CUTTINGS

Earth Data Sample Number : n/a
Described By : Rob Beam
Date Described : 6.10.2016 & 6.13.2016

DEPTH INTERVAL FROM	TO	COLOR	SIZE	TYPE MATERIAL	SPECIAL FEATURES	OVM/PID CONCENTRATION
0	0.3			asphalt		0 ppm
0.3	0.6	gray		stone		0 ppm
0.6	2.0	orange	medium-coarse	gravelly clayey sand		0 ppm
2.0	5.5	orange		silty clay		0 ppm
5.5	9.0	gray-orange	very fine-fine	silty w/ some sand		0 ppm
9.0	12.0	brown	very fine-fine	silty clay	w/ some sand and gravel	0 ppm
12.0	15.0	red-orange	fine-medium	sand	w/ ironstone layers and silt	0 ppm
15.0	31.0	dark orange	fine-medium	sand	w/ ironstone layers	3 ppm @27'
31.0	34.0	green/red	fine-medium	sand	w/ gravel	9 ppm @29'
34.0	40.0	green-brown	fine-medium	clayey sand		20 ppm @ 31'
40.0	45.0	green-red	fine-medium	sand		23 ppm @ 32'
45.0	50.0	brown-red	fine-medium	clayey sand	w/ gravel	28 ppm @ 32.5
50.0	55.0	brown-red	fine-medium	silty sand		33 ppm @ 35'
						58 ppm @ 36'
						103 ppm @ 36.5'
						125 ppm @ 37'
						186 ppm @ 38'
						169 ppm @ 40'
					lab soil sample @ 36'-37'	16 ppm @ 41'
					lab sample taken @ 54'-55'	4 ppm @ 42'
						2.5 ppm @ 46'
						4 ppm @ 49'
						0.1 ppm @ 50'
						0 ppm @ 50'-55'

***ppm = parts per million**

Project: UMD Shore Health- Chestertown

Earth Data File No. 4816 **Soil Boring I.D.:** MW-55
Static Water Level: 35.3'

DETAILED DESCRIPTION OF CUTTINGS

Earth Data Sample Number : n/a
Described By : K. Livingston
Date Described : 5.20.2016 & 6.02.2016

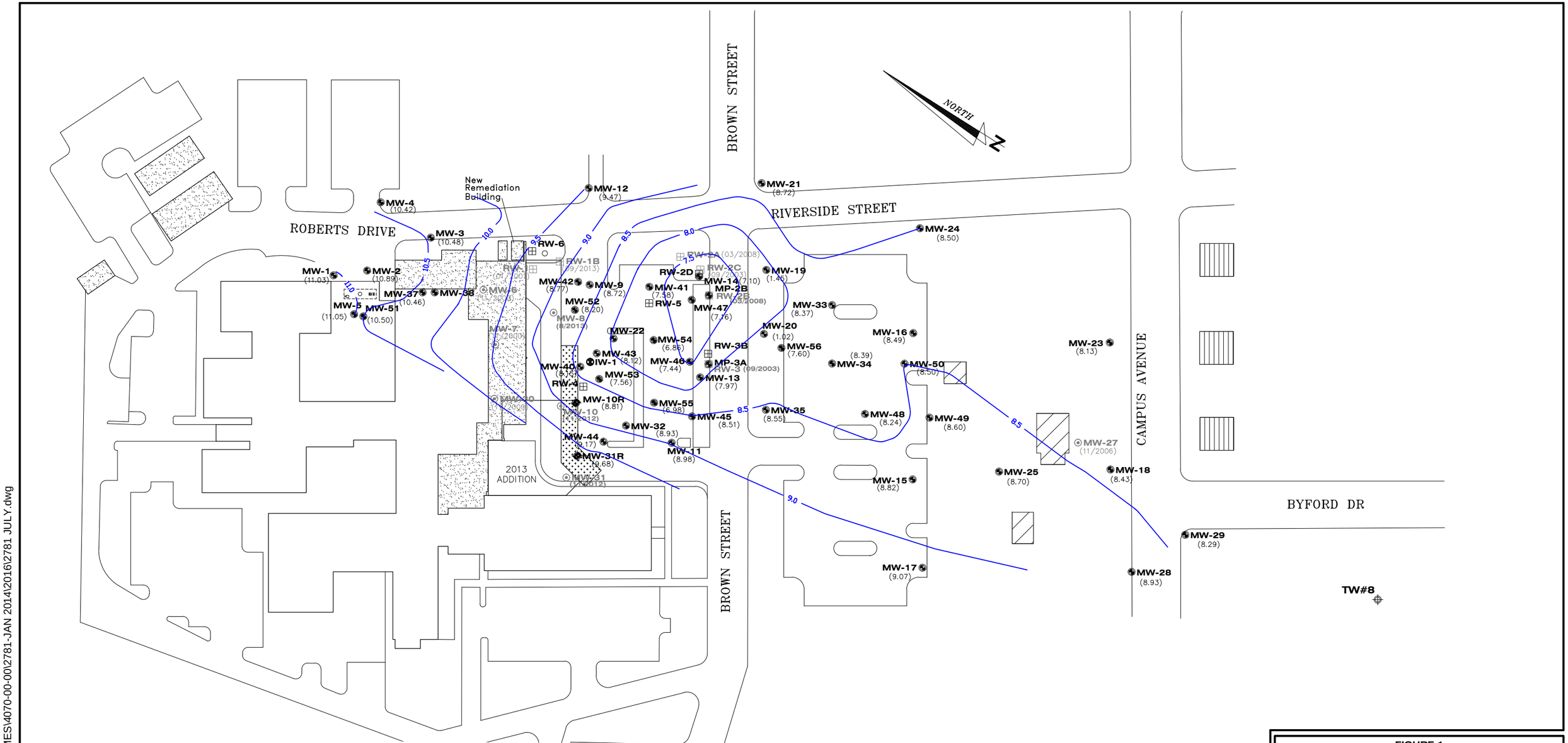
DEPTH INTERVAL FROM	TO	COLOR	SIZE	TYPE MATERIAL	SPECIAL FEATURES	OVM/PID CONCENTRATION
0	0.3	-	-	asphalt		0 ppm
0.3	3.8	light to orange	Medium-Coarse	gravelly sand/fill		0 ppm
3.8	11.5	dark gray to orange	-	silty clay		0 ppm
11.5	23.2	red to orange	Fine-Medium	silty sand	few weathered ironstone layers from 18' to 23'	0 ppm
23.2	28.2	reddish orange	Fine	sand	weathered ironstone @ 27'	0 ppm
28.2	37.0	red to orange	Fine-Very Fine	silty sand	traces of clay	0 ppm
37.0	39.0	reddish brown	Fine	silty clayey sand	wet @ 37'	1 ppm @ 37'
39.0	41.2	brown to dark brown	Fine-Medium	silty sand	orange and black discoloration @ 41'	2 ppm @ 39'
41.2	45.0	reddish brown	Medium-Very Coarse	silty sand		0 ppm
45.0	47.1	deep red	Fine	silty sand		0 ppm
47.1	49.0	brownish green and red	Fine-Coarse	silty sand	oxidized and reduced layers	0 ppm
					lab soil sample @ 37-38'	

***ppm = parts per million**

Project:	UMD Shore Health- Chestertown			DETAILED DESCRIPTION OF CUTTINGS	Earth Data Sample Number :	n/a
Earth Data File No. 4816	Soil Boring I.D.:	MW-56			Described By :	K. Livingston
	Static Water Level:	31'			Date Described :	5.18.2016

DEPTH INTERVAL FROM	TO	COLOR	SIZE	TYPE MATERIAL	SPECIAL FEATURES	OVM/PID CONCENTRATION
0	1.2	brown	Very Fine	sandy clayey silt/topsoil	with roots	0 ppm
1.2	5.6	light brown	-	silty clay	gray mottling	0 ppm
5.6	6.1	dark gray	Fine	silty clayey sand	with roots	0 ppm
6.1	7.1	tan	-	clay	gray and orange mottling	0 ppm
7.1	32.0	orange to reddish brown	Fine-Medium	silty sand	few weathered ironstone layers from 14' to 21'	0 ppm
32.0	35.0	brown to orange	Fine-Medium	clayey sand	wet @ 32'	0 ppm
35.0	37.5	light brown	Fine	clayey silty sand		0 ppm
37.5	40.0	brownish red and green	Fine	silty sand	oxidized and reduced layers	0 ppm
40.0	45.0	tan	Very Fine	sand	NO RETURN	0 ppm
					lab soil sample @ 31.5-32.5'	

ATTACHMENT B



X:\DAN-WORK FOR OTHERS\JAMES\4070-00-0012781-JAN 2014\2016\2781 JULY.dwg

LEGEND

MW-40	MONITORING WELL
RW-3B	RECOVERY WELL
IW-1	INJECTION WELL
MW-30	ABANDONED MONITORING WELL
(09/2003)	DATE OF ABANDONMENT
RW-3	ABANDONED RECOVERY WELL
(09/2003)	DATE OF ABANDONMENT
5.50	WATER TABLE CONTOUR (FT. MSL)
	10,000 UST
TW#8	TOWN WELL

EXCLUDES GAUGING DATA FROM ACTIVE RECOVERY WELLS (RW-2D, RW-3B, RW-4, RW-5, RW-6, MW-22)

80 0 40 80
GRAPHIC SCALE (FEET)

FIGURE 1
WATER TABLE CONTOUR MAP
FOR
CHESTER RIVER HOSPITAL CENTER
CHESTERTOWN, MARYLAND

PROJECT:	SCALE:
4070-00	AS SHOWN
DRAWN BY:	DATE:
DK	8/01/2016

EBA ENGINEERING, INC.
4813 SETON DRIVE
BALTIMORE, MD. 21215
Tel: (410) 358-7171 Fax: (410) 358-7213
www.ebaengineering.com

Figure 1 – Water table contour map July 21, 2016 – Chester River Hospital Center, Chestertown, Maryland.

ATTACHMENT C

Analytical Report for

UMM Shore Regional Health Chestertown

Certificate of Analysis No.: 16052016

Project Manager: Ken Hannon

Project Name : CRHC

Project Location: Chestertown, MD

May 27, 2016

Phase Separation Science, Inc.

6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

May 27, 2016

Ken Hannon
UMM Shore Regional Health Chestertown
100 Brown Street
Chestertown, MD 21620

Reference: PSS Work Order(s) No: **16052016**
Project Name: CRHC
Project Location: Chestertown, MD

Dear Ken Hannon :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **16052016**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on June 24, 2016, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16052016

The following samples were received under chain of custody by Phase Separation Science (PSS) on 05/20/2016 at 02:25 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
16052016-001	MW-56_31.5-32.5	SOIL	05/18/16 13:15

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16052016

UMM Shore Regional Health Chestertown, Chestertown, MD

May 27, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-56_31.5-32.5	**Date/Time Sampled: 05/18/2016 13:15**	**PSS Sample ID: 16052016-001**
Matrix: SOIL	**Date/Time Received: 05/20/2016 14:25**	**% Solids: 84**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	12		1	05/23/16	05/25/16 02:34	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16052016

UMM Shore Regional Health Chestertown, Chestertown, MD

May 27, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-56_31.5-32.5 **Date/Time Sampled: 05/18/2016 13:15** **PSS Sample ID: 16052016-001**

Matrix: SOIL **Date/Time Received: 05/20/2016 14:25** **% Solids: 84**

MDE TCL VOCs + Oxy | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	20		1	05/27/16	05/27/16 12:57	1011
tert-Amyl alcohol	ND	ug/kg	40		1	05/27/16	05/27/16 12:57	1011
tert-Amyl ethyl ether	ND	ug/kg	40		1	05/27/16	05/27/16 12:57	1011
tert-Amyl methyl ether	ND	ug/kg	40		1	05/27/16	05/27/16 12:57	1011
Benzene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Bromochloromethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Bromodichloromethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Bromoform	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Bromomethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
2-Butanone (MEK)	ND	ug/kg	20		1	05/27/16	05/27/16 12:57	1011
tert-Butyl Alcohol	ND	ug/kg	40		1	05/27/16	05/27/16 12:57	1011
tert-Butyl ethyl ether	ND	ug/kg	10		1	05/27/16	05/27/16 12:57	1011
Carbon Disulfide	ND	ug/kg	10		1	05/27/16	05/27/16 12:57	1011
Carbon tetrachloride	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Chlorobenzene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Chloroethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Chloroform	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Chloromethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Cyclohexane	ND	ug/kg	20		1	05/27/16	05/27/16 12:57	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	40		1	05/27/16	05/27/16 12:57	1011
Dibromochloromethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,2-Dibromoethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,2-Dichlorobenzene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,3-Dichlorobenzene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,4-Dichlorobenzene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Dichlorodifluoromethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,1-Dichloroethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,2-Dichloroethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,1-Dichloroethene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,2-Dichloropropane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16052016

UMM Shore Regional Health Chestertown, Chestertown, MD

May 27, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-56_31.5-32.5 **Date/Time Sampled: 05/18/2016 13:15** **PSS Sample ID: 16052016-001**
Matrix: SOIL **Date/Time Received: 05/20/2016 14:25** **% Solids: 84**

MDE TCL VOCs + Oxy | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
cis-1,2-Dichloroethene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
cis-1,3-Dichloropropene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
trans-1,2-Dichloroethene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
trans-1,3-Dichloropropene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Diisopropyl ether	ND	ug/kg	10		1	05/27/16	05/27/16 12:57	1011
Ethylbenzene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
2-Hexanone (MBK)	ND	ug/kg	20		1	05/27/16	05/27/16 12:57	1011
Isopropylbenzene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Methyl Acetate	ND	ug/kg	20		1	05/27/16	05/27/16 12:57	1011
Methylcyclohexane	ND	ug/kg	20		1	05/27/16	05/27/16 12:57	1011
Methylene chloride	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	20		1	05/27/16	05/27/16 12:57	1011
Methyl-t-Butyl Ether	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Naphthalene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Styrene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Tetrachloroethene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Toluene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,2,3-Trichlorobenzene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,2,4-Trichlorobenzene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,1,1-Trichloroethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,1,2-Trichloroethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Trichloroethene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Trichlorofluoromethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
Vinyl Chloride	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011
m&p-Xylene	ND	ug/kg	10		1	05/27/16	05/27/16 12:57	1011
o-Xylene	ND	ug/kg	5.0		1	05/27/16	05/27/16 12:57	1011

Case Narrative Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16052016

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

All sample receipt conditions were acceptable.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 16052016
Report Prepared For: UMM Shore Regional Health Chestertown, Cl
Project Name: Chester River Hospital Center-CRHC
Project Manager: Ken Hannon

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
ASTM D2216 05	MW-56_31.5-32.5	Initial	16052016-001	1059	S	132820	132820	05/18/2016	05/23/2016 16:27	05/23/2016 16:27
SW-846 8015 C	MW-56_31.5-32.5	Initial	16052016-001	1055	S	60939	132938	05/18/2016	05/23/2016 12:09	05/25/2016 02:34
	60939-1-BKS	BKS	60939-1-BKS	1055	S	60939	132938	--------	05/23/2016 12:09	05/24/2016 21:09
	60939-1-BLK	BLK	60939-1-BLK	1055	S	60939	132938	--------	05/23/2016 12:09	05/24/2016 20:43
	60939-1-BSD	BSD	60939-1-BSD	1055	S	60939	132938	--------	05/23/2016 12:09	05/24/2016 21:34
	Top Soil-Commonwealth RA S	MS	16051912-001 S	1055	S	60939	132938	05/19/2016	05/23/2016 12:09	05/25/2016 03:49
	Top Soil-Commonwealth RA SD	MSD	16051912-001 SD	1055	S	60939	132938	05/19/2016	05/23/2016 12:09	05/25/2016 04:14
SW-846 8260 B	MW-56_31.5-32.5	Initial	16052016-001	1011	S	61012	132956	05/18/2016	05/27/2016 08:06	05/27/2016 12:57
	61012-1-BKS	BKS	61012-1-BKS	1011	S	61012	132956	--------	05/27/2016 08:06	05/27/2016 11:38
	61012-1-BLK	BLK	61012-1-BLK	1011	S	61012	132956	--------	05/27/2016 08:06	05/27/2016 12:17

PHASE SEPARATION SCIENCE, INC.

QC Summary 16052016

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 132938 Matrix: Soil Date Prep: 05/23/2016
PSS Sample ID: 16052016-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	78		26-128	%	05/25/16 02:34

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 132956 Matrix: Soil Date Prep: 05/27/2016
PSS Sample ID: 16052016-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	106		82-126	%	05/27/16 12:57
Dibromofluoromethane	102		92-113	%	05/27/16 12:57
Toluene-D8	100		94-105	%	05/27/16 12:57

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

PHASE SEPARATION SCIENCE, INC.

QC Summary 16052016

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 132938 Matrix: Solid Date Prep: 05/23/16
MB Sample Id: 60939-1-BLK LCS Sample Id: 60939-1-BKS LCSD Sample Id: 60939-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (Diesel Range Organics)	<9.855	32.85	31.33	95	32.36	96	49-105	3	25	mg/kg	05/24/16 21:09	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
o-Terphenyl	85		85		89		26-128	%	05/24/16 21:09

PHASE SEPARATION SCIENCE, INC.

QC Summary 16052016

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030
Seq Number: 132956 Matrix: Solid Date Prep: 05/27/16
MB Sample Id: 61012-1-BLK LCS Sample Id: 61012-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<20.00	60.00	62.47	104	46-127	ug/kg	05/27/16 11:38	
tert-Amyl alcohol	<40.00	60.00	<40.00	0	46-130	ug/kg	05/27/16 11:38	L
tert-Amyl ethyl ether	<40.00	60.00	47.78	80	68-116	ug/kg	05/27/16 11:38	
tert-Amyl methyl ether	<40.00	60.00	46.60	78	67-121	ug/kg	05/27/16 11:38	
Benzene	<5.000	60.00	58.62	98	70-127	ug/kg	05/27/16 11:38	
Bromochloromethane	<5.000	60.00	51.73	86	68-122	ug/kg	05/27/16 11:38	
Bromodichloromethane	<5.000	60.00	52.11	87	68-122	ug/kg	05/27/16 11:38	
Bromoform	<5.000	60.00	50.92	85	57-127	ug/kg	05/27/16 11:38	
Bromomethane	<5.000	60.00	56.35	94	68-123	ug/kg	05/27/16 11:38	
2-Butanone (MEK)	<20.00	60.00	61.42	102	41-136	ug/kg	05/27/16 11:38	
tert-Butyl Alcohol	<40.00	60.00	<40.00	0	51-128	ug/kg	05/27/16 11:38	L
tert-Butyl ethyl ether	<10.00	60.00	47.03	78	65-117	ug/kg	05/27/16 11:38	
Carbon Disulfide	<10.00	60.00	59.80	100	66-135	ug/kg	05/27/16 11:38	
Carbon tetrachloride	<5.000	60.00	54.39	91	64-147	ug/kg	05/27/16 11:38	
Chlorobenzene	<5.000	60.00	55.73	93	70-121	ug/kg	05/27/16 11:38	
Chloroethane	<5.000	60.00	53.27	89	66-142	ug/kg	05/27/16 11:38	
Chloroform	<5.000	60.00	54.62	91	68-123	ug/kg	05/27/16 11:38	
Chloromethane	<5.000	60.00	53.17	89	65-136	ug/kg	05/27/16 11:38	
Cyclohexane	<20.00	60.00	59.79	100	62-138	ug/kg	05/27/16 11:38	
1,2-Dibromo-3-chloropropane	<40.00	60.00	52.31	87	55-122	ug/kg	05/27/16 11:38	
Dibromochloromethane	<5.000	60.00	49.83	83	61-122	ug/kg	05/27/16 11:38	
1,2-Dibromoethane	<5.000	60.00	49.85	83	63-119	ug/kg	05/27/16 11:38	
1,2-Dichlorobenzene	<5.000	60.00	53.30	89	65-121	ug/kg	05/27/16 11:38	
1,3-Dichlorobenzene	<5.000	60.00	54.57	91	69-121	ug/kg	05/27/16 11:38	
1,4-Dichlorobenzene	<5.000	60.00	54.09	90	69-118	ug/kg	05/27/16 11:38	
Dichlorodifluoromethane	<5.000	60.00	49.48	82	53-162	ug/kg	05/27/16 11:38	
1,1-Dichloroethane	<5.000	60.00	58.80	98	70-127	ug/kg	05/27/16 11:38	
1,2-Dichloroethane	<5.000	60.00	50.82	85	68-118	ug/kg	05/27/16 11:38	
1,1-Dichloroethene	<5.000	60.00	53.32	89	69-133	ug/kg	05/27/16 11:38	
1,2-Dichloropropane	<5.000	60.00	57.88	96	70-122	ug/kg	05/27/16 11:38	
cis-1,2-Dichloroethene	<5.000	60.00	53.70	90	68-126	ug/kg	05/27/16 11:38	
cis-1,3-Dichloropropene	<5.000	60.00	52.20	87	68-121	ug/kg	05/27/16 11:38	
trans-1,2-Dichloroethene	<5.000	60.00	54.75	91	70-132	ug/kg	05/27/16 11:38	
trans-1,3-Dichloropropene	<5.000	60.00	50.20	84	67-115	ug/kg	05/27/16 11:38	
Diisopropyl ether	<10.00	60.00	53.06	88	68-121	ug/kg	05/27/16 11:38	
Ethylbenzene	<5.000	60.00	58.16	97	70-125	ug/kg	05/27/16 11:38	
2-Hexanone (MBK)	<20.00	60.00	63.30	106	40-121	ug/kg	05/27/16 11:38	
Isopropylbenzene	<5.000	60.00	55.87	93	68-130	ug/kg	05/27/16 11:38	
Methyl Acetate	<20.00	60.00	52.28	87	60-125	ug/kg	05/27/16 11:38	
Methylcyclohexane	<20.00	60.00	61.04	102	62-150	ug/kg	05/27/16 11:38	
Methylene chloride	<5.000	60.00	53.82	90	67-121	ug/kg	05/27/16 11:38	
4-Methyl-2-Pentanone (MIBK)	<20.00	60.00	57.59	96	48-117	ug/kg	05/27/16 11:38	
Methyl-t-Butyl Ether	<5.000	60.00	46.49	77	66-119	ug/kg	05/27/16 11:38	
Naphthalene	<5.000	60.00	43.05	72	54-115	ug/kg	05/27/16 11:38	
Styrene	<5.000	60.00	53.21	89	71-120	ug/kg	05/27/16 11:38	
1,1,2,2-Tetrachloroethane	<5.000	60.00	53.87	90	59-122	ug/kg	05/27/16 11:38	
Tetrachloroethene	<5.000	60.00	58.89	98	65-145	ug/kg	05/27/16 11:38	
Toluene	<5.000	60.00	54.80	91	69-129	ug/kg	05/27/16 11:38	
1,2,3-Trichlorobenzene	<5.000	60.00	50.48	84	60-114	ug/kg	05/27/16 11:38	
1,2,4-Trichlorobenzene	<5.000	60.00	50.98	85	64-115	ug/kg	05/27/16 11:38	
1,1,1-Trichloroethane	<5.000	60.00	55.92	93	65-139	ug/kg	05/27/16 11:38	

PHASE SEPARATION SCIENCE, INC.

QC Summary 16052016

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 132956 Matrix: Solid Date Prep: 05/27/16

MB Sample Id: 61012-1-BLK LCS Sample Id: 61012-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
1,1,2-Trichloroethane	<5.000	60.00	54.27	90	64-125	ug/kg	05/27/16 11:38	
Trichloroethene	<5.000	60.00	56.94	95	69-133	ug/kg	05/27/16 11:38	
Trichlorofluoromethane	<5.000	60.00	59.83	100	59-153	ug/kg	05/27/16 11:38	
1,1,2-Trichlorotrifluoroethane	<5.000	60.00	59.10	99	62-139	ug/kg	05/27/16 11:38	
Vinyl Chloride	<5.000	60.00	53.33	89	69-142	ug/kg	05/27/16 11:38	
m&p-Xylene	<10.00	120	113.3	94	71-124	ug/kg	05/27/16 11:38	
o-Xylene	<5.000	60.00	54.55	91	72-123	ug/kg	05/27/16 11:38	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	110		96		82-126	%	05/27/16 11:38
Dibromofluoromethane	98		100		92-113	%	05/27/16 11:38
Toluene-D8	99		99		94-105	%	05/27/16 11:38

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: UMMS at Chestertown *OFFICE LOC.

*PROJECT MGR: JP Stokes *PHONE NO.: (410) 758-8160

EMAIL: jpstokes@earthdatainc.com FAX NO.: ( )

*PROJECT NAME: CRHC PROJECT NO.:

SITE LOCATION: Chestertown, MD P.O. NO.:

SAMPLER(S): K. Livingston DW CERT NO.:

PSS Work Order #: 1605201G PAGE 1 OF 1

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	Preservatives Used	(3) * Analysis/Method Required: MDE VOC List 8260	OXYgenates 8260	8015B	TPH-DRO	REMARKS
1	MW-56_31.5-32.5	5/18/16	1315	S	2	G		X	X	X		
1	MW-56_31.5-32.5	5/18/16	1315	S	Terra Core	G		X	X	X		

(5)

Relinquished By: (1)	Date	Time	Received By:
Robert Blum	5-20-16	1425	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4) *Requested TAT (One TAT per COC)
☒ 5-Day ☐ 3-Day ☐ 2-Day ☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:
COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER ____

# of Coolers: 1
Custody Seal: ABS
Ice Present: PRES Temp: 4°c
Shipping Carrier: CLIENT

Special Instructions:

DW COMPLIANCE? YES ☐ EDD FORMAT TYPE ____

STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☐ WV ☐ OTHER ____

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	16052016	**Received By**	Rachel Davis
Client Name	UMM Shore Regional Health Chester	**Date Received**	05/20/2016 02:25:00 PM
Project Name	CRHC	**Delivered By**	Client
Disposal Date	06/24/2016	**Tracking No**	Not Applicable
		Logged In By	Rachel Davis

Shipping Container(s)

No. of Coolers 1

		Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	4
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Not Provided
COC agrees with sample labels?	Yes		N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 1

Total No. of Containers Received 6

Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By: Rachel Davis — Date: 05/20/2016

Rachel Davis

PM Review and Approval: N Y Jackson — Date: 05/23/2016

Lynn Jackson

Analytical Report for

UMM Shore Regional Health Chestertown

Certificate of Analysis No.: 16052017

Project Manager: Ken Hannon

Project Name : CRHC

Project Location: Chestertown, MD

May 27, 2016

Phase Separation Science, Inc.

6630 Baltimore National Pike
Baltimore, MD 21228
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PHASE SEPARATION SCIENCE, INC.

May 27, 2016

Ken Hannon
UMM Shore Regional Health Chestertown
100 Brown Street
Chestertown, MD 21620

Reference: PSS Work Order(s) No: **16052017**
Project Name: CRHC
Project Location: Chestertown, MD

Dear Ken Hannon :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **16052017**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on June 24, 2016, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16052017

The following samples were received under chain of custody by Phase Separation Science (PSS) on 05/20/2016 at 02:25 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
16052017-001	MW-55 37'-38'	SOIL	05/20/16 10:15

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16052017

UMM Shore Regional Health Chestertown, Chestertown, MD

May 27, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-55 37'-38'	**Date/Time Sampled: 05/20/2016 10:15**	**PSS Sample ID: 16052017-001**
Matrix: SOIL	**Date/Time Received: 05/20/2016 14:25**	**% Solids: 84**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**51**	mg/kg	12		1	05/23/16	05/25/16 02:59	1055

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CERTIFICATE OF ANALYSIS

No: 16052017

UMM Shore Regional Health Chestertown, Chestertown, MD

May 27, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-55 37'-38' **Date/Time Sampled: 05/20/2016 10:15** **PSS Sample ID: 16052017-001**

Matrix: SOIL **Date/Time Received: 05/20/2016 14:25** **% Solids: 84**

MDE TCL VOC + Oxy | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	19		1	05/27/16	05/27/16 13:36	1011
tert-Amyl alcohol	ND	ug/kg	37		1	05/27/16	05/27/16 13:36	1011
tert-Amyl ethyl ether	ND	ug/kg	37		1	05/27/16	05/27/16 13:36	1011
tert-Amyl methyl ether	ND	ug/kg	37		1	05/27/16	05/27/16 13:36	1011
Benzene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Bromochloromethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Bromodichloromethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Bromoform	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Bromomethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
2-Butanone (MEK)	ND	ug/kg	19		1	05/27/16	05/27/16 13:36	1011
tert-Butyl Alcohol	ND	ug/kg	37		1	05/27/16	05/27/16 13:36	1011
tert-Butyl ethyl ether	ND	ug/kg	9.3		1	05/27/16	05/27/16 13:36	1011
Carbon Disulfide	ND	ug/kg	9.3		1	05/27/16	05/27/16 13:36	1011
Carbon tetrachloride	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Chlorobenzene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Chloroethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Chloroform	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Chloromethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Cyclohexane	ND	ug/kg	19		1	05/27/16	05/27/16 13:36	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	37		1	05/27/16	05/27/16 13:36	1011
Dibromochloromethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,2-Dibromoethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,2-Dichlorobenzene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,3-Dichlorobenzene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,4-Dichlorobenzene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Dichlorodifluoromethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,1-Dichloroethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,2-Dichloroethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,1-Dichloroethene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
cis-1,2-Dichloroethene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16052017

UMM Shore Regional Health Chestertown, Chestertown, MD

May 27, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-55 37'-38' **Date/Time Sampled: 05/20/2016 10:15** **PSS Sample ID: 16052017-001**
Matrix: SOIL **Date/Time Received: 05/20/2016 14:25** **% Solids: 84**

MDE TCL VOC + Oxy | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,2-Dichloropropane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
cis-1,3-Dichloropropene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
trans-1,2-Dichloroethene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
trans-1,3-Dichloropropene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Diisopropyl ether	ND	ug/kg	9.3		1	05/27/16	05/27/16 13:36	1011
Ethylbenzene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
2-Hexanone (MBK)	ND	ug/kg	19		1	05/27/16	05/27/16 13:36	1011
Isopropylbenzene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Methyl Acetate	ND	ug/kg	19		1	05/27/16	05/27/16 13:36	1011
Methylcyclohexane	ND	ug/kg	19		1	05/27/16	05/27/16 13:36	1011
Methylene chloride	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	19		1	05/27/16	05/27/16 13:36	1011
Methyl-t-Butyl Ether	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Naphthalene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Styrene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Tetrachloroethene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Toluene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,2,3-Trichlorobenzene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,2,4-Trichlorobenzene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,1,1-Trichloroethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,1,2-Trichloroethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Trichloroethene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Trichlorofluoromethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
Vinyl Chloride	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011
m&p-Xylene	ND	ug/kg	9.3		1	05/27/16	05/27/16 13:36	1011
o-Xylene	ND	ug/kg	4.6		1	05/27/16	05/27/16 13:36	1011

Case Narrative Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16052017

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

All sample receipt conditions were acceptable.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 16052017
Report Prepared For: UMM Shore Regional Health Chestertown, Cl
Project Name: Chester River Hospital Center-CRHC
Project Manager: Ken Hannon

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
ASTM D2216 05	MW-55 37'-38'	Initial	16052017-001	1059	S	132820	132820	05/20/2016	05/23/2016 16:27	05/23/2016 16:27
SW-846 8015 C	MW-55 37'-38'	Initial	16052017-001	1055	S	60939	132938	05/20/2016	05/23/2016 12:09	05/25/2016 02:59
	60939-1-BKS	BKS	60939-1-BKS	1055	S	60939	132938	--------	05/23/2016 12:09	05/24/2016 21:09
	60939-1-BLK	BLK	60939-1-BLK	1055	S	60939	132938	--------	05/23/2016 12:09	05/24/2016 20:43
	60939-1-BSD	BSD	60939-1-BSD	1055	S	60939	132938	--------	05/23/2016 12:09	05/24/2016 21:34
	Top Soil-Commonwealth RA S	MS	16051912-001 S	1055	S	60939	132938	05/19/2016	05/23/2016 12:09	05/25/2016 03:49
	Top Soil-Commonwealth RA SD	MSD	16051912-001 SD	1055	S	60939	132938	05/19/2016	05/23/2016 12:09	05/25/2016 04:14
SW-846 8260 B	MW-55 37'-38'	Initial	16052017-001	1011	S	61012	132956	05/20/2016	05/27/2016 08:06	05/27/2016 13:36
	61012-1-BKS	BKS	61012-1-BKS	1011	S	61012	132956	--------	05/27/2016 08:06	05/27/2016 11:38
	61012-1-BLK	BLK	61012-1-BLK	1011	S	61012	132956	--------	05/27/2016 08:06	05/27/2016 12:17

PHASE SEPARATION SCIENCE, INC.

QC Summary 16052017

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 132938 Matrix: Soil Date Prep: 05/23/2016
PSS Sample ID: 16052017-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	92		26-128	%	05/25/16 02:59

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 132956 Matrix: Soil Date Prep: 05/27/2016
PSS Sample ID: 16052017-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	102		82-126	%	05/27/16 13:36
Dibromofluoromethane	109		92-113	%	05/27/16 13:36
Toluene-D8	101		94-105	%	05/27/16 13:36

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

PHASE SEPARATION SCIENCE, INC.

QC Summary 16052017

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 132938 Matrix: Solid Date Prep: 05/23/16
MB Sample Id: 60939-1-BLK LCS Sample Id: 60939-1-BKS LCSD Sample Id: 60939-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (Diesel Range Organics)	<9.855	32.85	31.33	95	32.36	96	49-105	3	25	mg/kg	05/24/16 21:09	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
o-Terphenyl	85		85		89		26-128	%	05/24/16 21:09

PHASE SEPARATION SCIENCE, INC.

QC Summary 16052017

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 132956 Matrix: Solid Date Prep: 05/27/16

MB Sample Id: 61012-1-BLK LCS Sample Id: 61012-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<20.00	60.00	62.47	104	46-127	ug/kg	05/27/16 11:38	
tert-Amyl alcohol	<40.00	60.00	<40.00	0	46-130	ug/kg	05/27/16 11:38	L
tert-Amyl ethyl ether	<40.00	60.00	47.78	80	68-116	ug/kg	05/27/16 11:38	
tert-Amyl methyl ether	<40.00	60.00	46.60	78	67-121	ug/kg	05/27/16 11:38	
Benzene	<5.000	60.00	58.62	98	70-127	ug/kg	05/27/16 11:38	
Bromochloromethane	<5.000	60.00	51.73	86	68-122	ug/kg	05/27/16 11:38	
Bromodichloromethane	<5.000	60.00	52.11	87	68-122	ug/kg	05/27/16 11:38	
Bromoform	<5.000	60.00	50.92	85	57-127	ug/kg	05/27/16 11:38	
Bromomethane	<5.000	60.00	56.35	94	68-123	ug/kg	05/27/16 11:38	
2-Butanone (MEK)	<20.00	60.00	61.42	102	41-136	ug/kg	05/27/16 11:38	
tert-Butyl Alcohol	<40.00	60.00	<40.00	0	51-128	ug/kg	05/27/16 11:38	L
tert-Butyl ethyl ether	<10.00	60.00	47.03	78	65-117	ug/kg	05/27/16 11:38	
Carbon Disulfide	<10.00	60.00	59.80	100	66-135	ug/kg	05/27/16 11:38	
Carbon tetrachloride	<5.000	60.00	54.39	91	64-147	ug/kg	05/27/16 11:38	
Chlorobenzene	<5.000	60.00	55.73	93	70-121	ug/kg	05/27/16 11:38	
Chloroethane	<5.000	60.00	53.27	89	66-142	ug/kg	05/27/16 11:38	
Chloroform	<5.000	60.00	54.62	91	68-123	ug/kg	05/27/16 11:38	
Chloromethane	<5.000	60.00	53.17	89	65-136	ug/kg	05/27/16 11:38	
Cyclohexane	<20.00	60.00	59.79	100	62-138	ug/kg	05/27/16 11:38	
1,2-Dibromo-3-chloropropane	<40.00	60.00	52.31	87	55-122	ug/kg	05/27/16 11:38	
Dibromochloromethane	<5.000	60.00	49.83	83	61-122	ug/kg	05/27/16 11:38	
1,2-Dibromoethane	<5.000	60.00	49.85	83	63-119	ug/kg	05/27/16 11:38	
1,2-Dichlorobenzene	<5.000	60.00	53.30	89	65-121	ug/kg	05/27/16 11:38	
1,3-Dichlorobenzene	<5.000	60.00	54.57	91	69-121	ug/kg	05/27/16 11:38	
1,4-Dichlorobenzene	<5.000	60.00	54.09	90	69-118	ug/kg	05/27/16 11:38	
Dichlorodifluoromethane	<5.000	60.00	49.48	82	53-162	ug/kg	05/27/16 11:38	
1,1-Dichloroethane	<5.000	60.00	58.80	98	70-127	ug/kg	05/27/16 11:38	
1,2-Dichloroethane	<5.000	60.00	50.82	85	68-118	ug/kg	05/27/16 11:38	
1,1-Dichloroethene	<5.000	60.00	53.32	89	69-133	ug/kg	05/27/16 11:38	
1,2-Dichloropropane	<5.000	60.00	57.88	96	70-122	ug/kg	05/27/16 11:38	
cis-1,2-Dichloroethene	<5.000	60.00	53.70	90	68-126	ug/kg	05/27/16 11:38	
cis-1,3-Dichloropropene	<5.000	60.00	52.20	87	68-121	ug/kg	05/27/16 11:38	
trans-1,2-Dichloroethene	<5.000	60.00	54.75	91	70-132	ug/kg	05/27/16 11:38	
trans-1,3-Dichloropropene	<5.000	60.00	50.20	84	67-115	ug/kg	05/27/16 11:38	
Diisopropyl ether	<10.00	60.00	53.06	88	68-121	ug/kg	05/27/16 11:38	
Ethylbenzene	<5.000	60.00	58.16	97	70-125	ug/kg	05/27/16 11:38	
2-Hexanone (MBK)	<20.00	60.00	63.30	106	40-121	ug/kg	05/27/16 11:38	
Isopropylbenzene	<5.000	60.00	55.87	93	68-130	ug/kg	05/27/16 11:38	
Methyl Acetate	<20.00	60.00	52.28	87	60-125	ug/kg	05/27/16 11:38	
Methylcyclohexane	<20.00	60.00	61.04	102	62-150	ug/kg	05/27/16 11:38	
Methylene chloride	<5.000	60.00	53.82	90	67-121	ug/kg	05/27/16 11:38	
4-Methyl-2-Pentanone (MIBK)	<20.00	60.00	57.59	96	48-117	ug/kg	05/27/16 11:38	
Methyl-t-Butyl Ether	<5.000	60.00	46.49	77	66-119	ug/kg	05/27/16 11:38	
Naphthalene	<5.000	60.00	43.05	72	54-115	ug/kg	05/27/16 11:38	
Styrene	<5.000	60.00	53.21	89	71-120	ug/kg	05/27/16 11:38	
1,1,2,2-Tetrachloroethane	<5.000	60.00	53.87	90	59-122	ug/kg	05/27/16 11:38	
Tetrachloroethene	<5.000	60.00	58.89	98	65-145	ug/kg	05/27/16 11:38	
Toluene	<5.000	60.00	54.80	91	69-129	ug/kg	05/27/16 11:38	
1,2,3-Trichlorobenzene	<5.000	60.00	50.48	84	60-114	ug/kg	05/27/16 11:38	
1,2,4-Trichlorobenzene	<5.000	60.00	50.98	85	64-115	ug/kg	05/27/16 11:38	
1,1,1-Trichloroethane	<5.000	60.00	55.92	93	65-139	ug/kg	05/27/16 11:38	

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QC Summary 16052017

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 132956 Matrix: Solid Date Prep: 05/27/16

MB Sample Id: 61012-1-BLK LCS Sample Id: 61012-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
1,1,2-Trichloroethane	<5.000	60.00	54.27	90	64-125	ug/kg	05/27/16 11:38	
Trichloroethene	<5.000	60.00	56.94	95	69-133	ug/kg	05/27/16 11:38	
Trichlorofluoromethane	<5.000	60.00	59.83	100	59-153	ug/kg	05/27/16 11:38	
1,1,2-Trichlorotrifluoroethane	<5.000	60.00	59.10	99	62-139	ug/kg	05/27/16 11:38	
Vinyl Chloride	<5.000	60.00	53.33	89	69-142	ug/kg	05/27/16 11:38	
m&p-Xylene	<10.00	120	113.3	94	71-124	ug/kg	05/27/16 11:38	
o-Xylene	<5.000	60.00	54.55	91	72-123	ug/kg	05/27/16 11:38	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	110		96		82-126	%	05/27/16 11:38
Dibromofluoromethane	98		100		92-113	%	05/27/16 11:38
Toluene-D8	99		99		94-105	%	05/27/16 11:38

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: UMMS at Chestertown *OFFICE LOC.

*PROJECT MGR: JPStokes *PHONE NO.: (410) 758-8160

EMAIL: JPStokes@earthlink.com FAX NO.: ( )

*PROJECT NAME: CRHC PROJECT NO.:

SITE LOCATION: Chestertown, MD P.O. NO.:

SAMPLER(S): K. Livingston DW CERT NO.:

PSS Work Order #: 1605 2017 PAGE 1 OF 1

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	Preservatives Used	(3) Analysis/ Method Required *	REMARKS
1	MW-55 37'-38'	5/20/16	1015	S	2	G		MDEVPH List + 8260 oxygenates + 8015B TPH-DRO	
1	MW-55 37-38'	5/20/16	1015	S	extra cont.	G			

(5)

Relinquished By: (1)	Date	Time	Received By:
Robert P Brown	5-20-16	1425	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

*Requested TAT (One TAT per COC)
☒ 5-Day ☐ 3-Day ☐ 2-Day ☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:
COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER ____

# of Coolers: 1
Custody Seal: ABS
Ice Present: PRES Temp: 4°C
Shipping Carrier: CLIENT

Special Instructions:

DW COMPLIANCE? YES ☐

EDD FORMAT TYPE ____

STATE RESULTS REPORTED TO:
MD ☐ DE ☐ PA ☐ VA ☐ WV ☐ OTHER ____

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Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	16052017	**Received By**	Rachel Davis
Client Name	UMM Shore Regional Health Chester	**Date Received**	05/20/2016 02:25:00 PM
Project Name	CRHC	**Delivered By**	Client
Disposal Date	06/24/2016	**Tracking No**	Not Applicable
		Logged In By	Rachel Davis

Shipping Container(s)

No. of Coolers 1

		Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	4
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Not Provided
COC agrees with sample labels?	Yes		N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 1

Total No. of Containers Received 6

Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By: Rachel Davis — Date: 05/20/2016

Rachel Davis

PM Review and Approval: N Y Jackson — Date: 05/23/2016

Lynn Jackson

Analytical Report for

UMM Shore Regional Health Chestertown

Certificate of Analysis No.: 16060810

Project Manager: J.P. Stokes

Project Name : CRHC

Project Location: Chestertown, MD

June 15, 2016

Phase Separation Science, Inc.

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PHASE SEPARATION SCIENCE, INC.

June 15, 2016

J.P. Stokes
UMM Shore Regional Health Chestertown
100 Brown Street
Chestertown, MD 21620

Reference: PSS Work Order(s) No: **16060810**
Project Name: CRHC
Project Location: Chestertown, MD

Dear J.P. Stokes :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **16060810**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on July 13, 2016, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16060810

The following samples were received under chain of custody by Phase Separation Science (PSS) on 06/08/2016 at 01:28 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
16060810-001	MW 51 50-51'	SOIL	06/07/16 14:35
16060810-002	MW 51 54-55'	SOIL	06/07/16 14:50
16060810-003	MW 51 69-70'	SOIL	06/08/16 11:20

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060810

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 51 50-51'	**Date/Time Sampled: 06/07/2016 14:35**	**PSS Sample ID: 16060810-001**
Matrix: SOIL	**Date/Time Received: 06/08/2016 13:28**	**% Solids: 81**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**240**	mg/kg	12		1	06/09/16	06/10/16 17:44	1045

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CERTIFICATE OF ANALYSIS

No: 16060810

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 51 50-51' **Date/Time Sampled: 06/07/2016 14:35** **PSS Sample ID: 16060810-001**

Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 81**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	**22**	ug/kg	21		1	06/14/16	06/14/16 10:05	1011
tert-Amyl alcohol	ND	ug/kg	42		1	06/14/16	06/14/16 10:05	1011
tert-Amyl ethyl ether	ND	ug/kg	42		1	06/14/16	06/14/16 10:05	1011
tert-Amyl methyl ether	ND	ug/kg	42		1	06/14/16	06/14/16 10:05	1011
Benzene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Bromochloromethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Bromodichloromethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Bromoform	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Bromomethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
2-Butanone (MEK)	ND	ug/kg	21		1	06/14/16	06/14/16 10:05	1011
tert-Butyl Alcohol	ND	ug/kg	42		1	06/14/16	06/14/16 10:05	1011
tert-Butyl ethyl ether	ND	ug/kg	11		1	06/14/16	06/14/16 10:05	1011
Carbon Disulfide	ND	ug/kg	11		1	06/14/16	06/14/16 10:05	1011
Carbon tetrachloride	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Chlorobenzene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Chloroethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Chloroform	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Chloromethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Cyclohexane	ND	ug/kg	21		1	06/14/16	06/14/16 10:05	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	42		1	06/14/16	06/14/16 10:05	1011
Dibromochloromethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,2-Dibromoethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,2-Dichlorobenzene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,3-Dichlorobenzene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,4-Dichlorobenzene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Dichlorodifluoromethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,1-Dichloroethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,2-Dichloroethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,1-Dichloroethene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060810

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 51 50-51' **Date/Time Sampled: 06/07/2016 14:35** **PSS Sample ID: 16060810-001**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 81**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,2-Dichloropropane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
cis-1,2-Dichloroethene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
cis-1,3-Dichloropropene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
trans-1,2-Dichloroethene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
trans-1,3-Dichloropropene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Diisopropyl ether	ND	ug/kg	11		1	06/14/16	06/14/16 10:05	1011
Ethylbenzene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
2-Hexanone (MBK)	ND	ug/kg	21		1	06/14/16	06/14/16 10:05	1011
Isopropylbenzene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Methyl Acetate	ND	ug/kg	21		1	06/14/16	06/14/16 10:05	1011
Methylcyclohexane	ND	ug/kg	21		1	06/14/16	06/14/16 10:05	1011
Methylene chloride	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	21		1	06/14/16	06/14/16 10:05	1011
Methyl-t-Butyl Ether	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Naphthalene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Styrene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Tetrachloroethene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Toluene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,2,3-Trichlorobenzene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,2,4-Trichlorobenzene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,1,1-Trichloroethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,1,2-Trichloroethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Trichloroethene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Trichlorofluoromethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
Vinyl Chloride	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011
m&p-Xylene	ND	ug/kg	11		1	06/14/16	06/14/16 10:05	1011
o-Xylene	ND	ug/kg	5.3		1	06/14/16	06/14/16 10:05	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060810

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 51 54-55'	**Date/Time Sampled: 06/07/2016 14:50**	**PSS Sample ID: 16060810-002**
Matrix: SOIL	**Date/Time Received: 06/08/2016 13:28**	**% Solids: 85**

Total Petroleum Hydrocarbons - DRO | Analytical Method: SW-846 8015 C | Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**5,900**	mg/kg	240		20	06/09/16	06/13/16 15:19	1045

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060810

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 51 54-55' **Date/Time Sampled: 06/07/2016 14:50** **PSS Sample ID: 16060810-002**

Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 85**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	2,200		100	06/14/16	06/14/16 12:14	1011
tert-Amyl alcohol	ND	ug/kg	4,300		100	06/14/16	06/14/16 12:14	1011
tert-Amyl ethyl ether	ND	ug/kg	4,300		100	06/14/16	06/14/16 12:14	1011
tert-Amyl methyl ether	ND	ug/kg	4,300		100	06/14/16	06/14/16 12:14	1011
Benzene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Bromochloromethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Bromodichloromethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Bromoform	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Bromomethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
tert-Butyl Alcohol	ND	ug/kg	4,300		100	06/14/16	06/14/16 12:14	1011
2-Butanone (MEK)	ND	ug/kg	2,200		100	06/14/16	06/14/16 12:14	1011
tert-Butyl ethyl ether	ND	ug/kg	1,100		100	06/14/16	06/14/16 12:14	1011
Carbon Disulfide	ND	ug/kg	1,100		100	06/14/16	06/14/16 12:14	1011
Carbon tetrachloride	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Chlorobenzene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Chloroethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Chloroform	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Chloromethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Cyclohexane	ND	ug/kg	2,200		100	06/14/16	06/14/16 12:14	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	4,300		100	06/14/16	06/14/16 12:14	1011
Dibromochloromethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,2-Dibromoethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,2-Dichlorobenzene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,3-Dichlorobenzene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,4-Dichlorobenzene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Dichlorodifluoromethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,1-Dichloroethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,2-Dichloroethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,1-Dichloroethene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011

Final 1.000

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060810

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 51 54-55' **Date/Time Sampled: 06/07/2016 14:50** **PSS Sample ID: 16060810-002**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 85**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,2-Dichloropropane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
cis-1,2-Dichloroethene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
cis-1,3-Dichloropropene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
trans-1,2-Dichloroethene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
trans-1,3-Dichloropropene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Diisopropyl ether	ND	ug/kg	1,100		100	06/14/16	06/14/16 12:14	1011
Ethylbenzene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
2-Hexanone (MBK)	ND	ug/kg	2,200		100	06/14/16	06/14/16 12:14	1011
Isopropylbenzene	**850**	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Methyl Acetate	ND	ug/kg	2,200		100	06/14/16	06/14/16 12:14	1011
Methylcyclohexane	ND	ug/kg	2,200		100	06/14/16	06/14/16 12:14	1011
Methylene chloride	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	2,200		100	06/14/16	06/14/16 12:14	1011
Methyl-t-Butyl Ether	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Naphthalene	**1,400**	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Styrene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Tetrachloroethene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Toluene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,2,3-Trichlorobenzene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,2,4-Trichlorobenzene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,1,1-Trichloroethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,1,2-Trichloroethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Trichloroethene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Trichlorofluoromethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
Vinyl Chloride	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011
m&p-Xylene	ND	ug/kg	1,100		100	06/14/16	06/14/16 12:14	1011
o-Xylene	ND	ug/kg	540		100	06/14/16	06/14/16 12:14	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060810

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 51 69-70'	**Date/Time Sampled: 06/08/2016 11:20**	**PSS Sample ID: 16060810-003**
Matrix: SOIL	**Date/Time Received: 06/08/2016 13:28**	**% Solids: 78**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	13		1	06/09/16	06/10/16 15:49	1045

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CERTIFICATE OF ANALYSIS

No: 16060810

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 51 69-70' **Date/Time Sampled: 06/08/2016 11:20** **PSS Sample ID: 16060810-003**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 78**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	20		1	06/14/16	06/14/16 10:27	1011
tert-Amyl alcohol	ND	ug/kg	40		1	06/14/16	06/14/16 10:27	1011
tert-Amyl ethyl ether	ND	ug/kg	40		1	06/14/16	06/14/16 10:27	1011
tert-Amyl methyl ether	ND	ug/kg	40		1	06/14/16	06/14/16 10:27	1011
Benzene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Bromochloromethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Bromodichloromethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Bromoform	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Bromomethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
2-Butanone (MEK)	ND	ug/kg	20		1	06/14/16	06/14/16 10:27	1011
tert-Butyl Alcohol	ND	ug/kg	40		1	06/14/16	06/14/16 10:27	1011
tert-Butyl ethyl ether	ND	ug/kg	10		1	06/14/16	06/14/16 10:27	1011
Carbon Disulfide	ND	ug/kg	10		1	06/14/16	06/14/16 10:27	1011
Carbon tetrachloride	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Chlorobenzene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Chloroethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Chloroform	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Chloromethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Cyclohexane	ND	ug/kg	20		1	06/14/16	06/14/16 10:27	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	40		1	06/14/16	06/14/16 10:27	1011
Dibromochloromethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,2-Dibromoethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,2-Dichlorobenzene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,3-Dichlorobenzene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,4-Dichlorobenzene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Dichlorodifluoromethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,1-Dichloroethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,2-Dichloroethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,1-Dichloroethene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060810

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 51 69-70' **Date/Time Sampled: 06/08/2016 11:20** **PSS Sample ID: 16060810-003**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 78**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,2-Dichloropropane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
cis-1,2-Dichloroethene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
cis-1,3-Dichloropropene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
trans-1,2-Dichloroethene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
trans-1,3-Dichloropropene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Diisopropyl ether	ND	ug/kg	10		1	06/14/16	06/14/16 10:27	1011
Ethylbenzene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
2-Hexanone (MBK)	ND	ug/kg	20		1	06/14/16	06/14/16 10:27	1011
Isopropylbenzene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Methyl Acetate	ND	ug/kg	20		1	06/14/16	06/14/16 10:27	1011
Methylcyclohexane	ND	ug/kg	20		1	06/14/16	06/14/16 10:27	1011
Methylene chloride	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	20		1	06/14/16	06/14/16 10:27	1011
Methyl-t-Butyl Ether	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Naphthalene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Styrene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Tetrachloroethene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Toluene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,2,3-Trichlorobenzene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,2,4-Trichlorobenzene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,1,1-Trichloroethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,1,2-Trichloroethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Trichloroethene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Trichlorofluoromethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
Vinyl Chloride	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011
m&p-Xylene	ND	ug/kg	10		1	06/14/16	06/14/16 10:27	1011
o-Xylene	ND	ug/kg	5.1		1	06/14/16	06/14/16 10:27	1011

Case Narrative Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16060810

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Sample(s) received at a temperature greater than 6 degrees C and ice packs were used.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 16060810
Report Prepared For: UMM Shore Regional Health Chestertown, Cl
Project Name: Chester River Hospital Center-CRHC
Project Manager: J.P. Stokes

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
ASTM D2216 05	MW 51 50-51'	Initial	16060810-001	1057	S	133196	133196	06/07/2016	06/08/2016 15:56	06/08/2016 15:56
	MW 51 54-55'	Initial	16060810-002	1057	S	133196	133196	06/07/2016	06/08/2016 15:56	06/08/2016 15:56
	MW 51 69-70'	Initial	16060810-003	1057	S	133196	133196	06/08/2016	06/08/2016 15:56	06/08/2016 15:56
SW-846 8015 C	MW 51 50-51'	Initial	16060810-001	1045	S	61145	133332	06/07/2016	06/09/2016 09:48	06/10/2016 17:44
	MW 51 54-55'	Initial	16060810-002	1045	S	61145	133332	06/07/2016	06/09/2016 09:48	06/13/2016 15:19
	MW 51 69-70'	Initial	16060810-003	1045	S	61145	133332	06/08/2016	06/09/2016 09:48	06/10/2016 15:49
	61145-1-BKS	BKS	61145-1-BKS	1045	S	61145	133332	--------	06/09/2016 09:48	06/10/2016 13:48
	61145-1-BLK	BLK	61145-1-BLK	1045	S	61145	133332	--------	06/09/2016 09:48	06/10/2016 13:23
	61145-1-BSD	BSD	61145-1-BSD	1045	S	61145	133332	--------	06/09/2016 09:48	06/10/2016 14:13
	S-9 S	MS	16060721-003 S	1045	S	61145	133332	06/06/2016	06/09/2016 09:48	06/10/2016 13:48
	S-9 SD	MSD	16060721-003 SD	1045	S	61145	133332	06/06/2016	06/09/2016 09:48	06/10/2016 14:13
SW-846 8260 B	MW 51 50-51'	Initial	16060810-001	1011	S	61220	133348	06/07/2016	06/14/2016 04:02	06/14/2016 10:05
	MW 51 54-55'	Initial	16060810-002	1011	S	61220	133348	06/07/2016	06/14/2016 04:02	06/14/2016 12:14
	MW 51 69-70'	Initial	16060810-003	1011	S	61220	133348	06/08/2016	06/14/2016 04:02	06/14/2016 10:27
	61220-1-BKS	BKS	61220-1-BKS	1011	S	61220	133348	--------	06/14/2016 04:02	06/14/2016 05:06
	61220-1-BLK	BLK	61220-1-BLK	1011	S	61220	133348	--------	06/14/2016 04:02	06/14/2016 05:49
	CSO 012/SW S	MS	16060726-001 S	1011	S	61220	133348	06/06/2016	06/14/2016 04:02	06/14/2016 06:32
	CSO 012/SW SD	MSD	16060726-001 SD	1011	S	61220	133348	06/06/2016	06/14/2016 04:02	06/14/2016 06:53

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060810

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133332 Matrix: Soil Date Prep: 06/09/2016
PSS Sample ID: 16060810-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	105		26-128	%	06/10/16 17:44

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 133348 Matrix: Soil Date Prep: 06/14/2016
PSS Sample ID: 16060810-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	101		82-126	%	06/14/16 10:05
Dibromofluoromethane	100		92-113	%	06/14/16 10:05
Toluene-D8	98		94-105	%	06/14/16 10:05

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133332 Matrix: Soil Date Prep: 06/09/2016
PSS Sample ID: 16060810-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	177	*	26-128	%	06/13/16 15:19

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 133348 Matrix: Soil Date Prep: 06/14/2016
PSS Sample ID: 16060810-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	104		82-126	%	06/14/16 12:14
Dibromofluoromethane	95		92-113	%	06/14/16 12:14
Toluene-D8	103		94-105	%	06/14/16 12:14

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133332 Matrix: Soil Date Prep: 06/09/2016
PSS Sample ID: 16060810-003

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	87		26-128	%	06/10/16 15:49

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060810

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 133348 Matrix: Soil Date Prep: 06/14/2016
PSS Sample ID: 16060810-003

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		82-126	%	06/14/16 10:27
Dibromofluoromethane	97		92-113	%	06/14/16 10:27
Toluene-D8	98		94-105	%	06/14/16 10:27

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060810

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C

Seq Number: 133332 Matrix: Solid Date Prep: 06/09/16

MB Sample Id: 61145-1-BLK LCS Sample Id: 61145-1-BKS LCSD Sample Id: 61145-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (Diesel Range Organics)	<10.16	33.86	34.90	103	30.27	92	49-105	14	25	mg/kg	06/10/16 13:48	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
o-Terphenyl	84		99		88		26-128	%	06/10/16 13:48

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060810

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 133348 Matrix: Solid Date Prep: 06/14/16

MB Sample Id: 61220-1-BLK LCS Sample Id: 61220-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<20.00	60.00	51.48	86	46-127	ug/kg	06/14/16 05:06	
tert-Amyl alcohol	<40.00	60.00	59.34	99	46-130	ug/kg	06/14/16 05:06	
tert-Amyl ethyl ether	<40.00	60.00	57.70	96	68-116	ug/kg	06/14/16 05:06	
tert-Amyl methyl ether	<40.00	60.00	58.16	97	67-121	ug/kg	06/14/16 05:06	
Benzene	<5.000	60.00	57.68	96	70-127	ug/kg	06/14/16 05:06	
Bromochloromethane	<5.000	60.00	58.98	98	68-122	ug/kg	06/14/16 05:06	
Bromodichloromethane	<5.000	60.00	57.64	96	68-122	ug/kg	06/14/16 05:06	
Bromoform	<5.000	60.00	52.96	88	57-127	ug/kg	06/14/16 05:06	
Bromomethane	<5.000	60.00	53.81	90	68-123	ug/kg	06/14/16 05:06	
2-Butanone (MEK)	<20.00	60.00	55.53	93	41-136	ug/kg	06/14/16 05:06	
tert-Butyl Alcohol	<40.00	60.00	58.84	98	51-128	ug/kg	06/14/16 05:06	
tert-Butyl ethyl ether	<10.00	60.00	55.77	93	65-117	ug/kg	06/14/16 05:06	
Carbon Disulfide	<10.00	60.00	53.60	89	66-135	ug/kg	06/14/16 05:06	
Carbon tetrachloride	<5.000	60.00	56.37	94	64-147	ug/kg	06/14/16 05:06	
Chlorobenzene	<5.000	60.00	56.27	94	70-121	ug/kg	06/14/16 05:06	
Chloroethane	<5.000	60.00	54.72	91	66-142	ug/kg	06/14/16 05:06	
Chloroform	<5.000	60.00	56.93	95	68-123	ug/kg	06/14/16 05:06	
Chloromethane	<5.000	60.00	54.43	91	65-136	ug/kg	06/14/16 05:06	
Cyclohexane	<20.00	60.00	57.13	95	62-138	ug/kg	06/14/16 05:06	
1,2-Dibromo-3-chloropropane	<40.00	60.00	59.93	100	55-122	ug/kg	06/14/16 05:06	
Dibromochloromethane	<5.000	60.00	55.86	93	61-122	ug/kg	06/14/16 05:06	
1,2-Dibromoethane	<5.000	60.00	57.70	96	63-119	ug/kg	06/14/16 05:06	
1,2-Dichlorobenzene	<5.000	60.00	56.31	94	65-121	ug/kg	06/14/16 05:06	
1,3-Dichlorobenzene	<5.000	60.00	54.35	91	69-121	ug/kg	06/14/16 05:06	
1,4-Dichlorobenzene	<5.000	60.00	52.54	88	69-118	ug/kg	06/14/16 05:06	
Dichlorodifluoromethane	<5.000	60.00	53.80	90	53-162	ug/kg	06/14/16 05:06	
1,1-Dichloroethane	<5.000	60.00	54.93	92	70-127	ug/kg	06/14/16 05:06	
1,2-Dichloroethane	<5.000	60.00	58.43	97	68-118	ug/kg	06/14/16 05:06	
1,1-Dichloroethene	<5.000	60.00	55.51	93	69-133	ug/kg	06/14/16 05:06	
1,2-Dichloropropane	<5.000	60.00	57.49	96	70-122	ug/kg	06/14/16 05:06	
cis-1,2-Dichloroethene	<5.000	60.00	57.13	95	68-126	ug/kg	06/14/16 05:06	
cis-1,3-Dichloropropene	<5.000	60.00	53.22	89	68-121	ug/kg	06/14/16 05:06	
trans-1,2-Dichloroethene	<5.000	60.00	53.58	89	70-132	ug/kg	06/14/16 05:06	
trans-1,3-Dichloropropene	<5.000	60.00	52.32	87	67-115	ug/kg	06/14/16 05:06	
Diisopropyl ether	<10.00	60.00	54.96	92	68-121	ug/kg	06/14/16 05:06	
Ethylbenzene	<5.000	60.00	55.86	93	70-125	ug/kg	06/14/16 05:06	
2-Hexanone (MBK)	<20.00	60.00	50.40	84	40-121	ug/kg	06/14/16 05:06	
Isopropylbenzene	<5.000	60.00	59.67	99	68-130	ug/kg	06/14/16 05:06	
Methyl Acetate	<20.00	60.00	56.07	93	60-125	ug/kg	06/14/16 05:06	
Methylcyclohexane	<20.00	60.00	58.06	97	62-150	ug/kg	06/14/16 05:06	
Methylene chloride	<5.000	60.00	56.75	95	67-121	ug/kg	06/14/16 05:06	
4-Methyl-2-Pentanone (MIBK)	<20.00	60.00	56.79	95	48-117	ug/kg	06/14/16 05:06	
Methyl-t-Butyl Ether	<5.000	60.00	53.50	89	66-119	ug/kg	06/14/16 05:06	
Naphthalene	<5.000	60.00	53.83	90	54-115	ug/kg	06/14/16 05:06	
Styrene	<5.000	60.00	54.90	92	71-120	ug/kg	06/14/16 05:06	
1,1,2,2-Tetrachloroethane	<5.000	60.00	54.84	91	59-122	ug/kg	06/14/16 05:06	
Tetrachloroethene	<5.000	60.00	56.35	94	65-145	ug/kg	06/14/16 05:06	
Toluene	<5.000	60.00	57.15	95	69-129	ug/kg	06/14/16 05:06	
1,2,3-Trichlorobenzene	<5.000	60.00	52.65	88	60-114	ug/kg	06/14/16 05:06	
1,2,4-Trichlorobenzene	<5.000	60.00	50.54	84	64-115	ug/kg	06/14/16 05:06	
1,1,1-Trichloroethane	<5.000	60.00	58.34	97	65-139	ug/kg	06/14/16 05:06	

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060810

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 133348 Matrix: Solid Date Prep: 06/14/16

MB Sample Id: 61220-1-BLK LCS Sample Id: 61220-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
1,1,2-Trichloroethane	<5.000	60.00	57.02	95	64-125	ug/kg	06/14/16 05:06	
Trichloroethene	<5.000	60.00	61.53	103	69-133	ug/kg	06/14/16 05:06	
Trichlorofluoromethane	<5.000	60.00	53.53	89	59-153	ug/kg	06/14/16 05:06	
1,1,2-Trichlorotrifluoroethane	<5.000	60.00	53.59	89	62-139	ug/kg	06/14/16 05:06	
Vinyl Chloride	<5.000	60.00	51.99	87	69-142	ug/kg	06/14/16 05:06	
m&p-Xylene	<10.00	120	107.2	89	71-124	ug/kg	06/14/16 05:06	
o-Xylene	<5.000	60.00	55.67	93	72-123	ug/kg	06/14/16 05:06	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		101		82-126	%	06/14/16 05:06
Dibromofluoromethane	95		97		92-113	%	06/14/16 05:06
Toluene-D8	100		100		94-105	%	06/14/16 05:06

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: UMMS AT CHESTERTOWN *OFFICE LOC.

*PROJECT MGR: JP STOKES *PHONE NO.: (410) 758.8160

EMAIL: JPSTOKES@EARTHDATAINC.COM FAX NO.: ( )

*PROJECT NAME: CRHC PROJECT NO.:

SITE LOCATION: CHESTERTOWN, MD P.O. NO.:

SAMPLER(S): K LIVINGSTON DW CERT NO.:

PSS Work Order #: 1606081O PAGE 1 OF 1

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used	Analysis/ Method Required (3) * MDE VOC LIST 8260	8260 OXYGENATES	8015B TPH-DRO	REMARKS
1	MW 51 50-51'	10/7/16	14.35	S	2	G		X	X	X	
1	MW 51 50-51'	10/7/16	14.35	S	TERRA CORE	G		X	X	X	
2	MW 51 54-55'	10/7/16	14.50	S	2	G		X	X	X	
2	MW 51 54-55'	10/7/16	14.50	S	TERRA CORE	G		X	X	X	
3	MW 51 69-70'	10/8/16	11.20	S	2	G		X	X	X	
3	MW 51 69-70'	10/8/16	11.20	S	TERRA CORE	G		X	X	X	

(5)

Relinquished By: (1)	Date	Time	Received By:
	10/8/16	11.40	
Relinquished By: (2)	Date	Time	Received By:
	10-8-16	1:28PM	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

*Requested TAT (One TAT per COC)
☒ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:
COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER

# of Coolers: 1
Custody Seal: ABS
Ice Present: ICE PACKS Temp: 13°C
Shipping Carrier: Client

Special Instructions:

DW COMPLIANCE? YES ☐
EDD FORMAT TYPE
STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☐ WV ☐ OTHER

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Final 1.000

Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	16060810	**Received By**	Thomas Wingate
Client Name	UMM Shore Regional Health Chester	**Date Received**	06/08/2016 01:28:00 PM
Project Name	CRHC	**Delivered By**	Client
Disposal Date	07/13/2016	**Tracking No**	Not Applicable
		Logged In By	Rachel Davis

Shipping Container(s)

No. of Coolers 1

		Ice	Ice Packs Used
Custody Seal(s) Intact?	N/A	Temp (deg C)	13
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Not Provided
COC agrees with sample labels?	Yes		N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 3

Total No. of Containers Received 18

Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Sample(s) received at a temperature greater than 6 degrees C and ice packs were used.

Samples Inspected/Checklist Completed By: Rachel Davis — Date: 06/08/2016

Rachel Davis

PM Review and Approval: N Y Jackson — Date: 06/09/2016

Lynn Jackson

Analytical Report for

UMM Shore Regional Health Chestertown

Certificate of Analysis No.: 16060811

Project Manager: Ken Hannon

Project Name : CRHC

Project Location: Chestertown, MD

June 15, 2016

Phase Separation Science, Inc.

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PHASE SEPARATION SCIENCE, INC.

June 15, 2016

Ken Hannon
UMM Shore Regional Health Chestertown
100 Brown Street
Chestertown, MD 21620

Reference: PSS Work Order(s) No: **16060811**
Project Name: CRHC
Project Location: Chestertown, MD

Dear Ken Hannon :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **16060811**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on July 13, 2016, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16060811

The following samples were received under chain of custody by Phase Separation Science (PSS) on 06/08/2016 at 01:28 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
16060811-001	MW 52 33-34'	SOIL	06/06/16 11:15
16060811-002	MW 52 42-43'	SOIL	06/06/16 11:05
16060811-003	MW 52 57-58'	SOIL	06/06/16 12:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 52 33-34'	**Date/Time Sampled: 06/06/2016 11:15**	**PSS Sample ID: 16060811-001**
Matrix: SOIL	**Date/Time Received: 06/08/2016 13:28**	**% Solids: 90**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**13**	mg/kg	11		1	06/09/16	06/10/16 14:58	1045

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CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 52 33-34' **Date/Time Sampled: 06/06/2016 11:15** **PSS Sample ID: 16060811-001**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 90**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	23		1	06/14/16	06/14/16 10:48	1011
tert-Amyl alcohol	ND	ug/kg	45		1	06/14/16	06/14/16 10:48	1011
tert-Amyl ethyl ether	ND	ug/kg	45		1	06/14/16	06/14/16 10:48	1011
tert-Amyl methyl ether	ND	ug/kg	45		1	06/14/16	06/14/16 10:48	1011
Benzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Bromochloromethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Bromodichloromethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
tert-Butylbenzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Bromoform	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Bromomethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
tert-Butyl Alcohol	ND	ug/kg	45		1	06/14/16	06/14/16 10:48	1011
2-Butanone (MEK)	ND	ug/kg	23		1	06/14/16	06/14/16 10:48	1011
tert-Butyl ethyl ether	ND	ug/kg	11		1	06/14/16	06/14/16 10:48	1011
Carbon Disulfide	ND	ug/kg	11		1	06/14/16	06/14/16 10:48	1011
Carbon tetrachloride	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Chlorobenzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Chloroethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Chloroform	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Chloromethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Cyclohexane	ND	ug/kg	23		1	06/14/16	06/14/16 10:48	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	45		1	06/14/16	06/14/16 10:48	1011
Dibromochloromethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,2-Dibromoethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,2-Dichlorobenzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,3-Dichlorobenzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,4-Dichlorobenzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Dichlorodifluoromethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,1-Dichloroethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,2-Dichloroethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 52 33-34' **Date/Time Sampled: 06/06/2016 11:15** **PSS Sample ID: 16060811-001**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 90**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1-Dichloroethene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
cis-1,2-Dichloroethene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,2-Dichloropropane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
cis-1,3-Dichloropropene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
trans-1,2-Dichloroethene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
trans-1,3-Dichloropropene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Diisopropyl ether	ND	ug/kg	11		1	06/14/16	06/14/16 10:48	1011
Ethylbenzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
2-Hexanone (MBK)	ND	ug/kg	23		1	06/14/16	06/14/16 10:48	1011
Isopropylbenzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Methyl Acetate	ND	ug/kg	23		1	06/14/16	06/14/16 10:48	1011
Methylcyclohexane	ND	ug/kg	23		1	06/14/16	06/14/16 10:48	1011
Methylene chloride	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	23		1	06/14/16	06/14/16 10:48	1011
Methyl-t-Butyl Ether	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Naphthalene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Styrene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Tetrachloroethene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Toluene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,2,3-Trichlorobenzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,2,4-Trichlorobenzene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,1,1-Trichloroethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,1,2-Trichloroethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Trichloroethene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Trichlorofluoromethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
Vinyl Chloride	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011
m&p-Xylene	ND	ug/kg	11		1	06/14/16	06/14/16 10:48	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 52 33-34'	**Date/Time Sampled: 06/06/2016 11:15**	**PSS Sample ID: 16060811-001**
Matrix: SOIL	**Date/Time Received: 06/08/2016 13:28**	**% Solids: 90**

MDE TCL Volatile Organic Compounds & OXY — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
o-Xylene	ND	ug/kg	5.7		1	06/14/16	06/14/16 10:48	1011

Final 1.000

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 52 42-43'	**Date/Time Sampled: 06/06/2016 11:05**	**PSS Sample ID: 16060811-002**
Matrix: SOIL	**Date/Time Received: 06/08/2016 13:28**	**% Solids: 88**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**11,000**	mg/kg	560		50	06/09/16	06/13/16 17:06	1045

Final 1.000

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 52 42-43' **Date/Time Sampled: 06/06/2016 11:05** **PSS Sample ID: 16060811-002**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 88**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	1,900		100	06/14/16	06/14/16 12:35	1011
tert-Amyl alcohol	ND	ug/kg	3,700		100	06/14/16	06/14/16 12:35	1011
tert-Amyl ethyl ether	ND	ug/kg	3,700		100	06/14/16	06/14/16 12:35	1011
tert-Amyl methyl ether	ND	ug/kg	3,700		100	06/14/16	06/14/16 12:35	1011
Benzene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Bromochloromethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Bromodichloromethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
tert-Butylbenzene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Bromoform	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Bromomethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
2-Butanone (MEK)	ND	ug/kg	1,900		100	06/14/16	06/14/16 12:35	1011
tert-Butyl Alcohol	ND	ug/kg	3,700		100	06/14/16	06/14/16 12:35	1011
tert-Butyl ethyl ether	ND	ug/kg	930		100	06/14/16	06/14/16 12:35	1011
Carbon Disulfide	ND	ug/kg	930		100	06/14/16	06/14/16 12:35	1011
Carbon tetrachloride	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Chlorobenzene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Chloroethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Chloroform	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Chloromethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Cyclohexane	ND	ug/kg	1,900		100	06/14/16	06/14/16 12:35	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	3,700		100	06/14/16	06/14/16 12:35	1011
Dibromochloromethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,2-Dibromoethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,2-Dichlorobenzene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,3-Dichlorobenzene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,4-Dichlorobenzene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Dichlorodifluoromethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,1-Dichloroethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,2-Dichloroethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 52 42-43' **Date/Time Sampled: 06/06/2016 11:05** **PSS Sample ID: 16060811-002**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 88**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1-Dichloroethene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,2-Dichloropropane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
cis-1,2-Dichloroethene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
cis-1,3-Dichloropropene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
trans-1,2-Dichloroethene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
trans-1,3-Dichloropropene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Diisopropyl ether	ND	ug/kg	930		100	06/14/16	06/14/16 12:35	1011
Ethylbenzene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
2-Hexanone (MBK)	ND	ug/kg	1,900		100	06/14/16	06/14/16 12:35	1011
Isopropylbenzene	**1,400**	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Methyl Acetate	ND	ug/kg	1,900		100	06/14/16	06/14/16 12:35	1011
Methylcyclohexane	ND	ug/kg	1,900		100	06/14/16	06/14/16 12:35	1011
Methylene chloride	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	1,900		100	06/14/16	06/14/16 12:35	1011
Methyl-t-Butyl Ether	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Naphthalene	**13,000**	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Styrene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Tetrachloroethene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Toluene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,2,3-Trichlorobenzene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,2,4-Trichlorobenzene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,1,1-Trichloroethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,1,2-Trichloroethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Trichloroethene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Trichlorofluoromethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
Vinyl Chloride	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011
m&p-Xylene	ND	ug/kg	930		100	06/14/16	06/14/16 12:35	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 52 42-43'	**Date/Time Sampled: 06/06/2016 11:05**	**PSS Sample ID: 16060811-002**
Matrix: SOIL	**Date/Time Received: 06/08/2016 13:28**	**% Solids: 88**

MDE TCL Volatile Organic Compounds & OXY — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
o-Xylene	ND	ug/kg	470		100	06/14/16	06/14/16 12:35	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 52 57-58'	**Date/Time Sampled: 06/06/2016 12:00**	**PSS Sample ID: 16060811-003**
Matrix: SOIL	**Date/Time Received: 06/08/2016 13:28**	**% Solids: 83**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	12		1	06/09/16	06/10/16 14:58	1045

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 52 57-58' **Date/Time Sampled: 06/06/2016 12:00** **PSS Sample ID: 16060811-003**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 83**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	20		1	06/14/16	06/14/16 13:50	1011
tert-Amyl alcohol	ND	ug/kg	39		1	06/14/16	06/14/16 13:50	1011
tert-Amyl ethyl ether	ND	ug/kg	39		1	06/14/16	06/14/16 13:50	1011
tert-Amyl methyl ether	ND	ug/kg	39		1	06/14/16	06/14/16 13:50	1011
Benzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Bromochloromethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Bromodichloromethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
tert-Butylbenzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Bromoform	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Bromomethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
tert-Butyl Alcohol	ND	ug/kg	39		1	06/14/16	06/14/16 13:50	1011
2-Butanone (MEK)	ND	ug/kg	20		1	06/14/16	06/14/16 13:50	1011
tert-Butyl ethyl ether	ND	ug/kg	9.7		1	06/14/16	06/14/16 13:50	1011
Carbon Disulfide	ND	ug/kg	9.7		1	06/14/16	06/14/16 13:50	1011
Carbon tetrachloride	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Chlorobenzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Chloroethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Chloroform	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Chloromethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Cyclohexane	ND	ug/kg	20		1	06/14/16	06/14/16 13:50	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	39		1	06/14/16	06/14/16 13:50	1011
Dibromochloromethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,2-Dibromoethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,2-Dichlorobenzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,3-Dichlorobenzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,4-Dichlorobenzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Dichlorodifluoromethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,1-Dichloroethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,2-Dichloroethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW 52 57-58' **Date/Time Sampled: 06/06/2016 12:00** **PSS Sample ID: 16060811-003**
Matrix: SOIL **Date/Time Received: 06/08/2016 13:28** **% Solids: 83**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1-Dichloroethene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
cis-1,2-Dichloroethene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,2-Dichloropropane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
cis-1,3-Dichloropropene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
trans-1,2-Dichloroethene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
trans-1,3-Dichloropropene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Diisopropyl ether	ND	ug/kg	9.7		1	06/14/16	06/14/16 13:50	1011
Ethylbenzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
2-Hexanone (MBK)	ND	ug/kg	20		1	06/14/16	06/14/16 13:50	1011
Isopropylbenzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Methyl Acetate	ND	ug/kg	20		1	06/14/16	06/14/16 13:50	1011
Methylcyclohexane	ND	ug/kg	20		1	06/14/16	06/14/16 13:50	1011
Methylene chloride	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	20		1	06/14/16	06/14/16 13:50	1011
Methyl-t-Butyl Ether	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Naphthalene	ND	ug/kg	6.0		1	06/14/16	06/14/16 14:54	1011
Styrene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Tetrachloroethene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Toluene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,2,3-Trichlorobenzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,2,4-Trichlorobenzene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,1,1-Trichloroethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,1,2-Trichloroethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Trichloroethene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Trichlorofluoromethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
Vinyl Chloride	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011
m&p-Xylene	ND	ug/kg	9.7		1	06/14/16	06/14/16 13:50	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16060811

UMM Shore Regional Health Chestertown, Chestertown, MD

June 15, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW 52 57-58'	**Date/Time Sampled: 06/06/2016 12:00**	**PSS Sample ID: 16060811-003**
Matrix: SOIL	**Date/Time Received: 06/08/2016 13:28**	**% Solids: 83**

MDE TCL Volatile Organic Compounds & OXY — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
o-Xylene	ND	ug/kg	4.9		1	06/14/16	06/14/16 13:50	1011

Case Narrative Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16060811

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Sample(s) received at a temperature greater than 6 degrees C and ice packs were used.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 16060811
Report Prepared For: UMM Shore Regional Health Chestertown, Cl
Project Name: Chester River Hospital Center-CRHC
Project Manager: Ken Hannon

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
ASTM D2216 05	MW 52 33-34'	Initial	16060811-001	1057	S	133196	133196	06/06/2016	06/08/2016 15:56	06/08/2016 15:56
	MW 52 42-43'	Initial	16060811-002	1057	S	133196	133196	06/06/2016	06/08/2016 15:56	06/08/2016 15:56
	MW 52 57-58'	Initial	16060811-003	1057	S	133196	133196	06/06/2016	06/08/2016 15:56	06/08/2016 15:56
SW-846 8015 C	MW 52 33-34'	Initial	16060811-001	1045	S	61145	133332	06/06/2016	06/09/2016 09:48	06/10/2016 14:58
	MW 52 42-43'	Initial	16060811-002	1045	S	61145	133332	06/06/2016	06/09/2016 09:48	06/13/2016 17:06
	MW 52 57-58'	Initial	16060811-003	1045	S	61145	133332	06/06/2016	06/09/2016 09:48	06/10/2016 14:58
	61145-1-BKS	BKS	61145-1-BKS	1045	S	61145	133332	--------	06/09/2016 09:48	06/10/2016 13:48
	61145-1-BLK	BLK	61145-1-BLK	1045	S	61145	133332	--------	06/09/2016 09:48	06/10/2016 13:23
	61145-1-BSD	BSD	61145-1-BSD	1045	S	61145	133332	--------	06/09/2016 09:48	06/10/2016 14:13
	S-9 S	MS	16060721-003 S	1045	S	61145	133332	06/06/2016	06/09/2016 09:48	06/10/2016 13:48
	S-9 SD	MSD	16060721-003 SD	1045	S	61145	133332	06/06/2016	06/09/2016 09:48	06/10/2016 14:13
SW-846 8260 B	MW 52 33-34'	Initial	16060811-001	1011	S	61220	133348	06/06/2016	06/14/2016 04:02	06/14/2016 10:48
	MW 52 42-43'	Initial	16060811-002	1011	S	61220	133348	06/06/2016	06/14/2016 04:02	06/14/2016 12:35
	MW 52 57-58'	Initial	16060811-003	1011	S	61220	133348	06/06/2016	06/14/2016 04:02	06/14/2016 13:50
	61220-1-BKS	BKS	61220-1-BKS	1011	S	61220	133348	--------	06/14/2016 04:02	06/14/2016 05:06
	61220-1-BLK	BLK	61220-1-BLK	1011	S	61220	133348	--------	06/14/2016 04:02	06/14/2016 05:49
	CSO 012/SW S	MS	16060726-001 S	1011	S	61220	133348	06/06/2016	06/14/2016 04:02	06/14/2016 06:32
	CSO 012/SW SD	MSD	16060726-001 SD	1011	S	61220	133348	06/06/2016	06/14/2016 04:02	06/14/2016 06:53
	MW 52 57-58'	Reanalysis	16060811-003	1011	S	61220	133348	06/06/2016	06/14/2016 04:02	06/14/2016 14:54

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060811

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133332 Matrix: Soil Date Prep: 06/09/2016
PSS Sample ID: 16060811-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	75		26-128	%	06/10/16 14:58

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 133348 Matrix: Soil Date Prep: 06/14/2016
PSS Sample ID: 16060811-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		82-126	%	06/14/16 10:48
Dibromofluoromethane	96		92-113	%	06/14/16 10:48
Toluene-D8	99		94-105	%	06/14/16 10:48

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133332 Matrix: Soil Date Prep: 06/09/2016
PSS Sample ID: 16060811-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	120		26-128	%	06/13/16 17:06

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 133348 Matrix: Soil Date Prep: 06/14/2016
PSS Sample ID: 16060811-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		82-126	%	06/14/16 12:35
Dibromofluoromethane	93		92-113	%	06/14/16 12:35
Toluene-D8	96		94-105	%	06/14/16 12:35

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133332 Matrix: Soil Date Prep: 06/09/2016
PSS Sample ID: 16060811-003

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	77		26-128	%	06/10/16 14:58

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060811

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 133348 Matrix: Soil Date Prep: 06/14/2016
PSS Sample ID: 16060811-003

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		82-126	%	06/14/16 13:50
Dibromofluoromethane	93		92-113	%	06/14/16 13:50
Toluene-D8	103		94-105	%	06/14/16 13:50

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060811

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C
Prep Method: SW3550C
Seq Number: 133332
Matrix: Solid
Date Prep: 06/09/16
MB Sample Id: 61145-1-BLK
LCS Sample Id: 61145-1-BKS
LCSD Sample Id: 61145-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (Diesel Range Organics)	<10.16	33.86	34.90	103	30.27	92	49-105	14	25	mg/kg	06/10/16 13:48	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
o-Terphenyl	84		99		88		26-128	%	06/10/16 13:48

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060811

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 133348 Matrix: Solid Date Prep: 06/14/16

MB Sample Id: 61220-1-BLK LCS Sample Id: 61220-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<20.00	60.00	51.48	86	46-127	ug/kg	06/14/16 05:06	
tert-Amyl alcohol	<40.00	60.00	59.34	99	46-130	ug/kg	06/14/16 05:06	
tert-Amyl ethyl ether	<40.00	60.00	57.70	96	68-116	ug/kg	06/14/16 05:06	
tert-Amyl methyl ether	<40.00	60.00	58.16	97	67-121	ug/kg	06/14/16 05:06	
Benzene	<5.000	60.00	57.68	96	70-127	ug/kg	06/14/16 05:06	
Bromochloromethane	<5.000	60.00	58.98	98	68-122	ug/kg	06/14/16 05:06	
Bromodichloromethane	<5.000	60.00	57.64	96	68-122	ug/kg	06/14/16 05:06	
tert-Butylbenzene	<5.000	60.00	56.34	94	69-130	ug/kg	06/14/16 05:06	
Bromoform	<5.000	60.00	52.96	88	57-127	ug/kg	06/14/16 05:06	
Bromomethane	<5.000	60.00	53.81	90	68-123	ug/kg	06/14/16 05:06	
2-Butanone (MEK)	<20.00	60.00	55.53	93	41-136	ug/kg	06/14/16 05:06	
tert-Butyl Alcohol	<40.00	60.00	58.84	98	51-128	ug/kg	06/14/16 05:06	
tert-Butyl ethyl ether	<10.00	60.00	55.77	93	65-117	ug/kg	06/14/16 05:06	
Carbon Disulfide	<10.00	60.00	53.60	89	66-135	ug/kg	06/14/16 05:06	
Carbon tetrachloride	<5.000	60.00	56.37	94	64-147	ug/kg	06/14/16 05:06	
Chlorobenzene	<5.000	60.00	56.27	94	70-121	ug/kg	06/14/16 05:06	
Chloroethane	<5.000	60.00	54.72	91	66-142	ug/kg	06/14/16 05:06	
Chloroform	<5.000	60.00	56.93	95	68-123	ug/kg	06/14/16 05:06	
Chloromethane	<5.000	60.00	54.43	91	65-136	ug/kg	06/14/16 05:06	
Cyclohexane	<20.00	60.00	57.13	95	62-138	ug/kg	06/14/16 05:06	
1,2-Dibromo-3-chloropropane	<40.00	60.00	59.93	100	55-122	ug/kg	06/14/16 05:06	
Dibromochloromethane	<5.000	60.00	55.86	93	61-122	ug/kg	06/14/16 05:06	
1,2-Dibromoethane	<5.000	60.00	57.70	96	63-119	ug/kg	06/14/16 05:06	
1,2-Dichlorobenzene	<5.000	60.00	56.31	94	65-121	ug/kg	06/14/16 05:06	
1,3-Dichlorobenzene	<5.000	60.00	54.35	91	69-121	ug/kg	06/14/16 05:06	
1,4-Dichlorobenzene	<5.000	60.00	52.54	88	69-118	ug/kg	06/14/16 05:06	
Dichlorodifluoromethane	<5.000	60.00	53.80	90	53-162	ug/kg	06/14/16 05:06	
1,1-Dichloroethane	<5.000	60.00	54.93	92	70-127	ug/kg	06/14/16 05:06	
1,2-Dichloroethane	<5.000	60.00	58.43	97	68-118	ug/kg	06/14/16 05:06	
1,1-Dichloroethene	<5.000	60.00	55.51	93	69-133	ug/kg	06/14/16 05:06	
1,2-Dichloropropane	<5.000	60.00	57.49	96	70-122	ug/kg	06/14/16 05:06	
cis-1,2-Dichloroethene	<5.000	60.00	57.13	95	68-126	ug/kg	06/14/16 05:06	
cis-1,3-Dichloropropene	<5.000	60.00	53.22	89	68-121	ug/kg	06/14/16 05:06	
trans-1,2-Dichloroethene	<5.000	60.00	53.58	89	70-132	ug/kg	06/14/16 05:06	
trans-1,3-Dichloropropene	<5.000	60.00	52.32	87	67-115	ug/kg	06/14/16 05:06	
Diisopropyl ether	<10.00	60.00	54.96	92	68-121	ug/kg	06/14/16 05:06	
Ethylbenzene	<5.000	60.00	55.86	93	70-125	ug/kg	06/14/16 05:06	
2-Hexanone (MBK)	<20.00	60.00	50.40	84	40-121	ug/kg	06/14/16 05:06	
Isopropylbenzene	<5.000	60.00	59.67	99	68-130	ug/kg	06/14/16 05:06	
Methyl Acetate	<20.00	60.00	56.07	93	60-125	ug/kg	06/14/16 05:06	
Methylcyclohexane	<20.00	60.00	58.06	97	62-150	ug/kg	06/14/16 05:06	
Methylene chloride	<5.000	60.00	56.75	95	67-121	ug/kg	06/14/16 05:06	
4-Methyl-2-Pentanone (MIBK)	<20.00	60.00	56.79	95	48-117	ug/kg	06/14/16 05:06	
Methyl-t-Butyl Ether	<5.000	60.00	53.50	89	66-119	ug/kg	06/14/16 05:06	
Naphthalene	<5.000	60.00	53.83	90	54-115	ug/kg	06/14/16 05:06	
Styrene	<5.000	60.00	54.90	92	71-120	ug/kg	06/14/16 05:06	
1,1,2,2-Tetrachloroethane	<5.000	60.00	54.84	91	59-122	ug/kg	06/14/16 05:06	
Tetrachloroethene	<5.000	60.00	56.35	94	65-145	ug/kg	06/14/16 05:06	
Toluene	<5.000	60.00	57.15	95	69-129	ug/kg	06/14/16 05:06	
1,2,3-Trichlorobenzene	<5.000	60.00	52.65	88	60-114	ug/kg	06/14/16 05:06	
1,2,4-Trichlorobenzene	<5.000	60.00	50.54	84	64-115	ug/kg	06/14/16 05:06	

PHASE SEPARATION SCIENCE, INC.

QC Summary 16060811

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 133348 Matrix: Solid Date Prep: 06/14/16

MB Sample Id: 61220-1-BLK LCS Sample Id: 61220-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
1,1,1-Trichloroethane	<5.000	60.00	58.34	97	65-139	ug/kg	06/14/16 05:06	
1,1,2-Trichloroethane	<5.000	60.00	57.02	95	64-125	ug/kg	06/14/16 05:06	
Trichloroethene	<5.000	60.00	61.53	103	69-133	ug/kg	06/14/16 05:06	
Trichlorofluoromethane	<5.000	60.00	53.53	89	59-153	ug/kg	06/14/16 05:06	
1,1,2-Trichlorotrifluoroethane	<5.000	60.00	53.59	89	62-139	ug/kg	06/14/16 05:06	
Vinyl Chloride	<5.000	60.00	51.99	87	69-142	ug/kg	06/14/16 05:06	
m&p-Xylene	<10.00	120	107.2	89	71-124	ug/kg	06/14/16 05:06	
o-Xylene	<5.000	60.00	55.67	93	72-123	ug/kg	06/14/16 05:06	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		101		82-126	%	06/14/16 05:06
Dibromofluoromethane	95		97		92-113	%	06/14/16 05:06
Toluene-D8	100		100		94-105	%	06/14/16 05:06

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: VMMS AT CHESTERTOWN *OFFICE LOC.

*PROJECT MGR: JP STOKES *PHONE NO.: (410) 758-8160

EMAIL: JPSTOKES@EARTHDATAINC.COM FAX NO.: ( )

*PROJECT NAME: CRHC PROJECT NO.:

SITE LOCATION: CHESTERTOWN, MD P.O. NO.:

SAMPLER(S): K. LIVINGSTON DW CERT NO.:

PSS Work Order #: 1606081 1 PAGE 1 OF 1

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used	Analysis/ Method Required (3) * MDE VOC LIST 8260	8260 OXYGENATES	8015B TPH-DRO	REMARKS
1	MW 52 33-34'	6/6/16	11.15	S	2	G		X	X	X	
1	MW 52 33-34'	6/6/16	11.15	S	TERRA CORE	G		X	X	X	
2	MW52 42-43'	6/6/16	11.05	S	2	G		X	X	X	
2	MW52 42-43'	6/6/16	11.05	S	TERRA CORE	G		X	X	X	
3	MW52 57-58'	6/7/16	12.00	S	2	G		X	X	X	
3	MW52 57-58'	6/7/16	12.00	S	TERRA CORE	G		X	X	X	

(5)

Relinquished By: (1)	Date	Time	Received By:
	6/7/16	11.40	P.
Relinquished By: (2)	Date	Time	Received By:
P.	6-8-16	1:28 PM	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

*Requested TAT (One TAT per COC)
☒ 5-Day ☐ 3-Day ☐ 2-Day ☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:
COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER ____

# of Coolers: 1
Custody Seal: ABS
Ice Present: ICE PACKS Temp: 13°C
Shipping Carrier: Client

Special Instructions:

DW COMPLIANCE? YES ☐ EDD FORMAT TYPE ____ STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☐ WV ☐ OTHER ____

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	16060811	**Received By**	Thomas Wingate
Client Name	UMM Shore Regional Health Chester	**Date Received**	06/08/2016 01:28:00 PM
Project Name	CRHC	**Delivered By**	Client
Disposal Date	07/13/2016	**Tracking No**	Not Applicable
		Logged In By	Rachel Davis

Shipping Container(s)

No. of Coolers 1

		Ice	Ice Packs Used
Custody Seal(s) Intact?	N/A	Temp (deg C)	13
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Not Provided
COC agrees with sample labels?	Yes		N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 3

Total No. of Containers Received 18

Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Sample(s) received at a temperature greater than 6 degrees C and ice packs were used.

Samples Inspected/Checklist Completed By: Rachel Davis — Date: 06/08/2016

Rachel Davis

PM Review and Approval: N Y Jackson — Date: 06/09/2016

Lynn Jackson

Analytical Report for

UMM Shore Regional Health Chestertown

Certificate of Analysis No.: 16061501

Project Manager: J.P. Stokes

Project Name : CRHC

Project Location: Chestertown, MD

June 22, 2016

Phase Separation Science, Inc.

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Baltimore, MD 21228
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PHASE SEPARATION SCIENCE, INC.

June 22, 2016

J.P. Stokes
UMM Shore Regional Health Chestertown
100 Brown Street
Chestertown, MD 21620

Reference: PSS Work Order(s) No: **16061501**
Project Name: CRHC
Project Location: Chestertown, MD

Dear J.P. Stokes :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **16061501**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on July 20, 2016, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Cathy Thompson
QA Officer

Sample Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16061501

The following samples were received under chain of custody by Phase Separation Science (PSS) on 06/15/2016 at 08:45 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
16061501-001	MW-54 (36-37)	SOIL	06/10/16 10:07
16061501-002	MW-54 (54-55)	SOIL	06/13/16 12:44

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061501

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-54 (36-37)	**Date/Time Sampled: 06/10/2016 10:07**	**PSS Sample ID: 16061501-001**
Matrix: SOIL	**Date/Time Received: 06/15/2016 08:45**	**% Solids: 83**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**1,400**	mg/kg	120		10	06/16/16	06/21/16 11:06	1045

Final 1.000

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CERTIFICATE OF ANALYSIS

No: 16061501

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-54 (36-37) **Date/Time Sampled: 06/10/2016 10:07** **PSS Sample ID: 16061501-001**
Matrix: SOIL **Date/Time Received: 06/15/2016 08:45** **% Solids: 83**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	1,900		100	06/15/16	06/16/16 00:00	1011
tert-Amyl alcohol	ND	ug/kg	3,800		100	06/15/16	06/16/16 00:00	1011
tert-Amyl ethyl ether	ND	ug/kg	3,800		100	06/15/16	06/16/16 00:00	1011
tert-Amyl methyl ether	ND	ug/kg	3,800		100	06/15/16	06/16/16 00:00	1011
Benzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Bromochloromethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
tert-Butylbenzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Bromodichloromethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Bromoform	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Bromomethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
2-Butanone (MEK)	ND	ug/kg	1,900		100	06/15/16	06/16/16 00:00	1011
tert-Butyl Alcohol	ND	ug/kg	3,800		100	06/15/16	06/16/16 00:00	1011
tert-Butyl ethyl ether	ND	ug/kg	940		100	06/15/16	06/16/16 00:00	1011
Carbon Disulfide	ND	ug/kg	940		100	06/15/16	06/16/16 00:00	1011
Carbon tetrachloride	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Chlorobenzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Chloroethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Chloroform	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Chloromethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Cyclohexane	ND	ug/kg	1,900		100	06/15/16	06/16/16 00:00	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	3,800		100	06/15/16	06/16/16 00:00	1011
Dibromochloromethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,2-Dibromoethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,2-Dichlorobenzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,3-Dichlorobenzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,4-Dichlorobenzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Dichlorodifluoromethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,1-Dichloroethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,2-Dichloroethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061501

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-54 (36-37) **Date/Time Sampled: 06/10/2016 10:07** **PSS Sample ID: 16061501-001**
Matrix: SOIL **Date/Time Received: 06/15/2016 08:45** **% Solids: 83**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1-Dichloroethene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,2-Dichloropropane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
cis-1,2-Dichloroethene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
cis-1,3-Dichloropropene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
trans-1,2-Dichloroethene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
trans-1,3-Dichloropropene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Diisopropyl ether	ND	ug/kg	940		100	06/15/16	06/16/16 00:00	1011
Ethylbenzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
2-Hexanone (MBK)	ND	ug/kg	1,900		100	06/15/16	06/16/16 00:00	1011
Isopropylbenzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Methyl Acetate	ND	ug/kg	1,900		100	06/15/16	06/16/16 00:00	1011
Methylcyclohexane	ND	ug/kg	1,900		100	06/15/16	06/16/16 00:00	1011
Methylene chloride	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	1,900		100	06/15/16	06/16/16 00:00	1011
Methyl-t-Butyl Ether	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Naphthalene	**830**	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Styrene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Tetrachloroethene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Toluene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,2,3-Trichlorobenzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,2,4-Trichlorobenzene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,1,1-Trichloroethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,1,2-Trichloroethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Trichloroethene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Trichlorofluoromethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
Vinyl Chloride	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011
m&p-Xylene	ND	ug/kg	940		100	06/15/16	06/16/16 00:00	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061501

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-54 (36-37)	**Date/Time Sampled: 06/10/2016 10:07**	**PSS Sample ID: 16061501-001**
Matrix: SOIL	**Date/Time Received: 06/15/2016 08:45**	**% Solids: 83**

MDE TCL Volatile Organic Compounds & OXY — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
o-Xylene	ND	ug/kg	470		100	06/15/16	06/16/16 00:00	1011

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CERTIFICATE OF ANALYSIS

No: 16061501

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-54 (54-55)	**Date/Time Sampled: 06/13/2016 12:44**	**PSS Sample ID: 16061501-002**
Matrix: SOIL	**Date/Time Received: 06/15/2016 08:45**	**% Solids: 83**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	12		1	06/16/16	06/20/16 21:35	1045

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CERTIFICATE OF ANALYSIS

No: 16061501

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-54 (54-55) **Date/Time Sampled: 06/13/2016 12:44** **PSS Sample ID: 16061501-002**
Matrix: SOIL **Date/Time Received: 06/15/2016 08:45** **% Solids: 83**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	19		1	06/15/16	06/15/16 19:00	1011
tert-Amyl alcohol	ND	ug/kg	37		1	06/15/16	06/15/16 19:00	1011
tert-Amyl ethyl ether	ND	ug/kg	37		1	06/15/16	06/15/16 19:00	1011
tert-Amyl methyl ether	ND	ug/kg	37		1	06/15/16	06/15/16 19:00	1011
Benzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Bromochloromethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
tert-Butylbenzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Bromodichloromethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Bromoform	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Bromomethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
2-Butanone (MEK)	ND	ug/kg	19		1	06/15/16	06/15/16 19:00	1011
tert-Butyl Alcohol	ND	ug/kg	37		1	06/15/16	06/15/16 19:00	1011
tert-Butyl ethyl ether	ND	ug/kg	9.3		1	06/15/16	06/15/16 19:00	1011
Carbon Disulfide	ND	ug/kg	9.3		1	06/15/16	06/15/16 19:00	1011
Carbon tetrachloride	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Chlorobenzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Chloroethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Chloroform	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Chloromethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Cyclohexane	ND	ug/kg	19		1	06/15/16	06/15/16 19:00	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	37		1	06/15/16	06/15/16 19:00	1011
Dibromochloromethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,2-Dibromoethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,2-Dichlorobenzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,3-Dichlorobenzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,4-Dichlorobenzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Dichlorodifluoromethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,1-Dichloroethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,2-Dichloroethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061501

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-54 (54-55) **Date/Time Sampled: 06/13/2016 12:44** **PSS Sample ID: 16061501-002**
Matrix: SOIL **Date/Time Received: 06/15/2016 08:45** **% Solids: 83**

MDE TCL Volatile Organic Compounds & OXY | Analytical Method: SW-846 8260 B | Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1-Dichloroethene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
cis-1,2-Dichloroethene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,2-Dichloropropane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
cis-1,3-Dichloropropene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
trans-1,2-Dichloroethene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
trans-1,3-Dichloropropene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Diisopropyl ether	ND	ug/kg	9.3		1	06/15/16	06/15/16 19:00	1011
Ethylbenzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
2-Hexanone (MBK)	ND	ug/kg	19		1	06/15/16	06/15/16 19:00	1011
Isopropylbenzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Methyl Acetate	ND	ug/kg	19		1	06/15/16	06/15/16 19:00	1011
Methylcyclohexane	ND	ug/kg	19		1	06/15/16	06/15/16 19:00	1011
Methylene chloride	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	19		1	06/15/16	06/15/16 19:00	1011
Methyl-t-Butyl Ether	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Naphthalene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Styrene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Tetrachloroethene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Toluene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,2,3-Trichlorobenzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,2,4-Trichlorobenzene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,1,1-Trichloroethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,1,2-Trichloroethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Trichloroethene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Trichlorofluoromethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
Vinyl Chloride	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011
m&p-Xylene	ND	ug/kg	9.3		1	06/15/16	06/15/16 19:00	1011

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CERTIFICATE OF ANALYSIS

No: 16061501

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-54 (54-55)	**Date/Time Sampled: 06/13/2016 12:44**	**PSS Sample ID: 16061501-002**
Matrix: SOIL	**Date/Time Received: 06/15/2016 08:45**	**% Solids: 83**

MDE TCL Volatile Organic Compounds & OXY — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
o-Xylene	ND	ug/kg	4.6		1	06/15/16	06/15/16 19:00	1011

Case Narrative Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16061501

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

All sample receipt conditions were acceptable.

Analytical:

Total Petroleum Hydrocarbons - DRO

Batch: 133596

Surrogate recoveries affected by sample dilution.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 16061501
Report Prepared For: UMM Shore Regional Health Chestertown, Cl
Project Name: Chester River Hospital Center-CRHC
Project Manager: J.P. Stokes

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
ASTM D2216 05	MW-54 (36-37)	Initial	16061501-001	1057	S	133422	133422	06/10/2016	06/15/2016 16:32	06/15/2016 16:32
	MW-54 (54-55)	Initial	16061501-002	1057	S	133422	133422	06/13/2016	06/15/2016 16:32	06/15/2016 16:32
SW-846 8015 C	MW-54 (36-37)	Initial	16061501-001	1045	S	61262	133596	06/10/2016	06/16/2016 10:24	06/21/2016 11:06
	MW-54 (54-55)	Initial	16061501-002	1045	S	61262	133596	06/13/2016	06/16/2016 10:24	06/20/2016 21:35
	61262-1-BKS	BKS	61262-1-BKS	1045	S	61262	133596	--------	06/16/2016 10:24	06/20/2016 19:54
	61262-1-BLK	BLK	61262-1-BLK	1045	S	61262	133596	--------	06/16/2016 10:24	06/20/2016 19:29
	61262-1-BSD	BSD	61262-1-BSD	1045	S	61262	133596	--------	06/16/2016 10:24	06/20/2016 20:20
	12096-PEX-SW-01-22ft S	MS	16061406-001 S	1045	S	61262	133596	06/13/2016	06/16/2016 10:24	06/20/2016 19:54
	12096-PEX-SW-01-22ft SD	MSD	16061406-001 SD	1045	S	61262	133596	06/13/2016	06/16/2016 10:24	06/20/2016 20:20
SW-846 8260 B	MW-54 (36-37)	Initial	16061501-001	1011	S	61265	133436	06/10/2016	06/15/2016 14:50	06/16/2016 00:00
	MW-54 (54-55)	Initial	16061501-002	1011	S	61265	133436	06/13/2016	06/15/2016 14:50	06/15/2016 19:00
	61265-1-BKS	BKS	61265-1-BKS	1011	S	61265	133436	--------	06/15/2016 14:50	06/15/2016 16:30
	61265-1-BLK	BLK	61265-1-BLK	1011	S	61265	133436	--------	06/15/2016 14:50	06/15/2016 17:13
	WCS5 S	MS	16061416-001 S	1011	S	61265	133436	06/14/2016	06/15/2016 14:50	06/15/2016 17:56
	WCS5 SD	MSD	16061416-001 SD	1011	S	61265	133436	06/14/2016	06/15/2016 14:50	06/15/2016 18:17

PHASE SEPARATION SCIENCE, INC.

QC Summary 16061501

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133596 Matrix: Soil Date Prep: 06/16/2016
PSS Sample ID: 16061501-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	135	*	26-128	%	06/21/16 11:06

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 133436 Matrix: Soil Date Prep: 06/15/2016
PSS Sample ID: 16061501-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	102		82-126	%	06/16/16 00:00
Dibromofluoromethane	96		92-113	%	06/16/16 00:00
Toluene-D8	103		94-105	%	06/16/16 00:00

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133596 Matrix: Soil Date Prep: 06/16/2016
PSS Sample ID: 16061501-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	90		26-128	%	06/20/16 21:35

Analytical Method: SW-846 8260 B Prep Method: SW5035
Seq Number: 133436 Matrix: Soil Date Prep: 06/15/2016
PSS Sample ID: 16061501-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		82-126	%	06/15/16 19:00
Dibromofluoromethane	100		92-113	%	06/15/16 19:00
Toluene-D8	99		94-105	%	06/15/16 19:00

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

PHASE SEPARATION SCIENCE, INC.

QC Summary 16061501

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133596 Matrix: Solid Date Prep: 06/16/16
MB Sample Id: 61262-1-BLK LCS Sample Id: 61262-1-BKS LCSD Sample Id: 61262-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (Diesel Range Organics)	<10.10	33.66	23.70	70	25.78	76	49-105	8	25	mg/kg	06/20/16 19:54	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
o-Terphenyl	77		78		76		26-128	%	06/20/16 19:54

PHASE SEPARATION SCIENCE, INC.

QC Summary 16061501

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 133436 Matrix: Solid Date Prep: 06/15/16

MB Sample Id: 61265-1-BLK LCS Sample Id: 61265-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<20.00	60.00	37.68	63	46-127	ug/kg	06/15/16 16:30	
tert-Amyl alcohol	<40.00	60.00	53.05	88	46-130	ug/kg	06/15/16 16:30	
tert-Amyl ethyl ether	<40.00	60.00	52.93	88	68-116	ug/kg	06/15/16 16:30	
tert-Amyl methyl ether	<40.00	60.00	51.06	85	67-121	ug/kg	06/15/16 16:30	
Benzene	<5.000	60.00	50.16	84	70-127	ug/kg	06/15/16 16:30	
Bromochloromethane	<5.000	60.00	49.86	83	68-122	ug/kg	06/15/16 16:30	
Bromodichloromethane	<5.000	60.00	51.41	86	68-122	ug/kg	06/15/16 16:30	
tert-Butylbenzene	<5.000	60.00	55.25	92	69-130	ug/kg	06/15/16 16:30	
Bromoform	<5.000	60.00	49.64	83	57-127	ug/kg	06/15/16 16:30	
Bromomethane	<5.000	60.00	47.04	78	68-123	ug/kg	06/15/16 16:30	
2-Butanone (MEK)	<20.00	60.00	43.86	73	41-136	ug/kg	06/15/16 16:30	
tert-Butyl Alcohol	<40.00	60.00	49.73	83	51-128	ug/kg	06/15/16 16:30	
tert-Butyl ethyl ether	<10.00	60.00	44.67	74	65-117	ug/kg	06/15/16 16:30	
Carbon Disulfide	<10.00	60.00	41.59	69	66-135	ug/kg	06/15/16 16:30	
Carbon tetrachloride	<5.000	60.00	52.64	88	64-147	ug/kg	06/15/16 16:30	
Chlorobenzene	<5.000	60.00	52.27	87	70-121	ug/kg	06/15/16 16:30	
Chloroethane	<5.000	60.00	49.44	82	66-142	ug/kg	06/15/16 16:30	
Chloroform	<5.000	60.00	48.82	81	68-123	ug/kg	06/15/16 16:30	
Chloromethane	<5.000	60.00	47.90	80	65-136	ug/kg	06/15/16 16:30	
Cyclohexane	<20.00	60.00	47.20	79	62-138	ug/kg	06/15/16 16:30	
1,2-Dibromo-3-chloropropane	<40.00	60.00	54.50	91	55-122	ug/kg	06/15/16 16:30	
Dibromochloromethane	<5.000	60.00	50.61	84	61-122	ug/kg	06/15/16 16:30	
1,2-Dibromoethane	<5.000	60.00	51.12	85	63-119	ug/kg	06/15/16 16:30	
1,2-Dichlorobenzene	<5.000	60.00	54.24	90	65-121	ug/kg	06/15/16 16:30	
1,3-Dichlorobenzene	<5.000	60.00	53.17	89	69-121	ug/kg	06/15/16 16:30	
1,4-Dichlorobenzene	<5.000	60.00	51.56	86	69-118	ug/kg	06/15/16 16:30	
Dichlorodifluoromethane	<5.000	60.00	50.27	84	53-162	ug/kg	06/15/16 16:30	
1,1-Dichloroethane	<5.000	60.00	52.74	88	70-127	ug/kg	06/15/16 16:30	
1,2-Dichloroethane	<5.000	60.00	49.04	82	68-118	ug/kg	06/15/16 16:30	
1,1-Dichloroethene	<5.000	60.00	48.14	80	69-133	ug/kg	06/15/16 16:30	
1,2-Dichloropropane	<5.000	60.00	51.22	85	70-122	ug/kg	06/15/16 16:30	
cis-1,2-Dichloroethene	<5.000	60.00	50.13	84	68-126	ug/kg	06/15/16 16:30	
cis-1,3-Dichloropropene	<5.000	60.00	53.13	89	68-121	ug/kg	06/15/16 16:30	
trans-1,2-Dichloroethene	<5.000	60.00	46.62	78	70-132	ug/kg	06/15/16 16:30	
trans-1,3-Dichloropropene	<5.000	60.00	52.89	88	67-115	ug/kg	06/15/16 16:30	
Diisopropyl ether	<10.00	60.00	44.54	74	68-121	ug/kg	06/15/16 16:30	
Ethylbenzene	<5.000	60.00	52.60	88	70-125	ug/kg	06/15/16 16:30	
2-Hexanone (MBK)	<20.00	60.00	39.08	65	40-121	ug/kg	06/15/16 16:30	
Isopropylbenzene	<5.000	60.00	57.39	96	68-130	ug/kg	06/15/16 16:30	
Methyl Acetate	<20.00	60.00	46.02	77	60-125	ug/kg	06/15/16 16:30	
Methylcyclohexane	<20.00	60.00	50.55	84	62-150	ug/kg	06/15/16 16:30	
Methylene chloride	<5.000	60.00	48.93	82	67-121	ug/kg	06/15/16 16:30	
4-Methyl-2-Pentanone (MIBK)	<20.00	60.00	44.02	73	48-117	ug/kg	06/15/16 16:30	
Methyl-t-Butyl Ether	<5.000	60.00	44.36	74	66-119	ug/kg	06/15/16 16:30	
Naphthalene	<5.000	60.00	52.04	87	54-115	ug/kg	06/15/16 16:30	
Styrene	<5.000	60.00	51.53	86	71-120	ug/kg	06/15/16 16:30	
1,1,2,2-Tetrachloroethane	<5.000	60.00	52.70	88	59-122	ug/kg	06/15/16 16:30	
Tetrachloroethene	<5.000	60.00	63.23	105	65-145	ug/kg	06/15/16 16:30	
Toluene	<5.000	60.00	52.28	87	69-129	ug/kg	06/15/16 16:30	
1,2,3-Trichlorobenzene	<5.000	60.00	53.96	90	60-114	ug/kg	06/15/16 16:30	
1,2,4-Trichlorobenzene	<5.000	60.00	56.24	94	64-115	ug/kg	06/15/16 16:30	

PHASE SEPARATION SCIENCE, INC.

QC Summary 16061501

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 133436 Matrix: Solid Date Prep: 06/15/16

MB Sample Id: 61265-1-BLK LCS Sample Id: 61265-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
1,1,1-Trichloroethane	<5.000	60.00	60.01	100	65-139	ug/kg	06/15/16 16:30	
1,1,2-Trichloroethane	<5.000	60.00	51.02	85	64-125	ug/kg	06/15/16 16:30	
Trichloroethene	<5.000	60.00	54.50	91	69-133	ug/kg	06/15/16 16:30	
Trichlorofluoromethane	<5.000	60.00	49.60	83	59-153	ug/kg	06/15/16 16:30	
1,1,2-Trichlorotrifluoroethane	<5.000	60.00	46.26	77	62-139	ug/kg	06/15/16 16:30	
Vinyl Chloride	<5.000	60.00	42.91	72	69-142	ug/kg	06/15/16 16:30	
m&p-Xylene	<10.00	120	100.4	84	71-124	ug/kg	06/15/16 16:30	
o-Xylene	<5.000	60.00	50.64	84	72-123	ug/kg	06/15/16 16:30	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	104		102		82-126	%	06/15/16 16:30
Dibromofluoromethane	94		94		92-113	%	06/15/16 16:30
Toluene-D8	104		100		94-105	%	06/15/16 16:30

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: UMMS AT CHESTERTOWN *OFFICE LOC.

*PROJECT MGR: JP STOKES *PHONE NO.: (410) 758-8160

EMAIL: JPSTOKES@EARTHDATAINC.COM *FAX NO.: ( )

*PROJECT NAME: CRHC PROJECT NO.:

SITE LOCATION: CHESTERTOWN, MD P.O. NO.:

SAMPLER(S): R. BEAM DW CERT NO.:

PSS Work Order #: 1606161501 PAGE 1 OF 1

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used	Analysis/ Method Required (3) * MOC 4 VOC	8260	8260 Oxygenates	8015B TPH-DRO	REMARKS
1	MW-54 (36-37)	6/10/16	1007	S	2	G		X	X	X	X	
1	MW-54 (36-37)	6/10/16	1007	S	TERRA CORE	G						
2	MW-54 (54-55)	6/13/16	1244	S	2	G		X	X	X	X	
2	MW-54 (54-55	6/13/16	1244	S	TERRA CORE	G						

(5)

	Relinquished By:	Date	Time	Received By:
(1)	JP Stokes	6/14/16	1620	
(2)		6-14-16	1820	
(3)		6/15/16	8:45A	
(4)		Date	Time	Received By:

(4)

*Requested TAT (One TAT per COC)
☒ 5-Day ☐ 3-Day ☐ 2-Day ☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required: COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER

# of Coolers: 1

Custody Seal: ABS

Ice Present: PRES Temp: 1°C

Shipping Carrier: PSS

Special Instructions:

DW COMPLIANCE? YES ☐

EDD FORMAT TYPE

STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☐ WV ☐ OTHER

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	16061501	**Received By**	Rachel Davis
Client Name	UMM Shore Regional Health Chester	**Date Received**	06/15/2016 08:45:00 AM
Project Name	CRHC	**Delivered By**	PSS Personnel
Disposal Date	07/20/2016	**Tracking No**	Not Applicable
		Logged In By	Rachel Davis

Shipping Container(s)

No. of Coolers 1

		Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	1
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Not Provided
COC agrees with sample labels?	Yes		N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 2

Total No. of Containers Received 12

Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By: Rachel Davis — Date: 06/15/2016

Rachel Davis

PM Review and Approval: N Y Jackson — Date: 06/16/2016

Lynn Jackson

Analytical Report for

UMM Shore Regional Health Chestertown

Certificate of Analysis No.: 16061502

Project Manager: J.P. Stokes

Project Name : CRHC

Project Location: Chestertown, MD

June 22, 2016

Phase Separation Science, Inc.

6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

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PHASE SEPARATION SCIENCE, INC.

June 22, 2016

J.P. Stokes
UMM Shore Regional Health Chestertown
100 Brown Street
Chestertown, MD 21620

Reference: PSS Work Order(s) No: **16061502**
Project Name: CRHC
Project Location: Chestertown, MD

Dear J.P. Stokes :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **16061502**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on July 20, 2016, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Cathy Thompson
QA Officer

Sample Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16061502

The following samples were received under chain of custody by Phase Separation Science (PSS) on 06/15/2016 at 08:45 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
16061502-001	MW-53 (40-41)	SOIL	06/14/16 11:15
16061502-002	MW-53 (54-55)	SOIL	06/14/16 16:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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BALTIMORE, MD 21228
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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061502

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-53 (40-41)	**Date/Time Sampled: 06/14/2016 11:15**	**PSS Sample ID: 16061502-001**
Matrix: SOIL	**Date/Time Received: 06/15/2016 08:45**	**% Solids: 83**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**300**	mg/kg	12		1	06/16/16	06/20/16 20:45	1045

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BALTIMORE, MD 21228
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800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061502

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-53 (40-41) **Date/Time Sampled: 06/14/2016 11:15** **PSS Sample ID: 16061502-001**
Matrix: SOIL **Date/Time Received: 06/15/2016 08:45** **% Solids: 83**

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	**33**	ug/kg	24		1	06/15/16	06/15/16 19:22	1011
tert-Amyl alcohol	ND	ug/kg	49		1	06/15/16	06/15/16 19:22	1011
tert-Amyl ethyl ether	ND	ug/kg	49		1	06/15/16	06/15/16 19:22	1011
tert-Amyl methyl ether	ND	ug/kg	49		1	06/15/16	06/15/16 19:22	1011
Benzene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Bromochloromethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Bromodichloromethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
tert-Butylbenzene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Bromoform	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Bromomethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
2-Butanone (MEK)	ND	ug/kg	24		1	06/15/16	06/15/16 19:22	1011
tert-Butyl Alcohol	ND	ug/kg	49		1	06/15/16	06/15/16 19:22	1011
tert-Butyl ethyl ether	ND	ug/kg	12		1	06/15/16	06/15/16 19:22	1011
Carbon Disulfide	ND	ug/kg	12		1	06/15/16	06/15/16 19:22	1011
Carbon tetrachloride	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Chlorobenzene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Chloroethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Chloroform	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Chloromethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Cyclohexane	ND	ug/kg	24		1	06/15/16	06/15/16 19:22	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	49		1	06/15/16	06/15/16 19:22	1011
Dibromochloromethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,2-Dibromoethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,2-Dichlorobenzene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,3-Dichlorobenzene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,4-Dichlorobenzene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Dichlorodifluoromethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,1-Dichloroethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,2-Dichloroethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,1-Dichloroethene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061502

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-53 (40-41) **Date/Time Sampled: 06/14/2016 11:15** **PSS Sample ID: 16061502-001**
Matrix: SOIL **Date/Time Received: 06/15/2016 08:45** **% Solids: 83**

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,2-Dichloropropane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
cis-1,2-Dichloroethene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
cis-1,3-Dichloropropene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
trans-1,2-Dichloroethene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
trans-1,3-Dichloropropene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Diisopropyl ether	ND	ug/kg	12		1	06/15/16	06/15/16 19:22	1011
Ethylbenzene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
2-Hexanone (MBK)	ND	ug/kg	24		1	06/15/16	06/15/16 19:22	1011
Isopropylbenzene	**6.4**	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Methyl Acetate	ND	ug/kg	24		1	06/15/16	06/15/16 19:22	1011
Methylcyclohexane	ND	ug/kg	24		1	06/15/16	06/15/16 19:22	1011
Methylene chloride	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	24		1	06/15/16	06/15/16 19:22	1011
Methyl-t-Butyl Ether	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Naphthalene	**26**	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Styrene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Tetrachloroethene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Toluene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,2,3-Trichlorobenzene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,2,4-Trichlorobenzene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,1,1-Trichloroethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,1,2-Trichloroethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Trichloroethene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Trichlorofluoromethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
Vinyl Chloride	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011
m&p-Xylene	ND	ug/kg	12		1	06/15/16	06/15/16 19:22	1011
o-Xylene	ND	ug/kg	6.1		1	06/15/16	06/15/16 19:22	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061502

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC

Project Location: Chestertown, MD

Sample ID: MW-53 (54-55)	**Date/Time Sampled: 06/14/2016 16:00**	**PSS Sample ID: 16061502-002**
Matrix: SOIL	**Date/Time Received: 06/15/2016 08:45**	**% Solids: 83**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**12**	mg/kg	12		1	06/16/16	06/20/16 21:35	1045

Final 1.000

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061502

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-53 (54-55) **Date/Time Sampled: 06/14/2016 16:00** **PSS Sample ID: 16061502-002**
Matrix: SOIL **Date/Time Received: 06/15/2016 08:45** **% Solids: 83**

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	24		1	06/15/16	06/15/16 19:43	1011
tert-Amyl alcohol	ND	ug/kg	47		1	06/15/16	06/15/16 19:43	1011
tert-Amyl ethyl ether	ND	ug/kg	47		1	06/15/16	06/15/16 19:43	1011
tert-Amyl methyl ether	ND	ug/kg	47		1	06/15/16	06/15/16 19:43	1011
Benzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Bromochloromethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Bromodichloromethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
tert-Butylbenzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Bromoform	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Bromomethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
2-Butanone (MEK)	ND	ug/kg	24		1	06/15/16	06/15/16 19:43	1011
tert-Butyl Alcohol	ND	ug/kg	47		1	06/15/16	06/15/16 19:43	1011
tert-Butyl ethyl ether	ND	ug/kg	12		1	06/15/16	06/15/16 19:43	1011
Carbon Disulfide	ND	ug/kg	12		1	06/15/16	06/15/16 19:43	1011
Carbon tetrachloride	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Chlorobenzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Chloroethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Chloroform	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Chloromethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Cyclohexane	ND	ug/kg	24		1	06/15/16	06/15/16 19:43	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	47		1	06/15/16	06/15/16 19:43	1011
Dibromochloromethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,2-Dibromoethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,2-Dichlorobenzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,3-Dichlorobenzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,4-Dichlorobenzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Dichlorodifluoromethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,1-Dichloroethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,2-Dichloroethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,1-Dichloroethene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 16061502

UMM Shore Regional Health Chestertown, Chestertown, MD

June 22, 2016

Project Name: CRHC
Project Location: Chestertown, MD

Sample ID: MW-53 (54-55) **Date/Time Sampled: 06/14/2016 16:00** **PSS Sample ID: 16061502-002**
Matrix: SOIL **Date/Time Received: 06/15/2016 08:45** **% Solids: 83**

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,2-Dichloropropane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
cis-1,2-Dichloroethene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
cis-1,3-Dichloropropene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
trans-1,2-Dichloroethene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
trans-1,3-Dichloropropene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Diisopropyl ether	ND	ug/kg	12		1	06/15/16	06/15/16 19:43	1011
Ethylbenzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
2-Hexanone (MBK)	ND	ug/kg	24		1	06/15/16	06/15/16 19:43	1011
Isopropylbenzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Methyl Acetate	ND	ug/kg	24		1	06/15/16	06/15/16 19:43	1011
Methylcyclohexane	ND	ug/kg	24		1	06/15/16	06/15/16 19:43	1011
Methylene chloride	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	24		1	06/15/16	06/15/16 19:43	1011
Methyl-t-Butyl Ether	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Naphthalene	**11**	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Styrene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Tetrachloroethene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Toluene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,2,3-Trichlorobenzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,2,4-Trichlorobenzene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,1,1-Trichloroethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,1,2-Trichloroethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Trichloroethene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Trichlorofluoromethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
Vinyl Chloride	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011
m&p-Xylene	ND	ug/kg	12		1	06/15/16	06/15/16 19:43	1011
o-Xylene	ND	ug/kg	5.9		1	06/15/16	06/15/16 19:43	1011

Case Narrative Summary

Client Name: UMM Shore Regional Health Chestertown

Project Name: CRHC

Work Order Number(s): 16061502

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Received one soil jar for sample MW-53 (40-41) water logged; placed on hold.
All terra core vials received with more mass than needed for the analysis; placed on hold. VOCs analyzed from the 4oz soil jars.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 16061502
Report Prepared For: UMM Shore Regional Health Chestertown, Cl
Project Name: Chester River Hospital Center-CRHC
Project Manager: J.P. Stokes

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
ASTM D2216 05	MW-53 (40-41)	Initial	16061502-001	1057	S	133422	133422	06/14/2016	06/15/2016 16:32	06/15/2016 16:32
	MW-53 (54-55)	Initial	16061502-002	1057	S	133422	133422	06/14/2016	06/15/2016 16:32	06/15/2016 16:32
SW-846 8015 C	MW-53 (40-41)	Initial	16061502-001	1045	S	61262	133596	06/14/2016	06/16/2016 10:24	06/20/2016 20:45
	MW-53 (54-55)	Initial	16061502-002	1045	S	61262	133596	06/14/2016	06/16/2016 10:24	06/20/2016 21:35
	61262-1-BKS	BKS	61262-1-BKS	1045	S	61262	133596	--------	06/16/2016 10:24	06/20/2016 19:54
	61262-1-BLK	BLK	61262-1-BLK	1045	S	61262	133596	--------	06/16/2016 10:24	06/20/2016 19:29
	61262-1-BSD	BSD	61262-1-BSD	1045	S	61262	133596	--------	06/16/2016 10:24	06/20/2016 20:20
	12096-PEX-SW-01-22ft S	MS	16061406-001 S	1045	S	61262	133596	06/13/2016	06/16/2016 10:24	06/20/2016 19:54
	12096-PEX-SW-01-22ft SD	MSD	16061406-001 SD	1045	S	61262	133596	06/13/2016	06/16/2016 10:24	06/20/2016 20:20
SW-846 8260 B	MW-53 (40-41)	Initial	16061502-001	1011	S	61265	133436	06/14/2016	06/15/2016 14:50	06/15/2016 19:22
	MW-53 (54-55)	Initial	16061502-002	1011	S	61265	133436	06/14/2016	06/15/2016 14:50	06/15/2016 19:43
	61265-1-BKS	BKS	61265-1-BKS	1011	S	61265	133436	--------	06/15/2016 14:50	06/15/2016 16:30
	61265-1-BLK	BLK	61265-1-BLK	1011	S	61265	133436	--------	06/15/2016 14:50	06/15/2016 17:13
	WCS5 S	MS	16061416-001 S	1011	S	61265	133436	06/14/2016	06/15/2016 14:50	06/15/2016 17:56
	WCS5 SD	MSD	16061416-001 SD	1011	S	61265	133436	06/14/2016	06/15/2016 14:50	06/15/2016 18:17

PHASE SEPARATION SCIENCE, INC.

QC Summary 16061502

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133596 Matrix: Soil Date Prep: 06/16/2016
PSS Sample ID: 16061502-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	102		26-128	%	06/20/16 20:45

Analytical Method: SW-846 8260 B Prep Method: SW5030
Seq Number: 133436 Matrix: Soil Date Prep: 06/15/2016
PSS Sample ID: 16061502-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	104		82-126	%	06/15/16 19:22
Dibromofluoromethane	96		92-113	%	06/15/16 19:22
Toluene-D8	101		94-105	%	06/15/16 19:22

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133596 Matrix: Soil Date Prep: 06/16/2016
PSS Sample ID: 16061502-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	99		26-128	%	06/20/16 21:35

Analytical Method: SW-846 8260 B Prep Method: SW5030
Seq Number: 133436 Matrix: Soil Date Prep: 06/15/2016
PSS Sample ID: 16061502-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		82-126	%	06/15/16 19:43
Dibromofluoromethane	95		92-113	%	06/15/16 19:43
Toluene-D8	104		94-105	%	06/15/16 19:43

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

PHASE SEPARATION SCIENCE, INC.

QC Summary 16061502

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8015 C Prep Method: SW3550C
Seq Number: 133596 Matrix: Solid Date Prep: 06/16/16
MB Sample Id: 61262-1-BLK LCS Sample Id: 61262-1-BKS LCSD Sample Id: 61262-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (Diesel Range Organics)	<10.10	33.66	23.70	70	25.78	76	49-105	8	25	mg/kg	06/20/16 19:54	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
o-Terphenyl	77		78		76		26-128	%	06/20/16 19:54

PHASE SEPARATION SCIENCE, INC.

QC Summary 16061502

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 133436 Matrix: Solid Date Prep: 06/15/16

MB Sample Id: 61265-1-BLK LCS Sample Id: 61265-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<20.00	60.00	37.68	63	46-127	ug/kg	06/15/16 16:30	
tert-Amyl alcohol	<40.00	60.00	53.05	88	46-130	ug/kg	06/15/16 16:30	
tert-Amyl ethyl ether	<40.00	60.00	52.93	88	68-116	ug/kg	06/15/16 16:30	
tert-Amyl methyl ether	<40.00	60.00	51.06	85	67-121	ug/kg	06/15/16 16:30	
Benzene	<5.000	60.00	50.16	84	70-127	ug/kg	06/15/16 16:30	
Bromochloromethane	<5.000	60.00	49.86	83	68-122	ug/kg	06/15/16 16:30	
Bromodichloromethane	<5.000	60.00	51.41	86	68-122	ug/kg	06/15/16 16:30	
tert-Butylbenzene	<5.000	60.00	55.25	92	69-130	ug/kg	06/15/16 16:30	
Bromoform	<5.000	60.00	49.64	83	57-127	ug/kg	06/15/16 16:30	
Bromomethane	<5.000	60.00	47.04	78	68-123	ug/kg	06/15/16 16:30	
2-Butanone (MEK)	<20.00	60.00	43.86	73	41-136	ug/kg	06/15/16 16:30	
tert-Butyl Alcohol	<40.00	60.00	49.73	83	51-128	ug/kg	06/15/16 16:30	
tert-Butyl ethyl ether	<10.00	60.00	44.67	74	65-117	ug/kg	06/15/16 16:30	
Carbon Disulfide	<10.00	60.00	41.59	69	66-135	ug/kg	06/15/16 16:30	
Carbon tetrachloride	<5.000	60.00	52.64	88	64-147	ug/kg	06/15/16 16:30	
Chlorobenzene	<5.000	60.00	52.27	87	70-121	ug/kg	06/15/16 16:30	
Chloroethane	<5.000	60.00	49.44	82	66-142	ug/kg	06/15/16 16:30	
Chloroform	<5.000	60.00	48.82	81	68-123	ug/kg	06/15/16 16:30	
Chloromethane	<5.000	60.00	47.90	80	65-136	ug/kg	06/15/16 16:30	
Cyclohexane	<20.00	60.00	47.20	79	62-138	ug/kg	06/15/16 16:30	
1,2-Dibromo-3-chloropropane	<40.00	60.00	54.50	91	55-122	ug/kg	06/15/16 16:30	
Dibromochloromethane	<5.000	60.00	50.61	84	61-122	ug/kg	06/15/16 16:30	
1,2-Dibromoethane	<5.000	60.00	51.12	85	63-119	ug/kg	06/15/16 16:30	
1,2-Dichlorobenzene	<5.000	60.00	54.24	90	65-121	ug/kg	06/15/16 16:30	
1,3-Dichlorobenzene	<5.000	60.00	53.17	89	69-121	ug/kg	06/15/16 16:30	
1,4-Dichlorobenzene	<5.000	60.00	51.56	86	69-118	ug/kg	06/15/16 16:30	
Dichlorodifluoromethane	<5.000	60.00	50.27	84	53-162	ug/kg	06/15/16 16:30	
1,1-Dichloroethane	<5.000	60.00	52.74	88	70-127	ug/kg	06/15/16 16:30	
1,2-Dichloroethane	<5.000	60.00	49.04	82	68-118	ug/kg	06/15/16 16:30	
1,1-Dichloroethene	<5.000	60.00	48.14	80	69-133	ug/kg	06/15/16 16:30	
1,2-Dichloropropane	<5.000	60.00	51.22	85	70-122	ug/kg	06/15/16 16:30	
cis-1,2-Dichloroethene	<5.000	60.00	50.13	84	68-126	ug/kg	06/15/16 16:30	
cis-1,3-Dichloropropene	<5.000	60.00	53.13	89	68-121	ug/kg	06/15/16 16:30	
trans-1,2-Dichloroethene	<5.000	60.00	46.62	78	70-132	ug/kg	06/15/16 16:30	
trans-1,3-Dichloropropene	<5.000	60.00	52.89	88	67-115	ug/kg	06/15/16 16:30	
Diisopropyl ether	<10.00	60.00	44.54	74	68-121	ug/kg	06/15/16 16:30	
Ethylbenzene	<5.000	60.00	52.60	88	70-125	ug/kg	06/15/16 16:30	
2-Hexanone (MBK)	<20.00	60.00	39.08	65	40-121	ug/kg	06/15/16 16:30	
Isopropylbenzene	<5.000	60.00	57.39	96	68-130	ug/kg	06/15/16 16:30	
Methyl Acetate	<20.00	60.00	46.02	77	60-125	ug/kg	06/15/16 16:30	
Methylcyclohexane	<20.00	60.00	50.55	84	62-150	ug/kg	06/15/16 16:30	
Methylene chloride	<5.000	60.00	48.93	82	67-121	ug/kg	06/15/16 16:30	
4-Methyl-2-Pentanone (MIBK)	<20.00	60.00	44.02	73	48-117	ug/kg	06/15/16 16:30	
Methyl-t-Butyl Ether	<5.000	60.00	44.36	74	66-119	ug/kg	06/15/16 16:30	
Naphthalene	<5.000	60.00	52.04	87	54-115	ug/kg	06/15/16 16:30	
Styrene	<5.000	60.00	51.53	86	71-120	ug/kg	06/15/16 16:30	
1,1,2,2-Tetrachloroethane	<5.000	60.00	52.70	88	59-122	ug/kg	06/15/16 16:30	
Tetrachloroethene	<5.000	60.00	63.23	105	65-145	ug/kg	06/15/16 16:30	
Toluene	<5.000	60.00	52.28	87	69-129	ug/kg	06/15/16 16:30	
1,2,3-Trichlorobenzene	<5.000	60.00	53.96	90	60-114	ug/kg	06/15/16 16:30	
1,2,4-Trichlorobenzene	<5.000	60.00	56.24	94	64-115	ug/kg	06/15/16 16:30	

PHASE SEPARATION SCIENCE, INC.

QC Summary 16061502

UMM Shore Regional Health Chestertown
CRHC

Analytical Method: SW-846 8260 B Prep Method: SW5030

Seq Number: 133436 Matrix: Solid Date Prep: 06/15/16

MB Sample Id: 61265-1-BLK LCS Sample Id: 61265-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
1,1,1-Trichloroethane	<5.000	60.00	60.01	100	65-139	ug/kg	06/15/16 16:30	
1,1,2-Trichloroethane	<5.000	60.00	51.02	85	64-125	ug/kg	06/15/16 16:30	
Trichloroethene	<5.000	60.00	54.50	91	69-133	ug/kg	06/15/16 16:30	
Trichlorofluoromethane	<5.000	60.00	49.60	83	59-153	ug/kg	06/15/16 16:30	
1,1,2-Trichlorotrifluoroethane	<5.000	60.00	46.26	77	62-139	ug/kg	06/15/16 16:30	
Vinyl Chloride	<5.000	60.00	42.91	72	69-142	ug/kg	06/15/16 16:30	
m&p-Xylene	<10.00	120	100.4	84	71-124	ug/kg	06/15/16 16:30	
o-Xylene	<5.000	60.00	50.64	84	72-123	ug/kg	06/15/16 16:30	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	104		102		82-126	%	06/15/16 16:30
Dibromofluoromethane	94		94		92-113	%	06/15/16 16:30
Toluene-D8	104		100		94-105	%	06/15/16 16:30

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: UMMS AT CHESTERTOWN / FACILITY LOC.

*PROJECT MGR: JP STOKES *PHONE NO.: (410) 758-8160

EMAIL: JPSTOKES@EARTHDATAINC.COM ( )

*PROJECT NAME: CRHC PROJECT NO.:

SITE LOCATION: CHESTERTOWN, MD P.O. NO.:

SAMPLER(S): JP Stokes DW CERT NO.:

PSS Work Order #: 1606150Z PAGE 1 OF 1

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used / Analysis/ Method Required (3) * MDE VOC List 8260	8260 Oxygenates	8015B TPH-DRO	REMARKS
1	MW-53 (40-41)	6/14/16	1115	S	2	G	X	X	X	
1	MW-53 (40-41)	6/14/16	1115	S	TERRA CORE	G				
2	MW53 (54-55)	6/14/16	1600	S	2	G	X	X	X	
2	MW53 (54-55)	6/14/16	1600	S	TERRA CORE	G				

(5)

Relinquished By:	Date	Time	Received By:
(1) JP Stokes	6/14/16	1620	
(2)	6-14-16	1820	
(3)	6/15/16	8:45A	
(4)			

(4) *Requested TAT (One TAT per COC)
☒ 5-Day ☐ 3-Day ☐ 2-Day ☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required: COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER ____

# of Coolers: 1

Custody Seal: AGS

Ice Present: PRES Temp: 1°C

Shipping Carrier: PSS

Special Instructions:

DW COMPLIANCE? YES ☐

EDD FORMAT TYPE ____

STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☐ WV ☐ OTHER ____

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	16061502	**Received By**	Rachel Davis
Client Name	UMM Shore Regional Health Chester	**Date Received**	06/15/2016 08:45:00 AM
Project Name	CRHC	**Delivered By**	PSS Personnel
Disposal Date	07/20/2016	**Tracking No**	Not Applicable
		Logged In By	Rachel Davis

Shipping Container(s)

No. of Coolers 1

		Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	1
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Not Provided
COC agrees with sample labels?	Yes		N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	No	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 2 Total No. of Containers Received 12

Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Received one soil jar for sample MW-53 (40-41) water logged; placed on hold.
All terra core vials received with more mass than needed for the analysis; placed on hold. VOCs analyzed from the 4oz soil jars.

Samples Inspected/Checklist Completed By: Rachel Davis Date: 06/15/2016
Rachel Davis

PM Review and Approval: N Y Jackson Date: 06/16/2016
Lynn Jackson

ATTACHMENT D

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	NOT REQUIRED	1		

5. Generator's Name and Mailing Address
Chester River Hospital Center
100 Brown St., Chestertown, MD 21620
Generator's Phone: (410)778-3300 Attn: Kenneth Kozal

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Environmental Recovery Corporation of PA
U.S. EPA ID Number: PAD 987 266 749

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Environmental Recovery Corporation of PA
1076 Old Manheim Pike, Lancaster, PA 17601
Facility's Phone: (717) 393-2627
U.S. EPA ID Number: PAD 987 266 749

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non DOT, Non-RCRA regulated material (IDW Soil)	33	DM	16,500	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
1: App# 1607-04825-SPT

Job# WILM-KSWA

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Mike Crosley - As Agent for U. of MD Shore Regional Health
Signature
Month 07 Day 21 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: J. Wiggins
Signature
Month 07 Day 21 Year 16

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Brenda Weaver
Signature
Month 7 Day 21 Year 16

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NOT REQUIRED

2. Page 1 of: 1

3. Emergency Response Phone:

4. Waste Tracking Number:

GENERATOR

5. Generator's Name and Mailing Address
Chester River Hospital Center
100 Brown St., Chestertown, MD 21620
Generator's Phone: (410)778-3300 Attn: Kenneth Kozel

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
Environmental Recovery Corporation of PA
U.S. EPA ID Number: PAD 987 266 749

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Environmental Recovery Corporation of PA
1076 Old Manheim Pike, Lancaster, PA 17601
Facility's Phone: (717) 393-2627
U.S. EPA ID Number: PAD 987 266 749

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non DOT, Non-RCRA regulated material (IDW Soil)	33	DM	16,500	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
1: Appt 1607-04825-SPT
Job# WLM-KSWA

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Mike Cooley - Agent for D. of ND State Regional Health
Signature:
Month: 07 Day: 21 Year: 16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: J. Owens
Signature:
Month: 07 Day: 21 Year: 16
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name:
Signature:
Month: Day: Year:

ATTACHMENT E

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard, Suite 620 • Baltimore Maryland 21230-1719
(410) 537-3442 • 1-800-633-6101 • http://www.mde.maryland.gov
LAND MANAGEMENT ADMINISTRATION
Oil Control Program

Report of Observations

Type of Inspection/Observations: B4b	**Date:** May 18, 2016
Site/Facility Name: Chester River Hospital Center	**Facility ID #:**
Address: 100 Brown Street	**Case #:** 87-2534KE
City / County: Chestertown, Kent County	**Permit #:**

Remarks: On this date this writer was on-site to witness the beginning of Department approved *Subsurface Investigation* to determine if there is significant residual contamination or free phase heating oil present in the subsurface.

Upon arrival all selected well locations were approved following both Miss Utility and private property utility clearance. All wells advanced will hand cleared to at least 5 feet to ensure that close proximity subsurface utility features are not impacted by drilling, with the exception of MW-51. This boring will be drilled in the courtyard, in close proximity to the heating oil underground storage tank. This boring will be hand cleared to at least 10 feet to ensure that the adjacent heating oil underground storage tank is not compromised.

This writer observed the advancement of the 5 foot soil core for what will be monitoring well MW-56. Core recovery revealed a mostly dry red sandy soil with some silt, minimal clay and periodic bits of iron stone, from 10-35 feet below ground surface. The 35-40 foot sample revealed the presence of an approximately 2 foot diameter water layer (from 35 -37 feet) then a transition back to sand. A soil sample was collected from the 35 foot zone. The entire core length was screened with an OVM meter. All readings were zero units and no evidence of liquid phase hydrocarbons were observed. Due to collapse at the 35-37 foot zone, the coring unit was switched to the auger bit and the borehole was reamed out to 40 feet . At 40 feet split spoon samples will be advanced to characterize the subsurface from 40-46 feet. The monitoring well will be set at 46 feet.

Location of MW- 56, approximately 15 feet south of MW-20.

Revised: 04/15/2015

MDE/LMA/OCP
Report of Observation

NOTES

- Report the following conditions to the Department immediately, but not later than 2 hours after the detection, at **410-537-3442** during normal business hours, or to the Emergency Response Division hotline at **1-866-633-4686**:
  - An oil spill or discharge
  - If a storage system fails a test for tightness,
  - A storage system is determined to be leaking,
  - There exists evidence of a discharge
  - Two consecutive inconclusive tests
  - Presence of liquid phase hydrocarbons
- Reports should **not** be made via voice messages to OCP case managers.
- Operating without a permit or in violation of a permit, regulation, or law may result in the assessment of civil or administrative penalties and or other legal sanctions.

MDE Representative: Susan Bull	**Person Interviewed:** JAMES P. SINES
Signature: Susan Bull	**Signature:** James P. Sines
Date: 5-18-16	**Date:** 5-18-16

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LAND MANAGEMENT ADMINISTRATION
Oil Control Program

Report of Observations

Type of Inspection/Observations: B4b	**Date:** May 20, 2016
Site/Facility Name: Chester River Hospital Center	**Facility ID #:**
Address: 100 Brown Street	**Case #:** 87-2534KE
City / County: Chestertown, Kent County	**Permit #:**

Remarks: On this date this writer was on-site to witness the core advancement in the MW-55 location. Coring was advanced to the south of the retaining wall in the emergency room parking lot. MW-55 core is located almost between existing MW-32 and MW-45.

Soil cores were recovered from this location from surface to approximately 40 feet below ground surface (bgs), at 5 foot intervals. Core recovery revealed tight dry clay from 0-11 feet BGS. Then the soils transitioned to a mostly dry red sandy soil with some silt, minimal clay and periodic bits of iron stone, from 11-40 feet BGS. The 35-40 foot sample revealed the presence of moisture at around 37 feet then a transition back to sand. A soil sample was collected from the 37 foot zone. The entire core length was screened with an OVM meter. All readings were zero units and no evidence of liquid phase hydrocarbons were observed, with the exception of a 1 unit detection at the 37 foot zone. Due to scheduling commitments at another location, this core was abandoned today and will be reamed out on or about June 1, 2016, when Earth Data returns to the site.

Location of MW- 55, approximately 15 feet northeast of MW-450.

Soil Core recovered from MW-55. 0-5 foot interval is on the far right and the sleeves increase by 5 foot intervals to 40 foot total depth.

Revised: 04/15/2015

MDE/LMA/OCP
Report of Observation

NOTES

- Report the following conditions to the Department immediately, but not later than 2 hours after the detection, at **410-537-3442** during normal business hours, or to the Emergency Response Division hotline at **1-866-633-4686**:
  - An oil spill or discharge
  - If a storage system fails a test for tightness,
  - A storage system is determined to be leaking,
  - There exists evidence of a discharge
  - Two consecutive inconclusive tests
  - Presence of liquid phase hydrocarbons
- Reports should **not** be made via voice messages to OCP case managers.
- Operating without a permit or in violation of a permit, regulation, or law may result in the assessment of civil or administrative penalties and or other legal sanctions.

MDE Representative: Susan Bull	**Person Interviewed:** James P. Singi
Signature: Susan Bull	**Signature:**
Date: 5-20-16	**Date:** 5-20-16

Revised: 04/15/2015

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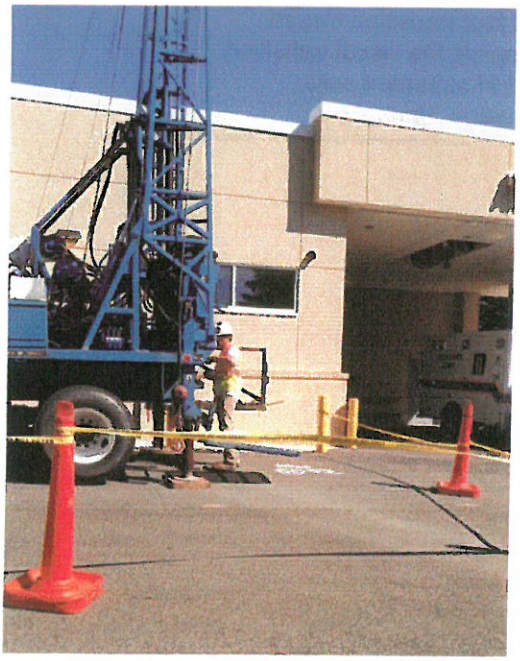
LAND MANAGEMENT ADMINISTRATION
Oil Control Program

Report of Observations

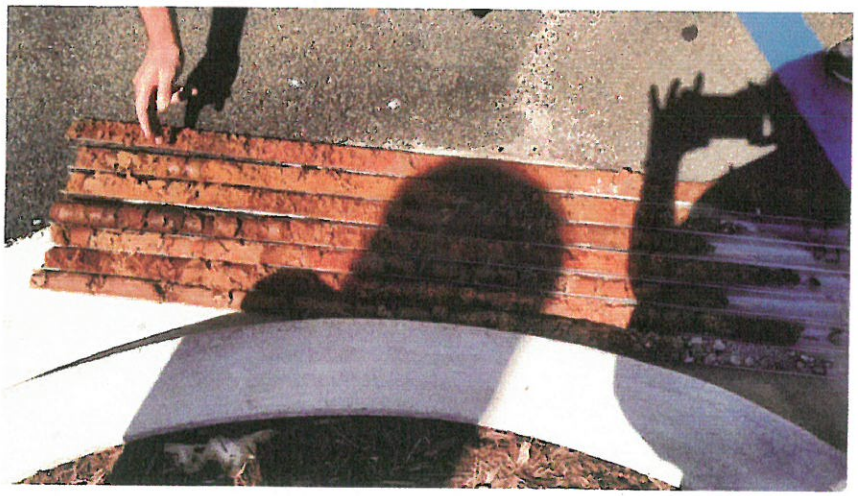
Type of Inspection/Observations: B4b	**Date:** June 6, 2016
Site/Facility Name: Chester River Hospital Center	**Facility ID #:**
Address: 100 Brown Street	**Case #:** 87-2534KE
City / County: Chestertown, Kent County	**Permit #:**

Remarks: On this date this writer was on-site to witness the core advancement in the MW-52 location. Coring was advanced to the south of the Hospital Emergency Ambulance entrance.

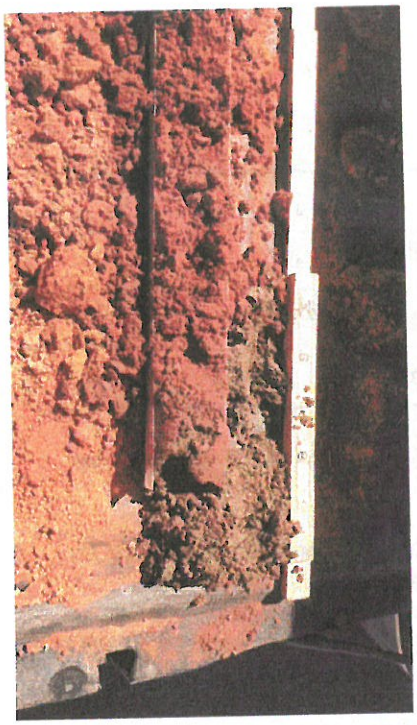
Soil cores were recovered from this location from surface to approximately 43 feet below ground surface (bgs), at mostly 5 foot intervals. Core recovery revealed tight dry clay from 0-5 feet BGS. The entire core length was screened with an OVM meter. From 5-38 feet BGS, the soils transitioned to a mostly dry red sandy soil with some silt, minimal clay and intermittent bits of iron stone ranging from sand grain sized to gravel sized. Screening with the OVM Meter began to reveal elevated readings from in the 28-29 foot zone (3-5 units). At 33 feet the readings increased to 33 units. At 38 feet the soil transitioned to a greenish gray sand that exhibited fuel odors (PID 79-80 units) and transitioned to near LPH saturated soils at 43 feet BGS (PID 150 units). Soil samples were collected from the 33-34 foot zone and 42-43 foot zone. Dues to some borehole collapse, a question of boring depth, and the potential for LPH, the coring unit was converted to the auger unit and drilling continued to terminal depth with the auger.



MW-52 is located south of the Emergency Room Ambulance Entrance.



Cores collected from 0-38 feet bgs.



Transition point at 38 feet bgs.

Evidence of LPH on the leading head of the core at 43 feet bgs.

38 to 43 foot transition sleeve, arrow depicts the visual transition point. LPH saturated soils evident below the arrow.

MDE/LMA/OCP
Report of Observation

NOTES

- Report the following conditions to the Department immediately, but not later than 2 hours after the detection, at **410-537-3442** during normal business hours, or to the Emergency Response Division hotline at **1-866-633-4686**:
  - An oil spill or discharge
  - If a storage system fails a test for tightness,
  - A storage system is determined to be leaking,
  - There exists evidence of a discharge
  - Two consecutive inconclusive tests
  - Presence of liquid phase hydrocarbons
- Reports should **not** be made via voice messages to OCP case managers.
- Operating without a permit or in violation of a permit, regulation, or law may result in the assessment of civil or administrative penalties and or other legal sanctions.

MDE Representative: Susan Bull	**Person Interviewed:** JAMES P. SINES
Signature: Susan Bull	**Signature:** P. Sines
Date: 6-6-16	**Date:** 6-6-16

MARYLAND DEPARTMENT OF THE ENVIRONMENT

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LAND MANAGEMENT ADMINISTRATION
Oil Control Program

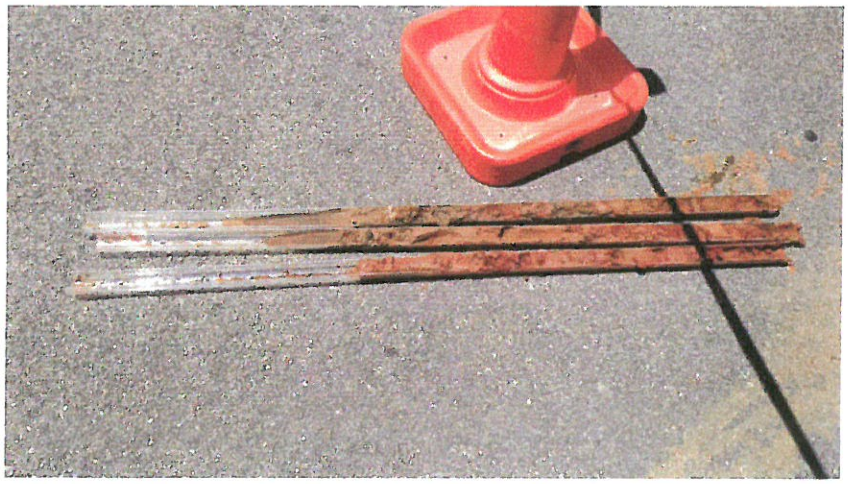
Report of Observations

Type of Inspection/Observations: B4b	**Date:** June 7, 2016
Site/Facility Name: Chester River Hospital Center	**Facility ID #:**
Address: 100 Brown Street	**Case #:** 87-2534KE
City / County: Chestertown, Kent County	**Permit #:**

Remarks: On this date this writer was on-site to witness the completion of MW-52 location. After I left the site yesterday, MW-52 was auger drilled from surface to 39 feet bgs. Drilling was terminated for the day and the rig was left on the hole for completion of the well today.

Upon arrival today, drilling of MW-52 continued. Three 5 foot soil cores were advanced ahead of the auger bits to permit the logging of the soils below the soil/water interface. Cores started at 43 feet bgs.

- **43-44 feet bgs – grey/green saturated sandy soils with intermixed bits of iron stone. Strong fuel odors and possible sheen/LPH was observed on the water. OVM readings 150 units**
- **44-46 feet bgs – transition to red/orange mottled sandy silty soils with intermixed bits of ironstone. OVM readings 25-30 units.**
- **46-48 feet bgs – transition to red/orange mottled sandy silty soils with intermixed bits of ironstone. OVM readings 9 units.**
- **48-53 feet bgs – transition to red/orange mottled sandy silty soils with intermixed bits of ironstone. OVM readings 9-11 units.**
- **53-58 feet bgs – transition to red/orange mottled sandy silty soils with intermixed bits of ironstone. OVM readings 0 units. Soil sample collected from 58 feet bgs and the monitoring well was completed at 55 feet.**



Soil cores collected below the water table in MW-52.

MW-51 was drilled with a Geoprobe rig in the courtyard of the hospital, adjacent to the current heating oil underground storage tank (UST). This tank is also located in close proximity to the historic leaking underground storage tank. The first boring was advanced approximately 10 feet off of the UST. The core encountered dry contractor sand and hit refusal at 13.5 feet bgs (expected former UST hold down pad). The boring was abandoned and moved approximately 5 feet to the south of that boring.

MW-51 encountered:

- 0-18.5 feet bgs – mostly contractor back fill. Tan dry sand. OVM readings 0 units.
- 18.5 – 30 feet bgs – transitioned to and remained dry reddish orange sand intermixed with bits of iron stone. OVM readings 0 units.
- 30 feet some moisture encountered
- 30- 55 feet bgs – red/orange sand with some silts and intermixed bits of ironstone. Some moisture.
    - 30-38' - OVM readings 0 units.
    - 38' – 3.5 units
    - 40' – 5.5 units
    - 45' – 10 units
    - 47' – 38 units
    - 50' – 3 units
    - 52' – 38 units
    - 55' – 71 units
- Water and evidence of LPH noted 50'. Sounded water level at 50.3 from ground surface.

Due to drilling with the geoprobe rig, the well must be drilled to the terminal depth for the well then the Florida plug can be punched out for the collection of a sub-water sample. This is a onetime ability to sample due to the drilling method.

Location of MW-51 – approximately 10 feet from the active UST

MDE/LMA/OCP
Report of Observation

NOTES

- Report the following conditions to the Department immediately, but not later than 2 hours after the detection, at **410-537-3442** during normal business hours, or to the Emergency Response Division hotline at **1-866-633-4686**:
  - An oil spill or discharge
  - If a storage system fails a test for tightness,
  - A storage system is determined to be leaking,
  - There exists evidence of a discharge
  - Two consecutive inconclusive tests
  - Presence of liquid phase hydrocarbons
- Reports should **not** be made via voice messages to OCP case managers.
- Operating without a permit or in violation of a permit, regulation, or law may result in the assessment of civil or administrative penalties and or other legal sanctions.

MDE Representative: Susan Bull	**Person Interviewed:** JAMES P. SINGL
Signature: Susan Bull	**Signature:** P. Sing
Date: 6-7-16	**Date:** 6-7-16

Revised: 04/15/2015