July 13, 2016

Ms. Ellen Jackson, Central Region Section Head
Maryland Department of the Environment
Remediation Division
Oil Control Program
1800 Washington Boulevard, Suite 620
Baltimore, Maryland 21230-1719

Via: Certified Mail #7009-1680-0001-1642-6838
Returned Receipt Required

Re: 2016 Second Quarter Site Status Report
Former Hess Station #20204
1613 East Joppa Road
Towson, Maryland
Case Number 1991-2100 BA

Dear Ms. Jackson:

Enclosed please find the above-referenced report. This report includes results from the June 7 and June 8, 2016, groundwater monitoring and sampling event. This report also summarizes the results of the groundwater management system (System) vapor screening, operations and maintenance (O&M), and discharge sampling events conducted during the second quarter of 2016. System vapor screening, O&M, and discharge sampling events will continue throughout the third quarter of 2016. The next groundwater monitoring and sampling event is scheduled for September 2016.

Should you have any questions or require any additional information, please feel free to contact me by telephone at (610) 866-7799 or via email at jfox@emsenv.com. If you have any questions relating to the project, please contact John Schenkewitz of Hess Corporation at (609) 406-3969.

Sincerely,
EMS Environmental, Inc.

Jeremy L. Fox
Regional Manger

Enclosure

cc: J. Schenkewitz, Hess Corporation
S. Leifer, Baker Botts
C. Varga, Marathon Petroleum Company
B. Hopkins, NeighborSpace

July 13, 2016

2016 SECOND QUARTER SITE STATUS REPORT
FORMER HESS STATION #20204
1613 East Joppa Road
Towson, Maryland
Case Number 1991-2100 BA

Prepared For: Hess Corporation
Trenton-Mercer Airport
601 Jack Stephan Way
West Trenton, NJ 08628

Prepared By: EMS Environmental, Inc.
4550 Bath Pike
Bethlehem, PA 18017

Prepared By:

Yoosef S. Nabavian
Staff Scientist

Reviewed By:

Jeremy L. Fox, P.E.
Regional Manager

INTRODUCTION

The following is the 2016 Second Quarter Site Status Report for Former Hess Station #20204, located at 1613 East Joppa Road in Towson, Maryland. This report includes results from the June 7 and June 8, 2016, groundwater monitoring and sampling event. Also included in this report are summaries of the groundwater management system (System) vapor screening, operations and maintenance (O&M), and discharge sampling events conducted during the second quarter of 2016. **Figure 1** is included as a Site Plan depicting the subject site layout, adjacent properties, the site's below-grade System, as well as all monitoring wells, piezometers, storm drain outlets, and vapor monitoring points bounded by the area known as Ridgely Manor Park. Refer to **Tables 1** and **2** for a summary of the groundwater data collected during the second quarter monitoring and sampling event. Refer to **Appendices A** and **B** for copies of the corresponding laboratory analytical reports for the second quarter sampling event.

During the second quarter of 2016, continued monthly System vapor screening events, using a photoionization detector (PID), were conducted at the designated vapor monitoring points depicted in **Figure 1**. Additionally, System O&M events were performed on a weekly basis. Post-treatment discharge samples were collected twice monthly from the System's groundwater collection vault. The laboratory analytical results for the System discharge samples will be tabulated and summarized within the 2016 Second Quarter Discharge Monitoring Report, which will be submitted to the Department under separate cover. Besides routine System maintenance (e.g. filter bag and carbon changeouts, pump and hose checks, electrical component maintenance, system throughput monitoring, etc.), noteworthy or unusual conditions, such as surficial dissolved iron staining, were not observed during the second quarter of 2016. **Tables 3** through **5** summarize the System vapor screening and discharge data collected during the second quarter.

GENERAL INFORMATION

Site:	Former Hess Station #20204 – Towson, MD (See **Figure 1**)
Sampling Frequency:	Quarterly
Reporting Frequency:	Quarterly
Monitoring Wells/Piezometers Sampled:	MDE-4, MW-1, MW-4, MW-7, OW-1, YMW-1 through YMW-9, and piezometers YP-1 through YP-5
Monitoring Wells/Piezometers Not Sampled:	None
Monitoring Wells/Piezometers Gauged:	MDE-4, MW-1, MW-4, MW-7, OW-1, YMW-1 through YMW-9, and piezometers YP-1 through YP-5
Monitoring Wells/Piezometers Not Gauged:	None
Required Analysis:	Full Scan Volatile Organic Compounds (VOCs) + Fuel Oxygenates (by EPA Method 8260B), and Total Petroleum Hydrocarbons-Gasoline Range Organics (TPH-GRO) and Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO) (by EPA Method 8015C)

SAMPLING DATA

Groundwater Sampling Event:	June 7 and June 8, 2016
Depth to Groundwater:	2.84 feet (YMW-2) to 20.58 feet (OW-1)
Groundwater Elevation:	427.32 feet (YMW-6) to 435.71 feet (MW-1) (See **Table 1**, **Table 2**, and **Figure 2**)

Groundwater Flow:	Predominantly south, with a calculated hydraulic gradient range of 0.012 feet/foot to 0.062 feet/foot (See **Figure 2**)
Liquid Phase Hydrocarbons (LPH) Identified:	None
Dissolved Phase Concentrations Reported:	See **Table 1** and **Figure 3**

REMEDIATION DATA

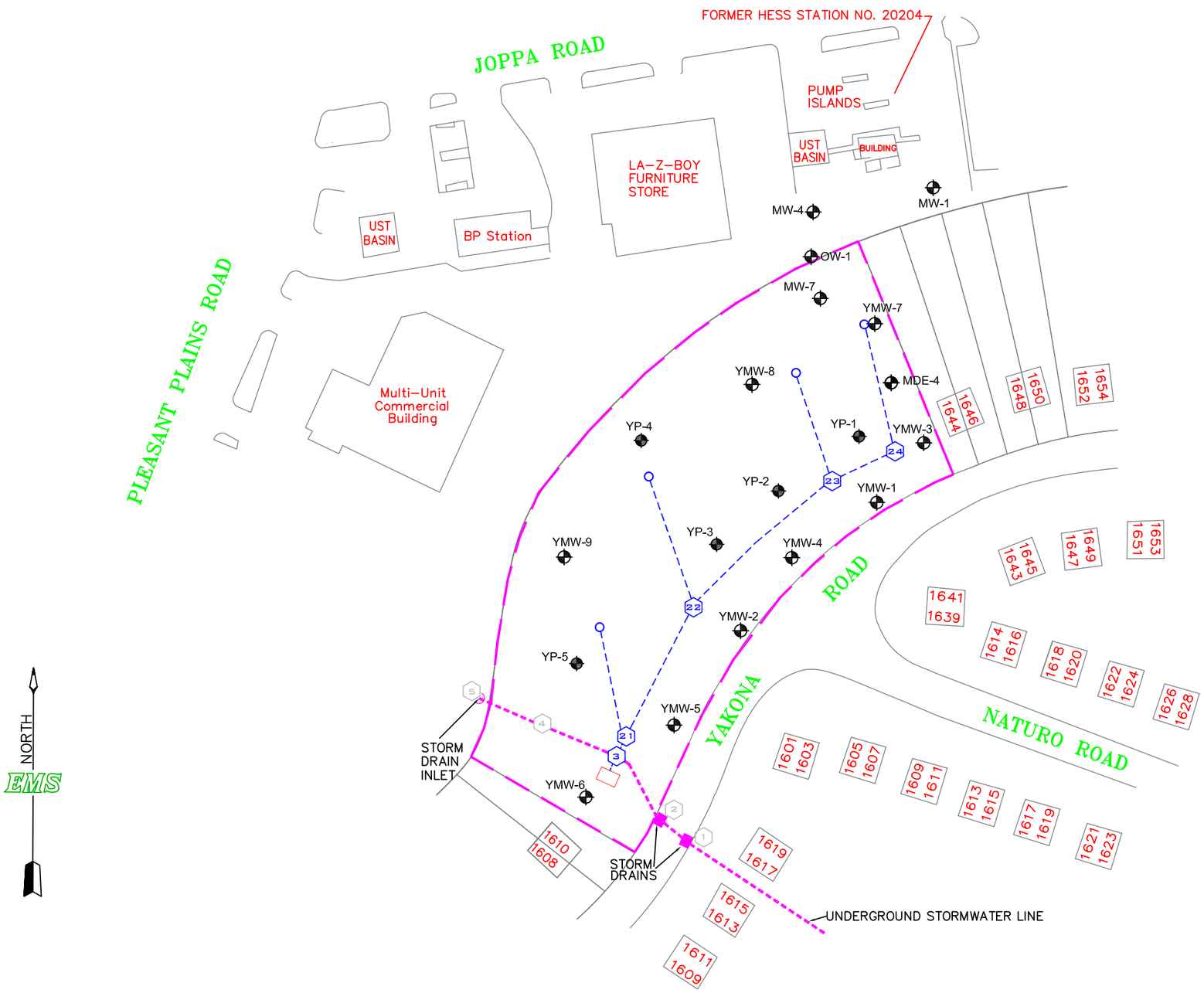
Technology:	Groundwater Collection System
System Start:	May 22, 2014
Waste Stream Treatment:	Groundwater collected within the site's groundwater collection system vault is treated via the use of both liquid phase carbon adsorbers and filter bags prior to being discharged to the adjacent public storm sewer system.
Vapor Screening (PID Screening):	Monthly
O&M Frequency:	Weekly
Discharge Sampling Frequency:	Twice monthly
System Performance:	See **Tables 4** and **5**

SCHEDULED/PROPOSED WORK

System vapor screening events are scheduled to continue on a monthly basis during the third quarter of 2016. System O&M events are scheduled to continue weekly while post-treatment System discharge sampling events are scheduled to continue twice monthly during the third quarter of 2016. The next groundwater monitoring and sampling event is scheduled for September 2016.

ATTACHMENTS

Figure 1:	Site Plan
Figure 2:	Groundwater Elevation & Hydraulic Contour Map (June 7, 2016)
Figure 3:	Hydrocarbon Distribution Map (June 7 and 8, 2016)
Table 1:	Historical Groundwater Monitoring Data Summary
Table 2:	Groundwater Gauging Results Summary
Table 3:	Monthly PID Screening Results Summary
Table 4:	Groundwater Treatment System Discharge Summary
Table 5:	Groundwater Treatment System Sampling Results Summary
Appendix A:	Laboratory Analytical Report (June 7, 2016)
Appendix B:	Laboratory Analytical Report (June 8, 2016)



LEGEND

- Ridgely Manor Park Boundary
- Groundwater Monitoring Well
- Piezometer
- Groundwater Management System Access Manhole (Vapor Screening Point)
- Stormwater Inlet Callout
- Drainage Piping Cleanout
- Below Grade Groundwater Management System Vault
- Underground Groundwater Management System Drainage Piping

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

FIGURE 1

SITE PLAN

FORMER HESS STATION #20204
1613 East Joppa Road
Towson, Maryland

Drawn By: YSN

Date: 4/5/16

EMS ENVIRONMENTAL

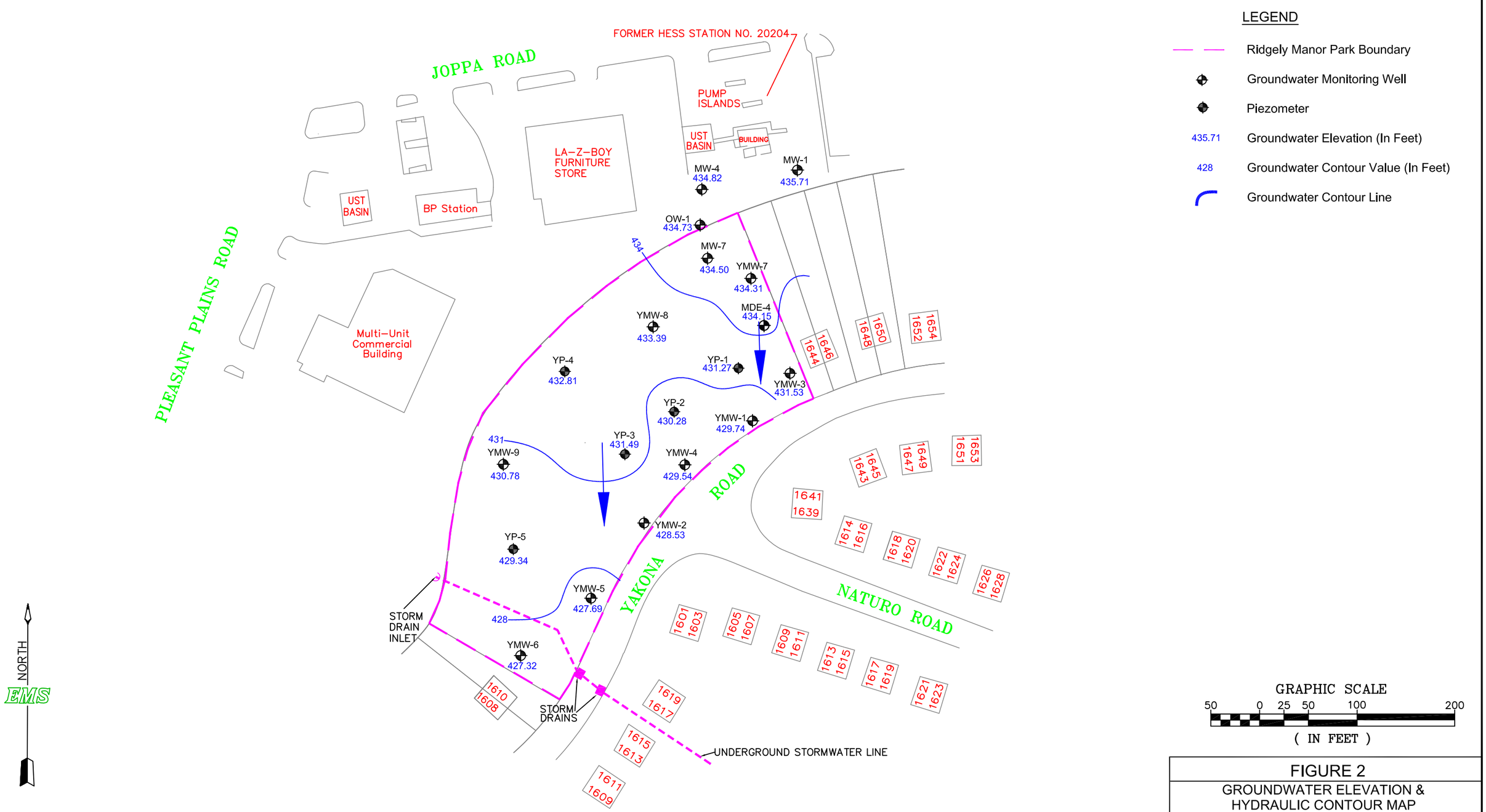


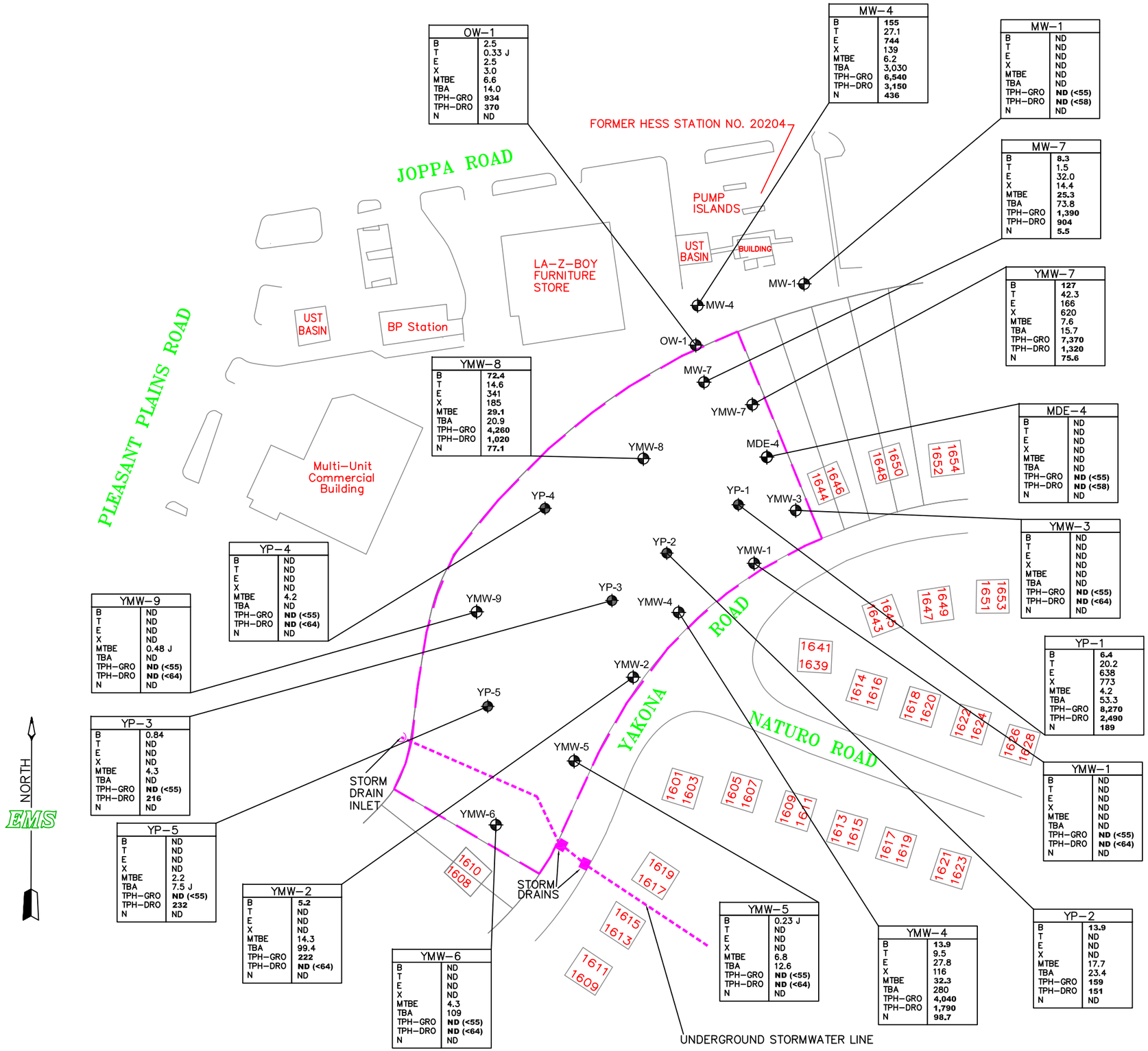
FIGURE 2

GROUNDWATER ELEVATION & HYDRAULIC CONTOUR MAP
(Gauged: 6/716)
FORMER HESS STATION #20204
1613 East Joppa Road
Towson, Maryland

Drawn By: YSN

Date: 6/23/16

EMS ENVIRONMENTAL



OW-1	
B	2.5
T	0.33 J
E	2.5
X	3.0
MTBE	6.6
TBA	14.0
TPH-GRO	**934**
TPH-DRO	**370**
N	ND

MW-4	
B	**155**
T	27.1
E	**744**
X	139
MTBE	6.2
TBA	3,030
TPH-GRO	**6,540**
TPH-DRO	**3,150**
N	**436**

MW-1	
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND
TPH-GRO	**ND (<55)**
TPH-DRO	**ND (<58)**
N	ND

MW-7	
B	**8.3**
T	1.5
E	32.0
X	14.4
MTBE	**25.3**
TBA	73.8
TPH-GRO	**1,390**
TPH-DRO	**904**
N	**5.5**

YMW-7	
B	**127**
T	42.3
E	166
X	620
MTBE	7.6
TBA	15.7
TPH-GRO	**7,370**
TPH-DRO	**1,320**
N	**75.6**

YMW-8	
B	**72.4**
T	14.6
E	341
X	185
MTBE	**29.1**
TBA	20.9
TPH-GRO	**4,260**
TPH-DRO	**1,020**
N	**77.1**

MDE-4	
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND
TPH-GRO	**ND (<55)**
TPH-DRO	**ND (<58)**
N	ND

YMW-3	
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND
TPH-GRO	**ND (<55)**
TPH-DRO	**ND (<64)**
N	ND

YP-4	
B	ND
T	ND
E	ND
X	ND
MTBE	4.2
TBA	ND
TPH-GRO	**ND (<55)**
TPH-DRO	**ND (<64)**
N	ND

YMW-9	
B	ND
T	ND
E	ND
X	ND
MTBE	0.48 J
TBA	ND
TPH-GRO	**ND (<55)**
TPH-DRO	**ND (<64)**
N	ND

YP-1	
B	**6.4**
T	20.2
E	638
X	773
MTBE	4.2
TBA	53.3
TPH-GRO	**8,270**
TPH-DRO	**2,490**
N	**189**

YP-3	
B	0.84
T	ND
E	ND
X	ND
MTBE	4.3
TBA	ND
TPH-GRO	**ND (<55)**
TPH-DRO	**216**
N	ND

YMW-1	
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND
TPH-GRO	**ND (<55)**
TPH-DRO	**ND (<64)**
N	ND

YP-5	
B	ND
T	ND
E	ND
X	ND
MTBE	2.2
TBA	7.5 J
TPH-GRO	**ND (<55)**
TPH-DRO	**232**
N	ND

YMW-2	
B	**5.2**
T	ND
E	ND
X	ND
MTBE	14.3
TBA	99.4
TPH-GRO	**222**
TPH-DRO	**ND (<64)**
N	ND

YMW-6	
B	ND
T	ND
E	ND
X	ND
MTBE	4.3
TBA	109
TPH-GRO	**ND (<55)**
TPH-DRO	**ND (<64)**
N	ND

YMW-5	
B	0.23 J
T	ND
E	ND
X	ND
MTBE	6.8
TBA	12.6
TPH-GRO	**ND (<55)**
TPH-DRO	**ND (<64)**
N	ND

YMW-4	
B	**13.9**
T	9.5
E	27.8
X	116
MTBE	**32.3**
TBA	280
TPH-GRO	**4,040**
TPH-DRO	**1,790**
N	**98.7**

YP-2	
B	**13.9**
T	ND
E	ND
X	ND
MTBE	17.7
TBA	23.4
TPH-GRO	**159**
TPH-DRO	**151**
N	ND

LEGEND

— —	Ridgely Manor Park Boundary
⊕	Groundwater Monitoring Well
●	Piezometer
ND	Constituent Compound Not Detected
J	Laboratory-Estimated Value
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes
MTBE	Methyl Tertiary Butyl Ether
TBA	Tertiary Butyl Alcohol
TPH-GRO	Total Petroleum Hydrocarbons-Gasoline Range Organics
TPH-DRO	Total Petroleum Hydrocarbons-Diesel Range Organics
N	Naphthalene

All Concentrations Expressed In Micrograms/Liter (µg/L)

Values Shown In Boldface Type Exceed The Applicable MDE Statewide Health Standard

Note: All analytical results displayed are representative of the 6/7/16 sampling event with the exception of the results for YP-1 through YP-5, which were sampled on 6/8/16.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

FIGURE 3

HYDROCARBON DISTRIBUTION MAP

(Sampled: 6/7/16 and 6/8/16)

FORMER HESS STATION #20204
1613 East Joppa Road
Towson, Maryland

Drawn By: YSN

Date: 6/22/16

EMS ENVIRONMENTAL

Table 1
HISTORICAL GROUNDWATER MONITORING DATA SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Well No.	Date	Casing Elevation* (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Table Elevation* (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Naphthalene (µg/L)
MDE-4	7/17/1996	NSVD	NM	NM	NM	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	11/26/1996	NSVD	NM	NM	NM	3	3	ND	ND	6	ND	NS	NS	NS	NS
Casing:	2/27/1997	444.03	5.78	0.00	438.25	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
0 to 3 feet	5/30/1997	444.03	6.20	0.00	437.83	ND	ND	ND	2	2	ND	NS	NS	NS	NS
	8/21/1997	444.03	7.37	0.00	436.66	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
Screen:	11/25/1997	444.03	7.42	0.00	436.61	**11**	642	**892**	3,050	4,595	**69**	NS	NS	NS	NS
3 to 13 feet	2/19/1998	444.03	6.01	0.00	438.02	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	5/28/1998	444.03	5.60	0.00	438.43	4	5	4	8	21	ND	NS	NS	NS	NS
	8/18/1998	444.03	6.68	0.00	437.35	**13**	10	57	92	172	**31**	NS	NS	NS	NS
	11/21/1998	444.03	7.64	0.00	436.39	1	8	31	176	216	**57**	NS	NS	NS	NS
	2/17/1999	444.03	7.70	0.00	436.33	3.7	107	193	605	909	**39**	NS	NS	NS	NS
	5/24/1999	444.03	7.02	0.00	437.01	2	ND	ND	ND	2	ND	NS	NS	NS	NS
	8/26/1999	444.03	7.87	0.00	436.16	**24**	140	390	750	1,304	**44**	NS	NS	NS	NS
	11/18/1999	444.03	6.90	0.00	437.13	ND	500	**920**	2,850	4,270	ND	NS	NS	NS	NS
	2/23/2000	444.03	6.50	0.00	437.53	ND	ND	ND	ND	ND	3.9	NS	NS	NS	NS
	5/17/2000	444.03	6.00	0.00	438.03	ND	ND	2.4	11.7	14.1	**30**	NS	NS	NS	NS
	8/3/2000	444.03	6.48	0.00	437.55	**7.7**	9	59	101	177	**54**	NS	NS	NS	NS
	11/20/2000	444.03	7.15	0.00	436.88	ND	ND	120	242	362	ND	NS	NS	NS	NS
	2/20/2001	444.03	6.87	0.00	437.16	**7.3**	7.5	19	81	115	**22**	NS	NS	NS	NS
	5/25/2001	444.03	6.66	0.00	437.37	**15**	8.8	ND	20.3	44	**34**	NS	NS	NS	NS
	8/6/2001	444.03	7.26	0.00	436.77	**9.7**	33	380	1,220	1,643	**87**	NS	NS	NS	NS
	11/7/2001	444.03	8.39	0.00	435.64	ND	41	220	760	1,021	**120**	NS	NS	NS	NS
	2/22/2002	444.03	8.83	0.00	435.20	**12**	91	220	1,380	1,703	ND	NS	NS	NS	NS
	5/16/2002	444.03	6.52	0.00	437.51	ND	27	120	268	415	15	NS	NS	NS	NS
	8/6/2002	444.03	8.72	0.00	435.31	ND	360	**1,100**	3,630	5,090	**150**	NS	NS	NS	NS
	11/13/2002	444.03	8.23	0.00	435.80	ND	610	**1,300**	5,900	7,810	ND	NS	NS	NS	NS
	3/5/2003	444.03	5.43	0.00	438.60	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	5/13/2003	444.03	5.36	0.00	438.67	2.0	ND	ND	2.6	4.6	11	NS	NS	NS	NS
	8/27/2003	444.03	5.72	0.00	438.31	1.0	ND	1.8	ND	2.8	ND	NS	NS	NS	NS
	11/12/2003	444.03	6.66	0.00	437.37	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	2/2/2004	444.03	5.39	0.00	438.64	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	5/14/2004	444.03	5.24	0.00	438.79	ND	ND	ND	ND	ND	1.7	NS	NS	NS	NS
	8/19/2004	444.03	5.97	0.00	438.06	ND	ND	ND	ND	ND	**26.8**	NS	NS	NS	NS
	5/19/2005	444.03	5.94	0.00	438.09	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/24/2007	444.03	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/27/2007	444.03	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/27/2008	444.03	6.91	0.00	437.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2008	444.03	6.56	0.00	437.47	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/2008	444.03	7.14	0.00	436.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/2008	444.03	6.53	0.00	437.50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/31/2009	444.03	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/22/2009	444.03	6.36	0.00	437.67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/25/2009	444.03	6.60	0.00	437.43	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2009	444.03	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2009	444.03	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/17/2010	444.03	4.51	0.00	439.52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/18/2010	444.03	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/24/2010	443.68	6.69	0.00	436.99	1.3	0.87 (J)	2.8	1.3	6.27	ND	ND	**858**	**216**	**1.6 (J)**
	1/11/2011	443.68	7.17	0.00	436.51	ND	ND	0.42 (J)	ND	0.42 (J)	ND	ND	**ND (<200)**	**ND (<100)**	ND
	6/23/2011	443.68	6.26	0.00	437.42	1.3	0.46 (J)	4.4	3.6	9.76 (J)	ND	ND	**982**	**464**	**3.3 (J)**
	9/28/2011	443.68	6.02	0.00	437.66	ND	ND	ND	ND	ND	ND	ND	**ND (<200)**	**ND (<100)**	ND
	12/21/2012	443.68	5.90	0.00	437.78	ND	ND	ND	ND	ND	ND	ND	**ND (<200)**	**ND (<100)**	ND
	3/21/2012	443.68	6.18	0.00	437.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2012	443.68	6.48	0.00	437.20	0.50 (J)	ND	0.46 (J)	0.73 (J)	1.69 (J)	ND	ND	**340**	**104**	ND
	8/29/2012	443.68	7.67	0.00	436.01	0.50 (J)	ND	0.30 (J)	0.43 (J)	1.23 (J)	ND	ND	**407**	ND	ND
	12/19/2012	443.68	6.94	0.00	436.74	0.40 (J)	0.44 (J)	2.5	19.2	22.54 (J)	ND	ND	**390**	**372**	**1.1 (J)**
	3/20/2013	443.68	6.57	0.00	437.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/19/2013	443.68	6.47	0.00	437.21	0.45 (J)	0.56 (J)	7.0	8.4	16.41	ND	ND	**328**	ND	**2.0 (J)**
	9/19/2013	443.68	7.31	0.00	436.37	0.71 (J)	ND	1.3	0.60 (J)	2.61	ND	ND	**580**	**221**	**2.0 (J)**
	11/22/2013	443.68	7.25	0.00	436.43	1.9	3.2	427	1,420	1,852.10	ND	ND	**13,300**	**2,310**	**110**
	3/20/2014	443.68	5.56	0.00	438.12	ND	ND	0.99	5.8	6.79	ND	ND	ND	ND	ND
***	6/18/2014	443.68	8.33	0.00	435.35	ND	1.2	ND	17.5	18.7	ND	ND	**762**	***	**6.9**
***	6/30/2014	443.68	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	ND	NS
	9/23/2014	443.18	9.54	0.00	433.64	ND	0.53 (J)	0.99 (J)	1.1	2.62 (J)	ND	ND	ND	**ND (<80)**	**0.93 (J)**
	12/23/2014	443.18	9.94	0.00	433.24	ND	ND	0.62 (J)	0.53 (J)	1.15 (J)	ND	ND	ND	**ND (<80)**	0.37 (J)
	3/24/2015	443.18	9.58	0.00	433.60	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<77)**	ND
	6/22/2015	443.18	9.25	0.00	433.93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	9/21/2015	443.18	9.28	0.00	433.90	ND	ND	ND	ND	ND	ND	ND	ND	**125**	ND
	12/9/2015	443.18	9.58	0.00	433.60	ND	ND	ND	ND	ND	ND	ND	ND	**98.4**	ND
	3/8/2016	443.18	8.98	0.00	434.20	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<64)**	ND
	6/7/2016	443.18	9.03	0.00	434.15	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<58)**	ND
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

Table 1
HISTORICAL GROUNDWATER MONITORING DATA SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Well No.	Date	Casing Elevation* (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Table Elevation* (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Naphthalene (µg/L)
MW-1	3/28/1991	455.93	15.86	0.00	440.07	**17**	ND	ND	35	52	5	NS	NS	NS	NS
	6/26/1991	455.93	29.40	0.00	426.53	2	ND	ND	2	4	8	NS	NS	NS	NS
Casing:	9/1/1992	455.93	26.35	0.00	429.58	**25**	18	10	41	94	ND	NS	NS	NS	NS
Unknown	1/7/1993	455.93	24.70	0.00	431.23	3	4	ND	10	17	**142**	NS	NS	NS	NS
	4/12/1993	455.93	NM	NM	NM	**29**	5	7	51	92	**30**	NS	NS	NS	NS
Screen:	7/15/1993	455.93	NM	NM	NM	**12**	3	3	66	84	ND	NS	NS	NS	NS
Unknown	10/19/1993	455.93	NM	NM	NM	**11**	ND	ND	37	48	ND	NS	NS	NS	NS
	1/26/1994	455.93	NM	NM	NM	**10**	ND	3	22	35	ND	NS	NS	NS	NS
	4/20/1994	455.93	NM	NM	NM	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	8/2/1994	455.93	NM	NM	NM	**23**	ND	4	38	65	ND	NS	NS	NS	NS
	11/22/1994	455.93	NM	NM	NM	**14**	ND	3	16	33	11	NS	NS	NS	NS
	3/3/1995	455.93	NM	NM	NM	**12**	2	3	13	30	6	NS	NS	NS	NS
	5/9/1995	455.93	NM	NM	NM	**10**	ND	ND	11	21	16	NS	NS	NS	NS
	8/15/1995	455.93	NM	NM	NM	**12**	ND	2	23	37	ND	NS	NS	NS	NS
	11/28/1995	455.93	NM	NM	NM	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	2/13/1996	455.93	16.20	0.00	439.73	ND	ND	ND	4	4	ND	NS	NS	NS	NS
	5/15/1996	455.93	18.06	0.00	437.87	4	ND	ND	6	10	**24.3**	NS	NS	NS	NS
	8/28/1996	455.93	16.95	0.00	438.98	ND	6	3	12	21	5.6	NS	NS	NS	NS
	11/26/1996	455.93	26.21	0.00	429.72	3	ND	ND	2	5	ND	NS	NS	NS	NS
	2/27/1997	455.93	15.73	0.00	440.20	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	5/30/1997	455.93	16.00	0.00	439.93	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	8/21/1997	455.93	18.66	0.00	437.27	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	11/25/1997	455.93	17.97	0.00	437.96	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	2/19/1998	455.93	15.47	0.00	440.46	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	5/28/1998	455.93	15.06	0.00	440.87	ND	ND	3	9	12	ND	NS	NS	NS	NS
	8/18/1998	455.93	16.42	0.00	439.51	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	5/19/2005	455.93	16.83	0.00	439.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/24/2007	455.93	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/27/2007	455.93	17.58	0.00	438.35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/27/2008	455.93	17.39	0.00	438.54	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2008	455.93	16.41	0.00	439.52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/2008	455.93	16.57	0.00	439.36	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/2008	455.93	16.26	0.00	439.67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/31/2009	455.93	17.87	0.00	438.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/22/2009	455.93	16.07	0.00	439.86	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/25/2009	455.93	16.48	0.00	439.45	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2009	455.93	15.94	0.00	439.99	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2009	455.93	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/17/2010	455.93	0.01	0.00	455.92	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/18/2010	455.93	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/26/2010	454.42	16.61	0.00	437.81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1/10/2011	454.42	17.64	0.00	436.78	ND	ND	ND	ND	ND	ND	ND	**ND (<200)**	**ND (<100)**	ND
	6/22/2011	454.42	16.05	0.00	438.37	ND	ND	ND	ND	ND	ND	ND	**ND (<200)**	**ND (<110)**	ND
	9/28/2011	454.42	6.68	0.00	447.74	ND	ND	ND	ND	ND	ND	ND	**ND (<200)**	**ND (<110)**	ND
	12/20/2012	454.42	15.90	0.00	438.52	ND	ND	ND	ND	ND	ND	ND	**ND (<200)**	**ND (<100)**	ND
	3/21/2012	454.42	16.41	0.00	438.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/15/2012	454.42	14.43	0.00	439.99	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/28/2012	454.42	15.84	0.00	438.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/18/2012	454.42	17.16	0.00	437.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/19/2013	454.42	16.57	0.00	437.85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/18/2013	454.42	17.45	0.00	436.97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	9/19/2013	454.42	17.54	0.00	436.88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/22/2013	454.42	17.87	0.00	436.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/20/2014	454.42	15.89	0.00	438.53	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.59 (J)
***	6/18/2014	454.42	18.43	0.00	435.99	ND	ND	ND	ND	ND	ND	ND	ND	***	ND
***	6/30/2014	454.42	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	ND	NS
	9/23/2014	453.92	18.73	0.00	435.19	ND	ND	ND	ND	ND	ND	18.4	ND	**243**	ND
	12/23/2014	453.92	19.67	0.00	434.25	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<80)**	ND
	3/24/2015	453.92	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/22/2015	453.92	18.24	0.00	435.68	ND	ND	ND	ND	ND	ND	ND	ND	**102**	ND
	9/21/2015	453.92	18.49	0.00	435.43	ND	ND	ND	ND	ND	ND	ND	ND	**233**	ND
	12/9/2015	453.92	19.24	0.00	434.68	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<64)**	ND
	3/8/2016	453.92	18.28	0.00	435.64	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<64)**	ND
	6/7/2016	453.92	18.21	0.00	435.71	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<58)**	ND
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

Table 1
HISTORICAL GROUNDWATER MONITORING DATA SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Well No.	Date	Casing Elevation* (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Table Elevation* (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Naphthalene (µg/L)
MW-4	3/28/1991	457.11	16.98	0.00	440.13	**600**	**1,300**	380	1,500	3,780	**40**	NS	NS	NS	NS
	6/26/1991	457.11	23.80	0.00	433.31	**3,775**	**4,825**	**925**	4,075	13,600	**1,125**	NS	NS	NS	NS
Casing:	9/1/1992	457.11	22.00	0.00	435.11	**3,500**	**9,300**	**1,625**	5,225	19,650	**1,100**	NS	NS	NS	NS
0 to 10 feet	9/4/1992	457.11	22.79	0.01	434.33	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/15/1992	457.11	22.98	sheen	434.13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Screen:	11/9/1992	457.11	23.20	2.50	435.79	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
10 to 25 feet	12/9/1992	457.11	21.58	1.36	436.55	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/7/1993	457.11	21.68	0.02	435.45	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/1993	457.11	23.15	0.85	434.60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/8/1993	457.11	20.10	sheen	437.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/12/1993	457.11	18.20	0.05	438.95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/11/1993	457.11	18.10	0.15	439.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/3/1993	457.11	18.96	0.38	438.44	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/7/1993	457.11	19.65	0.30	437.69	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/2/1993	457.11	18.95	0.00	438.16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/15/1993	457.11	19.34	0.00	437.77	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/19/1993	457.11	19.75	0.00	437.36	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/1993	457.11	20.75	sheen	436.36	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/1993	457.11	19.85	0.00	437.26	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/25/1994	457.11	17.84	0.00	439.27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/11/1994	457.11	17.13	0.00	439.98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/20/1994	457.11	17.68	0.00	439.43	**1,650**	**6,130**	678	3,950	12,408	**223**	NS	NS	NS	NS
	8/2/1994	457.11	18.35	0.00	438.76	**2,630**	**12,200**	**1,430**	9,070	25,330	ND	NS	NS	NS	NS
	11/22/1994	457.11	18.52	0.00	438.59	**2,950**	**7,040**	**1,430**	8,700	20,120	**340**	NS	NS	NS	NS
	3/3/1995	457.11	20.31	0.00	436.80	**1,560**	**12,400**	**1,690**	9,050	24,700	**775**	NS	NS	NS	NS
	5/9/1995	457.11	20.25	0.00	436.86	**1,600**	**12,800**	**1,840**	**10,400**	26,640	**499**	NS	NS	NS	NS
	8/15/1995	457.11	21.10	0.00	436.01	**<200**	<200	<200	726	726	**<200**	NS	NS	NS	NS
	7/24/1995	457.11	19.29	0.02	437.84	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/28/1995	457.11	22.00	0.00	435.11	ND	10	ND	58	68	**47**	NS	NS	NS	NS
	2/13/1996	457.11	20.20	0.00	436.91	3	11	2	21	37	14	NS	NS	NS	NS
	5/15/1996	457.11	17.60	0.00	439.51	ND	53	18	133	204	6	NS	NS	NS	NS
	8/28/1996	457.11	16.98	0.00	440.13	ND	3	3	10	16	6	NS	NS	NS	NS
	11/26/1996	457.11	15.85	0.00	441.26	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	2/27/1997	457.11	14.19	0.00	442.92	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	5/30/1997	457.11	15.77	0.00	441.34	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	8/21/1997	457.11	19.01	0.00	438.10	**15**	24	4	27	70	ND	NS	NS	NS	NS
	11/25/1997	457.11	19.15	0.00	437.96	**89**	75	143	240	547	3	NS	NS	NS	NS
	2/19/1998	457.11	17.68	0.00	439.43	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	5/28/1998	457.11	16.64	0.00	440.47	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	8/18/1998	457.11	18.21	0.00	438.90	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	11/21/1998	457.11	19.65	0.00	437.46	**71**	**1,600**	183	731	2,585	19	NS	NS	NS	NS
	2/17/1999	457.11	19.70	0.00	437.41	ND	780	252	460	1,492	**<100**	NS	NS	NS	NS
	5/24/1999	457.11	18.90	0.00	438.21	ND	14	8.7	21.9	44.6	**77.7**	NS	NS	NS	NS
	8/26/1999	457.11	20.60	0.00	436.51	ND	ND	35	123	158	**220**	NS	NS	NS	NS
	11/18/1999	457.11	18.52	0.00	438.59	ND	ND	ND	3.8	3.8	**2,000**	NS	NS	NS	NS
	12/29/1999	457.11	NM	NM	NM	ND	ND	ND	ND	ND	**2,100**	NS	NS	NS	NS
	2/23/2000	457.11	19.21	0.00	437.90	**120**	4.5	32	106	263	**730**	NS	NS	NS	NS
	5/17/2000	457.11	16.90	0.00	440.21	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	8/3/2000	457.11	17.28	0.00	439.83	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	11/20/2000	457.11	19.69	0.00	437.42	**87**	ND	ND	ND	87	**3,000**	NS	NS	NS	NS
	2/20/2001	457.11	18.60	0.00	438.51	ND	ND	ND	ND	ND	6.8	NS	NS	NS	NS
	5/25/2001	457.11	17.30	0.00	439.81	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	8/6/2001	457.11	19.17	0.00	437.94	ND	ND	ND	ND	ND	2.0	NS	NS	NS	NS
	11/7/2001	457.11	21.07	0.00	436.04	**330**	62	370	800	1,562	**110**	NS	NS	NS	NS
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

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Well No.	Date	Casing Elevation* (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Table Elevation* (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Naphthalene (µg/L)
MW-4 (continued)	2/22/2002	457.11	20.80	0.00	436.31	**81**	120	200	510	911	**33**	NS	NS	NS	NS
	5/16/2002	457.11	18.12	0.00	438.99	ND	15	12	223	250	2.2	NS	NS	NS	NS
	8/6/2002	457.11	21.61	0.00	435.50	3.5	3.2	7.0	22.8	36.5	3.9	NS	NS	NS	NS
	11/13/2002	457.11	18.81	0.00	438.30	ND	4.9	14	141	159.9	ND	NS	NS	NS	NS
	3/5/2003	457.11	18.41	0.00	438.70	ND	ND	ND	ND	ND	2.0	NS	NS	NS	NS
	5/13/2003	457.11	16.96	0.00	440.15	3.9	ND	ND	ND	3.9	**110**	NS	NS	NS	NS
	9/25/2003	457.11	NM	NM	NM	ND	ND	ND	ND	ND	1.5	NS	NS	NS	NS
	11/12/2003	457.11	18.32	0.00	438.79	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
	2/2/2004	457.11	14.70	0.00	442.41	ND	ND	ND	ND	ND	**666**	NS	NS	NS	NS
	5/14/2004	457.11	18.09	0.00	439.02	ND	ND	ND	ND	ND	**24.8**	NS	NS	NS	NS
	8/19/2004	457.11	16.55	0.00	440.56	1.6	2.1	36.5	92.4	132.6	1.6	NS	NS	NS	NS
	11/22/2004	457.11	19.43	0.00	437.68	ND	ND	0.31 (J)	0.57 (J)	0.88	0.29 (J)	NS	NS	NS	NS
	2/23/2005	457.11	18.93	0.00	438.18	ND	ND	ND	ND	ND	0.65 (J)	NS	NS	NS	NS
	5/19/2005	457.11	16.67	0.00	440.44	ND	ND	ND	ND	ND	0.91 (J)	ND	ND	ND	NS
	8/24/2007	457.11	19.06	0.00	438.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/27/2007	457.11	18.72	0.00	438.39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/27/2008	457.11	18.63	0.00	438.48	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2008	457.11	17.57	0.00	439.54	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/2008	457.11	19.28	0.00	437.83	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/17/2008	457.11	19.10	0.00	438.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/31/2009	457.11	19.12	0.00	437.99	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/22/2009	457.11	15.07	0.00	442.04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/25/2009	457.11	17.63	0.00	439.48	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2009	457.11	16.56	0.00	440.55	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2009	457.11	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/17/2010	457.11	14.98	0.00	442.13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/18/2010	457.11	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/23/2010	455.60	18.10	0.00	437.50	0.52 (J)	22.3	41.1	84.2	148.12	ND	ND	**449**	**244**	**7.2**
	1/10/2011	455.60	18.94	0.00	436.66	**16.4**	16.9	151	235	419.30	2.7	112	**1,940**	**1,930**	**84.1**
	6/22/2011	455.60	17.57	0.00	438.03	**8.7**	10.6	5.7	8.6	33.60	1.9	128	**306**	**304**	ND
	9/28/2011	455.60	17.08	0.00	438.52	ND	ND	ND	ND	ND	ND	ND	**ND (<200)**	**ND (<100)**	ND
	12/20/2012	455.60	17.30	0.00	438.30	ND	ND	0.29 (J)	ND	0.29 (J)	ND	ND	**ND (<200)**	**ND (<100)**	ND
	3/21/2012	455.60	17.78	0.00	437.82	0.24 (J)	ND	1.5	ND	1.74 (J)	ND	ND	ND	ND	ND
	5/15/2012	455.60	11.49	0.00	444.11	ND	ND	ND	ND	ND	ND	ND	ND	**283**	ND
	8/28/2012	455.60	18.91	0.00	436.69	ND	ND	ND	ND	ND	ND	ND	ND	**924**	ND
	12/18/2012	455.60	18.58	0.00	437.02	**6.5**	37.2	419	108	570.7	ND	18.5 (J)	**2,510**	**1,120**	**154**
	3/19/2013	455.60	17.99	0.00	437.61	ND	ND	ND	ND	ND	ND	ND	ND	**350**	ND
	6/18/2013	455.60	17.77	0.00	437.83	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	9/19/2013	455.60	19.01	0.00	436.59	3.0	16.1	85.9	16.2	121.2	ND	55.8	**2,420**	**367**	**34.3**
	11/22/2013	455.60	19.21	0.00	436.39	**9.9**	32.3	38.4	23.7	104.3	1.3	52.9	**4,110**	**1,400**	**7.0**
	3/20/2014	455.60	15.71	0.00	439.89	2.0	5.2	ND	5.8	13.0	1.2	71.3	**1,870**	**408**	ND
***	6/18/2014	455.60	18.24	0.00	437.36	**87.4**	59.2	9.4	24.8	180.8	**106**	1,770	**3,850**	***	**1.5 (J)**
***	6/30/2014	455.60	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	**2,160**	NS
	9/23/2014	455.10	20.69	0.00	434.41	**7.3**	212	541	567	1,327.3	**269**	1,150	**5,740**	**2,560**	**159**
	12/23/2014	455.10	21.37	0.00	433.73	**88.0**	83.0	**1,290**	1,480	2,941.0	**50.6**	771	**12,200**	**3,090**	**490**
	3/24/2015	455.10	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/22/2015	455.10	20.38	0.00	434.72	**178**	34.1	661	409	1,282.1	17.3	3,200	**6,130**	**4,540**	**392**
	9/21/2015	455.10	20.57	0.00	434.53	**153**	44.3	623	394	1,214.3	16.9	1,730	**10,300**	**3,740**	**430**
	12/9/2015	455.10	21.08	0.00	434.02	**7.8**	1.4	34.8	10.1	54.1	ND	250	**650**	**684**	**28.3**
	3/8/2016	455.10	20.29	0.00	434.81	**103**	9.4	223	49.0	384.4	7.5	553	**2,130**	**874**	**143**
	6/7/2016	455.10	20.28	0.00	434.82	**155**	27.1	**744**	139	1,065.1	6.2	3,030	**6,540**	**3,150**	**436**
MDE MEAT GNCSG**						**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

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Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Well No.	Date	Casing Elevation* (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Table Elevation* (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Naphthalene (µg/L)
MW-7	3/28/1991	452.69	15.10	0.00	437.59	**7,950**	**6,100**	**2,700**	8,550	25,300	**650**	NS	NS	NS	NS
	6/26/1991	452.69	16.12	0.00	436.57	**2,100**	**2,400**	**800**	2,300	7,600	**1,000**	NS	NS	NS	NS
Casing:	9/1/1992	452.69	17.22	0.00	435.47	**1,470**	**3,670**	**1,350**	5,350	11,840	**1,200**	NS	NS	NS	NS
0 to 8 feet	1/7/1993	452.69	26.25	0.00	426.44	**1,550**	**5,750**	**1,100**	6,250	14,650	**600**	NS	NS	NS	NS
	4/12/1993	452.69	NM	NM	NM	**200**	**2,550**	350	3,600	6,700	ND	NS	NS	NS	NS
Screen:	7/15/1993	452.69	NM	NM	NM	**2,150**	**8,550**	**1,200**	8,950	20,850	**1,000**	NS	NS	NS	NS
8 to 33 feet	10/19/1993	452.69	NM	NM	NM	**2,400**	**15,700**	**1,300**	9,000	28,400	**870**	NS	NS	NS	NS
	1/26/1994	452.69	NM	NM	NM	**1,100**	**6,200**	**950**	5,650	13,900	ND	NS	NS	NS	NS
	4/19/1994	452.69	NM	NM	NM	**11**	68	11	86	176	**64.4**	NS	NS	NS	NS
	8/2/1994	452.69	NM	NM	NM	**280**	**1,160**	260	2,280	3,980	**180**	NS	NS	NS	NS
	11/22/1994	452.69	NM	NM	NM	**1,530**	**1,780**	**1,380**	5,400	10,090	**338**	NS	NS	NS	NS
	3/3/1995	452.69	NM	NM	NM	**1,690**	**9,600**	**1,930**	**11,000**	24,220	**913**	NS	NS	NS	NS
	5/9/1995	452.69	NM	NM	NM	**448**	**2,330**	294	3,560	6,632	**<200**	NS	NS	NS	NS
	8/15/1995	452.69	NM	NM	NM	**370**	**1,790**	420	3,430	6,010	**<200**	NS	NS	NS	NS
	11/28/1995	452.69	NM	NM	NM	**394**	**3,440**	646	4,230	8,710	ND	NS	NS	NS	NS
	2/13/1996	452.69	14.75	0.00	437.94	**104**	164	106	259	633	ND	NS	NS	NS	NS
	5/15/1996	452.69	15.40	0.00	437.29	**132**	429	101	436	1,098	**33**	NS	NS	NS	NS
	8/28/1996	452.69	15.27	0.00	437.42	**422**	**3,460**	480	5,540	9,902	**78**	NS	NS	NS	NS
	11/26/1996	452.69	15.61	0.00	437.08	**96**	340	ND	875	1,311	ND	NS	NS	NS	NS
	2/27/1997	452.69	14.69	0.00	438.00	**56**	225	**1,420**	3,830	5,531	**109**	NS	NS	NS	NS
	5/30/1997	452.69	15.10	0.00	437.59	**69**	293	**1,600**	4,900	6,862	**149**	NS	NS	NS	NS
	8/21/1997	452.69	16.53	0.00	436.16	ND	349	**1,280**	5,730	7,359	ND	NS	NS	NS	NS
	11/25/1997	452.69	16.63	0.00	436.06	ND	175	**913**	4,160	5,248	**57**	NS	NS	NS	NS
	2/19/1998	452.69	15.23	0.00	437.46	ND	165	381	2,360	2,906	ND	NS	NS	NS	NS
	5/28/1998	452.69	14.36	0.00	438.33	**100**	364	**1,270**	5,070	6,804	**147**	NS	NS	NS	NS
	8/18/1998	452.69	15.61	0.00	437.08	**120**	313	**1,300**	5,540	7,273	ND	NS	NS	NS	NS
	11/21/1998	452.69	16.86	0.00	435.83	**<100**	195	**1,280**	6,340	7,815	**129**	NS	NS	NS	NS
	2/17/1999	452.69	17.02	0.00	435.67	**<50**	409	**1,510**	6,230	8,149	**136**	NS	NS	NS	NS
	5/24/1999	452.69	16.20	0.00	436.49	**37**	229	**1,010**	3,230	4,506	**211**	NS	NS	NS	NS
	8/26/1999	452.69	17.18	0.00	435.51	**<50**	110	**920**	3,900	4,930	**170**	NS	NS	NS	NS
	11/18/1999	452.69	16.02	0.00	436.67	**<20**	130	**870**	3,300	4,300	**1,400**	NS	NS	NS	NS
	12/29/1999	452.69	NM	NM	NM	**9**	140	**780**	3,200	4,129	**240**	NS	NS	NS	NS
	2/23/2000	452.69	15.43	0.00	437.26	**<20**	320	**990**	3,800	5,110	**370**	NS	NS	NS	NS
	5/17/2000	452.69	14.47	0.00	438.22	ND	180	**1,100**	3,900	5,180	**1,300**	NS	NS	NS	NS
	8/3/2000	452.69	14.92	0.00	437.77	**84**	260	**1,000**	4,200	5,544	**2,100**	NS	NS	NS	NS
	11/20/2000	452.69	16.65	0.00	436.04	ND	140	**830**	3,180	4,150	**150**	NS	NS	NS	NS
	2/20/2001	452.69	17.86	0.00	434.83	**70**	240	**850**	2,540	3,700	**130**	NS	NS	NS	NS
	5/25/2001	452.69	15.05	0.00	437.64	ND	250	**1,300**	3,600	5,150	ND	NS	NS	NS	NS
	8/6/2001	452.69	16.70	0.00	435.99	**11**	280	**1,400**	4,900	6,591	**210**	NS	NS	NS	NS
	11/7/2001	452.69	17.64	0.00	435.05	ND	64	**810**	2,284	3,158	**98**	NS	NS	NS	NS
	2/22/2002	452.69	17.92	0.00	434.77	**11**	75	660	2,080	2,826	**54**	NS	NS	NS	NS
	5/16/2002	452.69	15.80	0.00	436.89	ND	140	690	2,110	2,940	**51**	NS	NS	NS	NS
	8/6/2002	452.69	18.05	0.00	434.64	**60**	93	**800**	2,180	3,133	**140**	NS	NS	NS	NS
	11/13/2002	452.69	17.23	0.00	435.46	ND	ND	**760**	1,746	2,506	ND	NS	NS	NS	NS
	3/5/2003	452.69	13.94	0.00	438.75	ND	16	100	301	417	5.1	NS	NS	NS	NS
	5/13/2003	452.69	15.10	0.00	437.59	**10**	10	110	198	328	**22**	NS	NS	NS	NS
	9/25/2003	452.69	NM	NM	NM	**25.6**	24.9	343	273	667	16.1	NS	NS	NS	NS
	11/12/2003	452.69	15.36	0.00	437.33	**24.5**	91.7	**907**	1,400	2,423	10	NS	NS	NS	NS
	2/2/2004	452.69	14.40	0.00	438.29	**22.6**	76.4	605	1,390	2,094	7.0	NS	NS	NS	NS
	5/14/2004	452.69	13.97	0.00	438.72	**10.3**	28.8	499	595	1,133	5.8	NS	NS	NS	NS
	8/19/2004	452.69	14.67	0.00	438.02	**18.8**	82.8	**763**	2,720	3,585	11.3	NS	NS	NS	NS
	2/23/2005	452.69	16.39	0.00	436.30	3.5 (J)	80	**1,080**	4,320	5,484	7.6 (J)	NS	NS	NS	NS
	5/19/2005	452.69	16.25	0.00	436.44	2.1 (J)	61.9	**740**	2,580	3,384	3.7 (J)	NS	NS	NS	NS
	8/24/2005	452.69	15.89	0.00	436.80	**<10**	56.9	**1,020**	3,770	4,847	8.4 (J)	NS	NS	NS	NS
	11/8/2005	452.69	15.54	0.00	437.15	1.6 (J)	18.1	472	913	1,405	9.1	NS	NS	NS	NS
MDE MEAT GNCSG**						**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

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Well No.	Date	Casing Elevation* (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Table Elevation* (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Naphthalene (µg/L)
MW-7	2/10/2006	452.69	14.54	0.00	438.15	1.2 (J)	22	413	1,390	1,826	5.2	NS	NS	NS	NS
(continued)	5/15/2006	452.69	15.50	0.00	437.19	**<10**	34.4	**880**	2,690	3,604	**22.2**	NS	NS	NS	NS
	8/9/2006	452.69	15.41	0.00	437.28	ND	40	**911**	3,140	4,091	6.1	NS	NS	NS	NS
	10/17/2006	452.69	17.28	0.00	435.41	**<10**	42.3	**1,170**	4,340	5,552	10	NS	NS	NS	NS
	4/11/2007	452.69	NG	NG	NG	ND	1.9	57	92	150.9	ND	ND	**1,900**	ND	NS
	8/24/2007	452.69	16.38	0.00	436.31	1.5	7.2	200	150	359	4.3	ND	**1,900**	**1,300**	NS
	12/27/2007	452.69	16.02	0.00	436.67	ND	ND	1.2	2.2	3.4	ND	ND	ND	**4,900**	NS
	3/27/2008	452.69	16.11	0.00	436.58	ND	ND	14	12.9	26.9	1.0	ND	ND	ND	NS
	6/25/2008	452.69	15.56	0.00	437.13	0.42 (J)	3.1	17.4	39	59.9	ND	ND	**1,400**	**700**	NS
	9/24/2008	452.69	16.20	0.00	436.49	1.7	9.7	278	323	612.4	3.4	ND	**4,340**	**976**	NS
	12/17/2008	452.69	9.65	0.00	443.04	2.0	17.3	495	911	1,425.3	3.4	ND	**8,250**	**1,160**	NS
	3/31/2009	452.69	16.77	0.00	435.92	1.0	ND	ND	ND	1.0	**59.8**	ND (<25)	ND	**1,160**	NS
	6/22/2009	452.69	15.50	0.00	437.19	1.2 (J)	7.9	257	285	551.1 (J)	1.6 (J)	ND (<63)	**4,810**	**1,870**	NS
	9/25/2009	452.69	15.64	0.00	437.05	1.2 (J)	9.1	528	549	1,087.3 (J)	ND	ND (<50)	**9,450**	**2,330**	NS
	12/14/2009	452.69	13.57	0.00	439.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2009	452.69	NM	NM	NM	0.51 (J)	3.4	98.9	53.7	156.51 (J)	ND	ND (<25)	**1,490**	**531**	NS
	3/17/2010	452.69	13.17	0.00	439.52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/18/2010	452.69	NM	NM	NM	ND	ND	43.3	7.4	50.7	ND	ND (<25)	**1,160**	**516**	NS
19 ft. sample	8/24/2010	453.52	15.73	0.00	437.79	1.8	3	238	58.4	301.2	ND	ND	**3,000**	**567**	NS
27 ft. sample	8/24/2010	453.52	15.73	0.00	437.79	**13**	2	127	31.3	173.3	**53.1**	47.6	**2,080**	**655**	**7.3**
	1/11/2011	453.52	16.36	0.00	437.16	1.8	8.7	492	294	796.5	1.8	ND	**7,180**	**2,360**	**75.4**
	6/23/2011	453.52	15.20	0.00	438.32	0.76 (J)	3.8	114	19.9	138.46 (J)	0.75 (J)	ND	**1,640**	**772**	**12.6**
	9/29/2011	453.52	14.99	0.00	438.53	1.5	6.7	330	200	538.2	1.7	18.8 (J)	**3,060**	**2,620**	**48.0**
	12/21/2012	453.52	14.86	0.00	438.66	3.7	2.8	13.6	3.0	23.1	6.7	276	**452**	**422**	**32.9**
	3/21/2012	453.52	15.26	0.00	438.26	4.0	3.4	128	10.1	145.5	4.5	198	**1,820**	**1,390**	**11.9**
	5/16/2012	453.52	15.60	0.00	437.92	2.3	3.5	138	55.7	199.5	2.9	126	**2,270**	**1,330**	**20.5**
	8/29/2012	453.52	15.84	0.00	437.68	3.5	9.3	392	354	758.8	3.5	96.3	**6,070**	**1,530**	**85.7**
	12/19/2012	453.52	16.06	0.00	437.46	3.2	8.9	464	424	900.1	9.7	44.3 (J)	**8,770**	**1,760**	**153**
	3/20/2013	453.52	14.45	0.00	439.07	1.8	7.8	208	289	506.6	3.7	ND	**4,880**	**1,400**	**171**
	6/19/2013	453.52	15.46	0.00	438.06	1.6	6.1	193	150	350.7	2.4	5.4 (J)	**3,980**	**1,690**	**80.0**
	9/19/2013	453.52	16.49	0.00	437.03	2.4	8.0	386	259	647.4	2.8	ND	**6,250**	**1,520**	**162**
	11/22/2013	453.52	16.56	0.00	436.96	2.1	9.0	481	295	787.1	3.8	10.1 (J)	**8,920**	**1,230**	**197**
	3/20/2014	453.52	14.60	0.00	438.92	2.1	3.2	147	20.3	172.6	1.5	ND	**2,830**	**1,560**	**29.2**
	6/18/2014	453.52	Inaccessible - Sampled on 6/24/2014												
***	6/24/2014	453.52	16.89	0.00	436.63	4.8	10.5	396	284	695.3	**32.1**	256	**8,400**	***	**34.1**
***	6/30/2014	453.52	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	**1,840**	NS
	9/23/2014	452.69	18.44	0.00	434.25	1.3	5.5	350	389	745.8	**28.3**	125	**8,640**	**232**	**159**
	12/23/2014	452.69	19.02	0.00	433.67	1.4	4.3	200	177	382.7	**29.6**	90.1	**5,990**	**1,030**	**91.8**
	3/24/2015	452.69	18.67	0.00	434.02	3.6	1.9	97.4	53.4	156.3	**80.0**	130	**3,540**	**463**	**56.2**
	6/22/2015	452.69	18.29	0.00	434.40	5.0	3.6	117	117	242.6	**51.0**	145	**2,980**	**1,580**	**45.7**
	9/21/2015	452.69	18.42	0.00	434.27	**5.9**	2.6	77.0	73.2	158.7	18.0	89.7	**3,460**	**902**	**27.3**
	12/9/2015	452.69	18.81	0.00	433.88	**7.3**	2.5	63.3	40.4	113.5	18.1	93.2	**2,080**	**714**	**6.4**
	3/8/2016	452.69	18.16	0.00	434.53	**8.9**	1.6	36.9	11.6	59.0	**81.5**	138	**1,990**	**785**	**2.8 (J)**
	6/7/2016	452.69	18.19	0.00	434.50	**8.3**	1.5	32.0	14.4	56.2	**25.3**	73.8	**1,390**	**904**	**5.5**
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

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OW-1	11/22/2004	NSVD	18.36	0.00	NSVD	**74.8**	169	**919**	5,220	6,383	**25**	NS	NS	NS	NS
	2/23/2005	NSVD	17.93	0.00	NSVD	4.4	9.4	168	621	803	19.9	NS	NS	NS	NS
Casing:	5/19/2005	NSVD	17.44	0.00	NSVD	**14.5**	46	343	1,130	1,534	14.3	NS	NS	NS	NS
0 to 9 feet	8/24/2005	NSVD	18.44	0.00	NSVD	**43.1**	163	**831**	3,890	4,927	5.9	NS	NS	NS	NS
	11/8/2005	NSVD	18.57	0.00	NSVD	4.0	17.8	344	1,050	1,416	7.7	NS	NS	NS	NS
Screen:	2/10/2006	NSVD	17.35	0.00	NSVD	1.8	11.2	77.3	328	418	2.2	NS	NS	NS	NS
9 to 34 feet	5/15/2006	NSVD	17.99	0.00	NSVD	4.0 (J)	53.4	414	1,690	2,161	6.4	NS	NS	NS	NS
	8/9/2006	NSVD	18.15	0.00	NSVD	**5.8**	68.4	432	1,550	2,056	10.8	NS	NS	NS	NS
	10/17/2006	NSVD	18.50	0.00	NSVD	1.2 (J)	18.6	268	712	1,000	10.2	NS	NS	NS	NS
	4/11/2007	NSVD	17.68	0.00	NSVD	ND	26	320	1,400	1,746	8.7	ND	**14,000**	**3,000**	NS
	8/24/2007	NSVD	19.14	0.00	NSVD	ND	11	210	440	661	4.2	ND	**6,900**	**2,400**	NS
	12/27/2007	NSVD	18.98	0.00	NSVD	ND	5.8	120	3.1	128.9	3.3	13	**9,600**	**2,400**	NS
	3/27/2008	NSVD	18.24	0.00	NSVD	ND	4.2	69	382.5	455.7	5.0	7.6	**9,200**	**2,000**	NS
	6/25/2008	NSVD	NM	NM	NSVD	ND	8.7	163	347	518.7	ND	ND	**8,900**	**1,400**	NS
	9/24/2008	NSVD	16.30	0.00	NSVD	0.67 (J)	11.6	170	372	554.3	1.2	13.3 (J)	**8,400**	**1,550**	NS
	12/17/2008	NSVD	15.95	0.00	NSVD	0.46 (J)	6.2	96.3	248	351.0	ND	ND	**6,020**	**1,490**	NS
	3/31/2009	NSVD	19.19	0.00	NSVD	ND	3.4	31.2	157	191.6	1.9	ND (<25)	**8,110**	**1,820**	NS
	6/22/2009	NSVD	17.74	0.00	NSVD	0.60 (J)	7.5	111	352	471.1 (J)	1.0	ND (<25)	**7,200**	**1,710**	NS
	9/25/2009	NSVD	18.10	0.00	NSVD	ND	3.0	73.0	168	244.0	ND	ND (<50)	**5,920**	**2,960**	NS
	12/14/2009	NSVD	16.51	0.00	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2009	NSVD	NM	NM	NM	0.30 (J)	6.3	209	934	1,149.6 (J)	0.44 (J)	ND (<25)	**8,690**	**1,440**	NS
	3/17/2010	NSVD	15.70	0.00	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/18/2010	NSVD	NM	NM	NM	ND	22.1	98.5	378	498.6	ND	ND (<25)	**6,880**	**2,030**	NS
23 ft. sample	8/25/2010	455.81	18.27	0.00	437.54	0.71 (J)	14.7	267	376	658.41 (J)	ND	ND	**8,780**	**2,290**	NS
28 ft.sample	8/25/2010	455.81	18.27	0.00	437.54	0.88 (J)	13.4	239	384	637.28 (J)	ND	ND	**8,290**	**2,500**	ND
	1/10/2011	455.81	18.99	0.00	436.82	0.81 (J)	13.1	143	376	532.91 (J)	ND	ND	**7,960**	**2,800**	**138**
	6/22/2011	455.81	18.73	0.00	437.08	ND	0.20 (J)	4.3	9.1	13.6 (J)	ND	ND	**353**	**1,110**	**4.1 (J)**
	9/28/2011	455.81	17.56	0.00	438.25	ND	2.0	41.0	110	153.0	ND	ND	**3,920**	**268**	**53.9**
	12/20/2012	455.81	15.49	0.00	440.32	0.53 (J)	2.2	33.9	124	160.63 (J)	ND	ND	**4,430**	**465**	**61.8**
	3/20/2012	455.81	17.84	0.00	437.97	0.41 (J)	2.5	24.2	107	134.11 (J)	0.87 (J)	ND	**6,030**	**1,760**	**74.4**
	5/15/2012	455.81	20.16	0.00	435.65	0.65 (J)	1.1	11.8	57.4	70.95 (J)	ND	ND	**2,630**	**514**	**29.4**
	8/28/2012	455.81	18.31	0.00	437.50	0.54 (J)	2.8	54.3	95.0	152.64 (J)	ND	ND	**5,060**	**1,840**	**70.0**
	12/18/2012	455.81	18.64	0.00	437.17	0.90 (J)	3.6	77.8	145	227.30 (J)	0.42 (J)	ND	**4,890**	**1,280**	**58.8**
	3/19/2013	455.81	18.05	0.00	437.76	0.80 (J)	2.0	21.5	84.5	108.80 (J)	0.74 (J)	ND	**3,670**	**1,280**	**41.3**
	6/18/2013	455.81	17.91	0.00	437.90	ND	1.5	21.8	48.1	71.4	ND	ND	**4,330**	**2,190**	**56.7**
	9/19/2013	455.81	19.03	0.00	436.78	ND	2.5	53.7	68.5	124.7	ND	ND	**3,910**	**1,200**	**65.5**
	11/22/2013	455.81	19.13	0.00	436.68	0.38 (J)	5.1	116	92.4	213.88 (J)	ND	ND	**5,810**	**1,620**	**98.6**
	3/20/2014	455.81	17.24	0.00	438.57	0.33 (J)	1.7	27.4	35.5	64.93 (J)	0.52 (J)	ND	**4,100**	**1,240**	**45.3**
***	6/18/2014	455.81	18.82	0.00	436.99	2.2	3.5	47.6	65.1	118.4	7.9	ND	**6,150**	***	**66.4**
***	6/30/2014	455.81	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	**2,020**	NS
	9/23/2014	455.31	20.88	0.00	434.43	0.43 (J)	1.6	53.3	135	190.33 (J)	1.5	56.7	**7,780**	**1,170**	**72.0**
	12/23/2014	455.31	21.28	0.00	434.03	0.81	1.4	13.1	34.2	49.51	1.5	33.9	**4,310**	**1,280**	**23.6**
	3/24/2015	455.31	21.08	0.00	434.23	0.47 (J)	0.64 (J)	2.3	8.9	12.31 (J)	ND	ND	**3,180**	**787**	**14.6**
	6/22/2015	455.31	20.58	0.00	434.73	1.4	0.32 (J)	1.0	1.8	4.52 (J)	6.9	29.5	**1,370**	**918**	**3.4 (J)**
	9/21/2015	455.31	20.73	0.00	434.58	1.7	0.27 (J)	1.4	1.8	5.17 (J)	5.3	24.5	**982**	**515**	**1.3 (J)**
	12/9/2015	455.31	21.23	0.00	434.08	2.3	0.23 (J)	0.93 (J)	1.3	4.76 (J)	6.9	19.5	**1,040**	**459**	**0.76 (J)**
	3/8/2016	455.31	20.54	0.00	434.77	1.9	ND	0.36 (J)	ND	2.26 (J)	6.1	ND	**1,100**	**373**	0.33 (J)
	6/7/2016	455.31	20.58	0.00	434.73	2.5	0.33 (J)	2.5	3.0	8.33 (J)	6.6	14.0	**934**	**370**	ND
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

Table 1
HISTORICAL GROUNDWATER MONITORING DATA SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Well No.	Date	Casing Elevation* (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Table Elevation* (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Naphthalene (µg/L)
YMW-1	6/13/2006	433.72	3.00	0.00	430.72	**21.7**	30.1	559	373	984	15.6	NS	NS	NS	NS
	7/17/2006	433.72	3.95	0.00	429.77	**5.3**	61.4	543	1,390	2,000	ND	NS	NS	NS	NS
Casing:	4/11/2007	433.72	4.89	0.00	428.83	**5.5**	140	**1,200**	3,300	4,646	ND	ND	**37,000**	ND	NS
0 to 2 feet	8/24/2007	433.72	5.94	0.00	427.78	4.6	60	660	850	1,574.6	ND	ND	**12,000**	**1,500**	NS
	12/27/2007	433.72	5.29	0.00	428.43	4.8	32	500	30	566.8	ND	ND	**14,000**	**1,500**	NS
Screen:	3/27/2008	433.72	5.19	0.00	428.53	**5.6**	73	610	1,510	2,198.6	1.2	ND	**9,600**	**1,000**	NS
2 to 14 feet	6/25/2008	433.72	1.68	0.00	432.04	4.0	92.7	648	1,700	2,444.7	ND	ND	**14,300**	**1,980**	NS
	9/24/2008	433.72	2.55	0.00	431.17	2.3	38.1	477	912	1,429.4	ND	ND	**11,200**	**1,010**	NS
	12/17/2008	433.72	2.30	0.00	431.42	2.0	38.5	346	1,000	1,386.5	ND	ND	**10,700**	**731**	NS
	3/31/2009	433.72	2.78	0.00	430.94	**7.7**	20.2	112	290	429.9	6.1	ND (<25)	**7,790**	**567**	NS
	6/22/2009	433.72	1.13	0.00	432.59	1.9 (J)	54.4	557	1,470	2,083.3 (J)	ND	(<130)	**11,600**	**1,810**	NS
	9/25/2009	433.72	0.20	0.00	433.52	2.0	28.1	325	701	1,056.1	ND	ND (<50)	**8,540**	**1,540**	NS
	12/14/2009	433.72	0.00	0.00	433.72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2009	433.72	NM	NM	NM	ND	40.7	401	1,490	1,931.7	ND	(<130)	**10,700**	**1,760**	NS
	3/17/2010	433.72	0.01	0.00	433.71	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/18/2010	433.72	NM	NM	NM	ND	60.4	407	1,060	1,527.4	ND	(<130)	**10,500**	**1,080**	NS
	8/25/2010	434.11	1.39	0.00	432.72	2.3 (J)	81.1	635	1,250	1,968.4	ND	131	**5,350**	**796**	**234**
	1/12/2011	434.11	1.51	0.00	432.60	1.8	40.6	464	1,620	2,126.4	ND	ND	**11,500**	**2,080**	**168**
	6/22/2011	434.11	1.34	0.00	432.77	0.74 (J)	18.0	181	392	591.74 (J)	ND	ND	**4,200**	**1,530**	**59.3**
	9/28/2011	434.11	0.03	0.00	434.08	1.6	31.3	463	685	1,180.9	ND	ND	**7,580**	**ND (<110)**	**168**
	12/20/2012	434.11	1.01	0.00	433.10	1.4 (J)	52.0	**792**	1,530	2375.4 (J)	ND	ND	**12,600**	**1,161**	**285**
	3/20/2012	434.11	0.90	0.00	433.21	0.51 (J)	11.4	145	298	454.91 (J)	ND	ND	**1,690**	**1,140**	**58.6**
†	5/15/2012	434.11	0.04	0.00	434.07	3.5	7.3	14.1	73.8	98.7	5.8	21.8 (J)	**2,420**	**1,650**	**83.3**
	8/28/2012	434.11	1.56	0.00	432.55	1.9 (J)	22.0	240	107	370.9 (J)	ND	ND	**5,040**	**1,860**	**156**
	12/18/2012	434.11	0.50	0.00	433.61	2.0	23.4	178	143	346.4	ND	ND	**3,790**	**616**	**15.1**
	3/19/2013	434.11	0.03	0.00	434.08	1.3	54.4	444	645	1,144.7	ND	ND	**6,810**	**807**	**184**
	6/18/2013	434.11	0.89	0.00	433.22	0.90 (J)	21.3	231	164	417.2 (J)	ND	ND	**3,770**	**1,280**	**104**
	9/19/2013	434.11	1.49	0.00	432.62	2.2	27.3	428	173	630.5	ND	ND	**5,960**	**1,560**	**200**
	11/22/2013	434.11	0.50	0.00	433.61	2.2	23.0	377	89.5	491.7	ND	ND	**8,760**	**1,130**	**186**
	3/20/2014	434.11	0.01	0.00	434.10	1.4	18.6	234	69.5	323.5	ND	ND	**3,210**	**659**	**57.4**
***	6/18/2014	434.11	3.62	0.00	430.49	3.3	19.2	96.6	104	223.1	ND	ND	**4,710**	***	**132**
***	6/30/2014	434.11	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	**1,040**	NS
	9/23/2014	433.64	5.33	0.00	428.31	0.72	1.4	0.98 (J)	2.7	5.8 (J)	ND	ND	**775**	**269**	**2.3 (J)**
	12/23/2014	433.64	4.19	0.00	429.45	0.31 (J)	0.33 (J)	2.5	0.61 (J)	3.75 (J)	ND	ND	**277**	**ND (<80)**	ND
	3/24/2015	433.64	3.02	0.00	430.62	ND	ND	2.0	0.57 (J)	2.57 (J)	ND	ND	ND	**ND (<77)**	**0.97 (J)**
	6/22/2015	433.64	3.04	0.00	430.60	ND	ND	0.39 (J)	ND	0.39 (J)	ND	ND	ND	**108**	ND
	9/21/2015	433.64	4.94	0.00	428.70	0.60	ND	0.61 (J)	ND	1.21 (J)	ND	ND	**205**	**144**	**0.81 (J)**
	12/9/2015	433.64	4.37	0.00	429.27	ND	ND	1.7	ND	1.7	ND	ND	ND	**160**	ND
	3/8/2016	433.64	3.31	0.00	430.33	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<64)**	ND
	6/7/2016	433.64	3.90	0.00	429.74	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<64)**	ND
YMW-2	6/13/2006	431.42	0.89	0.00	430.53	3.3	47.6	211	656	917.9	2.3	NS	NS	NS	NS
	7/17/2006	431.42	1.25	0.00	430.17	**14.9**	25.6	533	285	858.5	10.7	NS	NS	NS	NS
Casing:	4/11/2007	431.42	1.60	0.00	429.82	**15**	24	630	670	1,339	14	17	**1,400**	**3,000**	NS
0 to 2 feet	8/24/2007	431.42	2.61	0.00	428.81	**16**	59	250	270	595	14	ND	**4,800**	**3,200**	NS
	12/27/2007	431.42	2.48	0.00	428.94	**13**	21	370	14	418	9.9	17	**13,000**	**2,300**	NS
Screen:	3/27/2008	431.42	1.06	0.00	430.36	**8.2**	21	260	395	684.2	7.7	ND	**7,700**	**1,400**	NS
2 to 14 feet	6/25/2008	431.42	1.00	0.00	430.42	**11.5**	38.5	66.3	163	279.3	10.5	ND	**6,010**	**1,550**	NS
	9/24/2008	431.42	1.15	0.00	430.27	**13.5**	45.7	125	215	399.2	9	ND	**7,710**	**2,000**	NS
	12/17/2008	431.42	1.00	0.00	430.42	1.3	2.4	22.7	33.9	60.3	1.1	ND	**920**	ND	NS
	3/31/2009	431.42	1.66	0.00	429.76	**8.1**	23.2	164	357	552.3	5.8	ND (<25)	**7,750**	**1,030**	NS
	6/22/2009	431.42	0.60	0.00	430.82	**6.6**	14.6	43.8	93.8	158.8	4.1	ND (<25)	**3,960**	**977**	NS
	9/25/2009	431.42	0.30	0.00	431.12	**9.1**	25.8	73.0	178	285.9	6.5	ND (<25)	**5,290**	**3,070**	NS
	12/14/2009	431.42	0.10	0.00	431.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2009	431.42	NM	NM	NM	4.8	12.0	117	176	309.8	2.7	ND (<25)	**4,560**	**534**	NS
	3/17/2010	431.42	0.74	0.00	430.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/18/2010	431.42	NM	NM	NM	4.9	17.0	115	187	323.9	3.8	ND (<25)	**3,670**	**549**	NS
	8/25/2010	431.34	0.90	0.00	430.44	**6.9**	25.4	63.8	118	214.1	5.3	ND	**5,820**	**1,580**	**239**
	1/11/2011	431.34	1.39	0.00	429.95	**7.0**	23.6	199	251	480.6	4.8	ND	**7,190**	**1,950**	**215**
	6/23/2011	431.34	0.87	0.00	430.47	1.8	3.0	2.1	7.8	14.7	5.5	ND	**2,140**	**649**	**17.8**
	9/29/2011	431.34	0.08	0.00	431.26	**6.9**	19.6	29.0	138	193.5	9.4	31.5	**3,010**	**1,140**	**150**
	12/21/2012	431.34	0.92	0.00	430.42	**7.2**	14.9	98.0	194	314.1	8.6	ND	**5,510**	**1,470**	**164**
	3/21/2012	431.34	1.18	0.00	430.16	4.1	8.6	38.1	90.5	141.3	6.5	27.3	**3,800**	**859**	**86.2**
	5/16/2012	431.34	1.47	0.00	429.87	1.0 (J)	28.6	450	551	1,030.6 (J)	ND	ND	**8,100**	**1,820**	**247**
	8/29/2012	431.34	0.59	0.00	430.75	4.7	15.2	25.4	135	180.3	4.7	39.0	**4,490**	**1,990**	**157 (E)**
	12/19/2012	431.34	1.03	0.00	430.31	4.5	19.1	77.9	229	330.5	3.1	ND	**6,000**	**1,300**	**148**
	3/20/2013	431.34	1.00	0.00	430.34	2.9	12.4	55.1	133	203.4	5.0	ND	**3,550**	**582**	**96.5**
	6/19/2013	431.34	0.58	0.00	430.76	2.2	7.9	6.2	85.8	102.1	4.6	ND	**3,190**	**612**	**61.1**
	9/19/2013	431.34	0.08	0.00	431.26	3.2	18.9	23.3	158	203.4	2.7	ND	**3,770**	**1,250**	**102**
	11/22/2013	431.34	0.50	0.00	430.84	0.98 (J)	4.1	12.3	67.9	85.28 (J)	1.4	ND	**2,180**	**747**	**34.3**
	3/20/2014	431.34	0.00	0.00	431.34	4.5	7.6	124	178	314.1	4.7	ND	**4,340**	**934**	**76.6**
***	6/18/2014	431.34	1.23	0.00	430.11	0.89	0.43 (J)	9.4	24.6	35.32 (J)	ND	ND	**729**	***	**2.2 (J)**
***	6/30/2014	431.34	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	**183**	NS
	9/23/2014	431.37	2.51	0.00	428.86	3.4	ND	ND	ND	3.4	13.4	77.3	**759**	**313**	ND
	12/23/2014	431.37	2.64	0.00	428.73	2.7	ND	ND	ND	2.7	18.7	103	**740**	**310**	ND
	3/24/2015	431.37	2.78	0.00	428.59	3.0	0.27 (J)	ND	ND	3.27 (J)	**22.6**	92.9	**671**	**309**	ND
	6/22/2015	431.37	2.51	0.00	428.86	2.4	ND	ND	ND	2.4	12.7	87.7	**336**	**315**	0.41 (J)
	9/21/2015	431.37	2.58	0.00	428.79	4.0	ND	ND	ND	4.0	18.2	150	**391**	**320**	ND
	12/9/2015	431.37	3.94	0.00	427.43	**6.8**	1.6	0.96 (J)	5.7	15.06 (J)	16.5	202	**671**	**345**	**1.6 (J)**
	3/8/2016	431.37	2.97	0.00	428.40	2.2	ND	ND	ND	2.2	19.6	96.2	**364**	**ND (<64)**	ND
	6/7/2016	431.37	2.84	0.00	428.53	**5.2**	ND	ND	ND	5.2	14.3	99.4	**222**	**ND (<64)**	ND
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

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1613 East Joppa Road
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Well No.	Date	Casing Elevation* (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Table Elevation* (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Naphthalene (µg/L)
YMW-3	9/23/2014	440.39	9.41	0.00	430.98	ND	0.39 (J)	9.0	5.1	14.49 (J)	ND	ND	**268**	**327**	**1.1 (J)**
	12/23/2014	440.39	9.86	0.00	430.53	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<80)**	ND
Casing:	3/24/2015	440.39	8.17	0.00	432.22	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<76)**	ND
0 to 4.5 feet	6/22/2015	440.39	8.54	0.00	431.85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	9/21/2015	440.39	9.21	0.00	431.18	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<58)**	ND
Screen:	12/9/2015	440.39	8.83	0.00	431.56	ND	ND	ND	ND	ND	ND	ND	ND	**231**	ND
4.5 to 19.5 feet	3/8/2016	440.39	8.63	0.00	431.76	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<64)**	ND
	6/7/2016	440.39	8.86	0.00	431.53	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<64)**	ND
YMW-4	9/23/2014	433.72	4.71	0.00	429.01	**6.1**	9.2	94.0	192	301.3	4.3	ND	**3,780**	**1,050**	**45.0**
	12/23/2014	433.72	4.31	0.00	429.41	**5.7**	14.2	44.7	219	283.6	5.9	16.6	**4,240**	**612**	**57.3**
Casing:	3/24/2015	433.72	4.06	0.00	429.66	4.0	21.6	36.6	434	496.2	10.6	53.8	**4,470**	**1,190**	**73.1**
0 to 2 feet	6/22/2015	433.72	3.96	0.00	429.76	**5.6**	21.6	36.3	376	439.5	**24.5**	114	**4,280**	**2,460**	**124**
	9/21/2015	433.72	4.45	0.00	429.27	**7.8**	17.2	33.2	289	347.2	**38.9**	163	**5,480**	**1,560**	**138**
Screen:	12/9/2015	433.72	4.34	0.00	429.38	**9.2**	13.7	31.9	252	306.8	**38.4**	251	**5,110**	**1,560**	**87.8**
2 to 17 feet	3/8/2016	433.72	4.18	0.00	429.54	2.4	3.1	4.4	39.0	48.9	10	68.8	**828**	**414**	**15.8**
	6/7/2016	433.72	4.18	0.00	429.54	**13.9**	9.5	27.8	116	167.2	**32.3**	280	**4,040**	**1,790**	**98.7**
YMW-5	9/23/2014	430.70	4.42	0.00	426.28	ND	ND	ND	0.63 (J)	0.63 (J)	6.6	ND	**294**	**273**	ND
	12/23/2014	430.70	5.52	0.00	425.18	0.25 (J)	ND	ND	ND	0.25 (J)	5.6	ND	ND	**ND (<80)**	ND
Casing:	3/24/2015	430.70	3.05	0.00	427.65	0.65	ND	ND	ND	0.65	7.7	7.0 (J)	ND	**ND (<80)**	ND
0 to 1 feet	6/22/2015	430.70	3.05	0.00	427.65	0.92	ND	ND	ND	0.92	6.3	10.3	ND	**123**	ND
	9/21/2015	430.70	3.52	0.00	427.18	0.54	ND	ND	ND	0.54	9.2	23.5	ND	**98.0**	ND
Screen:	12/9/2015	430.70	3.16	0.00	427.54	0.35 (J)	ND	ND	ND	0.35 (J)	7.4	27.3	ND	**ND (<64)**	ND
1 to 16 feet	3/8/2016	430.70	2.99	0.00	427.71	0.38 (J)	ND	ND	ND	0.38 (J)	6.8	19.7	**ND (<55)**	**ND (<64)**	ND
	6/7/2016	430.70	3.01	0.00	427.69	0.23 (J)	ND	ND	ND	0.23 (J)	6.8	12.6	**ND (<55)**	**ND (<64)**	ND
YMW-6	9/23/2014	432.68	6.61	0.00	426.07	ND	ND	ND	ND	ND	1.5	26.9	ND	**ND (<80)**	ND
	12/23/2014	432.68	5.69	0.00	426.99	ND	ND	ND	ND	ND	1.4	24.7	ND	**ND (<80)**	ND
Casing:	3/24/2015	432.68	5.11	0.00	427.57	ND	ND	ND	ND	ND	2.1	44.5	ND	**ND (<80)**	ND
0 to 3 feet	6/22/2015	432.68	5.11	0.00	427.57	ND	ND	ND	ND	ND	2.4	65.6	ND	ND	ND
	9/21/2015	432.68	6.11	0.00	426.57	ND	ND	ND	ND	ND	2.9	73.3	ND	**76.9**	ND
Screen:	12/9/2015	432.68	5.56	0.00	427.12	ND	ND	ND	ND	ND	2.9	80.3	ND	**ND (<64)**	ND
3 to 18 feet	3/8/2016	432.68	5.10	0.00	427.58	ND	ND	ND	ND	ND	3.3	91.0	**ND (<55)**	**ND (<64)**	ND
	6/7/2016	432.68	5.36	0.00	427.32	ND	ND	ND	ND	ND	4.3	109	**ND (<55)**	**ND (<64)**	ND
YMW-7	9/23/2014	449.40	15.33	0.00	434.07	**173**	141	428	2,240	2,982	10.0	ND	**17,500**	**1,670**	**73.6**
	12/23/2014	449.40	15.16	0.00	434.24	**176**	130	690	2,580	3,576	9.1 (J)	ND	**23,800**	**2,250**	**99.7**
Casing:	3/24/2015	449.40	15.54	0.00	433.86	**142**	78.0	261	2,330	2,811	11.4	ND	**16,300**	**2,560**	**92.8**
0 to 18 feet	6/22/2015	449.40	15.22	0.00	434.18	**134**	37.4	146	828	1,145.4	9.1	ND	**6,820**	**1,680**	**39.8**
	9/21/2015	449.40	15.32	0.00	434.08	**101**	18.9	67.9	286	473.8	8.3	17.0	**4,970**	**736**	**22.1**
Screen:	12/9/2015	449.40	15.68	0.00	433.72	**129**	80.2	301	1,140	1,650.2	7.3	ND	**14,100**	**1,630**	**122**
18 to 28 feet	3/8/2016	449.40	15.13	0.00	434.27	**136**	52.0	140	688	1,016.0	7.3	17.0 (J)	**7,050**	**1,300**	**97.7**
	6/7/2016	449.40	15.09	0.00	434.31	**127**	42.3	166	620	955.3	7.6	15.7	**7,370**	**1,320**	**75.6**
YMW-8	9/23/2014	446.91	13.63	0.00	433.28	**56.4**	46.8	638	2,270	3,011.2	**50.8**	ND	**16,100**	**1,820**	**182**
	12/23/2014	446.91	13.96	0.00	432.95	**61.9**	50.5	**793**	2,570	3,475.4	**40.0**	ND	**17,800**	**2,450**	**216**
Casing:	3/24/2015	446.91	12.91	0.00	434.00	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<80)**	ND
0 to 7 feet	6/22/2015	446.91	13.44	0.00	433.47	**91.5**	18.4	255	395	759.9	**28.4**	17.2	**4,330**	**1,710**	**75.9**
	9/21/2015	446.91	13.85	0.00	433.06	**45.7**	24.9	533	1,150	1,753.6	**31.2**	ND	**16,600**	**1,900**	**145**
Screen:	12/9/2015	446.91	13.94	0.00	432.97	**39.5**	96.9	631	1,500	2,267.4	**24.6**	ND	**18,400**	**2,470**	**169**
7 to 22 feet	3/8/2016	446.91	13.05	0.00	433.86	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<64)**	ND
	6/7/2016	446.91	13.52	0.00	433.39	**72.4**	14.6	341	185	613.0	**29.1**	20.9	**4,260**	**1,020**	**77.1**
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

Table 1
HISTORICAL GROUNDWATER MONITORING DATA SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Well No.	Date	Casing Elevation* (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Table Elevation* (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TPH-GRO (µg/L)	TPH-DRO (µg/L)	Naphthalene (µg/L)
YMW-9	9/23/2014	436.71	6.16	0.00	430.55	ND	ND	ND	ND	ND	1.8	ND	ND	**ND (<80)**	ND
	12/23/2014	436.71	5.94	0.00	430.77	ND	ND	ND	ND	ND	1.6	ND	ND	**ND (<80)**	ND
Casing:	3/24/2015	436.71	5.41	0.00	431.30	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<80)**	ND
0 to 2.5 feet	6/22/2015	436.71	5.81	0.00	430.90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	9/21/2015	436.71	6.17	0.00	430.54	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<58)**	ND
Screen:	12/9/2015	436.71	5.86	0.00	430.85	ND	ND	ND	ND	ND	ND	ND	ND	**ND (<64)**	ND
2.5 to 17.5 feet	3/8/2016	436.71	5.43	0.00	431.28	ND	ND	ND	ND	ND	ND	ND	**ND (<55)**	**ND (<64)**	ND
	6/7/2016	436.71	5.93	0.00	430.78	ND	ND	ND	ND	ND	0.48 (J)	ND	**ND (<55)**	**ND (<64)**	ND
YP-1	9/23/2014	440.41	9.11	0.00	431.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/23/2014	440.41	9.16	0.00	431.25	0.98	42.1	383	326	752.08	6.3	34.5	**4,370**	**221**	**67.0**
Casing:	3/25/2015	440.41	9.26	0.00	431.15	1.8 (J)	72.6	**762**	2,120	2,956.4 (J)	11.2	70.9	**13,300**	**2,160**	**160**
0 to 8 feet	6/23/2015	440.41	9.18	0.00	431.23	**5.6**	75.6	**714**	1,420	2,215.2	19.3	104	**11,100**	**1,980**	**186**
	9/22/2015	440.41	9.20	0.00	431.21	**7.0**	63.1	**807**	1,460	2,337.1	9.4	120	**9,470**	**2,500**	**280**
Screen:	12/10/2015	440.41	9.17	0.00	431.24	**5.5**	31.0	**723**	872	1,631.5	5.0	113	**13,400**	**1,590**	**181**
8 to 13 feet	3/9/2016	440.41	9.24	0.00	431.17	**6.0**	28.1	**756**	970	1,760.1	5.0	38.4	**10,700**	**1,940**	**166**
	6/8/2016	440.41	9.14	0.00	431.27	**6.4**	20.2	638	773	1,437.6	4.2	53.3	**8,270**	**2,490**	**189**
YP-2	9/23/2014	438.35	8.25	0.00	430.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/23/2014	438.35	8.10	0.00	430.25	3.0	ND	ND	ND	3.0	8.5	7.4 (J)	ND	**ND (<80)**	0.43 (J)
Casing:	3/25/2015	438.35	8.05	0.00	430.30	**5.3**	ND	1.7	ND	7.0	12.5	ND	ND	**ND (<80)**	0.42 (J)
0 to 7 feet	6/23/2015	438.35	7.98	0.00	430.37	3.9	ND	ND	ND	3.9	12.6	4.7 (J)	ND	**95**	ND
	9/22/2015	438.35	8.13	0.00	430.22	**5.2**	0.20 (J)	ND	0.77 (J)	6.17 (J)	13.2	60.2	**399**	**299**	0.52 (J)
Screen:	12/10/2015	438.35	8.25	0.00	430.10	**9.8**	0.18 (J)	ND	0.44 (J)	10.42 (J)	15.5	76.0	**322**	**254**	**0.81 (J)**
7 to 12 feet	3/9/2016	438.35	8.15	0.00	430.20	**62.4**	0.21 (J)	2.8	0.44 (J)	65.85 (J)	**32.7**	18.9	**324**	**110**	0.66 (J)
	6/8/2016	438.35	8.07	0.00	430.28	**13.9**	ND	ND	ND	13.9	17.7	23.4	**159**	**151**	ND
YP-3	9/23/2014	436.51	5.21	0.00	431.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/23/2014	436.51	5.21	0.00	431.30	ND	ND	ND	ND	ND	1.9	ND	ND	**ND (<80)**	ND
Casing:	3/25/2015	436.51	4.85	0.00	431.66	0.30 (J)	ND	ND	ND	0.30 (J)	6.0	ND	ND	**ND (<80)**	ND
0 to 5.5 feet	6/23/2015	436.51	4.75	0.00	431.76	0.91	ND	ND	ND	0.91	6.9	4.8 (J)	ND	**199**	ND
	9/22/2015	436.51	5.19	0.00	431.32	1.0	ND	ND	ND	1.0	6.6	ND	ND	**122**	ND
Screen:	12/10/2015	436.51	5.27	0.00	431.24	0.98	ND	ND	ND	0.98	5.9	5.3 (J)	ND	**146**	ND
5.5 to 10.5 feet	3/9/2016	436.51	4.74	0.00	431.77	0.25 (J)	ND	ND	ND	0.25 (J)	2.6	ND	**ND (<55)**	**122**	ND
	6/8/2016	436.51	5.02	0.00	431.49	0.84	ND	ND	ND	0.84	4.3	ND	**ND (<55)**	**216**	ND
YP-4	9/23/2014	441.83	9.01	0.00	432.82	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/23/2014	441.83	9.24	0.00	432.59	0.44 (J)	ND	ND	ND	0.44 (J)	**36.5**	19.7	**386**	**ND (<80)**	ND
Casing:	3/25/2015	441.83	8.25	0.00	433.58	ND	ND	ND	ND	ND	5.5	ND	ND	**ND (<80)**	ND
0 to 8 feet	6/23/2015	441.83	8.96	0.00	432.87	ND	ND	ND	ND	ND	3.1	ND	ND	**ND (<64)**	ND
	9/22/2015	441.83	9.31	0.00	432.52	ND	ND	ND	ND	ND	12.2	ND	ND	**199**	0.26 (J)
Screen:	12/10/2015	441.83	9.28	0.00	432.55	0.41 (J)	ND	ND	ND	0.41 (J)	19.5	13.7	ND	**ND (<64)**	ND
8 to 13 feet	3/9/2016	441.83	8.54	0.00	433.29	ND	ND	ND	ND	ND	2.7	ND	**ND (<55)**	**ND (<64)**	ND
	6/8/2016	441.83	9.02	0.00	432.81	ND	ND	ND	ND	ND	4.2	ND	**ND (<55)**	**ND (<64)**	ND
YP-5	9/23/2014	433.65	4.01	0.00	429.64	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/23/2014	433.65	4.33	0.00	429.32	ND	ND	ND	ND	ND	0.66 (J)	ND	ND	**137**	ND
Casing:	3/25/2015	433.65	3.90	0.00	429.75	ND	ND	ND	ND	ND	17.7	51.2	ND	**ND (<80)**	ND
0 to 5 feet	6/23/2015	433.65	4.49	0.00	429.16	0.28 (J)	ND	ND	ND	0.28 (J)	**32.3**	106	ND	**117**	ND
	9/22/2015	433.65	4.12	0.00	429.53	1.2	ND	ND	ND	1.2	**45.7**	139	ND	**236**	ND
Screen:	12/10/2015	433.65	3.88	0.00	429.77	ND	ND	ND	ND	ND	**33.2**	8.7 (J)	ND	**ND (<64)**	ND
5 to 10 feet	3/9/2016	433.65	3.97	0.00	429.68	ND	ND	ND	ND	ND	1.6	ND	**ND (<55)**	**ND (<64)**	ND
	6/8/2016	433.65	4.31	0.00	429.34	ND	ND	ND	ND	ND	2.2	7.5 (J)	**ND (<55)**	**232**	ND
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

Table Notes:

*Elevation is relative to a designated benchmark
(Current Casing elevations surveyed on August 25, 2010.)
**Generic Numeric Cleanup Standards for Groundwater (GNCSG) from Appendix F of the Maryland Department of the Environments (MDE) Maryland Environmental Assessment Technology (MEAT) for Leaking Undergound Storage Tanks
***The June 18, 2014 TPH-DRO parameters were analyzed out of laboratory holding times; Follow-up samples were collected on June 30, 2014, for analysis of TPH-DRO only
ND (<MDL) = Not Detected above Method Detection Limit. (As of 2012 this changed to mean "Not Detected above Method Dection Limit".)
Values in boldface type exceed applicable MDE MEAT GNCSG
ND = Not Detected
NA = Not Applicable
Total BTEX = sum of Benzene, Toluene, Ethylbenzene, and Xylenes
MTBE = Methyl-tertiary-Butyl Ether
Groundwater elevations corrected for the presence of LPH using the following formula:
Water Table Elevation = Water Elevation+(0.75*LPH Thickness)
NS = Not Sampled for indicated analyte
LPH = Liquid Phase Hydrocarbons

J = Laboratory Estimated Value
NM = Not Measured
NSVD - Not Surveyed
µg/L = micrograms per liter
† = Samples damaged in shipment, resampled for TPH-DRO on 5/24/12
E= Value Exceeded Laboratory Calibration Range
¥ = Bottleware broken in shipment.

TABLE 2
GROUNDWATER GAUGING
RESULTS SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Monitoring Well/Piezometer Identification	Gauging Date	Top of Casing Elevation (ft)	LPH Thickness (ft)	Depth to Groundwater (ft)	Corrected Groundwater Table Elevation (ft)
YMW-1	1/19/2015	433.64	0.00	3.66	429.98
	2/25/2015	433.64	0.00	4.01	429.63
Casing:	3/24/2015	433.64	0.00	3.02	430.62
0 to 2 feet	4/20/2015	433.64	0.00	3.34	430.30
	5/27/2015	433.64	0.00	4.08	429.56
Screen:	6/22/2015	433.64	0.00	3.04	430.60
2 to 14 feet	7/28/2015	433.64	0.00	3.04	430.60
	8/24/2015	433.64	0.00	1.51	432.13
	9/21/2015	433.64	0.00	4.94	428.70
	10/29/2015	433.64	0.00	4.63	429.01
	11/18/2015	433.64	0.00	4.45	429.19
	12/9/2015	433.64	0.00	4.37	429.27
	1/12/2016	433.64	0.00	3.31	430.33
	3/8/2016	433.64	0.00	3.31	430.33
	6/7/2016	433.64	0.00	3.90	429.74
YMW-2	1/19/2015	431.37	0.00	2.86	428.51
	2/25/2015	431.37	0.00	2.84	428.53
Casing:	3/24/2015	431.37	0.00	2.78	428.59
0 to 2 feet	4/20/2015	431.37	0.00	2.71	428.66
	5/27/2015	431.37	0.00	2.78	428.59
Screen:	6/22/2015	431.37	0.00	2.51	428.86
2 to 14 feet	7/28/2015	431.37	0.00	2.41	428.96
	8/24/2015	431.37	0.00	0.61	430.76
	9/21/2015	431.37	0.00	2.58	428.79
	10/29/2015	431.37	0.00	2.31	429.06
	11/18/2015	431.37	0.00	4.02	427.35
	12/9/2015	431.37	0.00	3.94	427.43
	1/12/2016	431.37	0.00	2.90	428.47
	3/8/2016	431.37	0.00	2.97	428.40
	6/7/2016	431.37	0.00	2.84	428.53
YMW-3	1/19/2015	440.39	0.00	8.63	431.76
	2/25/2015	440.39	0.00	8.87	431.52
Casing:	3/24/2015	440.39	0.00	8.17	432.22
0 to 4.5 feet	4/20/2015	440.39	0.00	8.19	432.20
	5/27/2015	440.39	0.00	8.54	431.85
Screen:	6/22/2015	440.39	0.00	8.54	431.85
4.5 to 19.5 feet	7/28/2015	440.39	0.00	7.76	432.63
	8/24/2015	440.39	0.00	7.97	432.42
	9/21/2015	440.39	0.00	9.21	431.18
	10/29/2015	440.39	0.00	9.00	431.39
	11/18/2015	440.39	0.00	9.09	431.30
	12/9/2015	440.39	0.00	8.83	431.56
	1/12/2016	440.39	0.00	7.97	432.42
	3/8/2016	440.39	0.00	8.63	431.76
	6/7/2016	440.39	0.00	8.86	431.53
YMW-4	1/19/2015	433.72	0.00	4.29	429.43
	2/25/2015	433.72	0.00	4.02	429.70
Casing:	3/24/2015	433.72	0.00	4.06	429.66
0 to 2 feet	4/20/2015	433.72	0.00	4.09	429.63
	5/27/2015	433.72	0.00	4.33	429.39
Screen:	6/22/2015	433.72	0.00	3.96	429.76
2 to 17 feet	7/28/2015	433.72	0.00	4.13	429.59
	8/24/2015	433.72	0.00	2.34	431.38
	9/21/2015	433.72	0.00	4.45	429.27
	10/29/2015	433.72	0.00	4.24	429.48
	11/18/2015	433.72	0.00	4.55	429.17
	12/9/2015	433.72	0.00	4.34	429.38
	1/12/2016	433.72	0.00	4.71	429.01
	3/8/2016	433.72	0.00	4.18	429.54
	6/7/2016	433.72	0.00	4.18	429.54

TABLE 2
GROUNDWATER GAUGING
RESULTS SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Monitoring Well/Piezometer Identification	Gauging Date	Top of Casing Elevation (ft)	LPH Thickness (ft)	Depth to Groundwater (ft)	Corrected Groundwater Table Elevation (ft)
YMW-5	1/19/2015	430.70	0.00	3.26	427.44
	2/25/2015	430.70	0.00	3.15	427.55
Casing:	3/24/2015	430.70	0.00	3.05	427.65
0 to 1 feet	4/20/2015	430.70	0.00	3.19	427.51
	5/27/2015	430.70	0.00	3.25	427.45
Screen:	6/22/2015	430.70	0.00	3.05	427.65
1 to 16 feet	7/28/2015	430.70	0.00	3.23	427.47
	8/24/2015	430.70	0.00	1.43	429.27
	9/21/2015	430.70	0.00	3.52	427.18
	10/29/2015	430.70	0.00	3.23	427.47
	11/18/2015	430.70	0.00	3.32	427.38
	12/9/2015	430.70	0.00	3.16	427.54
	1/12/2016	430.70	0.00	2.91	427.79
	3/8/2016	430.70	0.00	2.99	427.71
	6/7/2016	430.70	0.00	3.01	427.69
YMW-6	1/19/2015	432.68	0.00	5.42	427.26
	2/25/2015	432.68	0.00	5.59	427.09
Casing:	3/24/2015	432.68	0.00	5.11	427.57
0 to 3 feet	4/20/2015	432.68	0.00	5.08	427.60
	5/27/2015	432.68	0.00	5.87	426.81
Screen:	6/22/2015	432.68	0.00	5.11	427.57
3 to 18 feet	7/28/2015	432.68	0.00	5.38	427.30
	8/24/2015	432.68	0.00	3.58	429.10
	9/21/2015	432.68	0.00	6.11	426.57
	10/29/2015	432.68	0.00	6.01	426.67
	11/18/2015	432.68	0.00	5.79	426.89
	12/9/2015	432.68	0.00	5.56	427.12
	1/12/2016	432.68	0.00	5.11	427.57
	3/8/2016	432.68	0.00	5.10	427.58
	6/7/2016	432.68	0.00	5.36	427.32
YMW-7	1/19/2015	449.40	0.00	15.91	433.49
	2/25/2015	449.40	0.00	15.98	433.42
Casing:	3/24/2015	449.40	0.00	15.54	433.86
0 to 18 feet	4/20/2015	449.40	0.00	15.47	433.93
	5/27/2015	449.40	0.00	15.51	433.89
Screen:	6/22/2015	449.40	0.00	15.22	434.18
18 to 28 feet	7/28/2015	449.40	0.00	14.89	434.51
	8/24/2015	449.40	0.00	15.10	434.30
	9/21/2015	449.40	0.00	15.32	434.08
	10/29/2015	449.40	0.00	14.97	434.43
	11/18/2015	449.40	0.00	15.83	433.57
	12/9/2015	449.40	0.00	15.68	433.72
	1/12/2016	449.40	0.00	15.29	434.11
	3/8/2016	449.40	0.00	15.13	434.27
	6/7/2016	449.40	0.00	15.09	434.31
YMW-8	1/19/2015	446.91	0.00	13.86	433.05
	2/25/2015	446.91	0.00	14.52	432.39
Casing:	3/24/2015	446.91	0.00	12.91	434.00
0 to 7 feet	4/20/2015	446.91	0.00	13.34	433.57
	5/27/2015	446.91	0.00	13.61	433.30
Screen:	6/22/2015	446.91	0.00	13.44	433.47
7 to 22 feet	7/28/2015	446.91	0.00	13.34	433.57
	8/24/2015	446.91	0.00	13.55	433.36
	9/21/2015	446.91	0.00	13.85	433.06
	10/29/2015	446.91	0.00	13.56	433.35
	11/18/2015	446.91	0.00	14.11	432.80
	12/9/2015	446.91	0.00	13.94	432.97
	1/12/2016	446.91	0.00	13.57	433.34
	3/8/2016	446.91	0.00	13.05	433.86
	6/7/2016	446.91	0.00	13.52	433.39

TABLE 2
GROUNDWATER GAUGING
RESULTS SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Monitoring Well/Piezometer Identification	Gauging Date	Top of Casing Elevation (ft)	LPH Thickness (ft)	Depth to Groundwater (ft)	Corrected Groundwater Table Elevation (ft)
YMW-9	1/19/2015	436.71	0.00	5.69	431.02
	2/25/2015	436.71	0.00	5.93	430.78
Casing:	3/24/2015	436.71	0.00	5.41	431.30
0 to 2.5 feet	4/20/2015	436.71	0.00	4.80	431.91
	5/27/2015	436.71	0.00	6.02	430.69
Screen:	6/22/2015	436.71	0.00	5.81	430.90
2.5 to 17.5 feet	7/28/2015	436.71	0.00	5.94	430.77
	8/24/2015	436.71	0.00	4.14	432.57
	9/21/2015	436.71	0.00	6.17	430.54
	10/29/2015	436.71	0.00	5.99	430.72
	11/18/2015	436.71	0.00	6.13	430.58
	12/9/2015	436.71	0.00	5.86	430.85
	1/12/2016	436.71	0.00	5.04	431.67
	3/8/2016	436.71	0.00	5.43	431.28
	6/7/2016	436.71	0.00	5.93	430.78
YP-1	1/19/2015	440.41	0.00	9.25	431.16
	2/25/2015	440.41	0.00	9.25	431.16
Casing:	3/24/2015	440.41	0.00	9.26	431.15
0 to 8 feet	4/20/2015	440.41	0.00	9.23	431.18
	5/27/2015	440.41	0.00	9.34	431.07
Screen:	6/22/2015	440.41	0.00	9.18	431.23
8 to 13 feet	7/28/2015	440.41	0.00	8.79	431.62
	8/24/2015	440.41	0.00	8.99	431.42
	9/21/2015	440.41	0.00	9.20	431.21
	10/29/2015	440.41	0.00	8.96	431.45
	11/18/2015	440.41	0.00	9.30	431.11
	12/9/2015	440.41	0.00	9.17	431.24
	1/12/2016	440.41	0.00	9.14	431.27
	3/8/2016	440.41	0.00	9.24	431.17
	6/7/2016	440.41	0.00	9.14	431.27
YP-2	1/19/2015	438.35	0.00	8.27	430.08
	2/25/2015	438.35	0.00	8.09	430.26
Casing:	3/24/2015	438.35	0.00	8.05	430.30
0 to 7 feet	4/20/2015	438.35	0.00	8.01	430.34
	5/27/2015	438.35	0.00	8.36	429.99
Screen:	6/22/2015	438.35	0.00	7.98	430.37
7 to 12 feet	7/28/2015	438.35	0.00	8.08	430.27
	8/24/2015	438.35	0.00	8.28	430.07
	9/21/2015	438.35	0.00	8.13	430.22
	10/29/2015	438.35	0.00	7.91	430.44
	11/18/2015	438.35	0.00	8.36	429.99
	12/9/2015	438.35	0.00	8.25	430.10
	1/12/2016	438.35	0.00	8.17	430.18
	3/8/2016	438.35	0.00	8.15	430.20
	6/7/2016	438.35	0.00	8.07	430.28
YP-3	1/19/2015	436.51	0.00	5.09	431.42
	2/25/2015	436.51	0.00	5.01	431.50
Casing:	3/24/2015	436.51	0.00	4.85	431.66
0 to 5.5 feet	4/20/2015	436.51	0.00	5.67	430.84
	5/27/2015	436.51	0.00	5.47	431.04
Screen:	6/22/2015	436.51	0.00	4.75	431.76
5.5 to 10.5 feet	7/28/2015	436.51	0.00	5.08	431.43
	8/24/2015	436.51	0.00	5.11	431.40
	9/21/2015	436.51	0.00	5.19	431.32
	10/29/2015	436.51	0.00	4.88	431.63
	11/18/2015	436.51	0.00	5.40	431.11
	12/9/2015	436.51	0.00	5.27	431.24
	1/12/2016	436.51	0.00	4.93	431.58
	3/8/2016	436.51	0.00	4.74	431.77
	6/7/2016	436.51	0.00	5.02	431.49

TABLE 2
GROUNDWATER GAUGING
RESULTS SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Monitoring Well/Piezometer Identification	Gauging Date	Top of Casing Elevation (ft)	LPH Thickness (ft)	Depth to Groundwater (ft)	Corrected Groundwater Table Elevation (ft)
YP-4	1/19/2015	441.83	0.00	9.13	432.70
	2/25/2015	441.83	0.00	9.32	432.51
Casing:	3/24/2015	441.83	0.00	8.25	433.58
0 to 8 feet	4/20/2015	441.83	0.00	8.74	433.09
	5/27/2015	441.83	0.00	9.07	432.76
Screen:	6/22/2015	441.83	0.00	8.96	432.87
8 to 13 feet	7/28/2015	441.83	0.00	8.27	433.56
	8/24/2015	441.83	0.00	9.18	432.65
	9/21/2015	441.83	0.00	9.31	432.52
	10/29/2015	441.83	0.00	9.11	432.72
	11/18/2015	441.83	0.00	9.41	432.42
	12/9/2015	441.83	0.00	9.28	432.55
	1/12/2016	441.83	0.00	8.78	433.05
	3/8/2016	441.83	0.00	8.54	433.29
	6/7/2016	441.83	0.00	9.02	432.81
YP-5	1/19/2015	433.65	0.00	5.50	428.15
	2/25/2015	433.65	0.00	5.79	427.86
Casing:	3/24/2015	433.65	0.00	3.90	429.75
0 to 5 feet	4/20/2015	433.65	0.00	4.05	429.60
	5/27/2015	433.65	0.00	4.21	429.44
Screen:	6/22/2015	433.65	0.00	4.49	429.16
5 to 10 feet	7/28/2015	433.65	0.00	5.48	428.17
	8/24/2015	433.65	0.00	3.68	429.97
	9/21/2015	433.65	0.00	4.12	429.53
	10/29/2015	433.65	0.00	4.02	429.63
	11/18/2015	433.65	0.00	4.02	429.63
	12/9/2015	433.65	0.00	3.88	429.77
	1/12/2016	433.65	0.00	4.69	428.96
	3/8/2016	433.65	0.00	3.97	429.68
	6/7/2016	433.65	0.00	4.31	429.34
MW-4	1/19/2015	455.10	NM	NM	NM
	2/25/2015	455.10	NM	NM	NM
Casing:	3/24/2015	455.10	NM	NM	NM
0 to 10 feet	4/20/2015	455.10	0.00	20.72	434.38
	5/27/2015	455.10	0.00	20.68	434.42
Screen:	6/22/2015	455.10	0.00	20.38	434.72
10 to 25 feet	7/28/2015	455.10	0.00	19.86	435.24
	8/24/2015	455.10	0.00	20.08	435.02
	9/21/2015	455.10	0.00	20.57	434.53
	10/29/2015	455.10	0.00	20.26	434.84
	11/18/2015	455.10	0.00	21.29	433.81
	12/9/2015	455.10	0.00	21.08	434.02
	1/12/2016	455.10	0.00	20.54	434.56
	3/8/2016	455.10	0.00	20.29	434.81
	6/7/2016	455.10	0.00	20.28	434.82
MW-7	1/19/2015	452.69	0.00	19.21	433.48
	2/25/2015	452.69	0.00	19.06	433.63
Casing:	3/24/2015	452.69	0.00	18.67	434.02
0 to 8 feet	4/20/2015	452.69	0.00	18.47	434.22
	5/27/2015	452.69	0.00	15.60	437.09
Screen:	6/22/2015	452.69	0.00	18.29	434.40
8 to 33 feet	7/28/2015	452.69	0.00	17.90	434.79
	8/24/2015	452.69	0.00	18.11	434.58
	9/21/2015	452.69	0.00	18.42	434.27
	10/29/2015	452.69	0.00	18.20	434.49
	11/18/2015	452.69	0.00	18.99	433.70
	12/9/2015	452.69	0.00	18.81	433.88
	1/12/2016	452.69	0.00	18.71	433.98
	3/8/2016	452.69	0.00	18.16	434.53
	6/7/2016	452.69	0.00	18.19	434.50

TABLE 2
GROUNDWATER GAUGING
RESULTS SUMMARY
Former Hess Station No. 20204
1613 East Joppa Road
Towson, MD
Case No. 1991-2100-BA

Monitoring Well/Piezometer Identification	Gauging Date	Top of Casing Elevation (ft)	LPH Thickness (ft)	Depth to Groundwater (ft)	Corrected Groundwater Table Elevation (ft)
MDE-4	1/19/2015	443.18	0.00	9.89	433.29
	2/25/2015	443.18	0.00	9.99	433.19
Casing:	3/24/2015	443.18	0.00	9.58	433.60
0 to 3 feet	4/20/2015	443.18	0.00	9.41	433.77
	5/27/2015	443.18	0.00	9.51	433.67
Screen:	6/22/2015	443.18	0.00	9.25	433.93
3 to 13 feet	7/28/2015	443.18	0.00	8.94	434.24
	8/24/2015	443.18	0.00	9.14	434.04
	9/21/2015	443.18	0.00	9.28	433.90
	10/29/2015	443.18	0.00	9.03	434.15
	11/18/2015	443.18	0.00	9.73	433.45
	12/9/2015	443.18	0.00	9.58	433.60
	1/12/2016	443.18	0.00	9.31	433.87
	3/8/2016	443.18	0.00	8.98	434.20
	6/7/2016	443.18	0.00	9.03	434.15
OW-1	1/19/2015	455.31	0.00	19.33	435.98
	2/25/2015	455.31	0.00	21.66	433.65
Casing:	3/24/2015	455.31	0.00	21.08	434.23
0 to 9 feet	4/20/2015	455.31	0.00	20.66	434.65
	5/27/2015	455.31	0.00	20.59	434.72
Screen:	6/22/2015	455.31	0.00	20.58	434.73
9 to 34 feet	7/28/2015	455.31	0.00	20.18	435.13
	8/24/2015	455.31	0.00	20.40	434.91
	9/21/2015	455.31	0.00	20.73	434.58
	10/29/2015	455.31	0.00	20.55	434.76
	11/18/2015	455.31	0.00	21.38	433.93
	12/9/2015	455.31	0.00	21.23	434.08
	1/12/2016	455.31	0.00	21.06	434.25
	3/8/2016	455.31	0.00	20.54	434.77
	6/7/2016	455.31	0.00	20.58	434.73
MW-1	1/19/2015	453.92	NM	NM	NM
	2/25/2015	453.92	NM	NM	NM
Casing:	3/24/2015	453.92	NM	NM	NM
Unknown	4/20/2015	453.92	0.00	16.71	437.21
	5/27/2015	453.92	0.00	18.75	435.17
Screen:	6/22/2015	453.92	0.00	18.24	435.68
Unknown	7/28/2015	453.92	0.00	17.20	436.72
	8/24/2015	453.92	0.00	17.42	436.50
	9/21/2015	453.92	0.00	18.49	435.43
	10/29/2015	453.92	0.00	18.36	435.56
	11/18/2015	453.92	0.00	19.40	434.52
	12/9/2015	453.92	0.00	19.24	434.68
	1/12/2016	453.92	0.00	18.45	435.47
	3/8/2016	453.92	0.00	18.28	435.64
	6/7/2016	453.92	0.00	18.21	435.71

Notes:
ft = feet
LPH = Liquid Phase Hydrocarbons
NM = Not Monitored (Well not accessible)

TABLE 3
MONTHLY PID SCREENING
RESULTS SUMMARY
Ridgely Manor Park
Towson, MD
Case No. 1991-2100-BA

Location (Corresponds with Site Plan)	Date	Breathing Zone Readings (ppm)	Below Grade Readings (ppm)
Yakona Road Curb Inlet	1/19/2015	0.0	0.6
	2/24/2015	0.0	0.0
	3/23/2015	0.0	0.0
	4/27/2015	0.0	0.0
	5/27/2015	0.0	0.0
	6/29/2015	0.0	0.0
	7/28/2015	0.0	0.0
	8/24/2015	0.0	0.0
	9/30/2015	0.0	0.0
	10/29/2015	0.0	0.1
	11/23/2015	0.0	0.0
	12/10/2015	0.0	0.0
	1/26/2016	0.0	0.0
	2/9/2016	0.0	0.0
	3/23/2016	0.0	0.0
	4/6/2016	0.0	0.0
	5/17/2016	0.0	0.0
	6/8/2016	0.0	0.0
Manhole 3	1/19/2015	0.0	0.4
	2/24/2015	0.0	0.0
	3/23/2015	0.0	0.0
	4/27/2015	0.0	0.0
	5/27/2015	0.0	0.0
	6/29/2015	0.0	2.2
	7/28/2015	0.0	0.2
	8/24/2015	0.0	0.4
	9/30/2015	0.0	0.7
	10/29/2015	0.0	0.8
	11/23/2015	0.0	0.0
	12/10/2015	0.0	0.1
	1/26/2016	0.0	0.0
	2/9/2016	0.0	0.0
	3/23/2016	0.0	0.0
	4/6/2016	0.0	0.0
	5/17/2016	0.0	0.0
	6/8/2016	0.0	0.6
Manhole 21	1/19/2015	0.0	1.6
	2/24/2015	0.0	1.2
	3/23/2015	0.0	5.0
	4/27/2015	0.0	23.0
	5/27/2015	0.0	1.0
	6/29/2015	0.0	7.9
	7/28/2015	0.0	1.9
	8/24/2015	0.0	2.6
	9/30/2015	0.0	2.9
	10/29/2015	0.0	3.2
	11/23/2015	0.0	0.1
	12/10/2015	0.0	0.7
	1/26/2016	0.0	0.0
	2/9/2016	0.0	0.4
	3/23/2016	0.0	0.2
	4/6/2016	0.0	25.9
	5/17/2016	0.0	26.7
	6/8/2016	0.0	21.3

TABLE 3
MONTHLY PID SCREENING
RESULTS SUMMARY
Ridgely Manor Park
Towson, MD
Case No. 1991-2100-BA

Location (Corresponds with Site Plan)	Date	Breathing Zone Readings (ppm)	Below Grade Readings (ppm)
Manhole 22	1/19/2015	0.0	63.6
	2/24/2015	0.0	54.2
	3/23/2015	0.0	52.0
	4/27/2015	0.0	48.0
	5/27/2015	0.0	30.0
	6/29/2015	0.0	0.1
	7/28/2015	0.0	28.5
	8/24/2015	0.0	32.1
	9/30/2015	0.0	37.4
	10/29/2015	0.0	39.2
	11/23/2015	0.0	3.8
	12/10/2015	0.0	30.8
	1/26/2016	0.0	2.1
	2/9/2016	0.0	27.4
	3/23/2016	0.0	3.9
	4/6/2016	0.0	44.2
	5/17/2016	0.0	3.8
	6/8/2016	0.0	0.0
Manhole 23	1/19/2015	0.0	43.7
	2/24/2015	0.0	2.4
	3/23/2015	0.0	48.0
	4/27/2015	0.0	40.0
	5/27/2015	0.0	6.1
	6/29/2015	0.0	0.3
	7/28/2015	0.0	9.2
	8/24/2015	0.0	8.3
	9/30/2015	0.0	9.3
	10/29/2015	0.0	10.1
	11/23/2015	0.0	19.4
	12/10/2015	0.0	23.1
	1/26/2016	0.0	15.7
	2/9/2016	0.0	24.1
	3/23/2016	0.0	15.1
	4/6/2016	0.0	15.3
	5/17/2016	0.0	0.0
	6/8/2016	0.0	0.2
Manhole 24	1/19/2015	0.0	63.2
	2/24/2015	0.0	5.1
	3/23/2015	0.0	83.0
	4/27/2015	0.0	71.0
	5/27/2015	0.0	10.6
	6/29/2015	0.0	1.0
	7/28/2015	0.0	11.5
	8/24/2015	0.0	11.5
	9/30/2015	0.0	10.2
	10/29/2015	0.0	10.6
	11/23/2015	0.0	23.1
	12/10/2015	0.0	24.3
	1/26/2016	0.0	24.9
	2/9/2016	0.0	19.9
	3/23/2016	0.0	26.5
	4/6/2016	0.0	29.0
	5/17/2016	0.0	0.0
	6/8/2016	0.0	0.0

Notes:
PID = Photoionization Detector
ppm = parts per million

Notable Observations: No petroleum odors were observed in the breathing zone, around any of th manholes.

TABLE 4
GROUNDWATER TREATMENT SYSTEM
DISCHARGE SUMMARY
Ridgely Manor Park
Towson, MD
Case No. 1991-2100-BA
NPDES Permit # MDG915958

Month Year	Monthly Discharge Volume (gallons)	Cumulative Discharge Volume (gallons)
January 2015	51,520	51,520
February 2015	41,600	93,120
March 2015	31,090	124,210
April 2015	18,940	143,150
May 2015	23,180	166,330
June 2015	36,940	203,270
July 2015	24,170	227,440
August 2015	29,460	256,900
September 2015	24,570	281,470
October 2015	18,540	300,010
November 2015	27,850	327,860
December 2015	45,180	373,040
January 2016	35,570	408,610
February 2016	33,300	441,910
March 2016	38,030	479,940
April 2016	54,020	533,960
May 2016	75,280	609,240
June 2016	54,560	663,800

Table 5
GROUNDWATER TREATMENT SYSTEM
SAMPLING RESULTS SUMMARY
Ridgely Manor Park
Towson, MD
Case # 1991-2100-BA
NPDES Permit # MDG915958

Groundwater Treatment System Sample Identification	Groundwater Treatment System Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (Total) (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Total TPH (mg/L)	Naphthalene (µg/L)
INN	1/19/2015	1.1	7.7	77.6	107	**193.4**	11.8	1.42	0.898	2.318	49.3
EFF	1/19/2015	ND	ND	ND	ND	0.0	2.7	ND	ND	0.0	ND
INN	1/26/2015	0.48 (J)	4.4	35.2	68.7	**108.78 (J)**	ND	0.973	0.454	1.427	35.1
EFF	1/26/2015	0.26 (J)	2.3	15.7	38.5	56.76 (J)	6.8	0.418	0.267	0.685	12.3
INN	2/4/2015	1.2	10.9	96.1	173	**281.2**	12.4	1.70	1.21	2.91	60.1
EFF	2/4/2015	ND	0.74 (J)	1.6	16.0	18.34 (J)	7.0	ND	ND	0.0	0.84 (J)
INN	2/20/2015	0.90	8.7	81.5	167	**258.10**	14.5	1.79	0.826	2.616	62.5
EFF	2/20/2015	ND	ND	ND	ND	0.0	ND	ND	ND	0.0	ND
INN	3/3/2015	0.77	8.6	71.1	152	**232.47**	10.9	1.51	0.573	2.083	47.3
EFF	3/3/2015	ND	ND	ND	ND	0.0	0.88 (J)	ND	ND	0.0	ND
INF	3/30/2015	1.6	15.3	100	352	**468.9**	11.5	2.33	0.779	3.109	51.3
EFF	3/30/2015	ND	ND	ND	ND	0.0	0.97 (J)	ND	ND	0.0	ND
INF	4/7/2015	1.9	16.7	143	439	**600.6**	12.5	3.52	0.870	4.390	94.1
EFF	4/7/2015	ND	ND	ND	ND	0.0	0.59 (J)	ND	ND	0.0	ND
INF	4/27/2015	1.7	ND	ND	ND	1.7	ND	2.51	1.24	3.75	79.7
EFF	4/27/2015	ND	ND	ND	ND	0.0	0.41 (J)	ND	ND	0.0	ND
INN	5/4/2015	1.4	15.3	117	340	**473.7**	11.9	2.02	0.873	2.893	76.6
EFF	5/4/2015	ND	ND	ND	ND	0.0	1.0	ND	0.192	0.192	ND
INF	5/18/2015	1.7	20.9	141	417	**580.6**	12.8	3.58	1.17	4.75	71.3
EFF	5/18/2015	ND	ND	ND	0.37 (J)	0.37 (J)	2.2	ND	ND	0.0	ND
INF	6/2/2015	0.83	8.7	75.3	250	**334.83**	6.2	1.45	0.461	1.911	38.2
EFF	6/2/2015	ND	ND	ND	ND	0.0	1.5	ND	0.114	0.114	ND
INF	6/23/2015	1.6	14.7	116	343	**475.3**	ND	1.45	0.937	2.387	69.3
EFF	6/23/2015	ND	ND	ND	ND	0.0	2.3	ND	ND	0.0	ND
INN	7/6/2015	1.7	13.1	109	355	**478.8**	11.6	2.20	1.02	3.22	67.4
EFF	7/6/2015	ND	ND	ND	0.27 (J)	0.27 (J)	3.8	ND	0.212	0.212	ND
INF	7/21/2015	1.4	10.4	81.4	278	**371.2**	7.0	2.03	0.943	2.973	58.7
EFF	7/21/2015	ND	ND	ND	ND	0.0	1.1	ND	ND	0.0	ND
INN	8/3/2015	2.3	17.7	125	430	**575.0**	12.4	3.08	0.812	3.892	72.9
EFF	8/3/2015	ND	ND	ND	ND	0.0	3.0	ND	ND	0.0	ND
INF	8/20/2015	1.1	5.9	22.4	81.3	**110.7**	5.3	0.476	0.206	0.682	3.6 (J)
EFF	8/20/2015	ND	ND	ND	ND	0.0	2.5	ND	0.239	0.239	ND
	NPDES Permit Limits*	**5**	**NL**	**NL**	**NL**	**100**	**NL**	**NL**	**NL**	**15**	**NL**

Table 5
GROUNDWATER TREATMENT SYSTEM
SAMPLING RESULTS SUMMARY
Ridgely Manor Park
Towson, MD
Case # 1991-2100-BA
NPDES Permit # MDG915958

Groundwater Treatment System Sample Identification	Groundwater Treatment System Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (Total) (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Total TPH (mg/L)	Naphthalene (µg/L)
INF	9/9/2015	3.1	25.5	144	446	**618.6**	11.2	3.15	1.27	4.42	50.8
EFF	9/9/2015	ND	ND	ND	ND	0.0	2.4	ND	0.448	0.448	ND
INN	9/22/2015	2.6	14.4	93.4	272	**382.4**	8.5	3.16	0.971	4.131	65.8
EFF	9/22/2015	ND	ND	ND	ND	0.0	2.6	ND	0.0953	0.0953	ND
INF	10/7/2015	3.1	14.7	105	298	**420.8**	10.3	2.09	0.290	2.380	58.1
EFF	10/7/2015	ND	ND	ND	ND	0.0	2.1	ND	0.0987	0.0987	ND
INF	10/13/2015	2.8	11.7	88.8	263	**366.3**	10.2	2.82	1.40	4.22	48.0
EFF	10/13/2015	ND	ND	ND	ND	0.0	1.9	ND	0.105	0.105	ND
INN	11/10/2015	2.0	9.1	71.9	177	**260.0**	ND	1.98	0.807	2.787	35.7
EFF	11/10/2015	ND	ND	ND	ND	0.0	1.7	ND	ND	0.0	ND
INF	12/2/2015	1.9	4.3	48.7	106	**160.9**	7.3	1.02	0.502	1.522	39.7
EFF	12/2/2015	ND	ND	ND	ND	0.0	3.8	ND	ND	0.0	ND
INF	12/16/2015	1.8	5.0	57.4	111	**175.2**	7.6	1.17	0.527	1.697	51.0
EFF	12/16/2015	ND	ND	ND	ND	0.0	1.0	ND	ND	0.0	ND
INF	1/6/2016	2.4	7.0	86.8	144	**240.2**	7.2	1.90	0.627	2.527	41.2
EFF	1/6/2016	ND	ND	ND	ND	0.0	3.4	ND	ND	0.0	ND
INN	1/12/2016	1.2	3.7	36.5	83.2	**124.6**	5.4	1.31	0.376	1.686	21.0
EFF	1/12/2016	ND	ND	ND	ND	0.0	3.1	ND	ND	0.0	ND
INF	2/3/2016	0.86	3.3	26.6	66.1	96.86	3.2	0.668	0.340	1.008	17.5
EFF	2/3/2016	ND	ND	ND	ND	0.0	2.0	ND	ND	0.0	ND
INF	2/9/2016	2.6	11.8	96.2	219	**329.6**	7.1	1.79	0.665	2.455	49.6
EFF	2/9/2016	ND	ND	ND	ND	0.0	2.1	ND	0.0850	0.0850	ND
INF	3/3/2016	3.1	12.2	112	367	**494.3**	7.6	2.71	0.717	3.427	68.5
EFF	3/3/2016	ND	ND	ND	ND	0.0	5.3	ND	ND	0.0	ND
INF	3/9/2016	3.1	14.1	125	377	**519.2**	6.6	3.03	0.665	3.695	76.7
EFF	3/9/2016	ND	ND	ND	0.78 (J)	0.78 (J)	6.2	ND	ND	0.0	ND
INN	4/6/2016	4.6	35.1	156	505	**700.7**	7.3	3.78	0.947	4.727	75.3
EFF	4/6/2016	ND	0.32 (J)	0.75 (J)	2.3	3.37 (J)	2.4	ND	ND	0.0	ND
INF	4/12/2016	4.3	29.0	109	439	**581.3**	7.4	2.83	0.994	3.824	74.9
EFF	4/12/2016	ND	0.17 (J)	0.41 (J)	1.4	1.98 (J)	1.4	ND	ND	0.0	ND
	NPDES Permit Limits*	**5**	**NL**	**NL**	**NL**	**100**	**NL**	**NL**	**NL**	**15**	**NL**

Table 5
GROUNDWATER TREATMENT SYSTEM
SAMPLING RESULTS SUMMARY
Ridgely Manor Park
Towson, MD
Case # 1991-2100-BA
NPDES Permit # MDG915958

Groundwater Treatment System Sample Identification	Groundwater Treatment System Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (Total) (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	Total TPH (mg/L)	Naphthalene (µg/L)
INN	5/4/2016	2.7	23.1	123	358	**506.8**	5.0	2.43	0.656	3.086	63.2
EFF	5/4/2016	ND	0.40 (J)	0.94 (J)	3.6	4.94 (J)	3.7	ND	ND	0.0	ND
INN	5/12/2016	3.8	29.2	166	388	**587.0**	7.4	3.28	1.40	4.68	76.1
EFF	5/12/2016	0.22 (J)	0.58 (J)	1.2	3.1	5.1 (J)	5.8	ND	0.269	0.269	ND
INN	6/8/2016	4.6	33.2	187	466	**690.8**	7.3	3.24	0.777	4.017	86.0
EFF	6/8/2016	0.50	1.4	3.5	10.4	15.80	7.2	0.226	ND	0.226	ND
INN	6/14/2016	4.9	30.1	164	422	**621.0**	7.2	2.94	0.822	3.762	74.4
EFF	6/14/2016	0.83	3.0	8.1	20.5	32.43	4.9	0.316	ND	0.316	ND
	NPDES Permit Limits*	**5**	**NL**	**NL**	**NL**	**100**	**NL**	**NL**	**NL**	**15**	**NL**

Notes:
*****Effluent Limitations listed in NPDES Permit # MDG915958
NPDES = National Pollutant Discharge Elimination System
EFF = Effluent Sample (Post-filtration)
INF = Influent Sample (Pre-filtration)
INN = Influent Sample (Pre-filtration)
ND = Constituent Compound Not Detected
NL = No limit listed in NPDES permit
NA = Not Analyzed
(J) = Laboratory-Estimated Value

µg/L = micrograms/Liter
mg/L = milligrams/Liter
MTBE = Methyl-Tertiary-Butyl Ether
Total BTEX = sum of Benzene, Toluene, Ethylbenzene, and Xylenes
TPH = Total Petroleum Hydrocarbons
DRO = Diesel Range Organics
GRO = Gasoline Range Organics

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Automated Report

Technical Report for

EMS Environmental, Inc.

HESS #20204, 1613 East Joppa Road, Towson, MD

5713

SGS Accutest Job Number: JC21893

Sampling Date: 06/07/16

Report to:

EMS Environmental, Inc.

ynabavian@emsenv.com

ATTN: Yoosef Nabavian

Total number of pages in report: **84**

Nancy Cole
Laboratory Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Client Service contact: Matt Cordova 732-329-0200

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Sample Summary

EMS Environmental, Inc.

Job No: JC21893

HESS #20204, 1613 East Joppa Road, Towson, MD
Project No: 5713

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC21893-1	06/07/16	14:05	RL	06/09/16	AQ	Ground Water	YMW-1
JC21893-2	06/07/16	11:50	RL	06/09/16	AQ	Ground Water	YMW-2
JC21893-3	06/07/16	11:25	RL	06/09/16	AQ	Ground Water	YMW-3
JC21893-4	06/07/16	13:15	RL	06/09/16	AQ	Ground Water	YMW-4
JC21893-5	06/07/16	15:10	RL	06/09/16	AQ	Ground Water	YMW-5
JC21893-6	06/07/16	14:40	RL	06/09/16	AQ	Ground Water	YMW-6
JC21893-7	06/07/16	10:30	RL	06/09/16	AQ	Ground Water	YMW-7
JC21893-8	06/07/16	12:15	RL	06/09/16	AQ	Ground Water	YMW-8
JC21893-9	06/07/16	13:40	RL	06/09/16	AQ	Ground Water	YMW-9
JC21893-10	06/07/16	09:40	RL	06/09/16	AQ	Ground Water	OW-1
JC21893-11	06/07/16	16:40	RL	06/09/16	AQ	Ground Water	MW-1
JC21893-12	06/07/16	10:55	RL	06/09/16	AQ	Ground Water	MW-4
JC21893-13	06/07/16	15:35	RL	06/09/16	AQ	Ground Water	MW-7

Sample Summary
(continued)

EMS Environmental, Inc.

Job No: JC21893

HESS #20204, 1613 East Joppa Road, Towson, MD
Project No: 5713

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC21893-14	06/07/16	16:00	RL	06/09/16	AQ	Ground Water	MDE-4

Summary of Hits

Job Number: JC21893
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/07/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC21893-1	**YMW-1**					
Isopropylbenzene		0.32 J	1.0	0.16	ug/l	SW846 8260C
n-Propylbenzene		0.37 J	2.0	0.17	ug/l	SW846 8260C
JC21893-2	**YMW-2**					
Benzene		5.2	0.50	0.14	ug/l	SW846 8260C
sec-Butylbenzene		1.0 J	2.0	1.0	ug/l	SW846 8260C
Di-Isopropyl ether		3.5	2.0	0.41	ug/l	SW846 8260C
1,2-Dichloroethane		0.51 J	1.0	0.39	ug/l	SW846 8260C
Isopropylbenzene		0.29 J	1.0	0.16	ug/l	SW846 8260C
Methyl Tert Butyl Ether		14.3	1.0	0.34	ug/l	SW846 8260C
Tert Butyl Alcohol		99.4	10	3.0	ug/l	SW846 8260C
tert-Butyl Ethyl Ether		0.47 J	2.0	0.23	ug/l	SW846 8260C
TPH-GRO (C6-C10)		0.222	0.20	0.055	mg/l	SW846 8015C
JC21893-3	**YMW-3**					
No hits reported in this sample.						
JC21893-4	**YMW-4**					
Benzene		13.9	0.50	0.14	ug/l	SW846 8260C
n-Butylbenzene		9.6	2.0	0.28	ug/l	SW846 8260C
sec-Butylbenzene		8.5	2.0	1.0	ug/l	SW846 8260C
tert-Butylbenzene		0.41 J	2.0	0.28	ug/l	SW846 8260C
Di-Isopropyl ether		8.7	2.0	0.41	ug/l	SW846 8260C
Ethylbenzene		27.8	1.0	0.20	ug/l	SW846 8260C
Isopropylbenzene		50.5	1.0	0.16	ug/l	SW846 8260C
p-Isopropyltoluene		1.5 J	2.0	1.0	ug/l	SW846 8260C
Methyl Tert Butyl Ether		32.3	1.0	0.34	ug/l	SW846 8260C
Naphthalene		98.7	5.0	0.39	ug/l	SW846 8260C
n-Propylbenzene		133	2.0	0.17	ug/l	SW846 8260C
Tert Butyl Alcohol		280	10	3.0	ug/l	SW846 8260C
tert-Butyl Ethyl Ether		1.8 J	2.0	0.23	ug/l	SW846 8260C
Toluene		9.5	1.0	0.23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		0.63 J	2.0	0.26	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		3.9	2.0	0.32	ug/l	SW846 8260C
m,p-Xylene		106	1.0	0.42	ug/l	SW846 8260C
o-Xylene		10.5	1.0	0.21	ug/l	SW846 8260C
Xylene (total)		116	1.0	0.21	ug/l	SW846 8260C
TPH-GRO (C6-C10)		4.04	0.20	0.055	mg/l	SW846 8015C
TPH-DRO (C10-C28)		1.79	0.083	0.064	mg/l	SW846 8015C

Summary of Hits

Job Number: JC21893
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/07/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC21893-5	**YMW-5**					
Benzene		0.23 J	0.50	0.14	ug/l	SW846 8260C
Methyl Tert Butyl Ether		6.8	1.0	0.34	ug/l	SW846 8260C
Tert Butyl Alcohol		12.6	10	3.0	ug/l	SW846 8260C
tert-Amyl Methyl Ether		0.23 J	2.0	0.23	ug/l	SW846 8260C
JC21893-6	**YMW-6**					
Di-Isopropyl ether		0.66 J	2.0	0.41	ug/l	SW846 8260C
1,2-Dichloroethane		12.1	1.0	0.39	ug/l	SW846 8260C
Methyl Tert Butyl Ether		4.3	1.0	0.34	ug/l	SW846 8260C
Tert Butyl Alcohol		109	10	3.0	ug/l	SW846 8260C
JC21893-7	**YMW-7**					
Benzene		127	0.50	0.14	ug/l	SW846 8260C
n-Butylbenzene		2.8	2.0	0.28	ug/l	SW846 8260C
sec-Butylbenzene		3.1	2.0	1.0	ug/l	SW846 8260C
1,2-Dichloroethane		9.2	1.0	0.39	ug/l	SW846 8260C
Ethylbenzene		166	1.0	0.20	ug/l	SW846 8260C
Isopropylbenzene		21.3	1.0	0.16	ug/l	SW846 8260C
p-Isopropyltoluene		3.9	2.0	1.0	ug/l	SW846 8260C
Methyl Tert Butyl Ether		7.6	1.0	0.34	ug/l	SW846 8260C
Naphthalene		75.6	5.0	0.39	ug/l	SW846 8260C
n-Propylbenzene		34.2	2.0	0.17	ug/l	SW846 8260C
Tert Butyl Alcohol		15.7	10	3.0	ug/l	SW846 8260C
Toluene		42.3	1.0	0.23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		244	20	2.6	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		88.5	2.0	0.32	ug/l	SW846 8260C
m,p-Xylene		491	10	4.2	ug/l	SW846 8260C
o-Xylene		129	1.0	0.21	ug/l	SW846 8260C
Xylene (total)		620	10	2.1	ug/l	SW846 8260C
TPH-GRO (C6-C10)		7.37	0.20	0.055	mg/l	SW846 8015C
TPH-DRO (C10-C28)		1.32	0.083	0.064	mg/l	SW846 8015C
JC21893-8	**YMW-8**					
Benzene		72.4	0.50	0.14	ug/l	SW846 8260C
n-Butylbenzene		4.7	2.0	0.28	ug/l	SW846 8260C
sec-Butylbenzene		4.1	2.0	1.0	ug/l	SW846 8260C
Chloroform		4.5	1.0	0.23	ug/l	SW846 8260C
Di-Isopropyl ether		0.92 J	2.0	0.41	ug/l	SW846 8260C
1,2-Dichloroethane		5.6	1.0	0.39	ug/l	SW846 8260C
Ethylbenzene		341	10	2.0	ug/l	SW846 8260C

2

Summary of Hits

Job Number: JC21893
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/07/16

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Isopropylbenzene	24.6	1.0	0.16	ug/l	SW846 8260C
p-Isopropyltoluene	13.8	2.0	1.0	ug/l	SW846 8260C
Methyl Tert Butyl Ether	29.1	1.0	0.34	ug/l	SW846 8260C
Naphthalene	77.1	5.0	0.39	ug/l	SW846 8260C
n-Propylbenzene	73.6	2.0	0.17	ug/l	SW846 8260C
Tert Butyl Alcohol	20.9	10	3.0	ug/l	SW846 8260C
Toluene	14.6	1.0	0.23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	299	20	2.6	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	40.1	2.0	0.32	ug/l	SW846 8260C
m,p-Xylene	175	1.0	0.42	ug/l	SW846 8260C
o-Xylene	9.4	1.0	0.21	ug/l	SW846 8260C
Xylene (total)	185	1.0	0.21	ug/l	SW846 8260C
TPH-GRO (C6-C10)	4.26	0.20	0.055	mg/l	SW846 8015C
TPH-DRO (C10-C28)	1.02	0.083	0.064	mg/l	SW846 8015C
JC21893-9 YMW-9					
1,2-Dichloroethane	1.5	1.0	0.39	ug/l	SW846 8260C
Methyl Tert Butyl Ether	0.48 J	1.0	0.34	ug/l	SW846 8260C
JC21893-10 OW-1					
Benzene	2.5	0.50	0.14	ug/l	SW846 8260C
n-Butylbenzene	0.37 J	2.0	0.28	ug/l	SW846 8260C
sec-Butylbenzene	2.8	2.0	1.0	ug/l	SW846 8260C
tert-Butylbenzene	0.29 J	2.0	0.28	ug/l	SW846 8260C
Di-Isopropyl ether	0.46 J	2.0	0.41	ug/l	SW846 8260C
Ethylbenzene	2.5	1.0	0.20	ug/l	SW846 8260C
Isopropylbenzene	0.88 J	1.0	0.16	ug/l	SW846 8260C
Methyl Tert Butyl Ether	6.6	1.0	0.34	ug/l	SW846 8260C
n-Propylbenzene	0.39 J	2.0	0.17	ug/l	SW846 8260C
Tert Butyl Alcohol	14.0	10	3.0	ug/l	SW846 8260C
Toluene	0.33 J	1.0	0.23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	0.75 J	2.0	0.26	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	0.68 J	2.0	0.32	ug/l	SW846 8260C
m,p-Xylene	2.7	1.0	0.42	ug/l	SW846 8260C
o-Xylene	0.33 J	1.0	0.21	ug/l	SW846 8260C
Xylene (total)	3.0	1.0	0.21	ug/l	SW846 8260C
TPH-GRO (C6-C10)	0.934	0.20	0.055	mg/l	SW846 8015C
TPH-DRO (C10-C28)	0.370	0.083	0.064	mg/l	SW846 8015C
JC21893-11 MW-1					

No hits reported in this sample.

2

Summary of Hits

Job Number: JC21893
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/07/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC21893-12	**MW-4**					
Benzene		155	0.50	0.14	ug/l	SW846 8260C
n-Butylbenzene		1.3 J	2.0	0.28	ug/l	SW846 8260C
sec-Butylbenzene		1.9 J	2.0	1.0	ug/l	SW846 8260C
Di-Isopropyl ether		38.1	2.0	0.41	ug/l	SW846 8260C
1,2-Dichloroethane		3.8	1.0	0.39	ug/l	SW846 8260C
Ethylbenzene		744	10	2.0	ug/l	SW846 8260C
Isopropylbenzene		45.1	1.0	0.16	ug/l	SW846 8260C
p-Isopropyltoluene		1.1 J	2.0	1.0	ug/l	SW846 8260C
Methyl Tert Butyl Ether		6.2	1.0	0.34	ug/l	SW846 8260C
Naphthalene		436	50	3.9	ug/l	SW846 8260C
n-Propylbenzene		95.2	2.0	0.17	ug/l	SW846 8260C
Tert Butyl Alcohol		3030	100	30	ug/l	SW846 8260C
tert-Amyl Methyl Ether		3.1	2.0	0.23	ug/l	SW846 8260C
tert-Butyl Ethyl Ether		0.33 J	2.0	0.23	ug/l	SW846 8260C
Toluene		27.1	1.0	0.23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		926	20	2.6	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		3.2	2.0	0.32	ug/l	SW846 8260C
m,p-Xylene		97.5	1.0	0.42	ug/l	SW846 8260C
o-Xylene		41.5	1.0	0.21	ug/l	SW846 8260C
Xylene (total)		139	1.0	0.21	ug/l	SW846 8260C
TPH-GRO (C6-C10)		6.54	0.20	0.055	mg/l	SW846 8015C
TPH-DRO (C10-C28)		3.15	0.076	0.058	mg/l	SW846 8015C
JC21893-13	**MW-7**					
Benzene		8.3	0.50	0.14	ug/l	SW846 8260C
n-Butylbenzene		2.2	2.0	0.28	ug/l	SW846 8260C
sec-Butylbenzene		4.3	2.0	1.0	ug/l	SW846 8260C
tert-Butylbenzene		0.39 J	2.0	0.28	ug/l	SW846 8260C
Di-Isopropyl ether		3.5	2.0	0.41	ug/l	SW846 8260C
1,2-Dichloroethane		1.7	1.0	0.39	ug/l	SW846 8260C
Ethylbenzene		32.0	1.0	0.20	ug/l	SW846 8260C
Isopropylbenzene		6.2	1.0	0.16	ug/l	SW846 8260C
Methyl Tert Butyl Ether		25.3	1.0	0.34	ug/l	SW846 8260C
Naphthalene		5.5	5.0	0.39	ug/l	SW846 8260C
n-Propylbenzene		11.3	2.0	0.17	ug/l	SW846 8260C
Tert Butyl Alcohol		73.8	10	3.0	ug/l	SW846 8260C
tert-Amyl Methyl Ether		1.0 J	2.0	0.23	ug/l	SW846 8260C
tert-Butyl Ethyl Ether		0.45 J	2.0	0.23	ug/l	SW846 8260C
Toluene		1.5	1.0	0.23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		36.2	2.0	0.26	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		1.2 J	2.0	0.32	ug/l	SW846 8260C
m,p-Xylene		12.6	1.0	0.42	ug/l	SW846 8260C

2

Summary of Hits

Job Number: JC21893
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/07/16

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
o-Xylene	1.9	1.0	0.21	ug/l	SW846 8260C
Xylene (total)	14.4	1.0	0.21	ug/l	SW846 8260C
TPH-GRO (C6-C10)	1.39	0.20	0.055	mg/l	SW846 8015C
TPH-DRO (C10-C28)	0.904	0.076	0.058	mg/l	SW846 8015C
JC21893-14 MDE-4					
Chloroform	0.53 J	1.0	0.23	ug/l	SW846 8260C
Tetrachloroethene	0.37 J	1.0	0.23	ug/l	SW846 8260C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	YMW-1		
Lab Sample ID:	JC21893-1	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156662.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-1		
Lab Sample ID:	JC21893-1	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	0.32	1.0	0.16	ug/l	J
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	0.37	2.0	0.17	ug/l	J
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-1		
Lab Sample ID:	JC21893-1	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-1		
Lab Sample ID:	JC21893-1	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82319.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	80%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-1		
Lab Sample ID:	JC21893-1	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77722.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		36-144%
16416-32-3	Tetracosane-d50	87%		32-138%
438-22-2	5a-Androstane	82%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-2		
Lab Sample ID:	JC21893-2	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156663.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	5.2	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	1.0	2.0	1.0	ug/l	J
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	3.5	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	0.51	1.0	0.39	ug/l	J
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-2		
Lab Sample ID:	JC21893-2	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	0.29	1.0	0.16	ug/l	J
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	14.3	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	99.4	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	0.47	2.0	0.23	ug/l	J
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-2		
Lab Sample ID:	JC21893-2	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-2		
Lab Sample ID:	JC21893-2	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82331.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.222	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	109%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-2		
Lab Sample ID:	JC21893-2	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77723.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	55%		36-144%
16416-32-3	Tetracosane-d50	56%		32-138%
438-22-2	5a-Androstane	55%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-3		
Lab Sample ID:	JC21893-3	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156668.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-3		
Lab Sample ID:	JC21893-3	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-3		
Lab Sample ID:	JC21893-3	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-3		
Lab Sample ID:	JC21893-3	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82320.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	80%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-3		
Lab Sample ID:	JC21893-3	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77724.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	57%		36-144%
16416-32-3	Tetracosane-d50	58%		32-138%
438-22-2	5a-Androstane	58%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-4		
Lab Sample ID:	JC21893-4	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156673.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	13.9	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	9.6	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	8.5	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	0.41	2.0	0.28	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	8.7	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-4		
Lab Sample ID:	JC21893-4	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	27.8	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	50.5	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	1.5	2.0	1.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	32.3	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	98.7	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	133	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	280	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	1.8	2.0	0.23	ug/l	J
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	9.5	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.63	2.0	0.26	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	3.9	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	106	1.0	0.42	ug/l	
95-47-6	o-Xylene	10.5	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	116	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-4		
Lab Sample ID:	JC21893-4	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	113%		73-122%
2037-26-5	Toluene-D8	102%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-4		
Lab Sample ID:	JC21893-4	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82335.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	4.04	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	90%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-4		
Lab Sample ID:	JC21893-4	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77727.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.79	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	84%		36-144%
16416-32-3	Tetracosane-d50	82%		32-138%
438-22-2	5a-Androstane	79%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-5		
Lab Sample ID:	JC21893-5	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156661.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	0.23	0.50	0.14	ug/l	J
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-5		
Lab Sample ID:	JC21893-5	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.8	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	12.6	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	0.23	2.0	0.23	ug/l	J
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-5		
Lab Sample ID:	JC21893-5	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-5		
Lab Sample ID:	JC21893-5	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82330.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	94%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-5		
Lab Sample ID:	JC21893-5	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77728.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		36-144%
16416-32-3	Tetracosane-d50	70%		32-138%
438-22-2	5a-Androstane	66%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-6		
Lab Sample ID:	JC21893-6	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156667.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	0.66	2.0	0.41	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	12.1	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-6		
Lab Sample ID:	JC21893-6	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.3	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	109	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-6		
Lab Sample ID:	JC21893-6	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-6		
Lab Sample ID:	JC21893-6	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82318.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	79%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-6		
Lab Sample ID:	JC21893-6	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77729.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	58%		36-144%
16416-32-3	Tetracosane-d50	46%		32-138%
438-22-2	5a-Androstane	44%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-7		
Lab Sample ID:	JC21893-7	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156675.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2	2D156676.D	10	06/14/16	AM	n/a	n/a	V2D6574

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	127	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	2.8	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	3.1	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	9.2	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-7		
Lab Sample ID:	JC21893-7	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	166	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	21.3	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	3.9	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	7.6	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	75.6	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	34.2	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	15.7	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	42.3	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	244 [a]	20	2.6	ug/l	
108-67-8	1,3,5-Trimethylbenzene	88.5	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	491 [a]	10	4.2	ug/l	
95-47-6	o-Xylene	129	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	620 [a]	10	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	103%	76-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-7		
Lab Sample ID:	JC21893-7	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	102%	73-122%
2037-26-5	Toluene-D8	101%	101%	84-119%
460-00-4	4-Bromofluorobenzene	100%	103%	78-117%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-7		
Lab Sample ID:	JC21893-7	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82338.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	7.37	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	90%		55-130%

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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-7		
Lab Sample ID:	JC21893-7	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77730.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.32	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		36-144%
16416-32-3	Tetracosane-d50	56%		32-138%
438-22-2	5a-Androstane	52%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-8		
Lab Sample ID:	JC21893-8	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156687.D	1	06/15/16	AM	n/a	n/a	V2D6574
Run #2	2D156688.D	10	06/15/16	AM	n/a	n/a	V2D6574

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	72.4	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	4.7	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	4.1	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	4.5	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	0.92	2.0	0.41	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	5.6	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-8		
Lab Sample ID:	JC21893-8	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	341 [a]	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	24.6	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	13.8	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	29.1	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	77.1	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	73.6	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	20.9	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	14.6	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	299 [a]	20	2.6	ug/l	
108-67-8	1,3,5-Trimethylbenzene	40.1	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	175	1.0	0.42	ug/l	
95-47-6	o-Xylene	9.4	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	185	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	104%	76-120%

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-8		
Lab Sample ID:	JC21893-8	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%	103%	73-122%
2037-26-5	Toluene-D8	102%	101%	84-119%
460-00-4	4-Bromofluorobenzene	100%	103%	78-117%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-8		
Lab Sample ID:	JC21893-8	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82326.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	4.26	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	92%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-8		
Lab Sample ID:	JC21893-8	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77731.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.02	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	61%		36-144%
16416-32-3	Tetracosane-d50	48%		32-138%
438-22-2	5a-Androstane	44%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-9		
Lab Sample ID:	JC21893-9	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156669.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	1.5	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-9		
Lab Sample ID:	JC21893-9	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.48	1.0	0.34	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-9		
Lab Sample ID:	JC21893-9	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-9		
Lab Sample ID:	JC21893-9	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82327.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	81%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YMW-9		
Lab Sample ID:	JC21893-9	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77732.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		36-144%
16416-32-3	Tetracosane-d50	60%		32-138%
438-22-2	5a-Androstane	55%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	JC21893-10	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156670.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	2.5	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	0.37	2.0	0.28	ug/l	J
135-98-8	sec-Butylbenzene	2.8	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	0.29	2.0	0.28	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	0.46	2.0	0.41	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	JC21893-10	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	2.5	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	0.88	1.0	0.16	ug/l	J
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.6	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	0.39	2.0	0.17	ug/l	J
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	14.0	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	0.33	1.0	0.23	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.75	2.0	0.26	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	0.68	2.0	0.32	ug/l	J
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	2.7	1.0	0.42	ug/l	
95-47-6	o-Xylene	0.33	1.0	0.21	ug/l	J
1330-20-7	Xylene (total)	3.0	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	JC21893-10	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	111%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	JC21893-10	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82336.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.934	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	88%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	JC21893-10	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77733.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.370	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%		36-144%
16416-32-3	Tetracosane-d50	59%		32-138%
438-22-2	5a-Androstane	55%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JC21893-11	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156671.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JC21893-11	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JC21893-11	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JC21893-11	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82328.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	81%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JC21893-11	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Z55710.D	1	06/13/16	TL	06/13/16	OP94675	G2Z2105
Run #2							

	Initial Volume	Final Volume
Run #1	330 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.076	0.058	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		36-144%
16416-32-3	Tetracosane-d50	82%		32-138%
438-22-2	5a-Androstane	84%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JC21893-12	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156689.D	1	06/15/16	AM	n/a	n/a	V2D6574
Run #2	2D156690.D	10	06/15/16	AM	n/a	n/a	V2D6574

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	155	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	1.3	2.0	0.28	ug/l	J
135-98-8	sec-Butylbenzene	1.9	2.0	1.0	ug/l	J
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	38.1	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	3.8	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JC21893-12	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	744 [a]	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	45.1	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	1.1	2.0	1.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	6.2	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	436 [a]	50	3.9	ug/l	
103-65-1	n-Propylbenzene	95.2	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	3030 [a]	100	30	ug/l	
994-05-8	tert-Amyl Methyl Ether	3.1	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	0.33	2.0	0.23	ug/l	J
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	27.1	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	926 [a]	20	2.6	ug/l	
108-67-8	1,3,5-Trimethylbenzene	3.2	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	97.5	1.0	0.42	ug/l	
95-47-6	o-Xylene	41.5	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	139	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	103%	76-120%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JC21893-12	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	97%	102%	73-122%
2037-26-5	Toluene-D8	104%	101%	84-119%
460-00-4	4-Bromofluorobenzene	98%	103%	78-117%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JC21893-12	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82332.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	6.54	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	102%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JC21893-12	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Z55713.D	1	06/13/16	TL	06/13/16	OP94675	G2Z2105
Run #2							

	Initial Volume	Final Volume
Run #1	330 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	3.15	0.076	0.058	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	64%		36-144%
16416-32-3	Tetracosane-d50	75%		32-138%
438-22-2	5a-Androstane	78%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	JC21893-13	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156691.D	1	06/15/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	8.3	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	2.2	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	4.3	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	0.39	2.0	0.28	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	3.5	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	1.7	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	JC21893-13	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	32.0	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	6.2	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	25.3	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	5.5	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	11.3	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	73.8	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	1.0	2.0	0.23	ug/l	J
637-92-3	tert-Butyl Ethyl Ether	0.45	2.0	0.23	ug/l	J
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	1.5	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	36.2	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	1.2	2.0	0.32	ug/l	J
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	12.6	1.0	0.42	ug/l	
95-47-6	o-Xylene	1.9	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	14.4	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		76-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	JC21893-13	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	JC21893-13	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82337.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	1.39	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	88%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	JC21893-13	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Z55714.D	1	06/13/16	TL	06/13/16	OP94675	G2Z2105
Run #2							

	Initial Volume	Final Volume
Run #1	330 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.904	0.076	0.058	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		36-144%
16416-32-3	Tetracosane-d50	88%		32-138%
438-22-2	5a-Androstane	89%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MDE-4		
Lab Sample ID:	JC21893-14	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2D156672.D	1	06/14/16	AM	n/a	n/a	V2D6574
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.53	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MDE-4		
Lab Sample ID:	JC21893-14	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	0.37	1.0	0.23	ug/l	J
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MDE-4		
Lab Sample ID:	JC21893-14	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MDE-4		
Lab Sample ID:	JC21893-14	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LM82329.D	1	06/13/16	HT	n/a	n/a	GLM3269
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	83%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MDE-4		
Lab Sample ID:	JC21893-14	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Z55715.D	1	06/13/16	TL	06/13/16	OP94675	G2Z2105
Run #2							

	Initial Volume	Final Volume
Run #1	330 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.076	0.058	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	62%		36-144%
16416-32-3	Tetracosane-d50	72%		32-138%
438-22-2	5a-Androstane	74%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Parameter Certification Exceptions

Job Number: JC21893
Account: EMSPA EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Methylene bromide	74-95-3	**SW846 8260C**	AQ	Accutest is not certified for this parameter.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

GW

CHAIN OF CUSTODY

ACCUTEST Laboratories
2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

Page 1 of 1

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JC21893

Client / Reporting Information

Company Name: EMS Environmental, Inc.
Address: 4550 Bath Pike
City: Bethlehem State: PA Zip: 18017
Project Contact: Jeremy Fox E-mail: jfox@emsenv.com
Phone #: 610-866-7799
Samplers's Name: Robert Lloyd/Brad Rohrbaugh

Project Information

Project Name: Former Hess 20204
Street: 1613 E. Joppa Road
City: Towson State: MD
Project #: 5713
Fax #: 610-866-8195
Client Purchase Order #: 5713

Requested Analysis

BTEX: 8021 ☐ 602 ☐ 624 ☐ TBA ☐ NAP ☐ 8260 ☐ MTBE ☐
8260 ☐ 624 ☐ TCL ☐ PPL ☐ STARS ☐ MTBE ☐ TBA ☐ NAP ☐ +10 ☐ +15 ☐
8270 ☐ 625 ☐ TCL ☐ PPL ☐ STARS ☐ ABN ☐ ACI ☐ BNI ☐ PAH ☐ +TICs ☐
Full Scan VOC's + Fuel Oxygenates by 8260B
TPH-GRO by 8015B
TPH-DRO by 8015B

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # MEOH Vial #	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	Na2S2O3	MEOH	EnCore	Full Scan VOC's + Fuel Oxygenates by 8260B	TPH-GRO by 8015B	TPH-DRO by 8015B	LAB USE ONLY
1	YMW-1 *		6/7/2016	1405	RL	GW	7	7								X	X	X	
2	YMW-2		6/7/2016	1150	RL	GW	7	7								X	X	X	E30
3	YMW-3		6/7/2016	1125	RL	GW	7	7								X	X	X	V346
4	YMW-4		6/7/2016	1315	RL	GW	7	7								X	X	X	V345
5	YMW-5		6/7/2016	1510	RL	GW	7	7								X	X	X	
6	YMW-6		6/7/2016	1440	RL	GW	7	7								X	X	X	
7	YMW-7		6/7/2016	1030	RL	GW	7	7								X	X	X	
8	YMW-8		6/7/2016	1215	RL	GW	7	7								X	X	X	
9	YMW-9		6/7/2016	1340	RL	GW	7	7								X	X	X	
10	OW-1		6/7/2016	940	RL	GW	7	7								X	X	X	
11	MW-1		6/7/2016	1640	RL	GW	7	7								X	X	X	
12	MW-4		6/7/2016	1055	RL	GW	7	7								X	X	X	
13	MW-7		6/7/2016	1535	RL	GW	7	7								X	X	X	
14	MDE-4 *		6/7/2016	1600	RL	GW	7	7								X	X	X	

Turnaround Time (Business days)

- ☐ Std. 15 Business Days
- ☐ 10 Day *RUSH*
- ☐ 5 Day *RUSH*
- ☐ 3 Day *EMERGENCY*
- ☐ 2 Day *EMERGENCY*
- ☐ 1 Day *EMERGENCY*
- ☒ Other 14 Day Hess Standard

Approved By:/ Date:

INITIAL ASESSMENT 2B 1L
LABEL VERIFICATION JF

Emergency T/A data available VIA Lablink

Data Deliverable Information

- ☒ Commercial "A"
- ☐ Commercial "B"
- ☐ NJ Reduced
- ☐ NJ Full
- ☐ Other Full TIER 1
- ☐ FULL CLP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format_____

Commercial "A" = Results Only

Comments / Remarks

*2 x 300mL DRO @ 6/9/16

Rec'd at Exton Service Center
6/9/16 1445

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/9/16 1225	1	2	6/9/16	2
Relinquished By: 3	Date Time: 6/9/16 1105	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp. 3.3 1-6

4.2
4

JC21893: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: JC21893 **Client:** **Project:**

Date / Time Received: 6/9/2016 5:05:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.3);

Cooler Temps (Corrected) °C: Cooler 1: (4.2);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control _Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

4.2

4

JC21893: Chain of Custody

Page 2 of 2

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0
Automated Report

Technical Report for

EMS Environmental, Inc.

HESS #20204, 1613 East Joppa Road, Towson, MD

5713

SGS Accutest Job Number: JC21892

Sampling Date: 06/08/16

Report to:

EMS Environmental, Inc.

ynabavian@emsenv.com

ATTN: Yoosef Nabavian

Total number of pages in report: 35

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TN, TX, VA, WV, DoD ELAP (L-A-B L2248)

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Test results relate only to samples analyzed.

SGS Accutest is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.

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Sample Summary

EMS Environmental, Inc.

Job No: JC21892

HESS #20204, 1613 East Joppa Road, Towson, MD
Project No: 5713

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC21892-1	06/08/16	11:15	BR	06/09/16	AQ	Ground Water	YP-1
JC21892-2	06/08/16	11:45	BR	06/09/16	AQ	Ground Water	YP-2
JC21892-3	06/08/16	10:45	BR	06/09/16	AQ	Ground Water	YP-3
JC21892-4	06/08/16	10:15	BR	06/09/16	AQ	Ground Water	YP-4
JC21892-5	06/08/16	09:45	BR	06/09/16	AQ	Ground Water	YP-5

2

Summary of Hits

Job Number: JC21892
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/08/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC21892-1	**YP-1**					
Benzene		6.4	1.0	0.28	ug/l	SW846 8260C
2-Butanone (MEK)		7.4 J	20	3.8	ug/l	SW846 8260C
n-Butylbenzene		20.5	4.0	0.56	ug/l	SW846 8260C
sec-Butylbenzene		7.1	4.0	2.0	ug/l	SW846 8260C
Di-Isopropyl ether		3.6 J	4.0	0.83	ug/l	SW846 8260C
1,1-Dichloroethane		0.54 J	2.0	0.41	ug/l	SW846 8260C
Ethylbenzene		638	5.0	0.98	ug/l	SW846 8260C
Isopropylbenzene		44.2	2.0	0.31	ug/l	SW846 8260C
p-Isopropyltoluene		3.7 J	4.0	2.0	ug/l	SW846 8260C
Methyl Tert Butyl Ether		4.2	2.0	0.68	ug/l	SW846 8260C
Naphthalene		189	10	0.78	ug/l	SW846 8260C
n-Propylbenzene		161	4.0	0.34	ug/l	SW846 8260C
Tert Butyl Alcohol		53.3	20	6.0	ug/l	SW846 8260C
Toluene		20.2	2.0	0.45	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		301	4.0	0.52	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		82.9	4.0	0.63	ug/l	SW846 8260C
m,p-Xylene		755	2.0	0.85	ug/l	SW846 8260C
o-Xylene		17.5	2.0	0.41	ug/l	SW846 8260C
Xylene (total)		773	2.0	0.41	ug/l	SW846 8260C
TPH-GRO (C6-C10)		8.27	0.20	0.055	mg/l	SW846 8015C
TPH-DRO (C10-C28)		2.49	0.083	0.064	mg/l	SW846 8015C
JC21892-2	**YP-2**					
Benzene		13.9	0.50	0.14	ug/l	SW846 8260C
Di-Isopropyl ether		0.73 J	2.0	0.41	ug/l	SW846 8260C
Methyl Tert Butyl Ether		17.7	1.0	0.34	ug/l	SW846 8260C
Tert Butyl Alcohol		23.4	10	3.0	ug/l	SW846 8260C
tert-Amyl Methyl Ether		0.51 J	2.0	0.23	ug/l	SW846 8260C
TPH-GRO (C6-C10)		0.159 J	0.20	0.055	mg/l	SW846 8015C
TPH-DRO (C10-C28)		0.151	0.083	0.064	mg/l	SW846 8015C
JC21892-3	**YP-3**					
Acetone		18.7	10	3.8	ug/l	SW846 8260C
Benzene		0.84	0.50	0.14	ug/l	SW846 8260C
1,2-Dichloroethane		0.53 J	1.0	0.39	ug/l	SW846 8260C
Methyl Tert Butyl Ether		4.3	1.0	0.34	ug/l	SW846 8260C
TPH-DRO (C10-C28)		0.216	0.083	0.064	mg/l	SW846 8015C
JC21892-4	**YP-4**					
cis-1,2-Dichloroethene		6.0	1.0	0.31	ug/l	SW846 8260C

Summary of Hits

Job Number: JC21892
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/08/16

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Methyl Tert Butyl Ether	4.2	1.0	0.34	ug/l	SW846 8260C
Vinyl chloride	0.39 J	1.0	0.33	ug/l	SW846 8260C
JC21892-5 YP-5					
1,2-Dichloroethane	1.4	1.0	0.39	ug/l	SW846 8260C
Methyl Tert Butyl Ether	2.2	1.0	0.34	ug/l	SW846 8260C
Tert Butyl Alcohol	7.5 J	10	3.0	ug/l	SW846 8260C
TPH-DRO (C10-C28)	0.232	0.083	0.064	mg/l	SW846 8015C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	YP-1		
Lab Sample ID:	JC21892-1	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A161711.D	2	06/14/16	HA	n/a	n/a	V1A6914
Run #2	1A161682.D	5	06/13/16	HA	n/a	n/a	V1A6913

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	7.6	ug/l	
71-43-2	Benzene	6.4	1.0	0.28	ug/l	
108-86-1	Bromobenzene	ND	2.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	2.0	0.93	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	1.1	ug/l	
75-25-2	Bromoform	ND	2.0	0.68	ug/l	
74-83-9	Bromomethane	ND	4.0	0.93	ug/l	
78-93-3	2-Butanone (MEK)	7.4	20	3.8	ug/l	J
104-51-8	n-Butylbenzene	20.5	4.0	0.56	ug/l	
135-98-8	sec-Butylbenzene	7.1	4.0	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	4.0	0.55	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.35	ug/l	
75-00-3	Chloroethane	ND	2.0	0.89	ug/l	
67-66-3	Chloroform	ND	2.0	0.45	ug/l	
74-87-3	Chloromethane	ND	2.0	1.9	ug/l	
95-49-8	o-Chlorotoluene	ND	4.0	0.35	ug/l	
106-43-4	p-Chlorotoluene	ND	4.0	0.58	ug/l	
108-20-3	Di-Isopropyl ether	3.6	4.0	0.83	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	1.4	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.45	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.44	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.47	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.39	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.43	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	0.54	2.0	0.41	ug/l	J
107-06-2	1,2-Dichloroethane	ND	2.0	0.79	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	0.41	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.62	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.71	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.65	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-1		
Lab Sample ID:	JC21892-1	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	2.0	0.56	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.0	0.85	ug/l	
563-58-6	1,1-Dichloropropene	ND	2.0	0.41	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.37	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.52	ug/l	
100-41-4	Ethylbenzene	638 [a]	5.0	0.98	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.0	0.44	ug/l	
98-82-8	Isopropylbenzene	44.2	2.0	0.31	ug/l	
99-87-6	p-Isopropyltoluene	3.7	4.0	2.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	4.2	2.0	0.68	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	10	2.4	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.56	ug/l	
75-09-2	Methylene chloride	ND	4.0	0.70	ug/l	
91-20-3	Naphthalene	189	10	0.78	ug/l	
103-65-1	n-Propylbenzene	161	4.0	0.34	ug/l	
100-42-5	Styrene	ND	2.0	0.54	ug/l	
75-65-0	Tert Butyl Alcohol	53.3	20	6.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	4.0	0.47	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	4.0	0.46	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.0	0.35	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.79	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	0.47	ug/l	
108-88-3	Toluene	20.2	2.0	0.45	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.40	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.49	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.43	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.55	ug/l	
79-01-6	Trichloroethene	ND	2.0	0.51	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	1.2	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	4.0	1.5	ug/l	
95-63-6	1,2,4-Trimethylbenzene	301	4.0	0.52	ug/l	
108-67-8	1,3,5-Trimethylbenzene	82.9	4.0	0.63	ug/l	
75-01-4	Vinyl chloride	ND	2.0	0.65	ug/l	
	m,p-Xylene	755	2.0	0.85	ug/l	
95-47-6	o-Xylene	17.5	2.0	0.41	ug/l	
1330-20-7	Xylene (total)	773	2.0	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	92%	76-120%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-1		
Lab Sample ID:	JC21892-1	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	94%	73-122%
2037-26-5	Toluene-D8	102%	99%	84-119%
460-00-4	4-Bromofluorobenzene	104%	103%	78-117%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-1		
Lab Sample ID:	JC21892-1	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV131794.D	1	06/13/16	JC	n/a	n/a	GUV5297
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	8.27	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	108%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-1		
Lab Sample ID:	JC21892-1	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77717.D	1	06/13/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.49	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		36-144%
16416-32-3	Tetracosane-d50	91%		32-138%
438-22-2	5a-Androstane	88%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-2		
Lab Sample ID:	JC21892-2	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A161708.D	1	06/14/16	HA	n/a	n/a	V1A6914
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	13.9	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	0.73	2.0	0.41	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-2		
Lab Sample ID:	JC21892-2	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	17.7	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	23.4	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	0.51	2.0	0.23	ug/l	J
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		76-120%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-2		
Lab Sample ID:	JC21892-2	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-2		
Lab Sample ID:	JC21892-2	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV131791.D	1	06/13/16	JC	n/a	n/a	GUV5297
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.159	0.20	0.055	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	88%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-2		
Lab Sample ID:	JC21892-2	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77718.D	1	06/13/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.151	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	91%		36-144%
16416-32-3	Tetracosane-d50	79%		32-138%
438-22-2	5a-Androstane	76%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-3		
Lab Sample ID:	JC21892-3	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A161684.D	1	06/14/16	HA	n/a	n/a	V1A6913
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	18.7	10	3.8	ug/l	
71-43-2	Benzene	0.84	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	0.53	1.0	0.39	ug/l	J
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-3		
Lab Sample ID:	JC21892-3	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.3	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		76-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-3		
Lab Sample ID:	JC21892-3	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	96%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	106%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-3		
Lab Sample ID:	JC21892-3	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV131790.D	1	06/13/16	JC	n/a	n/a	GUV5297
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	88%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-3		
Lab Sample ID:	JC21892-3	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77719.D	1	06/13/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.216	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		36-144%
16416-32-3	Tetracosane-d50	83%		32-138%
438-22-2	5a-Androstane	80%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-4		
Lab Sample ID:	JC21892-4	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A161685.D	1	06/14/16	HA	n/a	n/a	V1A6913
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	6.0	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-4		
Lab Sample ID:	JC21892-4	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.2	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	0.39	1.0	0.33	ug/l	J
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		76-120%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-4		
Lab Sample ID:	JC21892-4	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	106%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-4		
Lab Sample ID:	JC21892-4	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV131789.D	1	06/13/16	JC	n/a	n/a	GUV5297
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	87%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-4		
Lab Sample ID:	JC21892-4	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77720.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		36-144%
16416-32-3	Tetracosane-d50	88%		32-138%
438-22-2	5a-Androstane	85%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-5		
Lab Sample ID:	JC21892-5	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A161686.D	1	06/14/16	HA	n/a	n/a	V1A6913
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.22	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.18	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.29	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.41	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	1.4	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-5		
Lab Sample ID:	JC21892-5	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	1.0	0.28	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.42	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.22	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.2	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.39	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	7.5	10	3.0	ug/l	J
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.23	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.23	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.75	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		76-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-5		
Lab Sample ID:	JC21892-5	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

VOA Full List + Oxygenates

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	107%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-5		
Lab Sample ID:	JC21892-5	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV131788.D	1	06/13/16	JC	n/a	n/a	GUV5297
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.055	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	84%		55-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-5		
Lab Sample ID:	JC21892-5	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	HESS #20204, 1613 East Joppa Road, Towson, MD		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y77721.D	1	06/14/16	TL	06/13/16	OP94674	G2Y3002
Run #2							

	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.232	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		36-144%
16416-32-3	Tetracosane-d50	82%		32-138%
438-22-2	5a-Androstane	78%		31-136%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Parameter Certification Exceptions

Job Number: JC21892
Account: EMSPA EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Methylene bromide	74-95-3	**SW846 8260C**	AQ	Accutest is not certified for this parameter.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

ACCUTEST Laboratories

GW

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

Page 1 of 1

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JC21892

Client / Reporting Information

Company Name: EMS Environmental, Inc.
Address: 4550 Bath Pike
City: Bethlehem State: PA Zip: 18017
Project Contact: Jeremy Fox E-mail: jfox@emsenv.com
Phone #: 610-866-7799
Samplers's Name: Brad Rohrbaugh/Robert Lloyd

Project Information

Project Name: Former Hess 20204
Street: 1613 E. Joppa Road
City: Towson State: MD
Project #: 5713
Fax #: 610-866-8195
Client Purchase Order #: 5713

Requested Analysis

BTEX: 8021 ☐ 602 ☐ 624 ☐ NAP ☐ TBA☐ MTBE ☐
8260 ☐ 624 ☐ TCL ☐ PPL ☐ STARS ☐ MTBE ☐ TBA ☐ NAPH ☐ +10 ☐ +15 ☐
8270 ☐ 625 ☐ TCL ☐ PPL ☐ STARS☐ ABN☐ AE☐ BN☐ PAH☐ +TIC☐
Full Scan VOC's + Fuel Oxygenates by 8260B
TPH-GRO by 8015B
TPH-DRO by 8015B

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	MeOH	NaHSO4	H2SO4	NaOH	NaHSO4	MEOH	ENCORE	Full Scan VOC's + Fuel Oxygenates by 8260B	TPH-GRO by 8015B	TPH-DRO by 8015B	LAB USE ONLY
1	YP-1 *		6-8-16	11:15	BR	GW	7	7								X	X	X	
2	YP-2 *		6-8-16	11:45	BR	GW	7	7								X	X	X	E88
3	YP-3 *		6-8-16	10:45	BR	GW	7	7								X	X	X	V345
4	YP-4 *		6-8-16	10:15	BR	GW	7	7								X	X	X	
5	YP-5 *		6-8-16	9:45	BR	GW	7	7								X	X	X	

Turnaround Time (Business days)

- ☐ Std. 15 Business Days
- ☐ 10 Day *RUSH*
- ☐ 5 Day *RUSH*
- ☐ 3 Day *EMERGENCY*
- ☐ 2 Day *EMERGENCY*
- ☐ 1 Day *EMERGENCY*
- [x] Other 14 Day Hess Standard

Approved By:/ Date:
INITIAL ASESSMENT 2B Dan
LABEL VERIFICATION RG

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [X] Commercial "A"
- ☐ Commercial "B"
- ☐ NJ Reduced
- ☐ NJ Full
- ☐ Other Full TIER 1
- ☐ FULL CLP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format_____

Commercial "A" = Results Only

Comments / Remarks

*24 300mL DRO (12) 6/9/16

Rec'd at Exton Service Center
6/9/16 1445

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/9/16 1325	1	2	6/9/16	2
Relinquished by: 3	6/9/16 1405	Received By: 3	Relinquished By:	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice ☐ Cooler Temp. 2.2 C

4.2
4

JC21892: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: JC21892 **Client:** **Project:**

Date / Time Received: 6/9/2016 5:05:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.1);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control _Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

4.2

4

JC21892: Chain of Custody

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