August 5, 2015

Mrs. Jennifer Herman
Maryland Department of the Environment
Remediation Division
Oil Control Program
1800 Washington Boulevard, Suite 620
Baltimore, Maryland 21230-1719

Via: Certified Mail #7009-1680-0001-1642-8795
Returned Receipt Required

Re: 2015 Second Quarter Site Status Report
Former Hess Station #20204
1613 East Joppa Road
Towson, Maryland
Case Number 1991-2100 BA

Dear Mrs. Herman:

Enclosed please find the above-referenced report. This report includes results from the June 22 and June 23, 2015, groundwater monitoring and sampling event. The next groundwater monitoring and sampling event is scheduled for September 2015.

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 (732) 750-6616.

Sincerely,
EMS Environmental, Inc.

Jeremy L. Fox
Regional Manger

Enclosure

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

August 5, 2015

2015 SECOND QUARTER SITE STATUS REPORT
FORMER HESS STATION #20204
1613 East Joppa Road
Towson, Maryland
Case Number 1991-2100 BA

Prepared For: Hess Corporation
One Hess Plaza
Woodbridge, NJ 07095

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

Submitted By:

Jeremy L. Fox
Regional Manager

INTRODUCTION

The following is the 2015 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 22 and 23, 2015 groundwater monitoring and sampling event. **Figure 1** is included as a Site Plan depicting the subject site layout, adjacent properties, as well as all monitoring wells and piezometers bounded by the area known as Ridgely Manor Park.

GENERAL INFORMATION

Site:	Former Hess Station #20204 – Towson, MD (See **Figure 1**)
Sampling Frequency:	Quarterly
Reporting Frequency:	Quarterly
Monitoring Wells 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 Not Sampled:	None
Monitoring Wells 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 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 22 and June 23, 2015
Depth to Groundwater:	2.51 ft (YMW-2) to 20.58 ft (OW-1)
Groundwater Elevation:	427.57 ft (YMW-6) to 435.68 ft (MW-1) (See **Table 1**, **Table 2**, and **Figure 2**)
Groundwater Flow:	Predominantly south, with a calculated hydraulic gradient range of 0.014 ft/ft to 0.035 ft/ft (See **Figure 2**)
Liquid Phase Hydrocarbons (LPH) Identified:	None
Dissolved Phase Concentrations:	See **Table 1** and **Figure 3**

REMEDIATION DATA

Technology:	Groundwater Collection System
System Start:	May 22, 2014

ATTACHMENTS

Figure 1:	Site Plan
Figure 2:	Groundwater Elevation & Hydraulic Contour Map (June 22, 2015)
Figure 3:	Hydrocarbon Distribution Map (June 22 and 23, 2015)
Table 1:	Historical Monitoring Data Summary
Table 2:	Monthly Groundwater Gauging Results Summary
Appendix A:	Laboratory Analytical Report (June 22, 2015)
Appendix B:	Laboratory Analytical Report (June 23, 2015)

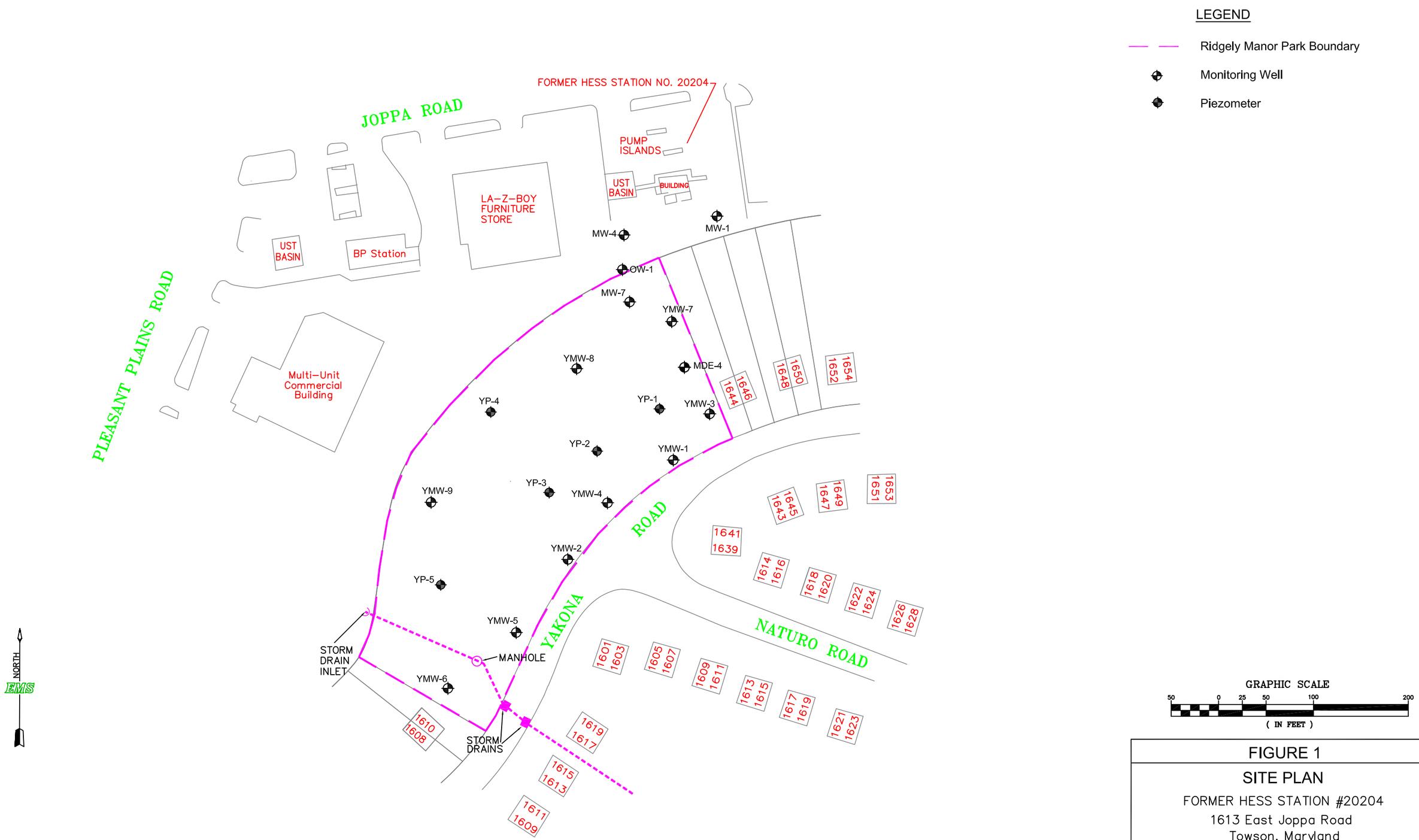


FIGURE 1

SITE PLAN

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

Drawn By: YSN

Date: 4/30/15

EMS ENVIRONMENTAL

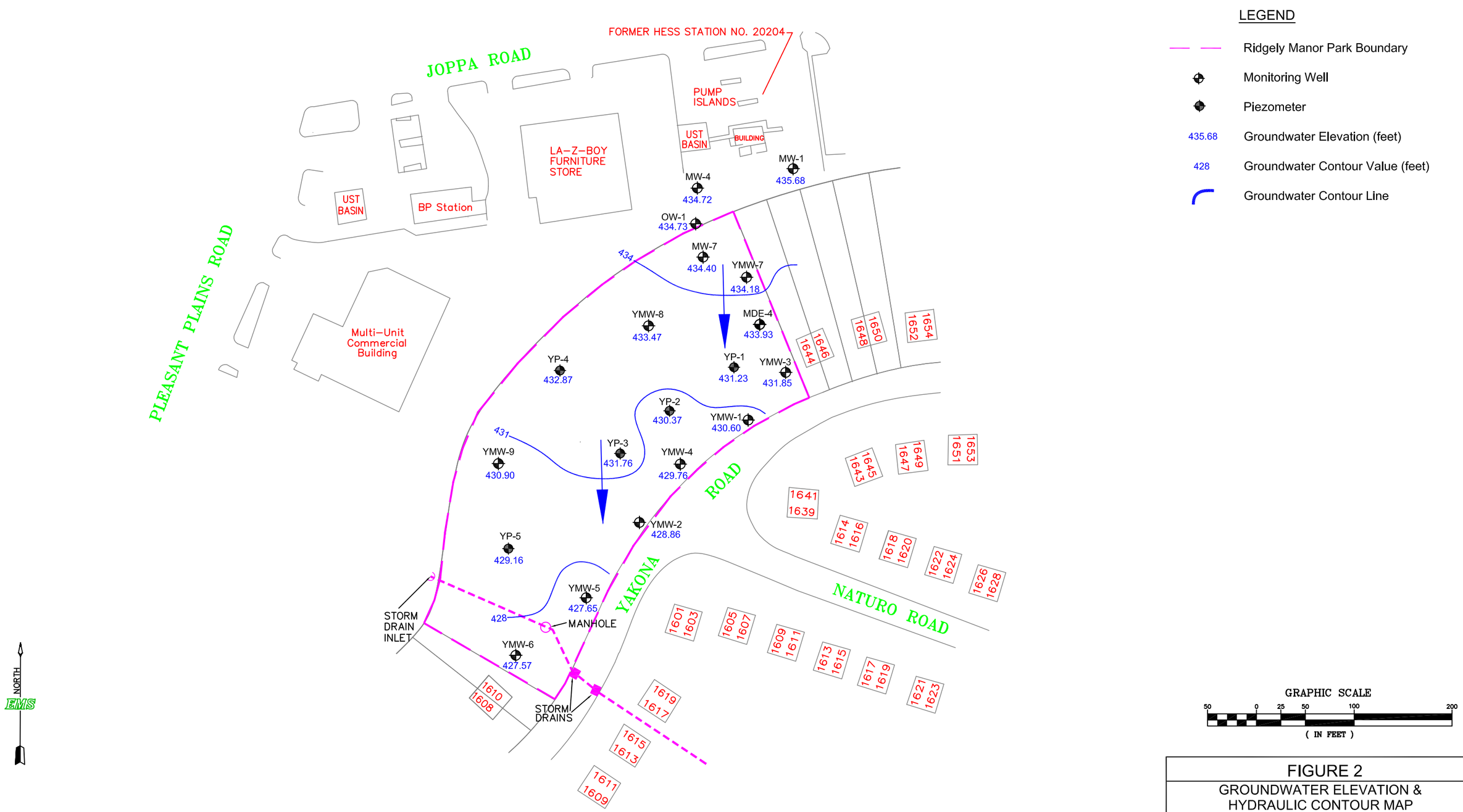


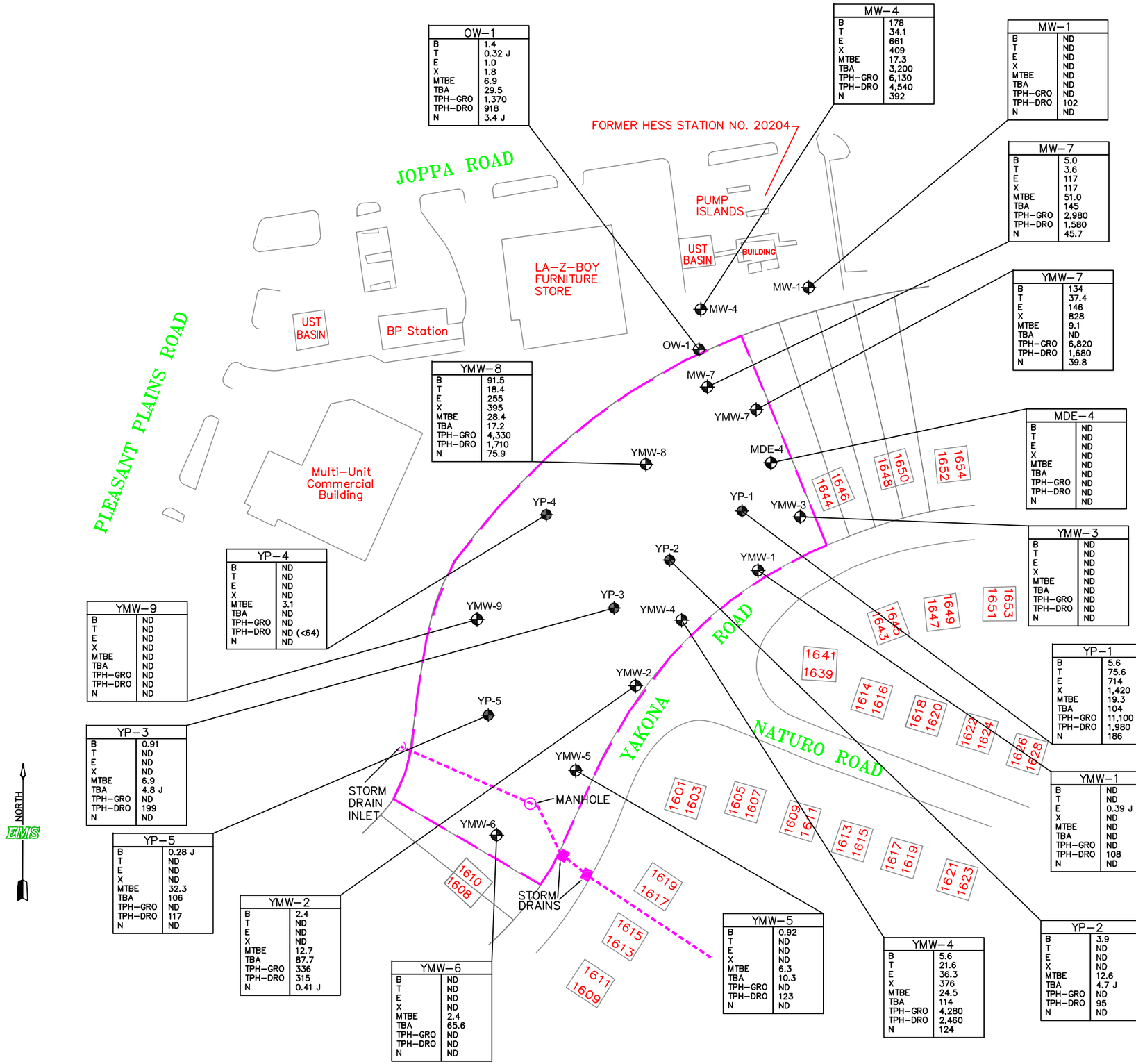
FIGURE 2

GROUNDWATER ELEVATION & HYDRAULIC CONTOUR MAP
(Gauged: 6/22/15)
FORMER HESS STATION #20204
1613 East Joppa Road
Towson, Maryland

Drawn By: YSN

Date: 7/24/15

EMS ENVIRONMENTAL



OW-1	
B	1.4
T	0.32 J
E	1.0
X	1.8
MTBE	6.9
TBA	29.5
TPH-GRO	1,370
TPH-DRO	918
N	3.4 J

MW-4	
B	178
T	34.1
E	661
X	409
MTBE	17.3
TBA	3,200
TPH-GRO	6,130
TPH-DRO	4,540
N	392

MW-1	
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND
TPH-GRO	ND
TPH-DRO	102
N	ND

MW-7	
B	5.0
T	3.6
E	117
X	117
MTBE	51.0
TBA	145
TPH-GRO	2,980
TPH-DRO	1,580
N	45.7

YMW-7	
B	134
T	37.4
E	146
X	828
MTBE	9.1
TBA	ND
TPH-GRO	6,820
TPH-DRO	1,680
N	39.8

YMW-8	
B	91.5
T	18.4
E	255
X	395
MTBE	28.4
TBA	17.2
TPH-GRO	4,330
TPH-DRO	1,710
N	75.9

MDE-4	
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND
TPH-GRO	ND
TPH-DRO	ND
N	ND

YMW-3	
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND
TPH-GRO	ND
TPH-DRO	ND
N	ND

YP-4	
B	ND
T	ND
E	ND
X	ND
MTBE	3.1
TBA	ND
TPH-GRO	ND
TPH-DRO	ND (<64)
N	ND

YMW-9	
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND
TPH-GRO	ND
TPH-DRO	ND
N	ND

YP-1	
B	5.6
T	75.6
E	714
X	1,420
MTBE	19.3
TBA	104
TPH-GRO	11,100
TPH-DRO	1,980
N	186

YP-3	
B	0.91
T	ND
E	ND
X	ND
MTBE	6.9
TBA	4.8 J
TPH-GRO	ND
TPH-DRO	199
N	ND

YMW-1	
B	ND
T	ND
E	0.39 J
X	ND
MTBE	ND
TBA	ND
TPH-GRO	ND
TPH-DRO	108
N	ND

YP-5	
B	0.28 J
T	ND
E	ND
X	ND
MTBE	32.3
TBA	106
TPH-GRO	ND
TPH-DRO	117
N	ND

YMW-2	
B	2.4
T	ND
E	ND
X	ND
MTBE	12.7
TBA	87.7
TPH-GRO	336
TPH-DRO	315
N	0.41 J

YMW-6	
B	ND
T	ND
E	ND
X	ND
MTBE	2.4
TBA	65.6
TPH-GRO	ND
TPH-DRO	ND
N	ND

YMW-5	
B	0.92
T	ND
E	ND
X	ND
MTBE	6.3
TBA	10.3
TPH-GRO	ND
TPH-DRO	123
N	ND

YMW-4	
B	5.6
T	21.6
E	36.3
X	376
MTBE	24.5
TBA	114
TPH-GRO	4,280
TPH-DRO	2,460
N	124

YP-2	
B	3.9
T	ND
E	ND
X	ND
MTBE	12.6
TBA	4.7 J
TPH-GRO	ND
TPH-DRO	95
N	ND

LEGEND

— —	Ridgely Manor Park Boundary
⊕	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 µg/L

Note: All analytical results displayed are representative of the 6/22/15 sampling event with the exception of the results for YP-1 through YP-5, which were sampled on 6/23/15.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

FIGURE 3

HYDROCARBON DISTRIBUTION MAP

(Sampled: 6/22/15 and 6/23/15)

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

Drawn By: YSN

Date: 7/24/15

EMS ENVIRONMENTAL

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

Well No.	Date	Casing Elevation* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

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

Well No.	Date	Casing Elevation* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

Table 1
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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* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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**
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* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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**

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

Well No.	Date	Casing Elevation* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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**
MDE MEAT GNCSG**						**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

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

Well No.	Date	Casing Elevation* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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)
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)
					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* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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
Unknown	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
Unknown	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
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
Unknown	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
Unknown	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)
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

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

Well No.	Date	Casing Elevation* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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
Screen: 4.5 to 19.5 feet															
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**
Screen: 2 to 17 feet															
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
Screen: 1 to 16 feet															
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
Screen: 3 to 18 feet															
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**
Screen: 18 to 28 feet															
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**
Screen: 7 to 22 feet															
					MDE MEAT GNCSG**	**5**	**1,000**	**700**	**10,000**	**NA**	**20**	**NA**	**47**	**47**	**0.7**

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

Well No.	Date	Casing Elevation* (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Table Elevation* (ft)	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
Screen: 2.5 to 17.5 feet															
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**
Screen: 8 to 13 feet															
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
Screen: 7 to 12 feet															
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
Screen: 5.5 to 10.5 feet															
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
Screen: 8 to 13 feet															
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
Screen: 5 to 10 feet															
					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
MONTHLY 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
Unknown	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
Unknown					
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
Unknown	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
Unknown					
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					
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					
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					

TABLE 2
MONTHLY 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-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					
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					
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					
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					

TABLE 2
MONTHLY 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-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					
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					
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					
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					
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					

TABLE 2
MONTHLY 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)
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					
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					
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					
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					
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					

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

New Jersey
ACCUTEST LABORATORIES

07/09/15

Technical Report for

EMS Environmental, Inc.

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

5713

Accutest Job Number: JB97803

Sampling Date: 06/22/15

Report to:

EMS Environmental, Inc.

ynabavian@emsenv.com

ATTN: Yoosef Nabavian

Total number of pages in report: **83**

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, VA, WV, DoD ELAP (L-A-B L2248)

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Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Summary of Hits **5**
Section 3: Sample Results **10**
3.1: JB97803-1: YMW-1 11
3.2: JB97803-2: YMW-2 16
3.3: JB97803-3: YMW-3 21
3.4: JB97803-4: YMW-4 26
3.5: JB97803-5: YMW-5 31
3.6: JB97803-6: YMW-6 36
3.7: JB97803-7: YMW-7 41
3.8: JB97803-8: YMW-8 46
3.9: JB97803-9: YMW-9 51
3.10: JB97803-10: OW-1 56
3.11: JB97803-11: MW-7 61
3.12: JB97803-12: MW-1 66
3.13: JB97803-13: MW-4 71
3.14: JB97803-14: MDE-4 76
Section 4: Misc. Forms **81**
4.1: Chain of Custody 82

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Sample Summary

EMS Environmental, Inc.

Job No: JB97803

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB97803-1	06/22/15	13:55	RL	06/24/15	AQ	Ground Water	YMW-1
JB97803-2	06/22/15	11:40	RL	06/24/15	AQ	Ground Water	YMW-2
JB97803-3	06/22/15	11:15	RL	06/24/15	AQ	Ground Water	YMW-3
JB97803-4	06/22/15	13:05	RL	06/24/15	AQ	Ground Water	YMW-4
JB97803-5	06/22/15	15:00	RL	06/24/15	AQ	Ground Water	YMW-5
JB97803-6	06/22/15	14:30	RL	06/24/15	AQ	Ground Water	YMW-6
JB97803-7	06/22/15	10:20	RL	06/24/15	AQ	Ground Water	YMW-7
JB97803-8	06/22/15	12:05	RL	06/24/15	AQ	Ground Water	YMW-8
JB97803-9	06/22/15	13:30	RL	06/24/15	AQ	Ground Water	YMW-9
JB97803-10	06/22/15	09:30	RL	06/24/15	AQ	Ground Water	OW-1
JB97803-11	06/22/15	15:25	RL	06/24/15	AQ	Ground Water	MW-7
JB97803-12	06/22/15	15:50	RL	06/24/15	AQ	Ground Water	MW-1
JB97803-13	06/22/15	16:20	RL	06/24/15	AQ	Ground Water	MW-4

Sample Summary
(continued)

EMS Environmental, Inc.

Job No: JB97803

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB97803-14	06/22/15	10:45	RL	06/24/15	AQ	Ground Water	MDE-4

Summary of Hits

Job Number: JB97803
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/22/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB97803-1	**YMW-1**					
Acetone		6.9 J	10	3.3	ug/l	SW846 8260C
Ethylbenzene		0.39 J	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		0.67 J	1.0	0.23	ug/l	SW846 8260C
n-Propylbenzene		1.5 J	2.0	0.21	ug/l	SW846 8260C
TPH-DRO (C10-C28)		0.108	0.025	0.019	mg/l	SW846 8015C
JB97803-2	**YMW-2**					
Benzene		2.4	0.50	0.24	ug/l	SW846 8260C
sec-Butylbenzene		0.62 J	2.0	0.21	ug/l	SW846 8260C
Di-Isopropyl ether		2.0	2.0	0.26	ug/l	SW846 8260C
Isopropylbenzene		0.33 J	1.0	0.23	ug/l	SW846 8260C
Methyl Tert Butyl Ether		12.7	1.0	0.24	ug/l	SW846 8260C
Naphthalene		0.41 J	5.0	0.20	ug/l	SW846 8260C
Tert Butyl Alcohol		87.7	10	2.8	ug/l	SW846 8260C
tert-Amyl Methyl Ether		0.74 J	2.0	0.19	ug/l	SW846 8260C
TPH-GRO (C6-C10)		0.336	0.20	0.038	mg/l	SW846 8015C
TPH-DRO (C10-C28)		0.315	0.025	0.019	mg/l	SW846 8015C
JB97803-3	**YMW-3**					
Acetone		4.3 J	10	3.3	ug/l	SW846 8260C
JB97803-4	**YMW-4**					
Benzene		5.6	0.50	0.24	ug/l	SW846 8260C
n-Butylbenzene		16.5	2.0	0.14	ug/l	SW846 8260C
sec-Butylbenzene		7.1	2.0	0.21	ug/l	SW846 8260C
tert-Butylbenzene		0.35 J	2.0	0.28	ug/l	SW846 8260C
Di-Isopropyl ether		4.0	2.0	0.26	ug/l	SW846 8260C
Ethylbenzene		36.3	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		48.8	1.0	0.23	ug/l	SW846 8260C
p-Isopropyltoluene		2.8	2.0	0.21	ug/l	SW846 8260C
Methyl Tert Butyl Ether		24.5	1.0	0.24	ug/l	SW846 8260C
Naphthalene		124	5.0	0.20	ug/l	SW846 8260C
n-Propylbenzene		140	2.0	0.21	ug/l	SW846 8260C
Tert Butyl Alcohol		114	10	2.8	ug/l	SW846 8260C
tert-Butyl Ethyl Ether		1.1 J	2.0	0.62	ug/l	SW846 8260C
Toluene		21.6	1.0	0.16	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		25.5	2.0	0.22	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		55.1	2.0	0.29	ug/l	SW846 8260C
m,p-Xylene		340	1.0	0.38	ug/l	SW846 8260C
o-Xylene		36.2	1.0	0.17	ug/l	SW846 8260C

Summary of Hits

Job Number: JB97803
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/22/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Xylene (total)		376	1.0	0.17	ug/l	SW846 8260C
TPH-GRO (C6-C10)		4.28	0.20	0.038	mg/l	SW846 8015C
TPH-DRO (C10-C28)		2.46	0.025	0.019	mg/l	SW846 8015C
JB97803-5	**YMW-5**					
Benzene		0.92	0.50	0.24	ug/l	SW846 8260C
sec-Butylbenzene		0.39 J	2.0	0.21	ug/l	SW846 8260C
1,2-Dichloroethane		0.28 J	1.0	0.18	ug/l	SW846 8260C
cis-1,2-Dichloroethene		0.40 J	1.0	0.27	ug/l	SW846 8260C
Methyl Tert Butyl Ether		6.3	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		10.3	10	2.8	ug/l	SW846 8260C
tert-Amyl Methyl Ether		0.25 J	2.0	0.19	ug/l	SW846 8260C
TPH-DRO (C10-C28)		0.123	0.026	0.020	mg/l	SW846 8015C
JB97803-6	**YMW-6**					
Di-Isopropyl ether		0.44 J	2.0	0.26	ug/l	SW846 8260C
1,2-Dichloroethane		8.2	1.0	0.18	ug/l	SW846 8260C
Methyl Tert Butyl Ether		2.4	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		65.6	10	2.8	ug/l	SW846 8260C
JB97803-7	**YMW-7**					
Benzene		134	1.3	0.59	ug/l	SW846 8260C
n-Butylbenzene		8.0	5.0	0.34	ug/l	SW846 8260C
sec-Butylbenzene		3.0 J	5.0	0.53	ug/l	SW846 8260C
Ethylbenzene		146	2.5	0.67	ug/l	SW846 8260C
Isopropylbenzene		18.5	2.5	0.58	ug/l	SW846 8260C
p-Isopropyltoluene		3.1 J	5.0	0.53	ug/l	SW846 8260C
Methyl Tert Butyl Ether		9.1	2.5	0.59	ug/l	SW846 8260C
Naphthalene		39.8	13	0.51	ug/l	SW846 8260C
n-Propylbenzene		28.6	5.0	0.53	ug/l	SW846 8260C
Toluene		37.4	2.5	0.41	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		293	5.0	0.56	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		128	5.0	0.74	ug/l	SW846 8260C
m,p-Xylene		757	2.5	0.94	ug/l	SW846 8260C
o-Xylene		70.9	2.5	0.41	ug/l	SW846 8260C
Xylene (total)		828	2.5	0.41	ug/l	SW846 8260C
TPH-GRO (C6-C10)		6.82	0.20	0.038	mg/l	SW846 8015C
TPH-DRO (C10-C28)		1.68	0.025	0.019	mg/l	SW846 8015C
JB97803-8	**YMW-8**					
Benzene		91.5	0.50	0.24	ug/l	SW846 8260C

2

Summary of Hits

Job Number: JB97803
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/22/15

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
2-Butanone (MEK)	5.8 J	10	5.6	ug/l	SW846 8260C
n-Butylbenzene	6.9	2.0	0.14	ug/l	SW846 8260C
sec-Butylbenzene	2.4	2.0	0.21	ug/l	SW846 8260C
Chloroform	5.1	1.0	0.19	ug/l	SW846 8260C
Di-Isopropyl ether	0.78 J	2.0	0.26	ug/l	SW846 8260C
1,2-Dibromoethane	0.32 J	1.0	0.23	ug/l	SW846 8260C
Ethylbenzene	255	10	2.7	ug/l	SW846 8260C
Isopropylbenzene	16.6	1.0	0.23	ug/l	SW846 8260C
p-Isopropyltoluene	15.6	2.0	0.21	ug/l	SW846 8260C
Methyl Tert Butyl Ether	28.4	1.0	0.24	ug/l	SW846 8260C
Naphthalene	75.9	5.0	0.20	ug/l	SW846 8260C
n-Propylbenzene	50.2	2.0	0.21	ug/l	SW846 8260C
Tert Butyl Alcohol	17.2	10	2.8	ug/l	SW846 8260C
Toluene	18.4	1.0	0.16	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	353	20	2.2	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	82.4	2.0	0.29	ug/l	SW846 8260C
m,p-Xylene	376	1.0	0.38	ug/l	SW846 8260C
o-Xylene	19.2	1.0	0.17	ug/l	SW846 8260C
Xylene (total)	395	1.0	0.17	ug/l	SW846 8260C
TPH-GRO (C6-C10)	4.33	0.20	0.038	mg/l	SW846 8015C
TPH-DRO (C10-C28)	1.71	0.025	0.019	mg/l	SW846 8015C
JB97803-9 YMW-9					
1,2-Dichloroethane	0.32 J	1.0	0.18	ug/l	SW846 8260C
JB97803-10 OW-1					
Benzene	1.4	0.50	0.24	ug/l	SW846 8260C
n-Butylbenzene	2.3	2.0	0.14	ug/l	SW846 8260C
sec-Butylbenzene	2.3	2.0	0.21	ug/l	SW846 8260C
Di-Isopropyl ether	0.44 J	2.0	0.26	ug/l	SW846 8260C
Ethylbenzene	1.0	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene	1.5	1.0	0.23	ug/l	SW846 8260C
Methyl Tert Butyl Ether	6.9	1.0	0.24	ug/l	SW846 8260C
Naphthalene	3.4 J	5.0	0.20	ug/l	SW846 8260C
n-Propylbenzene	0.85 J	2.0	0.21	ug/l	SW846 8260C
Tert Butyl Alcohol	29.5	10	2.8	ug/l	SW846 8260C
Toluene	0.32 J	1.0	0.16	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	0.76 J	2.0	0.22	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	0.69 J	2.0	0.29	ug/l	SW846 8260C
m,p-Xylene	1.4	1.0	0.38	ug/l	SW846 8260C
o-Xylene	0.36 J	1.0	0.17	ug/l	SW846 8260C
Xylene (total)	1.8	1.0	0.17	ug/l	SW846 8260C
TPH-GRO (C6-C10)	1.37	0.20	0.038	mg/l	SW846 8015C

Summary of Hits

Job Number: JB97803
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/22/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TPH-DRO (C10-C28)		0.918	0.025	0.019	mg/l	SW846 8015C
JB97803-11	**MW-7**					
Benzene		5.0	0.50	0.24	ug/l	SW846 8260C
n-Butylbenzene		8.1	2.0	0.14	ug/l	SW846 8260C
sec-Butylbenzene		5.6	2.0	0.21	ug/l	SW846 8260C
tert-Butylbenzene		0.32 J	2.0	0.28	ug/l	SW846 8260C
Di-Isopropyl ether		4.1	2.0	0.26	ug/l	SW846 8260C
1,2-Dichloroethane		2.8	1.0	0.18	ug/l	SW846 8260C
Ethylbenzene		117	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		24.2	1.0	0.23	ug/l	SW846 8260C
p-Isopropyltoluene		0.97 J	2.0	0.21	ug/l	SW846 8260C
Methyl Tert Butyl Ether		51.0	1.0	0.24	ug/l	SW846 8260C
Naphthalene		45.7	5.0	0.20	ug/l	SW846 8260C
n-Propylbenzene		70.1	2.0	0.21	ug/l	SW846 8260C
Tert Butyl Alcohol		145	10	2.8	ug/l	SW846 8260C
tert-Amyl Methyl Ether		1.5 J	2.0	0.19	ug/l	SW846 8260C
tert-Butyl Ethyl Ether		0.84 J	2.0	0.62	ug/l	SW846 8260C
Toluene		3.6	1.0	0.16	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		44.2	2.0	0.22	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		12.6	2.0	0.29	ug/l	SW846 8260C
m,p-Xylene		111	1.0	0.38	ug/l	SW846 8260C
o-Xylene		6.0	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		117	1.0	0.17	ug/l	SW846 8260C
TPH-GRO (C6-C10)		2.98	0.20	0.038	mg/l	SW846 8015C
TPH-DRO (C10-C28)		1.58	0.025	0.019	mg/l	SW846 8015C
JB97803-12	**MW-1**					
Acetone		4.8 J	10	3.3	ug/l	SW846 8260C
TPH-DRO (C10-C28)		0.102	0.025	0.019	mg/l	SW846 8015C
JB97803-13	**MW-4**					
Benzene		178	0.50	0.24	ug/l	SW846 8260C
2-Butanone (MEK)		7.3 J	10	5.6	ug/l	SW846 8260C
n-Butylbenzene		9.9	2.0	0.14	ug/l	SW846 8260C
sec-Butylbenzene		1.8 J	2.0	0.21	ug/l	SW846 8260C
Di-Isopropyl ether		10.6	2.0	0.26	ug/l	SW846 8260C
Ethylbenzene		661	10	2.7	ug/l	SW846 8260C
Isopropylbenzene		39.0	1.0	0.23	ug/l	SW846 8260C
p-Isopropyltoluene		1.0 J	2.0	0.21	ug/l	SW846 8260C
Methyl Tert Butyl Ether		17.3	1.0	0.24	ug/l	SW846 8260C
Naphthalene		392	50	2.0	ug/l	SW846 8260C

Summary of Hits

Job Number: JB97803
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/22/15

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
n-Propylbenzene	98.8	2.0	0.21	ug/l	SW846 8260C
Tert Butyl Alcohol	3200	100	28	ug/l	SW846 8260C
tert-Butyl Ethyl Ether	0.64 J	2.0	0.62	ug/l	SW846 8260C
Toluene	34.1	1.0	0.16	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	838	20	2.2	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	6.0	2.0	0.29	ug/l	SW846 8260C
m,p-Xylene	359	1.0	0.38	ug/l	SW846 8260C
o-Xylene	50.2	1.0	0.17	ug/l	SW846 8260C
Xylene (total)	409	1.0	0.17	ug/l	SW846 8260C
TPH-GRO (C6-C10)	6.13	0.20	0.038	mg/l	SW846 8015C
TPH-DRO (C10-C28)	4.54	0.025	0.019	mg/l	SW846 8015C

JB97803-14 MDE-4

No hits reported in this sample.

New Jersey

ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	YMW-1		
Lab Sample ID:	JB97803-1	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111523.D	1	07/01/15	XC	n/a	n/a	V3D4785
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	6.9	10	3.3	ug/l	J
71-43-2	Benzene	ND	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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-1		
Lab Sample ID:	JB97803-1	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	0.39	1.0	0.27	ug/l	J
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	0.67	1.0	0.23	ug/l	J
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	1.5	2.0	0.21	ug/l	J
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		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:	JB97803-1	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	98%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	93%		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:	JB97803-1	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24566.D	1	06/26/15	WO	n/a	n/a	GUV4957
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	90%		62-120%

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:	JB97803-1	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Y12132.D	1	06/26/15	KD	06/26/15	OP85108	G7Y475
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.108	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	67%		36-144%
16416-32-3	Tetracosane-d50	44%		32-138%
438-22-2	5a-Androstane	39%		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:	JB97803-2	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111526.D	1	07/01/15	XC	n/a	n/a	V3D4785
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	3.3	ug/l	
71-43-2	Benzene	2.4	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	0.62	2.0	0.21	ug/l	J
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	2.0	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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-2		
Lab Sample ID:	JB97803-2	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	0.33	1.0	0.23	ug/l	J
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	12.7	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	0.41	5.0	0.20	ug/l	J
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	87.7	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	0.74	2.0	0.19	ug/l	J
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		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:	JB97803-2	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	99%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	94%		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:	JB97803-2	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24567.D	1	06/26/15	WO	n/a	n/a	GUV4957
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.336	0.20	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	96%		62-120%

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:	JB97803-2	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12195.D	1	06/30/15	AD	06/29/15	OP85180	G7Z489
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.315	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	71%		36-144%
16416-32-3	Tetracosane-d50	41%		32-138%
438-22-2	5a-Androstane	34%		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:	JB97803-3	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111550.D	1	07/01/15	XC	n/a	n/a	V3D4786
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	4.3	10	3.3	ug/l	J
71-43-2	Benzene	ND	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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-3		
Lab Sample ID:	JB97803-3	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		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-3		
Lab Sample ID:	JB97803-3	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	101%		84-119%
460-00-4	4-Bromofluorobenzene	93%		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:	JB97803-3	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24568.D	1	06/26/15	WO	n/a	n/a	GUV4957
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	94%		62-120%

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-3		
Lab Sample ID:	JB97803-3	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12196.D	1	06/30/15	AD	06/29/15	OP85180	G7Z489
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		36-144%
16416-32-3	Tetracosane-d50	52%		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-4		
Lab Sample ID:	JB97803-4	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111640.D	1	07/06/15	XC	n/a	n/a	V3D4789
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	3.3	ug/l	
71-43-2	Benzene	5.6	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	16.5	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	7.1	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	0.35	2.0	0.28	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	4.0	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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-4		
Lab Sample ID:	JB97803-4	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	36.3	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	48.8	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	2.8	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	24.5	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	124	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	140	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	114	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	1.1	2.0	0.62	ug/l	J
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	21.6	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	25.5	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	55.1	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	340	1.0	0.38	ug/l	
95-47-6	o-Xylene	36.2	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	376	1.0	0.17	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 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:	JB97803-4	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	98%		73-122%
2037-26-5	Toluene-D8	104%		84-119%
460-00-4	4-Bromofluorobenzene	93%		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:	JB97803-4	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24569.D	1	06/26/15	WO	n/a	n/a	GUV4957
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	4.28	0.20	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	101%		62-120%

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:	JB97803-4	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12197.D	1	07/01/15	AD	06/29/15	OP85180	G7Z489
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.46	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		36-144%
16416-32-3	Tetracosane-d50	67%		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-5		
Lab Sample ID:	JB97803-5	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111524.D	1	07/01/15	XC	n/a	n/a	V3D4785
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	3.3	ug/l	
71-43-2	Benzene	0.92	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	0.39	2.0	0.21	ug/l	J
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	0.28	1.0	0.18	ug/l	J
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.40	1.0	0.27	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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:	JB97803-5	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.3	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	10.3	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	0.25	2.0	0.19	ug/l	J
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		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:	JB97803-5	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	98%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	92%		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:	JB97803-5	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24570.D	1	06/26/15	WO	n/a	n/a	GUV4957
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	94%		62-120%

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-5		
Lab Sample ID:	JB97803-5	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Y12211.D	1	07/01/15	KD	06/29/15	OP85180	G7Y479
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.123	0.026	0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	63%		36-144%
16416-32-3	Tetracosane-d50	57%		32-138%
438-22-2	5a-Androstane	54%		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:	JB97803-6	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111468.D	1	06/29/15	XC	n/a	n/a	V3D4783
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	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	0.44	2.0	0.26	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	8.2	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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-6		
Lab Sample ID:	JB97803-6	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.4	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	65.6	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		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-6		
Lab Sample ID:	JB97803-6	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	122%		73-122%
2037-26-5	Toluene-D8	104%		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-6		
Lab Sample ID:	JB97803-6	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24571.D	1	06/26/15	WO	n/a	n/a	GUV4957
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	94%		62-120%

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-6		
Lab Sample ID:	JB97803-6	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Y12212.D	1	07/01/15	KD	06/29/15	OP85180	G7Y479
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	54%		36-144%
16416-32-3	Tetracosane-d50	49%		32-138%
438-22-2	5a-Androstane	47%		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:	JB97803-7	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111639.D	2.5	07/06/15	XC	n/a	n/a	V3D4789
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	25	8.3	ug/l	
71-43-2	Benzene	134	1.3	0.59	ug/l	
108-86-1	Bromobenzene	ND	2.5	0.47	ug/l	
74-97-5	Bromochloromethane	ND	2.5	0.93	ug/l	
75-27-4	Bromodichloromethane	ND	2.5	0.57	ug/l	
75-25-2	Bromoform	ND	2.5	0.59	ug/l	
74-83-9	Bromomethane	ND	5.0	1.1	ug/l	
78-93-3	2-Butanone (MEK)	ND	25	14	ug/l	
104-51-8	n-Butylbenzene	8.0	5.0	0.34	ug/l	
135-98-8	sec-Butylbenzene	3.0	5.0	0.53	ug/l	J
98-06-6	tert-Butylbenzene	ND	5.0	0.70	ug/l	
56-23-5	Carbon tetrachloride	ND	2.5	0.55	ug/l	
108-90-7	Chlorobenzene	ND	2.5	0.46	ug/l	
75-00-3	Chloroethane	ND	2.5	0.85	ug/l	
67-66-3	Chloroform	ND	2.5	0.47	ug/l	
74-87-3	Chloromethane	ND	2.5	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.48	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.51	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.65	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/l	
124-48-1	Dibromochloromethane	ND	2.5	0.38	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.5	0.58	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.46	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.57	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.69	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.5	0.43	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.5	0.45	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.5	1.3	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	1.6	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.5	0.98	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:	JB97803-7	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	2.5	0.39	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.5	0.82	ug/l	
563-58-6	1,1-Dichloropropene	ND	2.5	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	0.52	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	0.46	ug/l	
100-41-4	Ethylbenzene	146	2.5	0.67	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.66	ug/l	
98-82-8	Isopropylbenzene	18.5	2.5	0.58	ug/l	
99-87-6	p-Isopropyltoluene	3.1	5.0	0.53	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	9.1	2.5	0.59	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	13	2.5	ug/l	
74-95-3	Methylene bromide	ND	2.5	0.66	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.8	ug/l	
91-20-3	Naphthalene	39.8	13	0.51	ug/l	
103-65-1	n-Propylbenzene	28.6	5.0	0.53	ug/l	
100-42-5	Styrene	ND	2.5	0.68	ug/l	
75-65-0	Tert Butyl Alcohol	ND	25	6.9	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	5.0	0.47	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	5.0	1.5	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5	0.45	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	0.52	ug/l	
127-18-4	Tetrachloroethene	ND	2.5	1.0	ug/l	
108-88-3	Toluene	37.4	2.5	0.41	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.57	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.52	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.63	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.5	0.54	ug/l	
79-01-6	Trichloroethene	ND	2.5	0.56	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	1.1	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.1	ug/l	
95-63-6	1,2,4-Trimethylbenzene	293	5.0	0.56	ug/l	
108-67-8	1,3,5-Trimethylbenzene	128	5.0	0.74	ug/l	
75-01-4	Vinyl chloride	ND	2.5	0.37	ug/l	
	m,p-Xylene	757	2.5	0.94	ug/l	
95-47-6	o-Xylene	70.9	2.5	0.41	ug/l	
1330-20-7	Xylene (total)	828	2.5	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%

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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:	JB97803-7	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	102%		73-122%
2037-26-5	Toluene-D8	104%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

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:	JB97803-7	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24576.D	1	06/26/15	WO	n/a	n/a	GUV4957
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	6.82	0.20	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	97%		62-120%

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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:	JB97803-7	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12210.D	1	07/01/15	KD	06/29/15	OP85180	G7Z490
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.68	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		36-144%
16416-32-3	Tetracosane-d50	51%		32-138%
438-22-2	5a-Androstane	48%		31-136%

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Report of Analysis

Client Sample ID:	YMW-8		
Lab Sample ID:	JB97803-8	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111534.D	1	07/01/15	XC	n/a	n/a	V3D4785
Run #2	3D111555.D	10	07/01/15	XC	n/a	n/a	V3D4786

	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	3.3	ug/l	
71-43-2	Benzene	91.5	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	5.8	10	5.6	ug/l	J
104-51-8	n-Butylbenzene	6.9	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	2.4	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	5.1	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	0.78	2.0	0.26	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	0.32	1.0	0.23	ug/l	J
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	

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

Report of Analysis

Client Sample ID:	YMW-8		
Lab Sample ID:	JB97803-8	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	255 [a]	10	2.7	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	16.6	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	15.6	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	28.4	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	75.9	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	50.2	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	17.2	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	18.4	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	353 [a]	20	2.2	ug/l	
108-67-8	1,3,5-Trimethylbenzene	82.4	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	376	1.0	0.38	ug/l	
95-47-6	o-Xylene	19.2	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	395	1.0	0.17	ug/l	

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

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

Report of Analysis

Client Sample ID:	YMW-8		
Lab Sample ID:	JB97803-8	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	92%	92%	73-122%
2037-26-5	Toluene-D8	103%	102%	84-119%
460-00-4	4-Bromofluorobenzene	95%	96%	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:	JB97803-8	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24577.D	1	06/26/15	WO	n/a	n/a	GUV4957
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	4.33	0.20	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	120%		62-120%

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-8		
Lab Sample ID:	JB97803-8	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12211.D	1	07/01/15	KD	06/29/15	OP85180	G7Z490
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.71	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		36-144%
16416-32-3	Tetracosane-d50	53%		32-138%
438-22-2	5a-Androstane	45%		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:	JB97803-9	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111556.D	1	07/01/15	XC	n/a	n/a	V3D4786
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	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	0.32	1.0	0.18	ug/l	J
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	

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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:	JB97803-9	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	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:	YMW-9		
Lab Sample ID:	JB97803-9	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	93%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	93%		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:	JB97803-9	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24578.D	1	06/26/15	WO	n/a	n/a	GUV4957
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	94%		62-120%

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-9		
Lab Sample ID:	JB97803-9	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12212.D	1	07/01/15	KD	06/29/15	OP85180	G7Z490
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		36-144%
16416-32-3	Tetracosane-d50	57%		32-138%
438-22-2	5a-Androstane	50%		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:	JB97803-10	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111530.D	1	07/01/15	XC	n/a	n/a	V3D4785
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	3.3	ug/l	
71-43-2	Benzene	1.4	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	2.3	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	2.3	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	0.44	2.0	0.26	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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:	JB97803-10	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	1.0	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	1.5	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.9	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	3.4	5.0	0.20	ug/l	J
103-65-1	n-Propylbenzene	0.85	2.0	0.21	ug/l	J
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	29.5	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	0.32	1.0	0.16	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.76	2.0	0.22	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	0.69	2.0	0.29	ug/l	J
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	1.4	1.0	0.38	ug/l	
95-47-6	o-Xylene	0.36	1.0	0.17	ug/l	J
1330-20-7	Xylene (total)	1.8	1.0	0.17	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:	OW-1		
Lab Sample ID:	JB97803-10	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	94%		73-122%
2037-26-5	Toluene-D8	102%		84-119%
460-00-4	4-Bromofluorobenzene	95%		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:	JB97803-10	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24579.D	1	06/26/15	WO	n/a	n/a	GUV4957
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	1.37	0.20	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	103%		62-120%

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:	JB97803-10	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12200.D	1	07/01/15	AD	06/29/15	OP85180	G7Z489
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.918	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		36-144%
16416-32-3	Tetracosane-d50	56%		32-138%
438-22-2	5a-Androstane	51%		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:	JB97803-11	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111532.D	1	07/01/15	XC	n/a	n/a	V3D4785
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	3.3	ug/l	
71-43-2	Benzene	5.0	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	8.1	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	5.6	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	0.32	2.0	0.28	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	4.1	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	2.8	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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-7		
Lab Sample ID:	JB97803-11	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	117	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	24.2	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	0.97	2.0	0.21	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	51.0	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	45.7	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	70.1	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	145	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	1.5	2.0	0.19	ug/l	J
637-92-3	tert-Butyl Ethyl Ether	0.84	2.0	0.62	ug/l	J
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	3.6	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	44.2	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	12.6	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	111	1.0	0.38	ug/l	
95-47-6	o-Xylene	6.0	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	117	1.0	0.17	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:	MW-7		
Lab Sample ID:	JB97803-11	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	93%		73-122%
2037-26-5	Toluene-D8	102%		84-119%
460-00-4	4-Bromofluorobenzene	94%		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:	JB97803-11	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24580.D	1	06/26/15	WO	n/a	n/a	GUV4957
Run #2 [a]	UV24601.D	1	06/29/15	WO	n/a	n/a	GUV4958

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	2.98	0.20	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	123% [c]	126% [b]	62-120%

(a) Confirmation run for surrogate recoveries.
(b) Outside control limits due to matrix interference.
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

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:	JB97803-11	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12201.D	1	07/01/15	AD	06/29/15	OP85180	G7Z489
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.58	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		36-144%
16416-32-3	Tetracosane-d50	46%		32-138%
438-22-2	5a-Androstane	38%		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:	JB97803-12	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111522.D	1	07/01/15	XC	n/a	n/a	V3D4785
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	4.8	10	3.3	ug/l	J
71-43-2	Benzene	ND	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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-1		
Lab Sample ID:	JB97803-12	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		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-1		
Lab Sample ID:	JB97803-12	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	98%		73-122%
2037-26-5	Toluene-D8	102%		84-119%
460-00-4	4-Bromofluorobenzene	92%		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:	JB97803-12	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24581.D	1	06/26/15	WO	n/a	n/a	GUV4957
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	95%		62-120%

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:	JB97803-12	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12202.D	1	07/01/15	AD	06/29/15	OP85180	G7Z489
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.102	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	65%		36-144%
16416-32-3	Tetracosane-d50	40%		32-138%
438-22-2	5a-Androstane	33%		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:	JB97803-13	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111535.D	1	07/01/15	XC	n/a	n/a	V3D4785
Run #2	3D111642.D	10	07/06/15	XC	n/a	n/a	V3D4789

	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	3.3	ug/l	
71-43-2	Benzene	178	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	7.3	10	5.6	ug/l	J
104-51-8	n-Butylbenzene	9.9	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	1.8	2.0	0.21	ug/l	J
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	10.6	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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:	JB97803-13	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	661 [a]	10	2.7	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	39.0	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	1.0	2.0	0.21	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	17.3	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	392 [a]	50	2.0	ug/l	
103-65-1	n-Propylbenzene	98.8	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	3200 [a]	100	28	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	0.64	2.0	0.62	ug/l	J
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	34.1	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	838 [a]	20	2.2	ug/l	
108-67-8	1,3,5-Trimethylbenzene	6.0	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	359	1.0	0.38	ug/l	
95-47-6	o-Xylene	50.2	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	409	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%	98%	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-4		
Lab Sample ID:	JB97803-13	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	94%	100%	73-122%
2037-26-5	Toluene-D8	105%	99%	84-119%
460-00-4	4-Bromofluorobenzene	94%	95%	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:	JB97803-13	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24582.D	1	06/26/15	WO	n/a	n/a	GUV4957
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	6.13	0.20	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	110%		62-120%

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-4		
Lab Sample ID:	JB97803-13	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12203.D	1	07/01/15	AD	06/29/15	OP85180	G7Z489
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	4.54	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		36-144%
16416-32-3	Tetracosane-d50	42%		32-138%
438-22-2	5a-Androstane	34%		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:	JB97803-14	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	3D111525.D	1	07/01/15	XC	n/a	n/a	V3D4785
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	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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:	MDE-4		
Lab Sample ID:	JB97803-14	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		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:	JB97803-14	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	98%		73-122%
2037-26-5	Toluene-D8	103%		84-119%
460-00-4	4-Bromofluorobenzene	92%		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:	JB97803-14	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24583.D	1	06/26/15	WO	n/a	n/a	GUV4957
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	96%		62-120%

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:	MDE-4		
Lab Sample ID:	JB97803-14	**Date Sampled:**	06/22/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	7Z12204.D	1	07/01/15	AD	06/29/15	OP85180	G7Z489
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.025	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	68%		36-144%
16416-32-3	Tetracosane-d50	38%		32-138%
438-22-2	5a-Androstane	30% [a]		31-136%

(a) Outside of in house control limits. There's no sample left to reextract.

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

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST Laboratories

CHAIN OF CUSTODY

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

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JB97803

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

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

624 ☐ 8021 ☐ 602 ☐ BTEX ☐ MTBE ☐ TBA ☐ NAP ☐
8260 ☐ 624 ☐ TCL ☐ PPL ☐ STARS ☐ MTBE ☐ TBA ☐ NAP ☐ +10 ☐ +15 ☐
8270 ☐ 625 ☐ TCL ☐ PPL ☐ STARS ☐ AGN ☐ AEO ☐ BN ☐ PAH ☐ +TICs ☐

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	MeOH	HNO3	H2SO4	NaOHE	NaHSO4	MEOH	ENCORE	Full Scan VOC's + Fuel Oxygenates by 8260B	TPH-GRO by 8015B	TPH-DRO by 8015B	LAB USE ONLY
1	YMW-1		6-22-15	1355	RL	GW	7	7								X	X	X	E40
2	YMW-2		6-22-15	1140	RL	GW	7	7								X	X	X	V403
3	YMW-3		6-22-15	11:15	RL	GW	7	7								X	X	X	V402
4	YMW-4		6-22-15	13:05	RL	GW	7	7								X	X	X	
5	YMW-5		6-22-15	1500	RL	GW	7	7								X	X	X	
6	YMW-6		6-22-15	1430	RL	GW	7	7								X	X	X	
7	YMW-7		6-22-15	1020	RL	GW	7	7								X	X	X	
8	YMW-8		6-22-15	1205	RL	GW	7	7								X	X	X	
9	YMW-9		6-22-15	13:30	RL	GW	7	7								X	X	X	
10	OW-1		6-22-15	9:30	RL	GW	7	7								X	X	X	
11	MW-7		6-22-15	1525	RL	GW	7	7								X	X	X	
12	MW-1		6-22-15	1550	RL	GW	7	7								X	X	X	
13	MW-4		6-22-15	1620	RL	GW	7	7								X	X	X	
14	MDE-4		6-22-15	1045	RL	GW	7	7								X	X	X	

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

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 LB
LABEL VERIFICATION MB

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

Rec'd at Exton Service Center
6/24/15 1530

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		1	2		2
Relinquished by: 3	Date Time: 6/24/15 10:45	Received By: 3	Relinquished By:	Date Time: 6/24/15 1640	Received By: 4
Relinquished by: 5	Date Time: 6/24/15 1705	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 6.0 C/G 5.9 C/G 5.8 C/G 4.6 C/G

JB97803: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB97803 **Client:** **Project:**

Date / Time Received: 6/24/2015 7:05:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (6.0); Cooler 2: (5.9); Cooler 3: (5.8); Cooler 4: (4.6);

Cooler Temps (Corrected) °C: Cooler 1: (5.7); Cooler 2: (5.6); Cooler 3: (5.5); Cooler 4: (4.3);

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:	4	

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

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB97803: Chain of Custody
Page 2 of 2

New Jersey
ACCUTEST LABORATORIES

07/08/15

Technical Report for

EMS Environmental, Inc.

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

5713

Accutest Job Number: JB97802

Sampling Date: 06/23/15

Report to:

EMS Environmental, Inc.

ynabavian@emsenv.com

ATTN: Yoosef Nabavian

Total number of pages in report: **34**

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, VA, WV, DoD ELAP (L-A-B L2248)

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Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Summary of Hits **4**
Section 3: Sample Results **6**
3.1: JB97802-1: YP-1 7
3.2: JB97802-2: YP-2 12
3.3: JB97802-3: YP-3 17
3.4: JB97802-4: YP-4 22
3.5: JB97802-5: YP-5 27
Section 4: Misc. Forms **32**
4.1: Chain of Custody 33

Accutest LabLink@08:25 08-Jul-2015

Sample Summary

EMS Environmental, Inc.

Job No: JB97802

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB97802-1	06/23/15	11:05	RL	06/24/15	AQ	Ground Water	YP-1
JB97802-2	06/23/15	11:35	RL	06/24/15	AQ	Ground Water	YP-2
JB97802-3	06/23/15	10:35	RL	06/24/15	AQ	Ground Water	YP-3
JB97802-4	06/23/15	10:05	RL	06/24/15	AQ	Ground Water	YP-4
JB97802-5	06/23/15	09:35	RL	06/24/15	AQ	Ground Water	YP-5

Summary of Hits

Job Number: JB97802
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/23/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB97802-1	**YP-1**					
Benzene		5.6	2.5	1.2	ug/l	SW846 8260C
n-Butylbenzene		18.3	10	0.68	ug/l	SW846 8260C
sec-Butylbenzene		6.7 J	10	1.1	ug/l	SW846 8260C
Di-Isopropyl ether		5.0 J	10	1.3	ug/l	SW846 8260C
Ethylbenzene		714	5.0	1.3	ug/l	SW846 8260C
Isopropylbenzene		46.7	5.0	1.2	ug/l	SW846 8260C
p-Isopropyltoluene		2.7 J	10	1.1	ug/l	SW846 8260C
Methyl Tert Butyl Ether		19.3	5.0	1.2	ug/l	SW846 8260C
Naphthalene		186	25	1.0	ug/l	SW846 8260C
n-Propylbenzene		155	10	1.1	ug/l	SW846 8260C
Tert Butyl Alcohol		104	50	14	ug/l	SW846 8260C
Toluene		75.6	5.0	0.81	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		304	10	1.1	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		74.3	10	1.5	ug/l	SW846 8260C
m,p-Xylene		1290	5.0	1.9	ug/l	SW846 8260C
o-Xylene		126	5.0	0.83	ug/l	SW846 8260C
Xylene (total)		1420	5.0	0.83	ug/l	SW846 8260C
TPH-GRO (C6-C10)		11.1	0.20	0.038	mg/l	SW846 8015C
TPH-DRO (C10-C28)		1.98	0.083	0.064	mg/l	SW846 8015C
JB97802-2	**YP-2**					
Benzene		3.9	0.50	0.24	ug/l	SW846 8260C
sec-Butylbenzene		0.21 J	2.0	0.21	ug/l	SW846 8260C
Di-Isopropyl ether		0.28 J	2.0	0.26	ug/l	SW846 8260C
1,2-Dichloroethane		0.72 J	1.0	0.18	ug/l	SW846 8260C
Methyl Tert Butyl Ether		12.6	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		4.7 J	10	2.8	ug/l	SW846 8260C
TPH-DRO (C10-C28)		0.0950	0.083	0.064	mg/l	SW846 8015C
JB97802-3	**YP-3**					
Acetone		3.6 J	10	3.3	ug/l	SW846 8260C
Benzene		0.91	0.50	0.24	ug/l	SW846 8260C
sec-Butylbenzene		0.38 J	2.0	0.21	ug/l	SW846 8260C
1,2-Dichloroethane		0.82 J	1.0	0.18	ug/l	SW846 8260C
cis-1,2-Dichloroethene		0.40 J	1.0	0.27	ug/l	SW846 8260C
Methyl Tert Butyl Ether		6.9	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		4.8 J	10	2.8	ug/l	SW846 8260C
TPH-DRO (C10-C28) [a]		0.199	0.083	0.064	mg/l	SW846 8015C

Summary of Hits

Job Number: JB97802
Account: EMS Environmental, Inc.
Project: HESS #20204, 1613 East Joppa Road, Towson, MD
Collected: 06/23/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB97802-4	**YP-4**					
cis-1,2-Dichloroethene		4.1	1.0	0.27	ug/l	SW846 8260C
Methyl Tert Butyl Ether		3.1	1.0	0.24	ug/l	SW846 8260C
JB97802-5	**YP-5**					
Acetone		3.7 J	10	3.3	ug/l	SW846 8260C
Benzene		0.28 J	0.50	0.24	ug/l	SW846 8260C
Di-Isopropyl ether		0.52 J	2.0	0.26	ug/l	SW846 8260C
1,2-Dichloroethane		21.5	1.0	0.18	ug/l	SW846 8260C
1,2-Dichloropropane		0.67 J	1.0	0.39	ug/l	SW846 8260C
Methyl Tert Butyl Ether		32.3	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		106	10	2.8	ug/l	SW846 8260C
tert-Butyl Ethyl Ether		0.76 J	2.0	0.62	ug/l	SW846 8260C
TPH-DRO (C10-C28)		0.117	0.083	0.064	mg/l	SW846 8015C

(a) Re-extracted for low surrogate recovery. Originally prep date was within holding time.

New Jersey

ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	YP-1		
Lab Sample ID:	JB97802-1	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	4B53466.D	5	07/02/15	TP	n/a	n/a	V4B2256
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	50	17	ug/l	
71-43-2	Benzene	5.6	2.5	1.2	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.95	ug/l	
74-97-5	Bromochloromethane	ND	5.0	1.9	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.1	ug/l	
75-25-2	Bromoform	ND	5.0	1.2	ug/l	
74-83-9	Bromomethane	ND	10	2.1	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	28	ug/l	
104-51-8	n-Butylbenzene	18.3	10	0.68	ug/l	
135-98-8	sec-Butylbenzene	6.7	10	1.1	ug/l	J
98-06-6	tert-Butylbenzene	ND	10	1.4	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	5.0	0.93	ug/l	
75-00-3	Chloroethane	ND	5.0	1.7	ug/l	
67-66-3	Chloroform	ND	5.0	0.94	ug/l	
74-87-3	Chloromethane	ND	5.0	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	10	0.97	ug/l	
106-43-4	p-Chlorotoluene	ND	10	1.0	ug/l	
108-20-3	Di-Isopropyl ether	5.0	10	1.3	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	0.77	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.2	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.93	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	4.5	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	0.86	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	0.90	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	2.6	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	3.2	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	2.0	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:	JB97802-1	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	5.0	0.77	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.6	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.93	ug/l	
100-41-4	Ethylbenzene	714	5.0	1.3	ug/l	
87-68-3	Hexachlorobutadiene	ND	10	1.3	ug/l	
98-82-8	Isopropylbenzene	46.7	5.0	1.2	ug/l	
99-87-6	p-Isopropyltoluene	2.7	10	1.1	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	19.3	5.0	1.2	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	25	5.1	ug/l	
74-95-3	Methylene bromide	ND	5.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	10	3.6	ug/l	
91-20-3	Naphthalene	186	25	1.0	ug/l	
103-65-1	n-Propylbenzene	155	10	1.1	ug/l	
100-42-5	Styrene	ND	5.0	1.4	ug/l	
75-65-0	Tert Butyl Alcohol	104	50	14	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	10	0.95	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	10	3.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.89	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	2.0	ug/l	
108-88-3	Toluene	75.6	5.0	0.81	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.1	ug/l	
79-01-6	Trichloroethene	ND	5.0	1.1	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	2.1	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10	2.2	ug/l	
95-63-6	1,2,4-Trimethylbenzene	304	10	1.1	ug/l	
108-67-8	1,3,5-Trimethylbenzene	74.3	10	1.5	ug/l	
75-01-4	Vinyl chloride	ND	5.0	0.74	ug/l	
	m,p-Xylene	1290	5.0	1.9	ug/l	
95-47-6	o-Xylene	126	5.0	0.83	ug/l	
1330-20-7	Xylene (total)	1420	5.0	0.83	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		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-1		
Lab Sample ID:	JB97802-1	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	102%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	99%		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-1		
Lab Sample ID:	JB97802-1	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24589.D	1	06/26/15	WO	n/a	n/a	GUV4957
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	11.1	0.20	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	99%		62-120%

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-1		
Lab Sample ID:	JB97802-1	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	2Z48723.D	1	06/27/15	KD	06/26/15	OP85104	G2Z1823
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)	1.98	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	46%		36-144%
16416-32-3	Tetracosane-d50	43%		32-138%
438-22-2	5a-Androstane	39%		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:	JB97802-2	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	4B53462.D	1	07/02/15	TP	n/a	n/a	V4B2256
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	3.3	ug/l	
71-43-2	Benzene	3.9	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	0.21	2.0	0.21	ug/l	J
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	0.28	2.0	0.26	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	0.72	1.0	0.18	ug/l	J
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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:	YP-2		
Lab Sample ID:	JB97802-2	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	12.6	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	4.7	10	2.8	ug/l	J
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		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:	JB97802-2	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	102%		73-122%
2037-26-5	Toluene-D8	99%		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:	YP-2		
Lab Sample ID:	JB97802-2	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24590.D	1	06/26/15	WO	n/a	n/a	GUV4957
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	95%		62-120%

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-2		
Lab Sample ID:	JB97802-2	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	2Z48724.D	1	06/27/15	KD	06/26/15	OP85104	G2Z1823
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)	0.0950	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	67%		36-144%
16416-32-3	Tetracosane-d50	59%		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:	YP-3		
Lab Sample ID:	JB97802-3	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	4B53463.D	1	07/02/15	TP	n/a	n/a	V4B2256
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	3.6	10	3.3	ug/l	J
71-43-2	Benzene	0.91	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	0.38	2.0	0.21	ug/l	J
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	0.82	1.0	0.18	ug/l	J
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.40	1.0	0.27	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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:	YP-3		
Lab Sample ID:	JB97802-3	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.9	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	4.8	10	2.8	ug/l	J
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		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:	JB97802-3	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	102%		73-122%
2037-26-5	Toluene-D8	99%		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:	YP-3		
Lab Sample ID:	JB97802-3	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24591.D	1	06/26/15	WO	n/a	n/a	GUV4957
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	94%		62-120%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	YP-3		
Lab Sample ID:	JB97802-3	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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 [a]	2Y70756.D	1	07/03/15	PK	07/02/15	OP85258	G2Y2718
Run #2 [b]	2Z48725.D	1	06/27/15	KD	06/26/15	OP85104	G2Z1823

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.199	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%	40%	36-144%
16416-32-3	Tetracosane-d50	68%	33%	32-138%
438-22-2	5a-Androstane	63%	30% [c]	31-136%

(a) Re-extracted for low surrogate recovery. Originally prep date was within holding time.
(b) Confirmation run.
(c) Outside of in house control limits.

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:	JB97802-4	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	4B53464.D	1	07/02/15	TP	n/a	n/a	V4B2256
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	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.1	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	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:	YP-4		
Lab Sample ID:	JB97802-4	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.1	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	0.62	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		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:	JB97802-4	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	101%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	101%		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:	JB97802-4	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24599.D	1	06/29/15	WO	n/a	n/a	GUV4958
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	91%		62-120%

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-4		
Lab Sample ID:	JB97802-4	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	2Z48726.D	1	06/27/15	KD	06/26/15	OP85104	G2Z1823
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	39%		32-138%
438-22-2	5a-Androstane	34%		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:	JB97802-5	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	4B53465.D	1	07/02/15	TP	n/a	n/a	V4B2256
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	3.7	10	3.3	ug/l	J
71-43-2	Benzene	0.28	0.50	0.24	ug/l	J
108-86-1	Bromobenzene	ND	1.0	0.19	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.14	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.21	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.19	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	0.52	2.0	0.26	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	21.5	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	0.67	1.0	0.39	ug/l	J

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:	JB97802-5	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	0.15	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.33	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.26	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
1634-04-4	Methyl Tert Butyl Ether	32.3	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.27	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.21	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	106	10	2.8	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.19	ug/l	
637-92-3	tert-Butyl Ethyl Ether	0.76	2.0	0.62	ug/l	J
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.18	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.45	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.29	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		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-5		
Lab Sample ID:	JB97802-5	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	101%		73-122%
2037-26-5	Toluene-D8	99%		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:	YP-5		
Lab Sample ID:	JB97802-5	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	UV24600.D	1	06/29/15	WO	n/a	n/a	GUV4958
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	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	94%		62-120%

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:	JB97802-5	**Date Sampled:**	06/23/15
Matrix:	AQ - Ground Water	**Date Received:**	06/24/15
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	2Z48727.D	1	06/27/15	KD	06/26/15	OP85104	G2Z1823
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)	0.117	0.083	0.064	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	59%		36-144%
16416-32-3	Tetracosane-d50	49%		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

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST Laboratories

WW

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 # JB97802

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

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

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: NO	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260 ☐ 624 ☐ 8021 ☐ 602 ☐ BTEX ☐ MTBE ☐ TBA ☐ NAP ☐	8260 ☐ 624 ☐ TCL ☐ PPL ☐ STARS ☐ MTBE ☐ TBA ☐ NAP ☐ +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	LAB USE ONLY
1	YP-1		6-23-15	11:05	RL	GW	7	7											X	X	X	E 10
2	YP-2		6-23-15	11:35	RL	GW	7	7											X	X	X	V 402
3	YP-3		6-23-15	10 35	RL	GW	7	7											X	X	X	
4	YP-4		6-23-15	10:05	RL	GW	7	7											X	X	X	
5	YP-5		6-23-15	9:35	RL	GW	7	7											X	X	X	

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

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 ZBo
LABEL VERIFICATION MB

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

Rec'd at Exton Service Center
6/24/15 1330

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		1	2		2
Relinquished by: 3	6/24/15 10:45	3	Relinquished By: 4	6/24/15 1540	Received By: 4
Relinquished by: 5	6/24/15 1405	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp. 1.0 C/G 5.8 C/G 5.8 C/G 4.6 C/G

JB97802: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB97802 **Client:** **Project:**

Date / Time Received: 6/24/2015 7:05:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (6.0); Cooler 2: (5.9); Cooler 3: (5.8); Cooler 4: (4.6);

Cooler Temps (Corrected) °C: Cooler 1: (5.7); Cooler 2: (5.6); Cooler 3: (5.5); Cooler 4: (4.3);

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:	4	

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

Accutest Laboratories
V:732.329.0200
2235 US Highway 130
F: 732.329.3499
Dayton, New Jersey
www/accutest.com

4.1

4

JB97802: Chain of Custody

Page 2 of 2