MassDEP Field Assessment and Support Team (FAST)				SURFACE WATER			RTN:		
City or Town:	Peabody		Address:	2 5th Street (Lifoam)					Location:
Date Sampled:	7/12/16	Time:	9:25 PM	Field ID:	RO-1	Collector:	Giddings		Fire fighting water runoff west side
Date Analyzed:	7/12/16	Time:	10:14 PM	Lab ID:	010	Analyst:	Fitzgerald		

NOTE - ALL REPORTED VALUES ARE ESTIMATES, BASED UPON HEADSPACE ANALYSIS AND APPLICATION OF HENRY'S LAW

Method Analytes	Est Conc µg/L		Sample	Dilution	Hdspc	K	DW	Aquatic Toxicty µg/L	
	Result	R.L.	ppbV	Factor	ppbV	(25°C)	µg/L	Acute	Chronic
Vinyl Chloride	N.D.	1	N.D.	85	N.D.	1.14	2	400,000	40,000
Chloroethane	N.D.	20	N.D.	85	N.D.	0.275	NS	NA	NA
Trichloromonofluoromethane	N.D.	15	N.D.	85	N.D.	4.51	NS	NA	NA
1,1-Dichloroethene	N.D.	1	N.D.	85	N.D.	0.634	7	12,000	1,200
Methylene Chloride	N.D.	1	N.D.	85	N.D.	0.09	5	NA	6,700
1,1,2-Trichlorotrifluoroethane	N.D.	17	N.D.	85	N.D.	14.34	NS	NA	NA
1,1-Dichloroethane	N.D.	70	N.D.	85	N.D.	0.012	70	NA	990
Cis 1,2-Dichloroethylene	N.D.	3	N.D.	85	N.D.	0.167	70	140,000	14,000
Chloroform	N.D.	4	N.D.	85	N.D.	0.151	70	NA	970
1,2-Dichloroethane	N.D.	19	N.D.	85	N.D.	0.024	5	NA	990
1,1,1-Trichloroethane	N.D.	1	N.D.	85	N.D.	0.705	200	9000	900
Benzene	**40**	3	21	85	1783	0.116	5	4600	460
Carbon Tetrachloride	N.D.	1	N.D.	85	N.D.	1.132	5	2000	200
1,2-Dichloropropane	N.D.	5	N.D.	85	N.D.	0.116	5	NA	25,000
Trichloroethylene	N.D.	4	N.D.	85	N.D.	0.197	5	1900	190
cis-1,3-Dichloropropene	N.D.	4	N.D.	85	N.D.	0.146	NS	90	9
trans-1,3-Dichloropropene	N.D.	28	N.D.	85	N.D.	0.036	NS	90	9
1,1,2-Trichloroethane	N.D.	18	N.D.	85	N.D.	0.034	5	NA	15,000
Toluene	**7**	2	4	85	316	0.272	1,000	1400	1,400
1,2-Dibromoethane	N.D.	26	N.D.	85	N.D.	0.029	NS	NA	9600
Tetrachloroethylene	N.D.	2	N.D.	85	N.D.	0.726	5	NA	1,100
Chlorobenzene	N.D.	4	N.D.	85	N.D.	0.128	100	NA	38
Ethylbenzene	**3**	2	1	85	119	0.323	700	1800	180
p/m-Xylene (see note)	N.D.	2	N.D.	85	N.D.	0.27	10,000	200	200
Styrene	**200**	5	34	85	2899	0.113	100	2500	250
o-Xylene	N.D.	5	N.D.	85	N.D.	0.114	part of total Xylenes		
1,1,2,2-Tetrachloroethane	N.D.	49	N.D.	85	N.D.	0.015	5	NA	4,000
1,3,5-Trimethylbenzene	N.D.	2	N.D.	85	N.D.	0.272	NS	5400	540
1,2,4-Trimethylbenzene	N.D.	3	N.D.	85	N.D.	0.212	NS	5400	540
1,3-Dichlorobenzene (meta)	N.D.	7	N.D.	85	N.D.	0.108	1	NA	1500
1,2-Dichlorobenzene (ortho)	N.D.	9	N.D.	85	N.D.	0.079	9	780	78
1,4-Dichlorobenzene (para)	N.D.	7	N.D.	85	N.D.	0.099	0.7	NA	310
1,2,4-Trichlorobenzene	N.D.	29	N.D.	85	N.D.	0.058	2	NA	340
HexachloroButadiene	N.D.	9	N.D.	85	N.D.	0.334	6	NA	13

Instrument: HAPSITE Smart Plus GC/MS Method: FAST TO-14 Last Calib: 4/22/16 Reporting Limit (R.L.) is lowest calib standard

Quality Control: 4-8 point calib w/ %RSD<30, Internal Stds, daily blank, daily calib check standard R.L= estimated aqueous conc

Headspace procedure involves half-filling a 40 mL vial and shaking it vigorously 30 seconds twice over a minimum 10 minute time period, at about 25°C. Calculated aqueous concentration assumes 75% of equilbrium conditions using Henry's Law.

N.D. = Not Detected K = dimensionless Henry's Law Constant DW = Drinking Water standard NA = Information Not Available

Aquatic Toxicity values from various sources as selected in MassDEP Method 1 Standard calculations for GW-3 (2014)

COMMENTS:

MassDEP Field Assessment and Support Team (FAST)							SURFACE WATER	RTN:	
City or Town:	Peabody		Address:	2 5th Street (Lifoam)					Location:
Date Sampled:	7/12/16	Time:	11:20 PM	Field ID:	W-1	Collector:	Clark		Brook at 1st Street
Date Analyzed:	7/12/16	Time:	11:35 PM	Lab ID:	012	Analyst:	Fitzgerald		

NOTE - ALL REPORTED VALUES ARE ESTIMATES, BASED UPON HEADSPACE ANALYSIS AND APPLICATION OF HENRY'S LAW

Method Analytes	Est Conc µg/L		Sample	Dilution	Hdspc	K	DW	Aquatic Toxicty µg/L	
	Result	R.L.	ppbV	Factor	ppbV	(25°C)	µg/L	Acute	Chronic
Vinyl Chloride	N.D.	1	N.D.	43	N.D.	1.14	2	400,000	40,000
Chloroethane	N.D.	7	N.D.	43	N.D.	0.275	NS	NA	NA
Trichloromonofluoromethane	N.D.	7	N.D.	43	N.D.	4.51	NS	NA	NA
1,1-Dichloroethene	N.D.	0	N.D.	43	N.D.	0.634	7	12,000	1,200
Methylene Chloride	N.D.	4	N.D.	43	N.D.	0.09	5	NA	6,700
1,1,2-Trichlorotrifluoroethane	N.D.	9	N.D.	43	N.D.	14.34	NS	NA	NA
1,1-Dichloroethane	N.D.	2	N.D.	43	N.D.	0.012	70	NA	990
Cis 1,2-Dichloroethylene	N.D.	3	N.D.	43	N.D.	0.167	70	140,000	14,000
Chloroform	N.D.	2	N.D.	43	N.D.	0.151	70	NA	970
1,2-Dichloroethane	N.D.	6	N.D.	43	N.D.	0.024	5	NA	990
1,1,1-Trichloroethane	N.D.	1	N.D.	43	N.D.	0.705	200	9000	900
Benzene	N.D.	1	0	43	N.D.	0.116	5	4600	460
Carbon Tetrachloride	N.D.	1	N.D.	43	N.D.	1.132	5	2000	200
1,2-Dichloropropane	N.D.	2	N.D.	43	N.D.	0.116	5	NA	25,000
Trichloroethylene	N.D.	1	N.D.	43	N.D.	0.197	5	1900	190
cis-1,3-Dichloropropene	N.D.	1	N.D.	43	N.D.	0.146	NS	90	9
trans-1,3-Dichloropropene	N.D.	1	N.D.	43	N.D.	0.036	NS	90	9
1,1,2-Trichloroethane	N.D.	9	N.D.	43	N.D.	0.034	5	NA	15,000
Toluene	N.D.	1	0	43	N.D.	0.272	1,000	1400	1,400
1,2-Dibromoethane	N.D.	10	N.D.	43	N.D.	0.029	NS	NA	9600
Tetrachloroethylene	N.D.	1	0	43	N.D.	0.726	5	NA	1,100
Chlorobenzene	N.D.	2	N.D.	43	N.D.	0.128	100	NA	38
Ethylbenzene	N.D.	1	N.D.	43	N.D.	0.323	700	1800	180
p/m-Xylene (see note)	N.D.	1	N.D.	43	N.D.	0.27	10,000	200	200
Styrene	**10**	2	5	43	197	0.113	100	2500	250
o-Xylene	N.D.	1	N.D.	43	N.D.	0.114	part of total Xylenes		
1,1,2,2-Tetrachloroethane	N.D.	20	N.D.	43	N.D.	0.015	5	NA	4,000
1,3,5-Trimethylbenzene	N.D.	2	N.D.	43	N.D.	0.272	NS	5400	540
1,2,4-Trimethylbenzene	N.D.	3	N.D.	43	N.D.	0.212	NS	5400	540
1,3-Dichlorobenzene (meta)	N.D.	7	N.D.	43	N.D.	0.108	1	NA	1500
1,2-Dichlorobenzene (ortho)	N.D.	9	N.D.	43	N.D.	0.079	9	780	78
1,4-Dichlorobenzene (para)	N.D.	7	N.D.	43	N.D.	0.099	0.7	NA	310
1,2,4-Trichlorobenzene	N.D.	20	N.D.	43	N.D.	0.058	2	NA	340
HexachloroButadiene	N.D.	5	N.D.	43	N.D.	0.334	6	NA	13

Instrument: HAPSITE ER GC/MS Method: FAST TO-14 Last Calib: 6/22/16. Reporting Limit (R.L.) is lowest calib standard

Quality Control: 4-8 point calib w/ %RSD<30, Internal Stds, daily blank, daily calib check standard R.L= estimated aqueous conc

Headspace procedure involves half-filling a 40 mL vial and shaking it vigorously 30 seconds twice over a minimum 10 minute time period, at about 25°C. Calculated aqueous concentration assumes 75% of equilbrium conditions using Henry's Law.

N.D. = Not Detected K = dimensionless Henry's Law Constant DW = Drinking Water standard NA = Information Not Available

Aquatic Toxicity values from various sources as selected in MassDEP Method 1 Standard calculations for GW-3 (2014)

COMMENTS:

MassDEP Field Assessment and Support Team (FAST)				SURFACE WATER		RTN:	0
City or Town:	Peabody		Address:	2 5th Street (Lifoam)			Location:
Date Sampled:	7/13/16	Time:	10:22 AM	Field ID:	W-2	Collector: Giddings	Brook at 1st Street
Date Analyzed:	7/13/16	Time:	1:40 PM	Lab ID:	006	Analyst: Fitzgerald	

NOTE - ALL REPORTED VALUES ARE ESTIMATES, BASED UPON HEADSPACE ANALYSIS AND APPLICATION OF HENRY'S LAW

Method Analytes	Est Conc µg/L		Sample	Dilution	Hdspc	K	DW	Aquatic Toxicty µg/L	
	Result	R.L.	ppbV	Factor	ppbV	(25°C)	µg/L	Acute	Chronic
Vinyl Chloride	N.D.	1	N.D.	43	N.D.	1.14	2	400,000	40,000
Chloroethane	N.D.	7	N.D.	43	N.D.	0.275	NS	NA	NA
Trichloromonofluoromethane	N.D.	7	N.D.	43	N.D.	4.51	NS	NA	NA
1,1-Dichloroethene	N.D.	0	N.D.	43	N.D.	0.634	7	12,000	1,200
Methylene Chloride	N.D.	4	N.D.	43	N.D.	0.09	5	NA	6,700
1,1,2-Trichlorotrifluoroethane	N.D.	9	N.D.	43	N.D.	14.34	NS	NA	NA
1,1-Dichloroethane	N.D.	2	N.D.	43	N.D.	0.012	70	NA	990
Cis 1,2-Dichloroethylene	N.D.	3	N.D.	43	N.D.	0.167	70	140,000	14,000
Chloroform	N.D.	2	N.D.	43	N.D.	0.151	70	NA	970
1,2-Dichloroethane	N.D.	6	N.D.	43	N.D.	0.024	5	NA	990
1,1,1-Trichloroethane	N.D.	1	N.D.	43	N.D.	0.705	200	9000	900
Benzene	N.D.	1	N.D.	43	N.D.	0.116	5	4600	460
Carbon Tetrachloride	N.D.	1	N.D.	43	N.D.	1.132	5	2000	200
1,2-Dichloropropane	N.D.	2	N.D.	43	N.D.	0.116	5	NA	25,000
Trichloroethylene	N.D.	1	N.D.	43	N.D.	0.197	5	1900	190
cis-1,3-Dichloropropene	N.D.	1	N.D.	43	N.D.	0.146	NS	90	9
trans-1,3-Dichloropropene	N.D.	1	N.D.	43	N.D.	0.036	NS	90	9
1,1,2-Trichloroethane	N.D.	9	N.D.	43	N.D.	0.034	5	NA	15,000
Toluene	N.D.	1	N.D.	43	N.D.	0.272	1,000	1400	1,400
1,2-Dibromoethane	N.D.	10	N.D.	43	N.D.	0.029	NS	NA	9600
Tetrachloroethylene	N.D.	1	N.D.	43	N.D.	0.726	5	NA	1,100
Chlorobenzene	N.D.	2	N.D.	43	N.D.	0.128	100	NA	38
Ethylbenzene	N.D.	1	N.D.	43	N.D.	0.323	700	1800	180
p/m-Xylene (see note)	N.D.	1	N.D.	43	N.D.	0.27	10,000	200	200
Styrene	N.D.	2	N.D.	43	N.D.	0.113	100	2500	250
o-Xylene	N.D.	1	N.D.	43	N.D.	0.114	part of total Xylenes		
1,1,2,2-Tetrachloroethane	N.D.	20	N.D.	43	N.D.	0.015	5	NA	4,000
1,3,5-Trimethylbenzene	N.D.	2	N.D.	43	N.D.	0.272	NS	5400	540
1,2,4-Trimethylbenzene	N.D.	3	N.D.	43	N.D.	0.212	NS	5400	540
1,3-Dichlorobenzene (meta)	N.D.	7	N.D.	43	N.D.	0.108	1	NA	1500
1,2-Dichlorobenzene (ortho)	N.D.	9	N.D.	43	N.D.	0.079	9	780	78
1,4-Dichlorobenzene (para)	N.D.	7	N.D.	43	N.D.	0.099	0.7	NA	310
1,2,4-Trichlorobenzene	N.D.	20	N.D.	43	N.D.	0.058	2	NA	340
HexachloroButadiene	N.D.	5	N.D.	43	N.D.	0.334	6	NA	13

Instrument: HAPSITE ER GC/MS Method: FAST TO-14 Last Calib: 6/22/16. Reporting Limit (R.L.) is lowest calib standard

Quality Control: 4-8 point calib w/ %RSD<30, Internal Stds, daily blank, daily calib check standard R.L= estimated aqueous conc

Headspace procedure involves half-filling a 40 mL vial and shaking it vigorously 30 seconds twice over a minimum 10 minute time period, at about 25°C. Calculated aqueous concentration assumes 75% of equilbrium conditions using Henry's Law.

N.D. = Not Detected K = dimensionless Henry's Law Constant DW = Drinking Water standard NA = Information Not Available

Aquatic Toxicity values from various sources as selected in MassDEP Method 1 Standard calculations for GW-3 (2014)

COMMENTS:

MassDEP Field Assessment and Support Team (FAST)				SURFACE WATER			RTN:	0
City or Town:	Peabody		Address:	Craig's Pond at Corwin Street				Location:
Date Sampled:	7/13/16	Time:	11:10 AM	Field ID:	W-3	Collector:	Giddings	
Date Analyzed:	7/13/16	Time:	1:02 PM	Lab ID:	005	Analyst:	Fitzgerald	

NOTE - ALL REPORTED VALUES ARE ESTIMATES, BASED UPON HEADSPACE ANALYSIS AND APPLICATION OF HENRY'S LAW

Method Analytes	Est Conc µg/L		Sample	Dilution	Hdspc	K	DW	Aquatic Toxicty µg/L	
	Result	R.L.	ppbV	Factor	ppbV	(25°C)	µg/L	Acute	Chronic
Vinyl Chloride	N.D.	1	N.D.	43	N.D.	1.14	2	400,000	40,000
Chloroethane	N.D.	7	3	43	N.D.	0.275	NS	NA	NA
Trichloromonofluoromethane	N.D.	7	N.D.	43	N.D.	4.51	NS	NA	NA
1,1-Dichloroethene	N.D.	0	N.D.	43	N.D.	0.634	7	12,000	1,200
Methylene Chloride	N.D.	4	N.D.	43	N.D.	0.09	5	NA	6,700
1,1,2-Trichlorotrifluoroethane	N.D.	9	N.D.	43	N.D.	14.34	NS	NA	NA
1,1-Dichloroethane	N.D.	2	N.D.	43	N.D.	0.012	70	NA	990
Cis 1,2-Dichloroethylene	N.D.	3	N.D.	43	N.D.	0.167	70	140,000	14,000
Chloroform	N.D.	2	N.D.	43	N.D.	0.151	70	NA	970
1,2-Dichloroethane	N.D.	6	N.D.	43	N.D.	0.024	5	NA	990
1,1,1-Trichloroethane	N.D.	1	N.D.	43	N.D.	0.705	200	9000	900
Benzene	N.D.	1	N.D.	43	N.D.	0.116	5	4600	460
Carbon Tetrachloride	N.D.	1	N.D.	43	N.D.	1.132	5	2000	200
1,2-Dichloropropane	N.D.	2	N.D.	43	N.D.	0.116	5	NA	25,000
Trichloroethylene	N.D.	1	N.D.	43	N.D.	0.197	5	1900	190
cis-1,3-Dichloropropene	N.D.	1	N.D.	43	N.D.	0.146	NS	90	9
trans-1,3-Dichloropropene	N.D.	1	N.D.	43	N.D.	0.036	NS	90	9
1,1,2-Trichloroethane	N.D.	9	N.D.	43	N.D.	0.034	5	NA	15,000
Toluene	N.D.	1	N.D.	43	N.D.	0.272	1,000	1400	1,400
1,2-Dibromoethane	N.D.	10	N.D.	43	N.D.	0.029	NS	NA	9600
Tetrachloroethylene	N.D.	1	N.D.	43	N.D.	0.726	5	NA	1,100
Chlorobenzene	N.D.	2	N.D.	43	N.D.	0.128	100	NA	38
Ethylbenzene	N.D.	1	N.D.	43	N.D.	0.323	700	1800	180
p/m-Xylene (see note)	N.D.	1	N.D.	43	N.D.	0.27	10,000	200	200
Styrene	N.D.	2	N.D.	43	N.D.	0.113	100	2500	250
o-Xylene	N.D.	1	N.D.	43	N.D.	0.114	part of total Xylenes		
1,1,2,2-Tetrachloroethane	N.D.	20	N.D.	43	N.D.	0.015	5	NA	4,000
1,3,5-Trimethylbenzene	N.D.	2	N.D.	43	N.D.	0.272	NS	5400	540
1,2,4-Trimethylbenzene	N.D.	3	N.D.	43	N.D.	0.212	NS	5400	540
1,3-Dichlorobenzene (meta)	N.D.	7	N.D.	43	N.D.	0.108	1	NA	1500
1,2-Dichlorobenzene (ortho)	N.D.	9	N.D.	43	N.D.	0.079	9	780	78
1,4-Dichlorobenzene (para)	N.D.	7	N.D.	43	N.D.	0.099	0.7	NA	310
1,2,4-Trichlorobenzene	N.D.	20	N.D.	43	N.D.	0.058	2	NA	340
HexachloroButadiene	N.D.	5	N.D.	43	N.D.	0.334	6	NA	13

Instrument: HAPSITE ER GC/MS Method: FAST TO-14 Last Calib: 6/22/16. Reporting Limit (R.L.) is lowest calib standard

Quality Control: 4-8 point calib w/ %RSD<30, Internal Stds, daily blank, daily calib check standard R.L= estimated aqueous conc

Headspace procedure involves half-filling a 40 mL vial and shaking it vigorously 30 seconds twice over a minimum 10 minute time period, at about 25°C. Calculated aqueous concentration assumes 75% of equilbrium conditions using Henry's Law.

N.D. = Not Detected K = dimensionless Henry's Law Constant DW = Drinking Water standard NA = Information Not Available

Aquatic Toxicity values from various sources as selected in MassDEP Method 1 Standard calculations for GW-3 (2014)

COMMENTS: