Water Drive Test Results Summary
Quanta Resources Superfund Site, Operable Unit 2; Edgewater, New Jersey

						Media Mass				Summary of NAPL Produced[b,c]			tPAH Concentrations	
Sample ID	Sample Midpoint Depth (ft)	SDG	Location	Wet Sample Mass (g)	Wet Bulk Density[a] (g/mL)	Solids (g)	Water (g)	NAPL (g)	Grain Density (g/mL)	Flow Rate 1	Flow Rate 2	Flow Rate 3	Sediment (mg/kg)	Effluent (mg/L)
A-13A-088090	7.42	T1060-02	OA	99.51	1.44	46.39	49.70	3.42	2.14	none	none	none	401.2	
		T1060-02_B	PWD	57.91	1.46	26.53	29.92	1.46	2.00				498.6	0.015
A-13A-120125[d]	10.25	T1060-03	OA	101.68	1.48	50.43	39.80	11.46	2.07	none	none	none	54.3	
		T1060-03 RE	OA	53.15	1.48	26.59	26.20	0.36	2.07				--	
		T1060-03_B	PWD	57.37	1.50	28.23	28.55	0.59	2.37				62.2	0.011
A-23A-048053	4.25	T1060-04	OA	102.65	1.39	44.65	55.60	2.40	1.91	none	none	none	32.3	
		T1060-04_B	PWD	46.06	1.41	20.94	24.27	0.85	1.76				33.7	0.003
A-23A-084089	7.25	T1060-05	OA	101.68	1.42	46.14	51.50	4.04	1.76	none	none	none	47.2	
		T1060-05_B	PWD	58.94	1.45	27.05	30.83	1.06	1.67				32.7	0.003
PR2-8-105113	9.08	T1060-07	OA	101.96	1.46	47.00	52.00	2.96	1.84	none	none	none	159.1	
		T1060-07_B	PWD	59.8	1.49	27.11	30.60	2.09	1.80				155.5	0.016
TTA-06-D-006008	0.58	T1060-08	OA	100.99	1.50	47.55	50.70	2.74	1.81	none	none	none	879.7	
		T1060-08_A	PWD	54.3	1.48	26.76	26.43	1.11	1.90				1,031.9	0.022
A-13A-166168	13.92	T1065-01	OA	56.22	1.42	26.68	27.74	1.80	2.30	none	none	none	465.0	
		T1065-01C	PWD	66.94	1.45	30.90	34.91	1.13	2.38				507.3	0.022
A23-A-111113	9.33	T1065-02	OA	57.85	1.39	25.45	31.48	0.92	2.05	none	none	none	49.2	
		T1065-02B	PWD	57.44	1.40	24.71	31.39	1.34	2.01				37.2	0.007
A23-A-134136	11.25	T1065-03	OA	60.83	1.38	26.61	32.61	1.61	1.75	none	none	none	77.3	
		T1065-03B	PWD	54.04	1.40	23.05	29.77	1.22	1.87				54.4	0.005
A23-A-201203	16.83	T1065-04	OA	61.18	1.50	31.65	26.87	2.66	2.01	none	none	none	4,193.9	
		T1065-04B	PWD	68.31	1.49	34.61	31.37	2.33	2.10				3,562.8	0.135
PR2-8-150152	12.58	T1065-05	OA	54.24	1.47	25.33	27.89	1.02	1.74	none	none	none	323.4	
		T1065-05B	PWD	65.58	1.48	30.61	33.23	1.74	1.70				346.6	0.037
PR2-8-170172	14.25	T1065-06	OA	55.24	1.47	27.52	26.74	0.98	2.83	none	none	none	1,375.4	
		T1065-06B	PWD	65.03	1.49	30.91	31.37	2.75	2.82				1,020.1	0.271
TTA-04-D-032034	2.75	T1065-07	OA	56.38	1.33	22.19	34.65	-0.46	1.89	none	none	none	18,032.5	
		T1065-07B	PWD	57.44	1.35	21.80	33.29	2.35	1.87				21,864.1	1.986
A-13A-170172	14.25	T1065-08	OA	56.79	1.51	26.90	28.18	1.71	2.34	none	none	none	140.9	
		T1065-08B	PWD	71.92	1.53	33.47	36.06	2.39	2.28				195.5	0.038
TTA-05-D-004006	0.42	T1065-09	OA	58.7291	1.55	28.66	28.55	1.52	2.93	none	<1 mm diameter dot	none	4,677.1	
		T1065-09B	PWD	51.97	1.53	26.37	24.70	0.90	2.89				3,842.5	0.355
PR1-4-058060	4.92	T1065-11	OA	58.8221	1.57	29.85	26.77	2.20	2.77	none	< 10µL	none	2,267.7	
		T1065-11C	PWD	57.0887	1.56	26.37	26.13	1.74	2.72				2,371.3	1.911
A-03b-046048	3.92	T1067-01	OA	50.09	1.67	26.74	23.11	0.24	2.46	none	none	none	75.0	
		T1067-01C	PWD	71.13	1.59	39.72	30.55	0.86	2.28				121.8	0.015
A-08b-033035	2.83	T1067-02	OA	49.92	1.39	18.42	28.66	2.84	1.32	none	none	none	9,988.6	
		T1067-02B	PWD	55.43	1.38	22.30	31.44	1.69	1.60				12,230.9	1.519
AA1-4-074076	6.25	T1067-03	OA	52.21	1.45	22.00	27.79	2.42	1.99	1-10 mm diameter dot	none	<1 mm diameter dot	11,341.6	
		T1067-03B	PWD	58.72	1.43	25.93	30.78	2.01	2.10				12,175.7	2.023
PR1-7-080082	6.75	T1067-04	OA	49.9	1.54	19.97	29.05	0.88	1.64	none	none	none	586.3	
		T1067-04B	PWD	72.67	1.53	34.53	37.08	1.06	2.08				448.5	0.134
NN6-10a-030032	2.58	T1067-05	OA	50.77	1.47	23.12	26.91	0.74	1.90	none	none	none	6,187.0	
		T1067-05B	PWD	65.36	1.48	29.45	33.93	1.98	1.29				7,216.4	0.225

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						Media Mass				Summary of NAPL Produced[b,c]			tPAH Concentrations	
Sample ID	**Sample Midpoint Depth** (ft)	**SDG**	**Location**	**Wet Sample Mass** (g)	**Wet Bulk Density[a]** (g/mL)	**Solids** (g)	**Water** (g)	**NAPL** (g)	**Grain Density** (g/mL)	**Flow Rate 1**	**Flow Rate 2**	**Flow Rate 3**	**Sediment** (mg/kg)	**Effluent** (mg/L)
NN6-10a-084086	7.08	T1067-07	OA	65.12	1.37	24.04	33.06	8.02	1.51	none	none	none	5,224.1	
		T1067-07B	PWD	37.92	1.35	14.52	22.00	1.40	1.35				4,162.0	1.326
VC-05b-037039	3.17	T1067-08	OA	38.92	1.52	17.65	19.39	1.88	1.71	none	none	none	480.9	
		T1067-08B	PWD	51.38	1.51	23.67	26.10	1.61	1.89				307.4	0.505
VC-05b-093095	7.83	T1067-09	OA	44.42	1.50	19.26	23.82	1.34	2.20	none	none	none	3,681.9	
		T1067-09B	PWD	53.96	1.50	24.71	28.50	0.75	2.67				2,707.3	0.137
A-03C-093095	7.83	T1072-01B	OA	76.17	1.47	35.48	39.06	1.63	2.53	none	none	none	270.2	
			PWD	52.95	1.48	23.98	27.88	1.09	2.49				4.7	0.022
A-14a-1-080082	6.67	T1072-02C	OA	52.64	1.49	25.81	24.70	2.13	1.95	none	none	none	151.7	
			PWD	58.26	1.44	30.54	30.47	ND[e]	2.78				9.2	0.067
PR1-9-1-032034	2.67	T1072-03B	OA	51.7	1.49	22.78	27.44	1.48	1.55	none	none	none	1,039.7	
			PWD	57.22	1.48	24.77	31.17	1.28	2.79				8.2	0.490
AA1-3-057059	4.75	T1072-04C	OA	53.18	1.45	23.28	28.59	1.31	1.47	<1 mm diameter dots	<1 mm diameter dot	<1 mm diameter dot	3,630.2	
			PWD	40.36	1.33	18.56	17.88	3.92	1.78				123.7	0.564
AA1-1-062064	5.17	T1072-05A	OA	51.87	1.44	22.93	26.67	2.27	1.50	none	none	none	223.0	
			PWD	40.02	1.36	18.88	20.13	1.01	1.66				5.1	0.019
VC-05b-2-084086	7.00	T1072-06A	OA	51.96	1.50	23.94	22.67	5.35	2.35	none	none	<1 mm diameter dot	4,033.4	
			PWD	56.76	1.48	26.06	28.81	1.89	1.68				98.8	0.145
TTA-05-D-032034	2.67	T1072-07C	OA	51.46	1.48	24.52	24.61	2.33	2.23	none	none	<1 mm diameter dot	1,608.1	
			PWD	59.39	1.48	29.84	28.50	1.05	1.98				30.6	0.095
TTA-04-E-063065	5.25	T1072-09A	OA	56	1.34	22.49	30.71	2.80	1.96	<1 mm diameter dots	<1 mm diameter dots	20-40 mm diameter bleb	8,150.0	
			PWD	57.78	1.31	22.76	32.91	2.11	1.52				354.4	5.370
TTA-04-E-098100	8.17	T1072-12B	OA	54.72	1.44	24.39	27.26	3.07	1.89	< 50 µL	20-40 mm diameter bleb	20-40 mm diameter bleb	5,583.7	
			PWD	48.6	1.42	20.54	24.93	3.13	1.22				1,816.7	6.408

Notes:

[a] Bulk density data measured from water drive samples only. Italicized values represent pre-water drive wet bulk densities, and were applied to the outer annulus (OA) samples. Post-water drive (PWD) bulk densities were measured after water drive testing was complete.

[b] Flow rates targeted for the water drive testing are those estimated to result in hydraulic gradients approximately two orders of magnitude (flow rate 1) to three orders of magnitued (flow rate 3) higher than the maximum gradient observed in OU2, calculated using the parameters described in Section 3 of the Supplemental NAPL Characterization Work Plan; sample specific considerations (e.g., high pressures during testing) may have required modifications to flow rate.

[c] Volume of NAPL produced by water drive test was insufficient to allow collection and measurement by laboratory. Volume or size estimates are approximate and based on professional judgement. Volume or size estimates are not cumulative (i.e., the amount of NAPL listed is the amount of NAPL noted after each flow rate was completed).

[d] Dean Stark analysis repeated on additional aliquot due to suspected heterogeneity.

[e] ND = No data due to laboratory error.

OA: Outer annulus

PWD: Post-water drive

SDG: Sample delivery group

tPAH: total polycyclic aromatic hydrocarbons