

Dunn, Greg

From: Sazama, Peter (PSC) [PSazama@pscnow.com]
Sent: Friday, June 24, 2011 3:18 PM
To: Dunn, Greg
Subject: RAP Addendum Clarification to to Table 1
Attachments: Ameren Champaign Soil Confirmation Samples.pdf

Greg,

Attached is the updated Table 1 to clarify the exceedances above a Tier 1 Residential for Ingestion and Inhalation.

If you need or require any additional information or clarifications please call me.

Thanks,

Pete



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RELEASABLE

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REVIEWER MD

Table 1
Exceedances of Tier 1 Remedial Objectives for Ingestion and Inhalation
Excavation Wall Samples in the 0 to 3 Feet Depth Interval
Champaign MCP

Constituent	Soil Ingestion			Soil Inhalation			Indoor Air			Soil Component Concentration ¹⁾ for MSA	EPA Accepted Remediation Objectives	Sample Location: Sample ID: P1-A1-W (0-3) Sample Date: 6/30/2009	Concentration (mg/kg)									
	Residential	Commercial	Construction	Residential	Commercial	Construction	Residential	Commercial	Construction				P1-A1-W (0-3)	P1-A2-W (0-3)	P1-A3-W (0-3)	P1-A4-W (0-3)	P1-A5-W (0-3)	P1-A1-W (0-3)	P1-A2-W (0-3)	P1-A3-W (0-3)	P1-A4-W (0-3)	P1-A5-W (0-3)
EEHC Contaminants Limited	12	100	2,300	0.4	0.4	1.6	2.2	0.63	0.51	0.03	0.069	0.303	3.96	154	0.115	1.39	13.1	0.42	31.6	6.14		
Benzene	7,800	200,000	20,000	400	400	400	56	130	130	13	59	0.330	16.9	72.0	0.207	22.2	128	0.61	8.18	27.7		
Ethylbenzene	16,000	410,000	41,000	650	650	650	42	240	240	12	42	0.660	47.6	187.2	0.047	45.17	10	0.44	4.95	9.99		
Toluene	16,000	410,000	41,000	420 ⁱⁱ	420 ⁱⁱ	420 ⁱⁱ	5.2 ⁱⁱ	75 ⁱⁱ	120 ⁱⁱ	200 ⁱⁱ	—	0.540	8.77	50.0	0.194	4.54	25.5	1.1	1	14		
m,p-Xylenes	16,000	410,000	41,000	410	410	410	5.5	88	140	190	—	0.270	5.7	48.7	0.130	7.77	13	1.3	5.6			
o-Xylenes	16,000	410,000	41,000	520	520	520	5.6	83	100	150	5.6	0.810	14.470	50.0	0.314	16.310	38.5	1.73	2.3	19.8		
PAH Contaminants Limited	4,700	120,000	120,000	—	—	—	—	—	—	570	4,700	4.21	56.3	160	0.31	60.7	13.1	0.42	31.6	6.14		
Acenaphthylene	2,300 ⁱⁱ	61,000 ⁱⁱ	61,000 ⁱⁱ	—	—	—	—	—	—	65 ⁱⁱ	2,300	64.8	7.59	17	0.12	4.63	12.6	0.61	8.18	27.7		
Acenaphthene	23,000	610,000	610,000	—	—	—	—	—	—	12,000	—	16.1	33.2	86	0.21	26.3	11.5	0.795	14.4	52.1		
Benzo(a)anthracene	0.80	8	170	—	—	—	—	—	—	2	2.1	—	—	—	0.22	—	—	—	—	—		
Benzo(b)fluoranthene	0.09	0.80	17	—	—	—	—	—	—	8	2.1	—	—	—	0.3	—	—	—	—	—		
Benzo(k)fluoranthene	0.30	8	170	—	—	—	—	—	—	5	2.1	—	—	—	0.25	—	—	—	—	—		
Benzo(a)pyrene	2,300 ⁱⁱ	61,000 ⁱⁱ	61,000 ⁱⁱ	—	—	—	—	—	—	27,000 ⁱⁱ	2.1	106	4.94	21	0.18	4.86	2.07	0.246	7.27	63.6		
Benzo(e)pyrene	9	78	1,700	—	—	—	—	—	—	49	9	—	—	—	0.18	3.02	3.06	0.432	3.68	44.3		
Benzo(g)hazardanthene	46	410	4,100	31,000	31,000	31,000	—	—	—	3,600	—	<16.6	<6.67	49	0.087	4.81	9.72	<2.4	4.43	47.1		
Benzo(h)hazardanthene	18	790	17,000	—	—	—	—	—	—	160	88	70	16.1	49	0.24	13.3	9.77	1.2	12.7	127		
Chrysene	0.09	0.80	17	—	—	—	—	—	—	2	0.42	61.7	36.8	110	0.044	24.8	24.3	<0.122	20.8	321		
Dibenz(a,h)anthracene	1,100	82,000	82,000	—	—	—	—	—	—	4,300	—	5.66	38.3	65	0.37	25.2	17.3	2.55	13.6	217		
Fluorene	3,100	82,000	82,000	—	—	—	—	—	—	560	3,100	—	—	—	0.16	—	—	—	—	—		
Indeno(1,2,3-cd)pyrene	0.30	8.00	170	—	—	—	—	—	—	14	1.8	10.8	141	49	0.14	77.8	44.9	0.287	37.1	45.2		
Naphthalene	1,600	41,000	4,100	170	170	270	1.8	34	34	12	1.8	17.5	104	260	0.38	39.9	43.6	1.59	50.5	161		
Phenanthrene	2,300 ⁱⁱ	61,000 ⁱⁱ	61,000 ⁱⁱ	—	—	—	—	—	—	200 ⁱⁱ	—	160	47.3	150	0.49	77.8	17.2	1.96	30.4	275		
Pyrene	2,300	61,000	61,000	—	—	—	—	—	—	4,200	—	—	—	—	0.49	39.9	17.2	1.96	30.4	275		
Metals (mg/kg)																						
Aluminum	23	610	61	10	18	0.10	0.45	0.45	—	6.4	0.1	0.09	0.094	0.096	0.048	0.046	0.029	0.044	0.043	0.043		
Barium	390	10,000	1,000	—	—	—	—	—	—	3.3	0.48	0.834	<0.588	1.78	3.78	4.9	0.582	7.02	0.587	0.46		
Cadmium	13.0	13.0	61.0	750	1,200	25,000	—	—	—	30	13	3.17	<2.5	3.28	41.3	12.2	1.2	2.4	2.51	34.3		
Copper	5,500	140,000	14,000	650,000	910,000	870,000	—	—	—	1,800	—	69.9	0.11	86	52.5	101	0.07	94.5	105	124		
Chromium	78	2,000	200	1,600	2,500	59,000	—	—	—	59	—	0.74	0.11	0.52	0.83	0.15	0.42	0.88	0.18	0.34		
Lead	400	6,100	4,100	420	420	690	—	—	—	32	200	12.4	24.9	23.2	19.3	23.2	20.1	19.1	24.4	14.3		
Manganese	400	800	700	—	—	—	—	—	—	107	—	52.5	15.7	16.5	19.8	18.3	14.6	29.6	23.4	16.8		
Silver	390	10,000	1,000	—	—	—	—	—	—	39	—	<0.53	<0.55	<0.52	<0.52	0.53	<0.53	<0.52	<0.52	<0.51		
Overide Applicable to Chloride	1,600	41,000	4,100	—	—	—	—	—	—	40	0.51	<0.627	<0.65	0.89	4.14	0.85	2.3	0.93	3.95	6.67		
Overide (Final)												3.68	16.5	88.7	4.14	0.85	2.3	0.93	3.95	6.67		

ⁱⁱ Objective is for m-xylenes to Objective is for p-xylenes
ⁱⁱⁱ Non-TACO or providential RODs provided by the EPA.
 — No objective has been published for this constituent by the EPA, or the sample was not analyzed for this constituent.
 Concentration exceeds Soil Ingestion Pathway for Residential project remediation objective.
 Concentration exceeds Soil Inhalation Pathway for Residential project remediation objective.
 Concentration exceeds both Soil Ingestion and Soil Inhalation Pathways for Residential project remediation objective.

Table 1
 Exceedance of Tier 1 Remedial Objectives for Ingestion and Inhalation
 Exceedance Wet Samples in the 1 to 3 Feet Open Interval
 Campaign Map

Contaminant	Soil Ingestion		Residential Construction		Soil Inhalation		Indoor Air		Soil Component	EPA Accepted Background Levels for USA	Project Remediation Objectives	Sample Location: Sample ID, Sample Date, Sample Depth (feet)	P3-Q2-S-W	P3-Q3-S-W	P3-Q4-S-W	P3-F-S-W	P3-G-W	P3-G-S-W	P3-H-S-W	P3-H-S-W (C)	P3-I-S-W		
	Residential	Commercial	Residential	Commercial	Residential	Commercial	Commercial	Commercial															
BTEX Contaminants (mg/kg)																							
Benzene	12	100	2,300	0.8	1.5	2.2	0.689	0.51	0.03	—	0.689	3.59	2.26	5.81	1.2	1.2	2.21	0.638	0.037	0.345	22.4	3.65	
Ethylbenzene	7.60	200,000	20,000	4.0	4.0	5.8	1.30	1.3	1.3	—	5.8	5.83	1.89	1.91	4.59	4.6	2.21	0.638	0.037	0.345	22.4	3.65	
Toluene	16,000	410,000	410,000	650	650	4.2	2.40	2.40	12	—	4.2	2.04	5.52	2	4.89	31.1	2.95	1.62	0.56	1.0	1.43	8.59	
m,p-Xylenes	16,000	410,000	41,000	420 ^{VI}	420 ^{VI}	5.8 ^{VI}	75 ^{VI}	120 ^{VI}	200 ^{VI}	—	—	13.2	13.1	2.30	4.89	16.7	2.95	1.62	0.56	1.0	1.43	8.59	
o-Xylene	16,000	410,000	41,000	410	410	8.5	98	140	190	—	—	11.2	5.34	1.43	4.89	7.45	2.95	1.62	0.56	1.0	1.43	8.59	
Xylenes	16,000	410,000	41,000	520	520	5.6	63	100	150	—	—	14.92	16.64	3.61	4.89	24.15	2.95	1.62	0.56	1.0	1.43	8.59	
PAH Contaminants (mg/kg)																							
Acenaphthene	4,700	120,000	120,000	—	—	—	—	—	570	0.13	4,700	2.95	10.3	24.8	0.53	2.21	0.638	0.037	0.345	22.4	3.65		
Acenaphthylene	2,300 ^{VI}	61,000 ^{VI}	61,000 ^{VI}	—	—	—	—	—	85 ^{VI}	0.07	2,300	1.81	18.6	9.2	1.27	7.79	2.01	1.62	0.56	1.0	1.43	8.59	
Anthracene	23,000	610,000	610,000	—	—	—	—	—	12,000	0.4	—	4.99	29.7	26.3	1.87	5.26	1.62	0.56	1.0	1.43	8.59		
Benzo(a)anthracene	0.50	8	170	—	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	
Benzo(b)fluoranthene	0.50	0.50	17	—	—	—	—	—	8	2.1	2.1	—	—	—	—	—	—	—	—	—	—	—	
Benzo(k)fluoranthene	0.50	0.50	170	—	—	—	—	—	5	2.1	2.1	—	—	—	—	—	—	—	—	—	—	—	
Benzo(a)pyrene	2,300 ^{VI}	61,000 ^{VI}	61,000 ^{VI}	—	—	—	—	—	27,000 ^{VI}	1.7	9	0.854	5.53	19.8	1.86	1.29	0.427	0.11	0.037	0.345	22.4	3.65	
Benzo(a)anthracene	9	78	1,700	—	—	—	—	—	49	1.7	—	0.889	6.59	0.27	0.822	0.294	0.24	0.19	0.037	0.345	22.4	3.65	
Benzo(b)fluoranthene	46	410	4,100	31,000	—	—	—	—	3,600	—	—	414.3	11.1	40.4	11.2	2.95	2.01	1.62	0.56	1.0	1.43	8.59	
Benzo(k)fluoranthene	48	780	17,000	—	—	—	—	—	160	2.7	88	2.96	18	40.4	3.76	2.95	1.62	0.56	1.0	1.43	8.59		
Chrysene	0.08	0.80	17	—	—	—	—	—	2	0.42	0.42	0.776	0.8	0.35	0.315	0.11	0.037	0.345	22.4	3.65			
Dibenz(a,h)anthracene	3,100	82,000	82,000	—	—	—	—	—	4,300	4.1	—	8.91	30.8	56.9	6.35	6.01	2.19	1.62	0.56	1.0	1.43	8.59	
Fluorene	3,100	82,000	82,000	—	—	—	—	—	580	0.18	3,100	3.9	21.9	1.59	6.01	1.8	2.19	1.62	0.56	1.0	1.43	8.59	
Indeno(1,2,3-cd)pyrene	0.80	8.00	170	—	—	—	—	—	14	1.6	1.6	1.1	1.1	0.34	0.34	0.11	0.037	0.345	22.4	3.65			
Naphthalene	1,600	41,000	4,100	170	270	1.8	34	34	12	0.2	1.8	18.2	90.4	94.9	10.5	5.27	2.19	1.62	0.56	1.0	1.43	8.59	
Phenanthrene	2,300 ^{VI}	61,000 ^{VI}	61,000 ^{VI}	—	—	—	—	—	200 ^{VI}	2.5	—	15.2	90.4	94.9	10.5	5.27	2.19	1.62	0.56	1.0	1.43	8.59	
Pyrene	2,300	61,000	61,000	—	—	—	—	—	4,200	3	—	6.74	37.5	82.5	5.77	8.16	2.77	2.19	1.62	0.56	1.0	1.43	8.59
Metals (mg/kg)																							
Barium	73	610	610	51	10	1.5	0.10	0.45	6.4	0.08	0.1	0.034	0.042	0.69	0.052	0.012	0.008	0.037	0.345	22.4	3.65		
Bismuth	330	10,000	1,900	—	—	—	—	—	33	0.48	—	0.558	0.789	3.58	0.568	0.245	0.008	0.037	0.345	22.4	3.65		
Cadmium	13.0	13.0	61.0	—	—	—	—	—	30	13	13	5.54	2.91	4.08	7.41	4.24	5.01	2.84	2.84	2.84	2.84	2.84	
Chromium	5,500	140,000	14,000	750	1,200	—	—	—	1,000	110	—	3.54	7.24	2.84	7.41	8.15	96.7	134	118	118	118	118	
Copper	78	2,000	200	1,800	910,000	—	—	—	59	0.6	—	0.1	0.17	0.12	0.21	0.22	0.12	0.12	0.12	0.12	0.12	0.12	
Lead	230	61,000	4,100	270	420	—	—	—	32	16.2	230	13.9	16	13.1	15.1	16.8	15.7	15.7	15.7	15.7	15.7	15.7	
Manganese	400	800	700	—	—	—	—	—	107	36	—	15.7	15.5	45.2	28.6	13	10.1	10.1	10.1	10.1	10.1	10.1	
Silver	380	10,000	1,000	—	—	—	—	—	39	0.55	—	0.52	0.51	0.55	0.53	0.55	0.45	0.45	0.45	0.45	0.45	0.45	
Organic Amendments in Chlorine	1,600	41,000	4,100	—	—	—	—	—	40	0.51	1,600	0.776	4.22	6.73	1.21	0.579	0.552	0.037	0.345	22.4	3.65		
Notes:																							
VI	Objective is for in-system																						
VI	Objective is for P-system																						
VI	Objective is for Class I groundwater																						
VI	Non-TACO or provisional RCL provided by the EPA.																						
VI	No objectives has been established for this constituent by the EPA, or the sample was not analyzed for this constituent.																						
VI	Concentration exceeds Soil Ingestion Pathway for Residential project remediation objective.																						
VI	Concentration exceeds Soil Inhalation Pathway for Residential project remediation objective.																						
VI	Concentration exceeds both Soil Ingestion and Soil Inhalation Pathways for Residential project remediation objective.																						

Table 1
Exceedances of Tier 1 Remedial Objectives for Ingestion and Inhalation
Extraction Well Samples in the 1 to 3 Feet Depth Interval
Champaign MCP

Constituent	Residential	Commercial	Construction	Residential	Commercial	Construction	Residential	Commercial	Construction	Indoor Air	Component	EPA Accepted	Project	Sample Location:	Exceedance Values											
															Background Levels for USA	Remediation Objectives	Sample Depth (feet)	P4-A2-W	P4-A3-W	P4-A4-W	P4-A5-W	P5-A3-W	P5-A4-W	P5-A5-W	P5-A6-W	P5-A7-W
DEP Concentrations (mg/L)	12	100	2,300	0.8	1.5	2.2	0.029	0.51	0.03	0.03	0.13	4,700	0.089	7.3	6.42	1.82	4.95	5.73	<1.05	<0.0919	0.0566	0.0652				
Benzo(a)anthracene	7,800	200,000	20,000	400	400	58	130	130	13	13	0.07	2,300	58	49.6	72.4	15.7	26.7	62.1	6.21	0.578	0.561	0.0652				
Benzo(a)pyrene	15,000	410,000	41,000	650	650	42	240	240	2	2	0.4	2,300	42	<2.9	<2.1	<6.32	<10.8	<6.31	1.4	<0.46	0.054	0.0072				
Benzo(b)fluoranthene	18,000	410,000	41,000	420 ^{VI}	420 ^{VI}	53 ^{VI}	75 ^{VI}	170 ^{VI}	59	59	0.07	2,300	53	13.7	22.5	2.4	6.05	14.9	2.2	2.4	<0.46	0.052	0.0072			
Benzo(k)fluoranthene	18,000	410,000	41,000	410	410	6.5	98	140	100	100	0.07	2,300	6.5	15.6	26.8	4.14	9.25	23.2	4.2	0.21	0.216	0.0449				
Chrysene	18,000	410,000	41,000	320	320	5.8	63	100	150	150	0.07	2,300	5.8	29.3	49.3	6.94	15.3	38.1	6.8	0.21	0.288	0.0521				
DPA Concentrations (mg/L)	4,700	120,000	120,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Acenaphthylene	2,300 ^{VI}	61,000 ^{VI}	61,000 ^{VI}	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Acenaphthene	23,000	610,000	610,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Benzo(a)anthracene	0.90	8	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Benzo(b)fluoranthene	0.90	8	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Benzo(k)fluoranthene	2,300 ^{VI}	61,000 ^{VI}	61,000 ^{VI}	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Benzo(a)pyrene	9	78	1,700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Benzo(e)fluoranthene	46	410	4,100	31,000	31,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Benzo(g)helenanthrene	88	780	17,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Chrysene	0.09	0.80	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Dibenz(a,h)anthracene	3,100	82,000	82,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Fluorene	0.90	8	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Indeno(1,2,3-cd)perylene	1,800	41,000	41,000	170	170	1.8	34	34	12	12	0.07	2,300	1.8	14.7	24.0	18.8	16.3	28.8	17	17	17	17	17			
Phenanthrene	2,300 ^{VI}	61,000 ^{VI}	61,000 ^{VI}	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Pyrene	2,300	61,000	61,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Metals (mg/kg)																										
Aluminum	23	610	610	10	16	0.10	0.45	0.45	6.4	6.4	0.06	4,700	0.1	0.02	0.024	0.129	0.022	0.029	0.025	—	—	—	0.022			
Barium	390	10,000	1,000	—	—	—	—	—	3.3	3.3	0.48	—	—	0.42	0.6	0.179	0.022	0.029	0.025	—	—	—	0.022			
Cadmium	13.0	61.0	61.0	750	1,200	—	—	—	30	30	13	—	—	<2.31	1.8	<2.5	0.828	0.658	<0.586	—	—	—	<0.586			
Copper	5,500	140,000	14,000	690,000	910,000	—	—	—	1,800	1,800	110	—	—	153	139	156	161	197	132	6.88	—	—	6.88			
Chromium	78	2,000	200	1,800	2,000	—	—	—	59	59	0.6	—	—	0.34	0.4	0.41	0.34	0.27	0.39	—	—	—	0.39			
Lead	400	6,100	4,100	270	420	—	—	—	32	32	16.2	—	—	20.3	23.6	19.7	21.7	23.6	23.2	—	—	—	23.2			
Manganese	400	600	700	—	—	—	—	—	107	107	36	—	—	15.9	16.3	32	32	16.1	16.9	18.2	—	—	—	18.2		
Silver	390	10,000	1,000	—	—	—	—	—	39	39	0.55	—	—	<0.51	<0.55	<0.55	<0.55	<0.49	<0.55	—	—	—	—	<0.51		
Vanadium	1,800	41,000	4,100	—	—	—	—	—	40	40	0.51	—	—	0.831	0.54	0.69	0.52	0.64	0.63	<0.59	—	—	—	0.63		
Zinc	1,800	41,000	4,100	—	—	—	—	—	40	40	0.51	—	—	0.831	0.54	0.69	0.52	0.64	0.63	<0.59	—	—	—	0.63		

^{VI} Objective is for in-plant
^{VII} Objective is for p-plant
^{VIII} Objective is for Class I groundwater
^{IX} Objective is for Class II groundwater
^X Non-TACO or provisional ROD provided by the EPA
^{XI} No objective has been published for this constituent by the EPA, or the sample was not analyzed for this constituent
^{XII} Concentration exceeds Soil Ingestion Pathway for Residential project remediation objective
^{XIII} Concentration exceeds Soil Ingestion Pathway for Residential project remediation objective
^{XIV} Concentration exceeds Soil Ingestion and Soil Inhalation Pathways for Residential project remediation objective

Table 1
 Exceedence of Tier 1 Remedial Objectives for Ingestion and Inhalation
 Excavation Well Samples in the 4 to 3 Feet Depth Interval
 Campaign MCP

Contaminant	Soil Ingestion		Residential Construction		Soil Ingestion		Residential Construction		Indoor Air		Soil Component	EPA Accepted Background Levels for USA	Project Remediation Objectives	Sample Location: Sample ID: P6-BGS-SW (3) P7-B1-SW (3) P7-C1-SW (3) P7-D1-SW (3) P7-E1-SW (3) P6-H1-W (3) P6-H4-W (3)										
	Residential		Commercial		Residential		Commercial		Commercial															
	Soil Ingestion	Commercial Construction	Soil Ingestion	Commercial Construction	Residential	Commercial	Residential	Commercial	Residential	Commercial														
DECA Contaminants (mg/kg)																								
Benzene	12	100	2,300	0.8	1.5	2.2	0.069	0.51	0.03	0.03	—	—	0.069	P6-BGS-SW 0.0022	P7-B1-SW <1.12	P7-C1-SW <0.0227	P7-D1-SW <0.886	P7-E1-SW <0.274	P7-D1-W <0.052	P7-E1-W <0.024	P6-H1-W 0.043	P6-H4-W 0.049		
Enthalene	7,800	200,000	20,000	400	400	58	130	13	13	13	—	—	58	P6-BGS-SW (3) 0.0016	P7-B1-SW (3) 13.9	P7-C1-SW (3) 26	P7-D1-SW (3) 17	P7-E1-SW (3) 17	P7-D1-W (3) 0.96	P7-E1-W (3) 0.29	P6-H1-W (3) 0.03	P6-H4-W (3) 1.02		
Toluene	18,000	410,000	41,000	550	650	42	240	12	12	12	—	—	42	P6-BGS-SW (3) 0.027	P7-B1-SW (3) <5.82	P7-C1-SW (3) <0.113	P7-D1-SW (3) <4.43	P7-E1-SW (3) <3.87	P7-D1-W (3) 0.002	P7-E1-W (3) 0.078	P6-H1-W (3) 0.031	P6-H4-W (3) 0.02		
m,p-Xylenes	16,000	410,000	41,000	420 ¹	420 ¹	53 ²	120 ²	12	12	12	—	—	—	P6-BGS-SW (3) 0.0024	P7-B1-SW (3) 5.8	P7-C1-SW (3) 4.63	P7-D1-SW (3) 3.1	P7-E1-SW (3) 3.1	P7-D1-W (3) 0.137	P7-E1-W (3) 0.125	P6-H1-W (3) 0.15	P6-H4-W (3) 0.11		
o-Xylenes	16,000	410,000	41,000	410	410	85	140	130	130	130	—	—	—	P6-BGS-SW (3) 0.0015	P7-B1-SW (3) 0.85	P7-C1-SW (3) 0.03	P7-D1-SW (3) 0.385	P7-E1-SW (3) 4.8	P7-D1-W (3) 0.385	P7-E1-W (3) 0.385	P6-H1-W (3) 0.385	P6-H4-W (3) 0.327		
p-Xylenes	16,000	410,000	41,000	320	320	83	100	150	150	150	—	—	5.8	P6-BGS-SW (3) 0.0049	P7-B1-SW (3) 14.45	P7-C1-SW (3) 0.03	P7-D1-SW (3) 14.93	P7-E1-SW (3) 7.9	P7-D1-W (3) 0.52	P7-E1-W (3) 0.49	P6-H1-W (3) 0.6	P6-H4-W (3) 0.637		
PAH Contaminants (mg/kg)																								
Acenaphthene	4,700	120,000	120,000	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW <0.021	P7-B1-SW 53.6	P7-C1-SW 4.7	P7-D1-SW 34.3	P7-E1-SW 22.6	P7-D1-W 1.71	P7-E1-W 1.81	P6-H1-W 1.93	P6-H4-W 36.6	
Acenaphthylene	2,300 ³	61,000 ³	61,000 ³	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.58	P7-B1-SW (3) 8.95	P7-C1-SW (3) 1.37	P7-D1-SW (3) 3.35	P7-E1-SW (3) 2.14	P7-D1-W (3) 2.89	P7-E1-W (3) 2.73	P6-H1-W (3) <0.419	P6-H4-W (3) 3.01	
Anthracene	23,000	610,000	610,000	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.02	P7-B1-SW (3) 31.2	P7-C1-SW (3) 3.83	P7-D1-SW (3) 19.5	P7-E1-SW (3) 11.1	P7-D1-W (3) 1.17	P7-E1-W (3) 0.981	P6-H1-W (3) 1.03	P6-H4-W (3) 17.6	
Benz[a]anthracene	0.30	8	170	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.024	P7-B1-SW (3) 0.874	P7-C1-SW (3) 0.274	P7-D1-SW (3) 0.874	P7-E1-SW (3) 0.274	P7-D1-W (3) 0.203	P7-E1-W (3) 0.203	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Benz[b]fluoranthene	0.80	8	170	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.018	P7-B1-SW (3) 0.818	P7-C1-SW (3) 0.274	P7-D1-SW (3) 0.818	P7-E1-SW (3) 0.274	P7-D1-W (3) 2.03	P7-E1-W (3) 2.03	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Benz[a]fluoranthene	2,300 ³	61,000 ³	61,000 ³	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.26	P7-B1-SW (3) 10.1	P7-C1-SW (3) 1.44	P7-D1-SW (3) 3.2	P7-E1-SW (3) 2.54	P7-D1-W (3) 2.82	P7-E1-W (3) 2.82	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Benz[k]fluoranthene	9	78	1,700	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.158	P7-B1-SW (3) 4.84	P7-C1-SW (3) 0.703	P7-D1-SW (3) 2.28	P7-E1-SW (3) 1.27	P7-D1-W (3) 0.523	P7-E1-W (3) 0.523	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Benz[e]pyrene	48	410	4,100	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) <0.42	P7-B1-SW (3) <4.24	P7-C1-SW (3) <0.848	P7-D1-SW (3) <4.24	P7-E1-SW (3) <0.848	P7-D1-W (3) <2.1	P7-E1-W (3) <2.1	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Benzo[ghi]perylene	88	780	17,000	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.061	P7-B1-SW (3) 20.6	P7-C1-SW (3) 2.78	P7-D1-SW (3) 10.6	P7-E1-SW (3) 5.4	P7-D1-W (3) 1.37	P7-E1-W (3) 1.34	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Chrysene	0.09	0.80	17	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.146	P7-B1-SW (3) 0.53	P7-C1-SW (3) 0.379	P7-D1-SW (3) 0.53	P7-E1-SW (3) 0.379	P7-D1-W (3) 0.407	P7-E1-W (3) 0.407	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Dibenz[a,h]anthracene	3,100	82,000	82,000	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.108	P7-B1-SW (3) 30.3	P7-C1-SW (3) 5.53	P7-D1-SW (3) 3.92	P7-E1-SW (3) 11.9	P7-D1-W (3) 0.421	P7-E1-W (3) 0.385	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Fluoranthene	3,100	82,000	82,000	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.044	P7-B1-SW (3) 0.3	P7-C1-SW (3) 3.92	P7-D1-SW (3) 1.27	P7-E1-SW (3) 11.9	P7-D1-W (3) 1.8	P7-E1-W (3) 1.85	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Fluorene	1,600	8,000	8,000	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.059	P7-B1-SW (3) 0.659	P7-C1-SW (3) 0.18	P7-D1-SW (3) 0.18	P7-E1-SW (3) 0.18	P7-D1-W (3) 1.3	P7-E1-W (3) 1.3	P6-H1-W (3) <0.419	P6-H4-W (3) <0.419	
Indeno[1,2,3-cd]pyrene	1,600	41,000	41,000	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) <0.021	P7-B1-SW (3) 36.6	P7-C1-SW (3) 0.318	P7-D1-SW (3) 12.9	P7-E1-SW (3) 36.5	P7-D1-W (3) 1.58	P7-E1-W (3) 1.33	P6-H1-W (3) 4.44	P6-H4-W (3) 5.5	
Naphthalene	2,300 ³	61,000 ³	61,000 ³	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) <0.021	P7-B1-SW (3) 104	P7-C1-SW (3) 12.9	P7-D1-SW (3) 67.6	P7-E1-SW (3) 36.5	P7-D1-W (3) 1.58	P7-E1-W (3) 1.33	P6-H1-W (3) 4.44	P6-H4-W (3) 5.5	
Pyrene	2,300	61,000	61,000	—	—	—	—	—	—	—	—	—	—	—	P6-BGS-SW (3) 0.044	P7-B1-SW (3) 65.6	P7-C1-SW (3) 8.75	P7-D1-SW (3) 34.3	P7-E1-SW (3) 18.8	P7-D1-W (3) 2	P7-E1-W (3) 1.84	P6-H1-W (3) 1.4	P6-H4-W (3) 24.9	
Metals (mg/kg)																								
Mercury	73	610	61	10	16	0.10	0.45	0.45	0.45	0.45	6.4	0.08	0.1	P6-BGS-SW 0.036	P7-B1-SW 0.031	P7-C1-SW 0.038	P7-D1-SW 0.017	P7-E1-SW 0.013	P7-D1-W 0.049	P7-E1-W 0.061	P6-H1-W 0.036	P6-H4-W 0.032		
Selenium	330	10,000	1,000	—	—	—	—	—	—	—	3.3	0.48	—	—	P6-BGS-SW 3.7	P7-B1-SW <0.538	P7-C1-SW <0.538	P7-D1-SW <0.577	P7-E1-SW <0.538	P7-D1-W <0.56	P7-E1-W <0.56	P6-H1-W <0.577	P6-H4-W <0.545	
Arsenic	13.0	13.0	750	—	—	—	—	—	—	—	30	13	13	—	P6-BGS-SW (3) 2	P7-B1-SW (3) 1.8	P7-C1-SW (3) 5.65	P7-D1-SW (3) 5.47	P7-E1-SW (3) 5.14	P7-D1-W (3) 9.52	P7-E1-W (3) 9.52	P6-H1-W (3) 6.57	P6-H4-W (3) 7.02	
Barium	5,500	140,000	14,000	680,000	910,000	870,000	—	—	—	—	1,800	110	—	—	P6-BGS-SW (3) 14.7	P7-B1-SW (3) 118	P7-C1-SW (3) 118	P7-D1-SW (3) 59.4	P7-E1-SW (3) 31.4	P7-D1-W (3) 96	P7-E1-W (3) 119	P6-H1-W (3) 138	P6-H4-W (3) 114	
Calcium	78	2,000	200	1,800	2,800	59,000	—	—	—	—	59	0.8	—	—	P6-BGS-SW (3) 0.34	P7-B1-SW (3) 0.43	P7-C1-SW (3) 0.52	P7-D1-SW (3) <0.2	P7-E1-SW (3) <0.18	P7-D1-W (3) 0.18	P7-E1-W (3) 0.24	P6-H1-W (3) 0.51	P6-H4-W (3) 0.19	
Chromium	230	6,100	4,100	270	420	630	—	—	—	—	32	16.2	230	—	P6-BGS-SW (3) 23.4	P7-B1-SW (3) 22	P7-C1-SW (3) 23.1	P7-D1-SW (3) 14.7	P7-E1-SW (3) 14.5	P7-D1-W (3) 19	P7-E1-W (3) 24.3	P6-H1-W (3) 21.9	P6-H4-W (3) 17.5	
Lead	400	800	700	—	—	—	—	—	—	—	107	36	400	—	P6-BGS-SW (3) 16	P7-B1-SW (3) 15.1	P7-C1-SW (3) 18	P7-D1-SW (3) 14.2	P7-E1-SW (3) 18.3	P7-D1-W (3) 14.7	P7-E1-W (3) 16.8	P6-H1-W (3) 17.3	P6-H4-W (3) 18.1	
Copper	300	10,000	1,000	—	—	—	—	—	—	—	39	0.55	—	—	P6-BGS-SW (3) <0.54	P7-B1-SW (3) <0.52	P7-C1-SW (3) <0.53	P7-D1-SW (3) <0.55	P7-E1-SW (3) <0.5	P7-D1-W (3) <0.54	P7-E1-W (3) <0.54	P6-H1-W (3) <0.55	P6-H4-W (3) <0.55	
Chloride, Ammonium to Chloride	1,600	41,000	4,100	—	—	—	—	—	—	—	40	0.51	1,600	—	P6-BGS-SW 0.278	P7-B1-SW 1.64	P7-C1-SW 37.4	P7-D1-SW 1.08	P7-E1-SW 1.62	P7-D1-W 36.8	P7-E1-W 3.84	P6-H1-W <3.8	P6-H4-W 6.28	
Organic (Total)															P6-BGS-SW 0.34	P7-B1-SW 2.34	P7-C1-SW 47.1	P7-D1-SW 1.55	P7-E1-SW 3.48	P7-D1-W 30.8	P7-E1-W 3.84	P6-H1-W 1.8	P6-H4-W 10.9	

¹ Objective is for m-xylylene
² Objective is for p-xylylene
³ Objectives are for Class I groundwater.
⁴ Non-TACO or provisional RfD provided by the EPA.
 — No objective has been established for the contaminant by the EPA, or the sample was not analyzed for this constituent.
 [] Concentration exceeds Soil Ingestion Pathway for Residential project remediation objective.
 [] Concentration exceeds Soil Ingestion Pathway for Residential project remediation objective.
 [] Concentration exceeds both Soil Ingestion and Soil Ingestion Pathways for Residential project remediation objective.