

TABLE 3-14
TIER 1 COMPARISON - METALS and CYANIDE RESULTS FOR 0 TO 3 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

Tier 1 Remedial Objectives - Soil											B-814	B-822	B-501	B-502	B-503	B-504	B-505	B-506	
CONSTITUENT	<u>Ingestion</u>			<u>Inhalation</u>			<u>Indoor Inhalation</u>		Soil Component to Groundwater (Class I)*	<u>MSA</u> <u>Background</u>	UNITS	B-814	B-822	B-501	B-502	B-503	B-504	B-505	B-506
	Residential	Commercial	Construction	Residential	Commercial	Construction	Residential	Commercial				B-814 (0.0-2.0) 4/1/2008	B-822 (1.0-3.0) 4/1/2008	B-501-2 7/13/2004	B-502-3 7/13/2004	B-503-3 7/13/2004	B-504-3 7/13/2004	B-505-3 7/14/2004	B-506-3 7/22/2004
Arsenic	13.0	13.0	61.0	750	1,200	25,000	---	---	30	13	(mg/kg)	5.29	3.45	9.28	58.5	8.31	15.4	4.5	14.7
Barium	5,500	140,000	14,000	690,000	910,000	870,000	---	---	1,800	110	(mg/kg)	---	---	143	58.3	99.6	152	27.1	113
Cadmium	78	2,000	200	1,800	2,800	59,000	---	---	59	0.6	(mg/kg)	---	---	0.28	0.5	0.3	1.68	0.58	0.14
Chromium	230	6,100	4,100	270	420	690	---	---	32	16.2	(mg/kg)	23.4	24.9	19.6	8.81	18.1	13.6	12.6	15.7
Copper	2,900	82,000	8,200	---	---	---	---	---	330,000	19.60	(mg/kg)	---	---	---	---	---	---	---	---
Cyanide ^(a)	1,600	41,000	4,100	---	---	---	---	---	40	0.51	(mg/kg)	<0.92	<6.24	1.38	1.02	11.7	55.5	25.2	2.31
Iron	---	---	---	---	---	---	---	---	---	15,900	(mg/kg)	---	---	---	---	---	---	---	---
Lead	400	800	700	---	---	---	---	---	107	36	(mg/kg)	53.3	17.3	58	21.7	202	221	552	177
Manganese	1,600	41,000	4,100	69,000	91,000	8,700	---	---	---	636	(mg/kg)	---	---	---	---	---	---	---	---
Mercury	23	610	61	10	16	0.10	0.45	0.45	6.4	0.06	(mg/kg)	---	---	0.215	0.037	0.167	0.338	0.061	0.695
Nickel	1,600	41,000	4,100	13,000	21,000	440,000	---	---	700	18	(mg/kg)	---	---	---	---	---	---	---	---
Selenium	390	10,000	1,000	---	---	---	---	---	3.3	0.48	(mg/kg)	---	---	<4.00	<3.85	<4.00	<3.92	<4.00	<3.85
Silver	390	10,000	1,000	---	---	---	---	---	39	0.55	(mg/kg)	---	---	<1.00	<0.96	<1.00	<0.98	<1.00	<0.96
Zinc	23,000	610,000	61,000	---	---	---	---	---	16,000	95	(mg/kg)	---	---	---	---	---	---	---	---

Notes:

- mg/kg Milligrams per kilogram
- (a) Remedial objectives are for amenable cyanide.
- No remediation objective has been established by the IEPA for this constituent for this exposure route
- <12 Not detected at the level identified
- * Based on an average pH of 7.50 for the site
- Analytical result exceeds one or more Tier 1 RO
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CONSTITUENT	Tier 1 Remedial Objectives - Soil									Soil Component to Groundwater (Class I)*	MSA Background	UNITS	B-507	B-508	B-509	B-510	B-512	B-513	B-514	B-515
	<u>Ingestion</u>			<u>Inhalation</u>			<u>Indoor Inhalation</u>		B-507-1				B-508-3	B-509-3	B-510-2	B-512-3	B-513-2	B-514-3	B-515-2	
	Residential	Commercial	Construction	Residential	Commercial	Construction	Residential	Commercial	7/21/2004				7/19/2004	7/21/2004	7/12/2004	7/12/2004	7/12/2004	7/22/2004	7/16/2004	
Arsenic	13.0	13.0	61.0	750	1,200	25,000	---	---	30	13	(mg/kg)	10.1	22.5	13	10.8	21.6	13.6	11.3	11.5	
Barium	5,500	140,000	14,000	690,000	910,000	870,000	---	---	1,800	110	(mg/kg)	141	96.4	184	84.6	98	129	128	136	
Cadmium	78	2,000	200	1,800	2,800	59,000	---	---	59	0.6	(mg/kg)	0.22	0.55	1.03	0.58	1.01	0.36	0.29	0.36	
Chromium	230	6,100	4,100	270	420	690	---	---	32	16.2	(mg/kg)	16	13.2	18.3	16	26.7	22.4	15.7	14	
Copper	2,900	82,000	8,200	---	---	---	---	---	330,000	19.60	(mg/kg)	---	---	---	---	---	---	---	---	
Cyanide ^(a)	1,600	41,000	4,100	---	---	---	---	---	40	0.51	(mg/kg)	2.15	2.51	2.74	6.43	68.4	17	16.6	3.68	
Iron	---	---	---	---	---	---	---	---	---	15,900	(mg/kg)	---	---	---	---	---	---	---	---	
Lead	400	800	700	---	---	---	---	---	107	36	(mg/kg)	60.8	49.8	164	128	158	470	113	36.1	
Manganese	1,600	41,000	4,100	69,000	91,000	8,700	---	---	---	636	(mg/kg)	---	---	---	---	---	---	---	---	
Mercury	23	610	61	10	16	0.10	0.45	0.45	6.4	0.06	(mg/kg)	0.084	0.174	0.252	0.432	0.291	0.352	4.2	0.091	
Nickel	1,600	41,000	4,100	13,000	21,000	440,000	---	---	700	18	(mg/kg)	---	---	---	---	---	---	---	---	
Selenium	390	10,000	1,000	---	---	---	---	---	3.3	0.48	(mg/kg)	<3.85	<3.85	<4.00	<3.85	<3.92	<4.00	<3.85	<3.77	
Silver	390	10,000	1,000	---	---	---	---	---	39	0.55	(mg/kg)	<0.96	<0.96	<1.00	<0.96	<0.98	<1.00	<0.96	<0.94	
Zinc	23,000	610,000	61,000	---	---	---	---	---	16,000	95	(mg/kg)	---	---	---	---	---	---	---	---	

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CONSTITUENT	Tier 1 Remedial Objectives - Soil									Soil Component to Groundwater (Class I)*	MSA Background	UNITS	B-516	B-550	B-551	B-553	B-554	B-556	B-557	CSS-3
	<u>Ingestion</u>			<u>Inhalation</u>			<u>Indoor Inhalation</u>						B-516-3	B-550-3	B-551-3	B-553-3	B-554-3	B-556-3	B-557-1	12/18/1990
	Residential	Commercial	Construction	Residential	Commercial	Construction	Residential	Commercial	Construction				7/22/2004	7/20/2004	7/15/2004	7/14/2004	7/15/2004	7/20/2004	7/20/2004	0-1'
Arsenic	13.0	13.0	61.0	750	1,200	25,000	---	---	30	13	(mg/kg)	28.7	11.6	10.7	<2.40	19.3	2.2	9.68	3	
Barium	5,500	140,000	14,000	690,000	910,000	870,000	---	---	1,800	110	(mg/kg)	134	45.6	60.5	20.1	207	59.8	102	82	
Cadmium	78	2,000	200	1,800	2,800	59,000	---	---	59	0.6	(mg/kg)	1.36	2.04	0.39	<0.19	0.97	0.13	0.59	1	
Chromium	230	6,100	4,100	270	420	690	---	---	32	16.2	(mg/kg)	40.3	22.3	10.3	7.23	16.3	9.54	15.6	6	
Copper	2,900	82,000	8,200	---	---	---	---	---	330,000	19.60	(mg/kg)	---	---	---	---	---	---	---	17	
Cyanide ^(a)	1,600	41,000	4,100	---	---	---	---	---	40	0.51	(mg/kg)	41.6	9.82	3	1.81	3.01	2.98	1.01	7	
Iron	---	---	---	---	---	---	---	---	---	15,900	(mg/kg)	---	---	---	---	---	---	---	14000	
Lead	400	800	700	---	---	---	---	---	107	36	(mg/kg)	165	32.1	50.6	8.5	252	55.7	184	80	
Manganese	1,600	41,000	4,100	69,000	91,000	8,700	---	---	---	636	(mg/kg)	---	---	---	---	---	---	---	830	
Mercury	23	610	61	10	16	0.10	0.45	0.45	6.4	0.06	(mg/kg)	0.491	0.076	0.281	0.005	0.076	0.075	0.133	---	
Nickel	1,600	41,000	4,100	13,000	21,000	440,000	---	---	700	18	(mg/kg)	---	---	---	---	---	---	---	12	
Selenium	390	10,000	1,000	---	---	---	---	---	3.3	0.48	(mg/kg)	<4.00	<4.00	<3.92	<3.85	<3.64	<3.85	<3.85	---	
Silver	390	10,000	1,000	---	---	---	---	---	39	0.55	(mg/kg)	<1.00	<1.00	<0.98	<0.96	<0.91	<0.96	<0.96	---	
Zinc	23,000	610,000	61,000	---	---	---	---	---	16,000	95	(mg/kg)	---	---	---	---	---	---	---	74	

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CONSTITUENT	Tier 1 Remedial Objectives - Soil									Soil Component to Groundwater (Class I)*	MSA Background	UNITS	CSS-4	CSS-5	UTP-01	UTP-02	UTP-03	UTP-04	UTP-08	UTP-09
	<u>Ingestion</u>			<u>Inhalation</u>			<u>Indoor Inhalation</u>						12/18/1990	12/19/1990	12/17/1991	12/17/1991	12/17/1991	12/17/1991	12/17/1991	12/17/1991
	Residential	Commercial	Construction	Residential	Commercial	Construction	Residential	Commercial	Construction				0-6"	0-6"	1	1.25	1.42	1	1	1
Arsenic	13.0	13.0	61.0	750	1,200	25,000	---	---	---	30	13	(mg/kg)	5	5	6	9	9	15	4	21
Barium	5,500	140,000	14,000	690,000	910,000	870,000	---	---	---	1,800	110	(mg/kg)	69	91	100	110	99	61	120	120
Cadmium	78	2,000	200	1,800	2,800	59,000	---	---	---	59	0.6	(mg/kg)	1	<0.5	1	1	1	1	<0.5	<0.5
Chromium	230	6,100	4,100	270	420	690	---	---	---	32	16.2	(mg/kg)	7	13	15	37	13	19	30	26
Copper	2,900	82,000	8,200	---	---	---	---	---	---	330,000	19.60	(mg/kg)	19	10	10	92	41	18	260	38
Cyanide ^(a)	1,600	41,000	4,100	---	---	---	---	---	---	40	0.51	(mg/kg)	2	<0.25	2	33	33	2900	620	3800
Iron	---	---	---	---	---	---	---	---	---	---	15,900	(mg/kg)	12000	15000	13000	16000	9500	46000	100000	110000
Lead	400	800	700	---	---	---	---	---	---	107	36	(mg/kg)	200	20	18	130	47	300	11000	1800
Manganese	1,600	41,000	4,100	69,000	91,000	8,700	---	---	---	---	636	(mg/kg)	630	530	730	71	340	170	430	330
Mercury	23	610	61	10	16	0.10	0.45	0.45	---	6.4	0.06	(mg/kg)	3	<0.4	<0.13	1	---	1	3	1
Nickel	1,600	41,000	4,100	13,000	21,000	440,000	---	---	---	700	18	(mg/kg)	10	14	15	8	11	8	12	10
Selenium	390	10,000	1,000	---	---	---	---	---	---	3.3	0.48	(mg/kg)	---	---	---	---	---	---	---	---
Silver	390	10,000	1,000	---	---	---	---	---	---	39	0.55	(mg/kg)	---	---	---	---	---	---	---	---
Zinc	23,000	610,000	61,000	---	---	---	---	---	---	16,000	95	(mg/kg)	95	47	41	64	89	46	230	110

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