Table F1 Soil and Sediment Sample Results - Metals

Site Area	Sample Description [b]	Date Sampled	Metals (EPA Method 6010B) in mg/kg [a]																						
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Area 1 Excavation Soil Samples	MA1-ES 1-1	3/9/2015	20,000	0.32 J	7.7	77	<0.76	0.52	65,000	26	7.7	23	20,000	8.8	27,000	260	<0.15	27	3,600	<0.76	<0.76	150	1.5 J	42	46
	MA1-ES 1-3	3/9/2015	23,000	<0.29	11	95	<0.73	0.6	93,000	31	12	23	22,000	7.3	20,000	490	<0.15	36	3,600	<0.73	<0.73	160	<1.4	47	44
	MA1-ES 1-4	3/9/2015	19,000	0.78 J	15	83	0.73	0.67	24,000	41	11	23	23,000	6.3	17,000	340	<0.12	35	3,400	<0.61	<0.61	100	<1.2	50	39
	MA1-ES 2-1	3/9/2015	19,000	0.35 J	40	82	0.77	1.3	29,000	27	13	25	27,000	16	22,000	420	<0.12	38	4,000	0.85 J	<0.60	210	<1.2	64	52
	MA1-ES 3-1	3/9/2015	21,000	0.71 J	12	77	1	0.74	100,000	30	10	24	20,000	8.4	19,000	350	<0.12	51	3,600	<0.60	<0.60	110	<1.2	46	46
	MA1-ES 3-3	3/9/2015	23,000	<0.24	11	82	1.5	0.62	87,000	33	12	25	22,000	7.7	23,000	330	<0.12	52	4,500	0.65 J	<0.60	400	<1.2	46	46
	MA1-ES 3-5	3/9/2015	19,000	<0.22	7.4	73	0.74	0.74	130,000	28	9.7	22	19,000	5.1	17,000	300	<0.11	44	4,000	<0.55	<0.55	340	<1.1	35	39
	MA1-ES 4-1	3/9/2015	18,000	0.35 J	9.5	110	<0.59	0.81	160,000	27	8.9	31	18,000	8.9	20,000	310	<0.12	27	3,300	0.95 J	<0.59	280	<1.2	36	43
	MA1-ES 4-3	3/9/2015	14,000	0.31 J	10	81	<0.55	1.4	190,000	24	7.7	76	14,000	18	16,000	280	<0.11	26	2,700	1.1	<0.55	260	<1.1	31	83
	MA1-ES 4-5	3/9/2015	22,000	0.55 J	18	120	1.1	0.93	29,000	51	17	70	27,000	9.2	28,000	470	<0.11	68	4,000	0.73 J	<0.55	630	<1.1	64	55
	MA1-ES 5-1	3/9/2015	19,000	1.5	13	91	0.74	1.1	130,000	39	11	48	21,000	**160**	19,000	360	<0.12	42	3,600	1.3	<0.61	130	<1.2	45	79
	MA1-ES 5-3	3/9/2015	17,000	0.49 J	10	76	0.56	0.77	140,000	24	7.3	30	17,000	12	18,000	290	<0.10	22	3,300	0.71 J	<0.52	96	<1.0	31	40
	MA1-ES 5-5	3/9/2015	22,000	<0.28	9.4	91	0.83	0.9	120,000	40	13	42	22,000	28	24,000	420	<0.14	53	4,300	0.71 J	<0.69	130	<1.4	46	120
	MA1-ES 6-1	3/10/2015	14,000	<0.23	11	71	<0.58	1	170,000	25	7.7	32	13,000	9.4	13,000	270	<0.12	23	2,700	<0.58	<0.58	87	1.6 J	29	50
	MA1-ES 6-3	3/10/2015	15,000	1.5	11	74	<0.59	0.85	140,000	27	8.4	28	14,000	7.8	13,000	270	<0.12	26	2,900	0.94 J	<0.59	290	<1.2	33	45
	MA1-ES 6-5	3/10/2015	15,000	<0.22	10	120	0.58	0.87	140,000	32	9.7	25	17,000	**250**	13,000	330	<0.11	30	3,700	1.1	<0.55	540	1.4 J	37	68
	MA1-ES 6-5D	3/10/2015	15,000	0.55 J	8	120	0.56	0.77	150,000	31	9.4	24	15,000	**240**	13,000	280	<0.11	30	3,600	1.6	<0.55	490	1.2 J	35	65
	MA1-ES 7-1	3/9/2015	16,000	<0.26	8	69	<0.65	0.55	170,000	26	8.4	20	17,000	4.8	14,000	290	<0.13	26	3,100	1.4	<0.65	86	<1.3	33	42
	MA1-ES 7-3	3/9/2015	19,000	<0.25	9.2	81	<0.62	0.55	20,000	27	9.4	24	19,000	5.7	12,000	350	<0.12	30	3,100	1.6	<0.62	310	<1.2	39	41
	MA1-ES 7-5	3/9/2015	16,000	0.61 J	7.3	83	<0.57	0.62	17,000	29	9.4	22	17,000	5.9	11,000	320	<0.11	29	2,800	<0.57	<0.57	280	<1.1	35	39
	MA1-ES 8-1	3/10/2015	15,000	0.29 J	8.3	84	<0.58	1.2	180,000	35	9.6	29	17,000	23	13,000	300	<0.12	35	2,900	<0.58	<0.58	120	1.2 J	37	**660**
	MA1-ES 8-3	3/10/2015	16,000	0.85 J	8.3	78	<0.54	0.59	160,000	36	10	19	18,000	5.9	13,000	310	<0.11	35	3,200	<0.54	<0.54	150	<1.1	37	53
	MA1-ES 8-5	3/10/2015	15,000	0.42 J	8	100	<0.55	0.61	210,000	29	8.1	21	14,000	5.5	9,900	260	<0.11	26	2,800	0.7 J	<0.55	400	1.2 J	30	34
	MA1-ES 8-5-DP	3/10/2015	13,000	0.47 J	7.1	71	<0.54	0.51	190,000	26	7.4	18	13,000	5.3	9,100	230	<0.11	23	2,500	0.89 J	<0.54	370	<1.1	27	31
	MA1-ES 9-1	3/9/2015	19,000	0.29 J	17	84	0.91	0.84	120,000	46	12	28	21,000	9	24,000	350	<0.11	55	3,300	<0.56	<0.56	140	<1.1	55	42
	MA1-ES 9-3	3/9/2015	18,000	0.85 J	32	410	0.7	**12**	83,000	47	15	290	26,000	**1,000**	16,000	480	<0.11	45	3,600	1.6	<0.54	380	<1.1	55	**870**
	MA1-ES 9-5	3/9/2015	20,000	0.74 J	13	110	1.2	1.8	110,000	34	11	43	20,000	27	24,000	360	<0.11	47	4,000	<0.56	<0.56	480	<1.1	43	110
	MA1-ES 10-1	3/9/2015	17,000	<0.24	8	76	0.6	0.7	150,000	32	10	27	17,000	7.1	24,000	320	<0.12	39	3,300	<0.59	<0.59	150	<1.2	37	41
	MA1-ES 10-3	3/9/2015	17,000	0.48 J	8	79	0.64	0.63	150,000	29	9.2	25	17,000	9	23,000	290	<0.11	39	3,400	<0.57	<0.57	180	1.1 J	36	52
	MA1-ES 10-5	3/9/2015	16,000	0.37 J	11	120	0.63	0.84	150,000	54	13	34	22,000	9.4	14,000	420	<0.11	47	2,700	1.8	<0.55	490	<1.1	53	50
	MA1-ES 11-1	3/10/2015	19,000	0.73 J	15	120	0.72	1.4	110,000	48	15	55	26,000	16	16,000	440	<0.12	51	2,800	<0.59	<0.59	420	1.9 J	58	74
	MA1-ES 11-3	3/10/2015	17,000	0.29 J	9.6	95	0.63	0.74	160,000	42	11	25	18,000	6.8	15,000	370	<0.11	42	2,800	1.2	<0.53	380	2.1	42	45
	MA1-ES 11-3-DP	3/10/2015	15,000	<0.22	8.9	95	0.56	0.78	160,000	38	12	22	17,000	5.3	18,000	360	<0.11	39	2,600	<0.54	<0.54	270	1.7 J	39	41
	MA1-ES 11-5	3/10/2015	20,000	1.2	15	170	0.82	1.1	120,000	74	17	36	32,000	7.4	13,000	560	<0.11	62	2,700	<0.55	<0.55	370	1.7 J	72	60
Potential Action Levels	**Three-Times Background Soil**		**78,500**	**2.6**	**129**	**590**	**2.6**	**9.1**	**116,000**	**263**	**93**	**1,044**	**140,500**	**98**	**48,500**	**2,170**	**<0.11**	**423**	**6,000**	**4.3**	**<0.54**	**2,380**	**3.6**	**287**	**341**
	AZ Residential SRL		76,000	31	10	15,000	150	39	--	30 [c]	900	3,100	--	400	--	3,300	23	1,600	--	390	390	--	5.2	78	23,000
	AZ Non-Residential SRL		920,000	410	10	170,000	1,900	510	--	65 [c]	13,000	41,000	--	800	--	32,000	310	20,000	--	5,100	5,100	--	67	1,000	310,000
	AZ Minimum GPL[e]		--	35	290	12,000	23	29	--	590	--	--	--	290	--	--	12	590	--	290	--	--	12	--	--
	EPA Eco-SSL - Plant		--	--	18	--	--	32	--	--	13	70	--	120	--	220	64 [d]	38	--	0.52	560	--	0.5 [d]	--	160
	EPA Eco-SSL - Invertebrate		--	78	--	330	40	140	--	--	--	80	--	1,700	--	450	0.5 [d]	280	--	4.1	--	--	--	--	120
	EPA Eco-SSL - Avian		--	--	43	--	--	0.77	--	26 [c]	120	28	--	11	--	4,300	0.13 [d]	210	--	1.2	4.2	--	63 [d]	8	46
	EPA Eco-SSL - Mammal		--	0.27	46	2,000	21	0.36	--	34 [c]	230	49	--	56	--	4,000	30 [d]	130	--	0.63	14	--	7.3 [d]	280	79

[a] All sample results based on dry sample weight.

[b] **Bolded** Sample ID indicates sample is a field duplicate of the previous sample (e.g., MA1-ES6-5D is a field duplicate ofMA1-ES6-5).

[c] The Arizona SRLs are for hexavalent chromium; the EPA Eco-SSLs are for trivalent chromium. Analytical results are for total chromium.

[d] Los Alamos National Laboratory (LANL) ecological screening levels, ECORISK Database v3.2 (October 2014).

[e] Arizona Minimum GPLs as identified in *ADEQ Water Quality Division, Drywell Investigation Guidelines, March 2014 Revision* . The chromium GPL is based on total chromium.

Bolded red result indicates sample result is greater than three times the background concentration and the AZ SRL; **bolded green** result indicates sample result greater than three times the background concentration and one or more EPA Eco-SSL.

Shaded blue indicates concentration exceeds the AZ Minimum GPL.

AZ SRL = Arizona Soil Remediation Level (Arizona Administrative Code [A.A.C.] R18-7-205, Appendix A; 2007)

EPA Eco-SSL = US Environmental Protection Agency Ecological Soil Screening Levels

GPL = Groundwater Protection Limit

J = estimated value

mg/kg = milligrams per kilogram

Table F1 Soil and Sediment Sample Results - Metals

Site Area	Sample Description [b]	Date Sampled	Metals (EPA Method 6010B) in mg/kg [a]																						
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Area 1 Surface and Near Surface Soil Samples	MA1-S 1-0-031015	3/10/2015	13,000	<0.24	13	66	<0.60	3.5	180,000	20	7.2	160	13,000	**120**	17,000	250	<0.12	28	3,000	<0.60	<0.60	82	<1.2	22	110
	MA1-S 1-1-031015	3/10/2015	14,000	0.32 J	14	68	<0.58	3.5	190,000	20	7.7	160	14,000	**100**	20,000	270	<0.12	29	3,300	1.1 J	<0.58	95	<1.2	22	120
	MA1-S 2-0-031015	3/10/2015	12,000	0.36 J	16	80	<0.61	4.6	190,000	22	7	230	12,000	69	7,700	330	**0.19**	16	2,300	1.2	<0.61	80	<1.2	18	150
	MA1-S 2-1-031015	3/10/2015	14,000	<0.24	18	85	<0.59	3.2	190,000	25	7.4	170	13,000	47	8,500	320	0.13	18	2,500	<0.59	<0.59	77	<1.2	20	100
	MA1-S 3-0-031015	3/10/2015	11,000	<0.23	9.5	66	<0.58	3.3	220,000	19	6	130	10,000	48	8,200	270	<0.12	14	2,000	0.91 J	<0.58	73	<1.1	15	81
	MA1-S 3-1-031015	3/10/2015	11,000	<0.24	9.3	63	<0.61	2.3	230,000	18	5.6	80	9,700	36	8,500	240	<0.12	13	1,800	1.5	<0.61	92	<1.2	15	61
	MA1-S 4-0-031015	3/10/2015	14,000	**140**	19	80	<0.58	2.2	170,000	17	7.4	130	13,000	**9,900**	<5.8	340	<0.12	20	2,700	0.77 J	**98**	72	<1.2	21	100
	MA1-S 4-1-031115	3/12/2015	14,000	**8.2**	12	86	<0.59	2.7	180,000	21	8.6	130	14,000	**2,500**	11,000	340	<0.12	22	2,800	0.65 J	<0.59	65	<1.2	27	120
	MA1-S 4-1-031115-DP	3/12/2015	14,000	**3**	13	80	<0.57	2.6	170,000	21	7.9	110	13,000	**640**	10,000	320	<0.11	22	2,600	<0.57	<0.57	60	<1.1	26	110
	MA1-S 5-0	3/12/2015	20,000	0.5 J	3.8	96	<0.58	0.44	160,000	20	8.3	32	15,000	67	11,000	420	<0.12	23	3,200	1.4	<0.58	84	<1.1	25	42
	MA1-S 5-1	3/12/2015	17,000	0.46 J	3.8	90	<0.58	0.37	210,000	18	8	27	13,000	43	9,700	380	<0.12	22	2,900	<0.58	<0.58	83	<1.1	23	35
	MA1-S 6-0	3/12/2015	18,000	0.46 J	7	74	<0.57	0.58	94,000	24	8.6	27	16,000	39	16,000	330	<0.11	23	3,200	0.93 J	<0.57	100	<1.1	33	49
	MA1-S 6-1	3/12/2015	19,000	1 J	6.8	73	<0.59	0.58	100,000	26	9.1	29	17,000	37	17,000	340	<0.12	24	3,200	<0.59	<0.59	100	<1.2	32	**500**
	MA1-S 7-0	3/12/2015	13,000	1.6	12	61	<0.55	0.73	200,000	33	8.4	21	14,000	75	11,000	300	<0.11	24	2,500	0.66 J	<0.55	120	<1.1	36	46
	MA1-S 7-1	3/12/2015	14,000	0.54 J	13	65	<0.55	0.72	200,000	34	9.2	29	14,000	49	11,000	310	<0.11	25	2,500	<0.55	<0.55	130	<1.1	38	45
	MA1-S 8-0	3/12/2015	17,000	1.7	11	74	0.74	1.3	110,000	38	10	54	16,000	**230**	22,000	310	<0.11	44	4,000	<0.57	<0.57	140	<1.1	41	68
	MA1-S 8-1	3/12/2015	19,000	1.3	13	77	0.78	1.3	120,000	41	11	53	18,000	**160**	25,000	330	<0.12	45	4,100	<0.59	<0.59	140	<1.2	45	68
	MA1-S 9-0	3/12/2015	13,000	**12**	11	59	<0.54	1.8	190,000	27	7.4	59	12,000	**2,000**	16,000	270	<0.11	22	2,800	<0.54	<0.54	100	1.3 J	29	54
	MA1-S 9-1	3/12/2015	13,000	**17**	13	62	<0.54	1.6	180,000	27	7.9	56	11,000	**2,900**	15,000	270	<0.11	23	2,900	<0.54	<0.54	99	<1.1	30	50
	MA1-S 10-0	3/12/2015	17,000	0.74 J	16	82	0.58	0.86	81,000	29	12	30	18,000	**120**	13,000	410	<0.11	33	3,900	0.91 J	<0.54	100	<1.1	46	47
	MA1-S 10-1	3/12/2015	16,000	1.3	14	79	<0.53	0.83	110,000	32	11	34	17,000	**380**	12,000	360	<0.11	30	3,300	<0.53	<0.53	90	<1.1	43	46
	MA1-S 10-1-DP	3/12/2015	17,000	1.7	14	230	0.54	0.78	130,000	33	11	33	17,000	**240**	12,000	360	<0.11	29	3,600	<0.54	<0.54	110	<1.1	43	44
	MA1-S 11-0	3/12/2015	16,000	**260**	76	80	<0.56	2.7	130,000	25	8.5	54	13,000	**33,000**	21,000	320	<0.11	25	3,500	0.8 J	<0.56	120	<1.1	32	43
	MA1-S 11-0-DP	3/12/2015	17,000	**4.5**	6.2	82	<0.56	0.54	140,000	26	9.1	36	15,000	**970**	24,000	330	<0.11	26	3,700	<0.56	<0.56	140	<1.1	35	39
	MA1-S 11-1	3/12/2015	18,000	**3**	6.8	81	<0.58	0.44	130,000	25	9.6	28	16,000	**620**	22,000	330	<0.12	27	3,900	<0.58	<0.58	140	<1.1	37	40
	MA1-S 12-0	3/12/2015	13,000	**7.9**	11	74	<0.56	2.7	200,000	22	7	120	11,000	**840**	11,000	280	<0.11	17	2,500	<0.56	<0.56	80	<1.1	22	91
	MA1-S 12-1	3/12/2015	15,000	**9.3**	13	79	<0.57	2.6	210,000	25	7.3	110	14,000	**4,400**	14,000	300	<0.11	18	2,700	<0.57	<0.57	91	1.3 J	26	89
	MA1-S 13-0	3/12/2015	14,000	0.33 J	5	76	<0.56	0.39	210,000	19	19	20	12,000	76	9,100	320	<0.11	19	3,100	<0.56	<0.56	68	<1.1	25	33
	MA1-S 13-1	3/12/2015	15,000	0.61 J	5.1	82	<0.58	0.5	220,000	20	7.8	20	12,000	47	9,200	330	<0.12	21	3,200	<0.58	<0.58	69	<1.1	27	33
	MA1-S 14-0	3/12/2015	19,000	**9.3**	17	82	<0.58	0.72	130,000	27	10	28	17,000	**1,500**	13,000	380	<0.12	29	3,300	<0.58	<0.58	89	<1.2	42	43
	MA1-S 14-1	3/12/2015	19,000	1.1 J	13	79	<0.59	0.59	110,000	27	9.7	23	18,000	**110**	13,000	340	<0.12	29	3,300	<0.59	<0.59	97	<1.2	43	41
	MA1-S 15-0	3/12/2015	19,000	1.1 J	10	88	<0.59	0.55	120,000	23	10	23	17,000	56	12,000	390	<0.12	30	3,400	<0.59	<0.59	78	<1.2	39	42
	MA1-S 15-1	3/12/2015	19,000	0.97 J	10	86	<0.59	0.49	120,000	22	9.5	21	16,000	47	12,000	350	<0.12	27	3,400	<0.59	<0.59	76	<1.2	39	42
Potential Action Levels	**Three-Times Background Soil**		**78,500**	**2.6**	**129**	**590**	**2.6**	**9.1**	**116,000**	**263**	**93**	**1,044**	**140,500**	**98**	**48,500**	**2,170**	**<0.11**	**423**	**6,000**	**4.3**	**<0.54**	**2,380**	**3.6**	**287**	**341**
	AZ Residential SRL		76,000	31	10	15,000	150	39	--	30 [c]	900	3,100	--	400	--	3,300	23	1,600	--	390	390	--	5.2	78	23,000
	AZ Non-Residential SRL		920,000	410	10	170,000	1,900	510	--	65 [c]	13,000	41,000	--	800	--	32,000	310	20,000	--	5,100	5,100	--	67	1,000	310,000
	AZ Minimum GPL[e]		--	35	290	12,000	23	29	--	590	--	--	--	290	--	--	12	590	--	290	--	--	12	--	--
	EPA Eco-SSL - Plant		--	--	18	--	--	32	--	--	13	70	--	120	--	220	64 [d]	38	--	0.52	560	--	0.5 [d]	--	160
	EPA Eco-SSL - Invertebrate		--	78	--	330	40	140	--	--	--	80	--	1,700	--	450	0.5 [d]	280	--	4.1	--	--	--	--	120
	EPA Eco-SSL - Avian		--	--	43	--	--	0.77	--	26 [c]	120	28	--	11	--	4,300	0.13 [d]	210	--	1.2	4.2	--	63 [d]	8	46
	EPA Eco-SSL - Mammal		--	0.27	46	2,000	21	0.36	--	34 [c]	230	49	--	56	--	4,000	30 [d]	130	--	0.63	14	--	7.3 [d]	280	79

[a] All sample results based on dry sample weight.

[b] **Bolded** Sample ID indicates sample is a field duplicate of the previous sample (e.g., MA1-ES6-5D is a field duplicate ofMA1-ES6-5).

[c] The Arizona SRLs are for hexavalent chromium; the EPA Eco-SSLs are for trivalent chromium. Analytical results are for total chromium.

[d] Los Alamos National Laboratory (LANL) ecological screening levels, ECORISK Database v3.2 (October 2014).

[e] Arizona Minimum GPLs as identified in *ADEQ Water Quality Division, Drywell Investigation Guidelines, March 2014 Revision* . The chromium GPL is based on total chromium.

Bolded red result indicates sample result is greater than three times the background concentration and the AZ SRL; **bolded green** result indicates sample result greater than three times the background concentration and one or more EPA Eco-SSL.

Shaded blue indicates concentration exceeds the AZ Minimum GPL.

AZ SRL = Arizona Soil Remediation Level (Arizona Administrative Code [A.A.C.] R18-7-205, Appendix A; 2007)

EPA Eco-SSL = US Environmental Protection Agency Ecological Soil Screening Levels

GPL = Groundwater Protection Limit

J = estimated value

mg/kg = milligrams per kilogram

Table F1 Soil and Sediment Sample Results - Metals

Site Area	Sample Description [b]	Date Sampled	Metals (EPA Method 6010B) in mg/kg [a]																						
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Area 1 Surface and Near Surface Soil Samples	MA1-S 16-0	3/12/2015	16,000	0.46 J	12	93	<0.58	2.3	160,000	24	8.6	79	14,000	50	9,700	350	<0.12	24	3,000	<0.58	<0.58	60	<1.1	29	96
	MA1-S 16-1	3/12/2015	14,000	0.91 J	12	79	<0.59	2.1	190,000	23	7.6	75	14,000	59	10,000	330	<0.12	23	2,400	<0.59	<0.59	72	<1.2	26	95
	MA1-S 17-0	3/12/2015	16,000	0.44 J	15	77	0.57	0.76	120,000	27	9.1	20	17,000	8	21,000	350	<0.11	29	2,900	<0.56	<0.56	160	<1.1	42	38
	MA1-S 17-1	3/12/2015	19,000	0.42 J	20	90	0.68	0.82	83,000	29	11	21	20,000	9	23,000	410	<0.12	33	3,400	2.6	<0.58	200	<1.2	50	42
	MA1-S 18-0	3/12/2015	16,000	**32**	18	77	0.76	1.1	270,000	59	12	110	16,000	**7,600**	19,000	350	<0.11	49	3,100	<0.56	<0.56	180	<1.1	49	60
	MA1-S 18-1	3/12/2015	15,000	**11**	18	160	0.86	1.1	120,000	52	12	81	19,000	**3,000**	24,000	390	<0.11	56	2,800	<0.56	<0.56	160	1.9 J	53	140
	MA1-S 19-0	3/12/2015	19,000	**70**	68	92	1.1	2.4	110,000	46	15	50	20,000	**5,800**	21,000	450	<0.11	66	2,900	1.1 J	<0.57	160	1.2 J	55	69
	MA1-S 19-1	3/12/2015	19,000	**9.3**	23	110	1.1	1.3	120,000	48	15	39	20,000	**1,600**	21,000	580	<0.12	65	2,900	<0.58	<0.58	140	<1.1	55	50
	MA1-S 20-0	3/12/2015	14,000	1 J	11	65	0.62	0.81	110,000	28	8.8	35	15,000	**290**	22,000	280	<0.12	34	3,300	0.65 J	<0.58	100	1.2 J	36	54
	MA1-S 20-0-DP	3/12/2015	16,000	1.8	13	80	0.71	0.87	140,000	36	9.4	39	16,000	**140**	25,000	330	<0.12	39	3,700	<0.58	<0.58	120	1.2 J	42	64
	MA1-S20-1	3/12/2015	16,000	1.7	11	73	0.68	0.86	130,000	37	9.4	42	16,000	**430**	24,000	300	<0.12	36	3,600	<0.58	<0.58	120	<1.1	41	79
	MA1-S 21-0	3/12/2015	14,000	0.97 J	9.1	69	<0.59	0.77	93,000	22	7.8	26	14,000	**100**	20,000	280	<0.12	25	3,100	<0.59	<0.59	100	<1.2	33	43
	MA1-S 21-1	3/12/2015	17,000	0.55 J	11	82	<0.61	0.98	110,000	25	8.8	33	17,000	55	23,000	340	<0.12	27	3,700	<0.61	<0.61	120	1.5 J	39	50
	MA1-S 22-0	3/12/2015	13,000	**6.3**	9.2	80	<0.55	0.59	180,000	22	8	18	13,000	**1,300**	24,000	350	<0.11	22	3,100	1 J	<0.55	120	<1.1	27	35
	MA1-S 22-1	3/12/2015	12,000	**730**	18	71	<0.54	0.73	150,000	19	7.1	16	11,000	**13,000**	24,000	320	<0.11	20	2,700	<0.54	2.8	120	<1.1	21	31
	MA1-S 23-0	3/12/2015	7,700	**640**	100	62	<0.55	3.4	190,000	19	6.6	200	8,100	**48,000**	11,000	240	**0.17**	20	1,500	<0.55	0.84	70	<1.1	20	66
	MA1-S 23-1	3/12/2015	9,700	**110**	42	65	<0.55	2.2	190,000	22	7.3	430	11,000	**16,000**	12,000	290	**0.25**	20	2,000	<0.55	<0.55	75	<1.1	24	140
	MA1-S 23-1-DP	3/12/2015	10,000	**25**	14	76	<0.55	0.96	190,000	22	7.3	630	11,000	**5,600**	12,000	300	**0.26**	19	2,000	1.1	<0.55	76	1.4 J	25	110
	MA1-S 24-0	3/12/2015	14,000	1.1 J	5.9	71	<0.55	0.45	150,000	25	8.3	22	14,000	**110**	16,000	350	<0.11	23	3,100	1.4	<0.55	73	<1.1	27	38
	MA1-S 24-1	3/12/2015	17,000	0.87 J	5.7	75	<0.56	0.45	170,000	25	8.8	21	16,000	56	16,000	340	<0.11	26	3,400	<0.56	<0.56	69	<1.1	30	39
	MA1-S 25-0	3/12/2015	12,000	0.47 J	11	64	<0.55	2	170,000	22	7.8	55	13,000	39	10,000	300	<0.11	22	2,300	<0.55	<0.55	63	<1.1	29	69
	MA1-S 25-1	3/12/2015	12,000	<0.23	14	68	<0.57	3.6	190,000	24	8.3	100	14,000	40	11,000	320	<0.11	23	2,400	3.6	<0.57	2,400	1.6 J	27	100
	MA1-S 26-0	3/12/2015	12,000	1.1	10	72	<0.57	0.93	140,000	33	8.7	37	15,000	**140**	18,000	320	<0.11	29	2,800	<0.57	<0.57	96	1.6 J	36	66
	MA1-S 26-1	3/12/2015	14,000	**110**	86	69	<0.56	2.9	120,000	29	8.8	34	15,000	**6,700**	19,000	340	<0.11	29	3,200	<0.56	<0.56	96	<1.1	34	60
	MA1-S 27-0	3/12/2015	15,000	**6.2**	11	78	<0.56	1.1	160,000	25	8.2	46	15,000	**800**	15,000	340	<0.11	23	2,900	0.75 J	<0.56	80	1.1 J	30	68
	MA1-S 27-1	3/12/2015	14,000	2.4	11	75	<0.57	1.1	170,000	25	7.8	41	14,000	**300**	15,000	300	<0.11	23	2,900	1.6	<0.57	85	1.1 J	30	59
	MA1-S 28-0	3/12/2015	13,000	0.7	7.4	67	<0.57	1.1	160,000	20	6.8	40	11,000	29	11,000	250	<0.11	20	2,600	0.75 J	<0.57	64	<1.1	23	49
	MA1-S 28-1	3/12/2015	13,000	0.69 J	8.6	68	<0.58	1.1	170,000	20	7.2	40	12,000	29	11,000	260	<0.12	20	2,700	1.2	<0.58	65	<1.2	26	49
	MA1-S 29-0	3/12/2015	9,100	0.42 J	11	55	<0.56	2.9	260,000	21	6	100	9,100	27	7,100	190	**0.18**	17	1,700	1.6	<0.56	45	<1.1	19	76
	MA1-S 29-1	3/12/2015	10,000	1.1	13	61	<0.56	2.5	250,000	20	6.4	81	9,800	24	7,600	210	<0.11	19	1,800	<0.56	<0.56	51	1.6 J	18	67
	MA1-S 30-0	3/12/2015	11,000	<0.23	4.8	87	<0.58	0.72	190,000	19	4.6	32	8,900	30	57,000	190	<0.12	19	2,300	1.7	<0.58	220	<1.1	20	41
	MA1-S 30-0-DP	3/12/2015	10,000	1.4	4.3	76	<0.58	0.75	190,000	16	4.3	28	8,400	29	52,000	170	<0.12	16	2,200	1.2	<0.58	210	1.4 J	19	36
	MA1-S 30-1	3/12/2015	11,000	0.71 J	4.3	81	<0.57	0.77	170,000	16	4.6	27	8,700	30	49,000	190	<0.11	17	2,300	<0.57	<0.57	230	1.4 J	18	37
Potential Action Levels	**Three-Times Background Soil**		**78,500**	**2.6**	**129**	**590**	**2.6**	**9.1**	**116,000**	**263**	**93**	**1,044**	**140,500**	**98**	**48,500**	**2,170**	**<0.11**	**423**	**6,000**	**4.3**	**<0.54**	**2,380**	**3.6**	**287**	**341**
	AZ Residential SRL		76,000	31	10	15,000	150	39	--	30 [c]	900	3,100	--	400	--	3,300	23	1,600	--	390	390	--	5.2	78	23,000
	AZ Non-Residential SRL		920,000	410	10	170,000	1,900	510	--	65 [c]	13,000	41,000	--	800	--	32,000	310	20,000	--	5,100	5,100	--	67	1,000	310,000
	AZ Minimum GPL[e]		--	35	290	12,000	23	29	--	590	--	--	--	290	--	--	12	590	--	290	--	--	12	--	--
	EPA Eco-SSL - Plant		--	--	18	--	--	32	--	--	13	70	--	120	--	220	64 [d]	38	--	0.52	560	--	0.5 [d]	--	160
	EPA Eco-SSL - Invertebrate		--	78	--	330	40	140	--	--	--	80	--	1,700	--	450	0.5 [d]	280	--	4.1	--	--	--	--	120
	EPA Eco-SSL - Avian		--	--	43	--	--	0.77	--	26 [c]	120	28	--	11	--	4,300	0.13 [d]	210	--	1.2	4.2	--	63 [d]	8	46
	EPA Eco-SSL - Mammal		--	0.27	46	2,000	21	0.36	--	34 [c]	230	49	--	56	--	4,000	30 [d]	130	--	0.63	14	--	7.3 [d]	280	79

[a] All sample results based on dry sample weight.

[b] **Bolded** Sample ID indicates sample is a field duplicate of the previous sample (e.g., MA1-ES6-5D is a field duplicate ofMA1-ES6-5).

[c] The Arizona SRLs are for hexavalent chromium; the EPA Eco-SSLs are for trivalent chromium. Analytical results are for total chromium.

[d] Los Alamos National Laboratory (LANL) ecological screening levels, ECORISK Database v3.2 (October 2014).

[e] Arizona Minimum GPLs as identified in *ADEQ Water Quality Division, Drywell Investigation Guidelines, March 2014 Revision* . The chromium GPL is based on total chromium.

Bolded red result indicates sample result is greater than three times the background concentration and the AZ SRL; **bolded green** result indicates sample result greater than three times the background concentration and one or more EPA Eco-SSL.

Shaded blue indicates concentration exceeds the AZ Minimum GPL.

AZ SRL = Arizona Soil Remediation Level (Arizona Administrative Code [A.A.C.] R18-7-205, Appendix A; 2007)

EPA Eco-SSL = US Environmental Protection Agency Ecological Soil Screening Levels

GPL = Groundwater Protection Limit

J = estimated value

mg/kg = milligrams per kilogram

Table F1 Soil and Sediment Sample Results - Metals

Site Area	Sample Description [b]	Date Sampled	Metals (EPA Method 6010B) in mg/kg [a]																						
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Area 2 Excavation Soil Samples	MA2-ES 1-1	3/10/2015	18,000	<0.25	5	120	<0.61	0.47	160,000	18	14	16	16,000	9.3	14,000	750	<0.12	28	3,700	1 J	<0.61	86	<1.2	37	44
	MA2-ES 1-3	3/10/2015	10,000	0.29 J	3.2	110	<0.56	0.33	280,000	26	4.9	7.6	8,200	1	8,600	320	<0.11	13	2,000	2.9	<0.56	95	<1.1	42	21
	MA2-ES 2-1	3/10/2015	16,000	2	23	370	<0.59	6.6	87,000	52	13	350	39,000	**420**	11,000	660	**0.27**	40	2,800	1 J	1.4	690	<1.2	46	**1,100**
	MA2-ES 2-3	3/10/2015	21,000	2	13	260	<0.59	6.9	130,000	48	11	250	50,000	**460**	9,200	620	**0.44**	36	3,300	4.3	1.3	800	<1.2	32	**1,300**
	MA2-ES 2-5	3/10/2015	19,000	2.5	18	310	<0.55	**13**	73,000	70	16	410	120,000	**880**	8,000	710	**0.63**	66	3,000	1.1 J	1.6	800	<1.1	34	**22,000**
	MA2-ES 3-1	3/10/2015	20,000	2	17	200	<0.60	5.4	130,000	37	9.8	160	37,000	**240**	11,000	470	**0.32**	30	2,300	0.81 J	<0.60	160	<1.2	36	**740**
	MA2-ES 3-3	3/10/2015	18,000	**7.7**	26	290	<0.60	**11**	110,000	61	20	510	72,000	**730**	11,000	790	**0.18**	64	4,100	0.94 J	2.4	610	<1.2	41	**2,500**
	MA2-ES 3-5	3/10/2015	17,000	**4.8**	25	300	<0.57	8.8	91,000	54	15	310	67,000	**560**	11,000	700	**0.69**	48	3,700	1.8	1.9	1,100	<1.1	40	**2,100**
	MA2-ES 4-1	3/10/2015	13,000	<0.24	16	70	<0.61	1.5	180,000	27	8.6	45	16,000	25	12,000	290	<0.12	28	2,700	<0.61	<0.61	73	<1.2	34	75
	MA2-ES 4-3	3/10/2015	15,000	1.3	15	370	<0.58	6.3	120,000	36	12	210	53,000	**460**	10,000	590	**0.33**	37	3,100	1.1 J	1	630	<1.1	34	**2,100**
	MA2-ES 4-5	3/10/2015	17,000	0.89 J	16	370	<0.57	8.2	150,000	42	13	14	87,000	**350**	14,000	720	**0.38**	77	2,700	3.8	0.62	570	<1.1	27	**2,500**
	MA2-ES 5-1	3/10/2015	11,000	<0.24	7.2	64	<0.59	0.44	240,000	30	5.7	12	12,000	1.1	18,000	170	<0.12	25	2,000	<0.59	<0.59	100	1.3 J	26	24
	MA2-ES 5-3	3/10/2015	13,000	0.43 J	15	160	<0.54	0.6	130,000	43	10	16	17,000	3.9	14,000	300	<0.11	33	1,900	0.8 J	<0.54	320	1.1 J	45	29
	MA2-ES 5-3-DP	3/10/2015	11,000	0.82 J	14	120	<0.54	0.59	150,000	38	8.5	14	14,000	4.6	12,000	240	<0.11	29	1,700	<0.54 J	<0.54	250	<1.1	41	30
	MA2-ES 5-4	3/10/2015	12,000	<0.22	9.1	79	<0.54	0.3	130,000	22	8.6	14	12,000	3.8	11,000	230	<0.11	25	2,300	0.76 J	<0.54	470	<1.1	29	24
	MA2-ES 6-1	3/11/2015	16,000	0.61 J	13	130	<0.58	0.68	160,000	41	11	23	21,000	3.7	11,000	310	<0.12	37	2,200	0.69 J	<0.58	130	1.6 J	49	36
	MA2-ES 6-3	3/11/2015	13,000	0.5 J	11	100	<0.56	0.62	220,000	32	9.3	18	15,000	2.5	9,600	250	<0.11	30	1,900	0.58 J	<0.56	88	1.1 J	35	28
	MA2-ES 6-5	3/11/2015	13,000	0.64 J	11	110	<0.64	0.54	170,000	31	9.6	17	14,000	2.9	14,000	420	<0.13	38	2,300	1.3	<0.64	380	1.6	36	29
	MA2-ES 6-5-DP	3/11/2015	13,000	0.55 J	10	100	<0.54	0.44	170,000	29	7.7	17	13,000	2.7	14,000	280	<0.11	30	2,000	1 J	<0.54	440	1.6	33	26
Potential Action Levels	**Three-Times Background Soil**		**78,500**	**2.6**	**129**	**590**	**2.6**	**9.1**	**116,000**	**263**	**93**	**1,044**	**140,500**	**98**	**48,500**	**2,170**	**<0.11**	**423**	**6,000**	**4.3**	**<0.54**	**2,380**	**3.6**	**287**	**341**
	AZ Residential SRL		76,000	31	10	15,000	150	39	--	30 [c]	900	3,100	--	400	--	3,300	23	1,600	--	390	390	--	5.2	78	23,000
	AZ Non-Residential SRL		920,000	410	10	170,000	1,900	510	--	65 [c]	13,000	41,000	--	800	--	32,000	310	20,000	--	5,100	5,100	--	67	1,000	310,000
	AZ Minimum GPL[e]		--	35	290	12,000	23	29	--	590	--	--	--	290	--	--	12	590	--	290	--	--	12	--	--
	EPA Eco-SSL - Plant		--	--	18	--	--	32	--	--	13	70	--	120	--	220	64 [d]	38	--	0.52	560	--	0.5 [d]	--	160
	EPA Eco-SSL - Invertebrate		--	78	--	330	40	140	--	--	--	80	--	1,700	--	450	0.5 [d]	280	--	4.1	--	--	--	--	120
	EPA Eco-SSL - Avian		--	--	43	--	--	0.77	--	26 [c]	120	28	--	11	--	4,300	0.13 [d]	210	--	1.2	4.2	--	63 [d]	8	46
	EPA Eco-SSL - Mammal		--	0.27	46	2,000	21	0.36	--	34 [c]	230	49	--	56	--	4,000	30 [d]	130	--	0.63	14	--	7.3 [d]	280	79

[a] All sample results based on dry sample weight.

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mg/kg = milligrams per kilogram

Table F1 Soil and Sediment Sample Results - Metals

Site Area	Sample Description [b]	Date Sampled	Metals (EPA Method 6010B) in mg/kg [a]																						
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Area 3 Excavation Soil Samples	MA3-ES 1-1	3/11/2015	33,000	1.1 J	27	270	0.9	1.5	52,000	83	22	56	43,000	13	11,000	590	<0.11	75	3,100	<0.57	<0.57	510	1.5 J	86	74
	MA3-ES 1-3	3/11/2015	31,000	0.86 J	22	270	0.86	1.3	86,000	79	22	54	46,000	9.4	13,000	580	<0.11	86	2,300	<0.56	<0.56	970	1.6 J	78	75
	MA3-ES 1-3-DP	3/11/2015	31,000	1 J	19	230	0.82	1	62,000	81	18	46	38,000	8.2	11,000	510	<0.12	69	2,400	0.83 J	<0.60	640	1.7 J	70	64
	MA3-ES 1-5	3/11/2015	17,000	0.79 J	18	160	<0.52	0.85	51,000	55	18	44	38,000	3.9	17,000	490	<0.10	64	1,400	0.79 J	<0.52	1,000	1.2 J	59	60
	MA3-ES 2-1	3/11/2015	24,000	0.92 J	14	270	0.74	0.84	96,000	60	19	45	41,000	7.1	16,000	530	<0.12	66	2,900	1.5	<0.58	520	1.4 J	72	60
	MA3-ES 2-3	3/11/2015	17,000	0.52 J	20	150	<0.57	1	85,000	46	16	37	28,000	5	18,000	420	<0.11	52	1,600	0.7 J	<0.57	570	1.1 J	63	52
	MA3-ES 2-5	3/11/2015	20,000	0.87 J	13	160	0.59	0.79	63,000	59	19	40	37,000	6.5	15,000	480	<0.11	60	2,100	0.9 J	<0.53	650	<1.0	61	58
	MA3-ES 3-1	3/11/2015	23,000	0.62 J	15	220	<0.63	1.9	110,000	55	16	100	41,000	16	23,000	520	<0.13	56	2,200	<0.63	<0.63	910	1.4 J	66	86
	MA3-ES 3-3	3/11/2015	24,000	0.94 J	15	200	0.7	1.2	77,000	57	17	54	31,000	9.7	15,000	480	<0.13	58	2,900	<0.66	<0.66	510	<1.3	65	69
	MA3-ES 3-5	3/11/2015	19,000	0.53 J	14	170	<0.64	0.8	97,000	46	18	40	30,000	4	22,000	450	<0.13	62	1,800	0.64 J	<0.64	770	1.5 J	58	50
	MA3-ES 4-1	3/11/2015	15,000	0.87 J	17	130	<0.55	1.6	84,000	51	15	87	25,000	13	24,000	400	0.11	56	1,400	1.4	<0.55	610	1.1 J	57	70
	MA3-ES 4-3	3/11/2015	27,000	1.1 J	15	210	0.95	0.98	23,000	72	19	50	40,000	13	9,600	580	<0.12	53	4,000	0.78 J	<0.58	310	<1.1	68	73
	MA3-ES 4-5	3/11/2015	18,000	0.62 J	13	240	<0.53	0.85	110,000	52	15	35	25,000	5.1	18,000	440	<0.11	55	1,800	1.1	<0.53	840	1.4 J	58	53
Area 3 Surface and Near Surface Soil Samples	MA3-S 1-0-031115	3/11/2015	33,000	1.5	31	230	1.1	4.1	17,000	86	25	130	46,000	33	13,000	730	<0.11	94	4,500	<0.57	<0.57	190	<1.1	83	140
	MA3-S 1-1-031115	3/11/2015	34,000	1.3	30	220	1.2	3.6	16,000	88	24	110	48,000	31	13,000	750	<0.12	92	4,600	<0.58	<0.58	140	<1.1	85	140
	MA3-S 2-0-031115	3/11/2015	25,000	1.1 J	29	200	1	2.6	25,000	76	23	110	41,000	26	11,000	670	<0.11	80	4,200	<0.57	<0.57	150	<1.1	75	110
	MA3-S 2-1-031115	3/11/2015	29,000	1.2	27	230	1.1	2.5	21,000	79	24	98	43,000	45	12,000	700	<0.12	86	4,400	1 J	<0.60	180	<1.2	79	110
	MA3-S 3-0-031115	3/11/2015	26,000	1.1 J	41	210	1	6.6	14,000	69	24	310	46,000	70	10,000	770	**0.21**	80	3,600	1.9	<0.55	210	<1.1	73	230
	MA3-S 3-1-031115	3/11/2015	30,000	1.1 J	29	230	0.99	3	32,000	68	25	120	44,000	26	12,000	740	<0.11	88	3,600	0.89 J	<0.55	230	<1.1	74	120
	MA3-S 3-1-031115-DP	3/11/2015	31,000	1.7	30	230	1	3.6	21,000	110	26	150	53,000	30	10,000	760	<0.11	84	3,600	1.8	<0.55	210	1.7 J	93	130
	MA3-S 4-0-031115	3/11/2015	22,000	4	44	200	0.8	5	51,000	84	24	250	45,000	**440**	16,000	690	**0.2**	75	3,500	2.2	<0.55	360	1.4 J	82	170
	MA3-S 4-1-031115	3/11/2015	25,000	1.9	40	210	0.87	0.91	53,000	88	23	<2.2	45,000	120	18,000	700	<0.11	85	4,300	0.89 J	<0.55	350	1.3 J	88	110
	MA3-S 5-0-031115	3/11/2015	19,000	**5**	26	160	0.7	1.7	58,000	100	24	63	51,000	**280**	17,000	610	<0.11	84	1,800	1.1	<0.53	470	2.1	100	96
	MA3-S 5-1-031115	3/11/2015	18,000	**3.1**	21	160	0.69	1.5	60,000	100	22	53	45,000	**200**	15,000	610	<0.11	79	1,900	0.97 J	<0.53	460	1.9 J	94	95
	MA3-S 6-0-031115	3/11/2015	18,000	1.1	27	180	0.69	1.9	68,000	90	24	71	45,000	29	20,000	720	<0.11	86	2,100	1.8	<0.55	340	<1.1	91	91
	MA3-S 6-1-031115	3/11/2015	16,000	0.74 J	36	150	0.61	1.9	86,000	67	20	13	44,000	12	20,000	560	<0.11	72	2,000	<0.55	<0.55	380	1.3 J	72	100
Potential Action Levels	**Three-Times Background Soil**		**78,500**	**2.6**	**129**	**590**	**2.6**	**9.1**	**116,000**	**263**	**93**	**1,044**	**140,500**	**98**	**48,500**	**2,170**	**<0.11**	**423**	**6,000**	**4.3**	**<0.54**	**2,380**	**3.6**	**287**	**341**
	AZ Residential SRL		76,000	31	10	15,000	150	39	--	30 [c]	900	3,100	--	400	--	3,300	23	1,600	--	390	390	--	5.2	78	23,000
	AZ Non-Residential SRL		920,000	410	10	170,000	1,900	510	--	65 [c]	13,000	41,000	--	800	--	32,000	310	20,000	--	5,100	5,100	--	67	1,000	310,000
	AZ Minimum GPL[e]		--	35	290	12,000	23	29	--	590	--	--	--	290	--	--	12	590	--	290	--	--	12	--	--
	EPA Eco-SSL - Plant		--	--	18	--	--	32	--	--	13	70	--	120	--	220	64 [d]	38	--	0.52	560	--	0.5 [d]	--	160
	EPA Eco-SSL - Invertebrate		--	78	--	330	40	140	--	--	--	80	--	1,700	--	450	0.5 [d]	280	--	4.1	--	--	--	--	120
	EPA Eco-SSL - Avian		--	--	43	--	--	0.77	--	26 [c]	120	28	--	11	--	4,300	0.13 [d]	210	--	1.2	4.2	--	63 [d]	8	46
	EPA Eco-SSL - Mammal		--	0.27	46	2,000	21	0.36	--	34 [c]	230	49	--	56	--	4,000	30 [d]	130	--	0.63	14	--	7.3 [d]	280	79

[a] All sample results based on dry sample weight.

[b] **Bolded** Sample ID indicates sample is a field duplicate of the previous sample (e.g., MA1-ES6-5D is a field duplicate ofMA1-ES6-5).

[c] The Arizona SRLs are for hexavalent chromium; the EPA Eco-SSLs are for trivalent chromium. Analytical results are for total chromium.

[d] Los Alamos National Laboratory (LANL) ecological screening levels, ECORISK Database v3.2 (October 2014).

[e] Arizona Minimum GPLs as identified in *ADEQ Water Quality Division, Drywell Investigation Guidelines, March 2014 Revision* . The chromium GPL is based on total chromium.

Bolded red result indicates sample result is greater than three times the background concentration and the AZ SRL; **bolded green** result indicates sample result greater than three times the background concentration and one or more EPA Eco-SSL.

Shaded blue indicates concentration exceeds the AZ Minimum GPL.

AZ SRL = Arizona Soil Remediation Level (Arizona Administrative Code [A.A.C.] R18-7-205, Appendix A; 2007)

EPA Eco-SSL = US Environmental Protection Agency Ecological Soil Screening Levels

GPL = Groundwater Protection Limit

J = estimated value

mg/kg = milligrams per kilogram

Table F1 Soil and Sediment Sample Results - Metals

Site Area	Sample Description [b]	Date Sampled	Metals (EPA Method 6010B) in mg/kg [a]																						
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Area 3 Surface and Near Surface Soil Samples	MA3-S 7-0	3/11/2015	26,000	1.4	40	190	0.94	6	12,000	120	26	190	51,000	48	12,000	740	0.12	95	3,700	0.93 J	<0.55	230	1.4 J	100	190
	MA3-S 7-1	3/11/2015	27,000	1.5	33	200	0.93	3.1	22,000	100	25	110	48,000	29	12,000	710	<0.11	90	3,900	1.3	<0.56	270	1.3 J	92	120
	MA3-S 8-0	3/11/2015	16,000	1 J	34	140	0.59	4.1	51,000	52	18	150	41,000	52	18,000	690	<0.11	52	2,400	1.5	<0.54	320	<1.1	63	170
	MA3-S 8-1	3/11/2015	18,000	1.2 J	41	150	0.66	3.3	61,000	57	19	120	50,000	33	19,000	780	<0.13	54	2,300	0.75 J	<0.64	360	<1.3	75	150
	MA3-S 9-0	3/11/2015	22,000	1.3	36	190	0.79	4.9	58,000	64	21	190	43,000	68	16,000	720	**0.15**	72	3,200	2.2	<0.58	240	<1.1	68	170
	MA3-S 9-0-D	3/11/2015	22,000	1.5	34	190	0.82	4.5	54,000	64	24	170	41,000	64	17,000	730	**0.14**	73	3,300	2.1	<0.59	260	<1.2	72	170
	MA3-S 9-1	3/11/2015	21,000	1.1	45	180	0.79	5.8	54,000	64	23	240	42,000	79	18,000	750	**0.21**	72	3,100	1.8	<0.57	250	<1.1	75	240
	MA3-S 10-0	3/11/2015	17,000	1.2	42	150	0.63	4.8	54,000	59	21	210	44,000	51	19,000	750	**0.19**	59	2,200	1.9	<0.56	320	<1.1	70	190
	MA3-S 10-1	3/11/2015	14,000	1.1 J	39	120	<0.58	2.9	44,000	49	25	130	39,000	26	16,000	600	<0.12	55	1,600	1.3	<0.58	420	<1.2	62	110
	MA3-S 11-0	3/11/2015	17,000	1.5	53	170	0.72	7	69,000	69	24	260	45,000	65	19,000	780	**0.2**	90	2,800	3.1	<0.57	430	<1.1	82	200
	MA3-S 11-1	3/11/2015	18,000	1 J	40	170	0.65	2.6	80,000	72	23	100	46,000	17	21,000	790	<0.11	81	2,900	1.3	<0.57	340	<1.1	84	96
	Three-Times Background Soil		**78,500**	**2.6**	**129**	**590**	**2.6**	**9.1**	**116,000**	**263**	**93**	**1,044**	**140,500**	**98**	**48,500**	**2,170**	**<0.11**	**423**	**6,000**	**4.3**	**<0.54**	**2,380**	**3.6**	**287**	**341**
Background Soil	MBG-S1-030915	3/9/2015	28,000	0.52 J	28	280	0.94	4.3	45,000	69	33	180	45,000	44	20,000	710	<0.12	180	3,900	1.9	<0.59	760	<1.2	87	140
	MBG-S 2-030915	3/9/2015	20,000	0.54 J	23	160	0.61	2.6	110,000	39	23	**1,300**	36,000	25	15,000	530	<0.12	99	2,600	1.4	<0.58	890	1.2 J	76	82
	MBG-S 3-030915	3/9/2015	21,000	0.36 J	14	140	<0.58	1.1	36,000	37	22	57	28,000	8.9	13,000	510	<0.12	97	900	0.78 J	<0.58	530	<1.2	50	50
	MBG-S 4-030915	3/9/2015	26,000	0.92 J	63	150	1	4.4	14,000	100	36	150	52,000	29	19,000	770	<0.11	180	1,000	1.5	<0.57	1,000	<1.1	100	110
	MBG-S 5-030915	3/9/2015	32,000	1 J	45	270	1.1	4.7	14,000	70	32	180	56,000	42	13,000	820	<0.11	120	1,500	1.7	<0.54	1,300	<1.1	130	140
	MBG-S 6-030915	3/9/2015	30,000	1.8	85	180	1	1	13,000	210	40	220	64,000	48	17,000	1000	<0.12	170	2,100	1.3	<0.60	280	<1.2	130	160
	Three-Times Background Soil		**78,500**	**2.6**	**129**	**590**	**2.6**	**9.1**	**116,000**	**263**	**93**	**1,044**	**140,500**	**98**	**48,500**	**2,170**	**<0.11**	**423**	**6,000**	**4.3**	**<0.54**	**2,380**	**3.6**	**287**	**341**
Sediment	MBO-SED 1-031015	3/10/2015	14,000	1.1	26	150	<0.54	1.9	62,000	56	20	62	44,000	12	22,000	700	<0.11	62	1,300	**3.1**	<0.54	540	<1.1	67	92
	MBO-SED 2-031015	3/10/2015	16,000	0.86 J	25	150	<0.57	2.1	62,000	63	21	64	46,000	11	23,000	610	<0.11	81	1,500	<0.57	<0.57	770	1.6 J	78	140
	MBO-SED 2-031015-DP	3/10/2015	15,000	0.39 J	22	130	<0.53	1.9	65,000	62	21	53	42,000	11	21,000	570	<0.11	78	1,400	0.91 J	<0.53	720	1.4 J	72	84
	MBO-SED 3-031015	3/10/2015	13,000	0.45 J	27	110	<0.52	1.8	80,000	69	19	44	42,000	11	22,000	520	<0.10	65	1,300	1.6	<0.52	690	2.2	75	79
	MBO-SED 4-031015	3/10/2015	15,000	1.3	31	130	<0.53	2.1	85,000	60	22	52	41,000	11	20,000	840	<0.11	69	1,300	**3**	<0.53	800	<1.1	71	89
	MUN-SED 5-031015	3/10/2015	15,000	0.84 J	13	180	0.59	1.2	51,000	73	17	41	42,000	9.8	12,000	500	<0.11	65	1,400	0.98 J	<0.54	820	1.8 J	71	78
	MUN-SED 6-031015	3/10/2015	15,000	<0.21	14	250	0.55	1.3	48,000	56	20	39	42,000	9.3	11,000	770	<0.11	53	1,500	<0.53	<0.53	560	<1.0	65	88
	MUN-SED 7-031015	3/10/2015	17,000	1.3	27	190	0.68	2.7	110,000	81	26	75	39,000	28	17,000	600	<0.11	84	1,600	1.1	<0.56	650	1.9 J	80	95
	MUN-SED 8-031015	3/10/2015	17,000	1.2	19	150	0.64	1.7	47,000	84	19	57	47,000	13	14,000	500	<0.11	68	1,600	<0.53	<0.53	600	<1.1	81	93
Background Sediment	MBG-SED 1-030915	3/9/2015	15,000	0.82 J	22	130	<0.52	2	73,000	76	19	67	43,000	13	26,000	590	<0.10	61	1,600	1.2	<0.52	520	<1.0	79	120
	MBG-SED 2-030915	3/9/2015	14,000	0.68 J	25	100	<0.52	1.8	52,000	51	15	53	41,000	9.4	23,000	460	<0.10	46	1,400	0.78 J	<0.52	870	<1.0	64	100
	MBG-SED 3-030915	3/9/2015	16,000	0.99 J	15	160	0.62	1.3	41,000	91	19	53	41,000	11	14,000	530	<0.11	67	1,500	<0.55	<0.55	610	1.2 J	81	81
	MBG-SED 4-030915	3/9/2015	16,000	1.3	21	260	0.54	1.5	46,000	79	19	50	40,000	26	14,000	490	<0.10	63	1,400	<0.52	<0.52	600	1.6 J	79	94
Potential Action Levels	**Three-Times Background Sediment**		**45,750**	**2.84**	**62**	**488**	**1.65**	**5**	**159,000**	**223**	**54**	**167**	**123,750**	**45**	**57,750**	**1,553**	**<0.10**	**178**	**4,425**	**2.3**	**<0.52**	**1,950**	**3.6**	**227**	**296**
	AZ Residential SRL		76,000	31	10	15,000	150	39	--	30 [c]	900	3,100	--	400	--	3,300	23	1,600	--	390	390	--	5.2	78	23,000
	AZ Non-Residential SRL		920,000	410	10	170,000	1,900	510	--	65 [c]	13,000	41,000	--	800	--	32,000	310	20,000	--	5,100	5,100	--	67	1,000	310,000
	AZ Minimum GPL[e]		--	35	290	12,000	23	29	--	590	--	--	--	290	--	--	12	590	--	290	--	--	12	--	--
	EPA Eco-SSL - Plant		--	--	18	--	--	32	--	--	13	70	--	120	--	220	64 [d]	38	--	0.52	560	--	0.5 [d]	--	160
	EPA Eco-SSL - Invertebrate		--	78	--	330	40	140	--	--	--	80	--	1,700	--	450	0.5 [d]	280	--	4.1	--	--	--	--	120
	EPA Eco-SSL - Avian		--	--	43	--	--	0.77	--	26 [c]	120	28	--	11	--	4,300	0.13 [d]	210	--	1.2	4.2	--	63 [d]	8	46
	EPA Eco-SSL - Mammal		--	0.27	46	2,000	21	0.36	--	34 [c]	230	49	--	56	--	4,000	30 [d]	130	--	0.63	14	--	7.3 [d]	280	79

[a] All sample results based on dry sample weight.

[b] **Bolded** Sample ID indicates sample is a field duplicate of the previous sample (e.g., MA1-ES6-5D is a field duplicate ofMA1-ES6-5).

[c] The Arizona SRLs are for hexavalent chromium; the EPA Eco-SSLs are for trivalent chromium. Analytical results are for total chromium.

[d] Los Alamos National Laboratory (LANL) ecological screening levels, ECORISK Database v3.2 (October 2014).

[e] Arizona Minimum GPLs as identified in *ADEQ Water Quality Division, Drywell Investigation Guidelines, March 2014 Revision* . The chromium GPL is based on total chromium.

Bolded red result indicates sample result is greater than three times the background concentration and the AZ SRL; **bolded green** result indicates sample result greater than three times the background concentration and one or more EPA Eco-SSL.

Shaded blue indicates concentration exceeds the AZ Minimum GPL.

AZ SRL = Arizona Soil Remediation Level (Arizona Administrative Code [A.A.C.] R18-7-205, Appendix A; 2007)

EPA Eco-SSL = US Environmental Protection Agency Ecological Soil Screening Levels

GPL = Groundwater Protection Limit

J = estimated value

mg/kg = milligrams per kilogram

Table E2 Soil and Sediment Sample Results - SPLP Metals
Mingus Area PA/SI, Prescott National Forest, Arizona

Site Area	Sample Description	Date Sampled	SPLP Metals (EPA Method 1312/6010B) in mg/L																		
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Area 1 Excavation Soil Samples	MA1-ES 2-1	3/9/2015	0.38	<0.20	0.097	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.21	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.21	<0.080
	MA1-ES 3-1	3/9/2015	0.3	<0.20	0.02	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.081	<0.080
	MA1-ES 4-3	3/9/2015	<0.20	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.044	<0.080
	MA1-ES 6-3	3/10/2015	1.5	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.87	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.042	0.11
	MA1-ES 7-5	3/9/2015	3.3	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	2	<0.080	0.023	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 8-5	3/10/2015	2.5	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	1.4	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.026	<0.080
	MA1-ES 8-5-DP	3/10/2015	2.5	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	1.4	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.026	<0.080
	MA1-ES 9-1	3/9/2015	0.46	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.27	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.052	<0.080
	MA1-ES 10-3	3/9/2015	0.41	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.31	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.031	<0.080
	MA1-ES 11-3	3/10/2015	5.4	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	3.3	<0.080	0.045	<0.010	<0.020	<0.20	<0.020	<0.20	0.029	<0.080
	MA1-ES 11-3-DP	3/10/2015	2.6	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	1.6	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.027	<0.080
Area 1 Surface and Near Surface Soil Samples	MA1-S 4-0-031015	3/10/2015	0.96	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.56	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 4-1-031115	3/12/2015	1	<0.20	0.02	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.57	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.023	<0.080
	MA1-S 9-1	3/12/2015	1.3	<0.20	0.021	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.81	**0.27**	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 10-1	3/12/2015	0.29	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 11-0	3/12/2015	0.29	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 11-1	3/12/2015	0.4	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.21	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.034	<0.080
	MA1-S 12-0	3/12/2015	0.81	<0.20	0.026	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.43	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 12-1	3/12/2015	1.7	<0.20	0.031	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.96	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 14-0	3/12/2015	1.8	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	1	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.042	<0.080
	MA1-S 18-0	3/12/2015	0.41	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.28	**0.55**	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 18-1	3/12/2015	0.29	<0.20	0.022	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**0.35**	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 19-0	3/12/2015	0.46	<0.20	0.026	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.3	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.046	<0.080
	MA1-S 19-1	3/12/2015	0.55	<0.20	0.027	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.34	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.072	<0.080
	MA1-S20-1	3/12/2015	0.47	<0.20	0.026	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.34	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.052	<0.080
	MA1-S 22-0	3/12/2015	1.1	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.82	<0.080	0.024	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 23-0	3/12/2015	0.92	0.41	0.029	<0.040	<0.020	<0.0080	<0.020	<0.020	0.024	0.58	**3.9**	0.025	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 26-1	3/12/2015	6.3	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	3.8	<0.080	0.055	<0.010	<0.020	<0.20	<0.020	<0.20	0.046	<0.080
	MA1-S 27-0	3/12/2015	11	<0.20	0.029	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	6.3	**0.23**	0.081	<0.010	<0.020	<0.20	<0.020	<0.20	0.026	<0.080
Action Levels	AZ Water Quality Standards - A&We (acute)		NE	NE	0.440 D	NE	NE	0.0447 T [b]	3.372 D [b]	NE	0.0447 D[b]	NE	0.287 D[b]	NE	0.005 D	7.475 D[b]	0.033 T	0.01 D[b]	NE	NE	2.00 D[b]
	AZ Water Quality Standards - PBC		NE	0.747 T	0.280 T	98 T	1.867 T	0.7 T	1,400 T 2.8 T	NE	1.3 T	NE	0.015 T	130.66	0.28 T	28 T	4.67 T	4.67 T	0.075 T	NE	280

[a] Bolded sample ID is a field duplicate of the previously listed sample.

[b] Hardness dependent water quality standards calculated using a mid-range hardness value of 200 mg/L; Arizona Water Quality Standards = 18 A.A.C. 11, Art. 1, Effective January 31, 2009.

Bolded green result indicates sample result greater than Potential Action Levels.

-- = Not analyzed
D = Dissolved
PBC = Partial Body Contact
T = Total Recoverable
A&We = Aquatic and wildlife (ephemeral)
mg/L = milligrams per Liter
SPLP = Synthetic precipitation leaching procedure

Table E2 Soil and Sediment Sample Results - SPLP Metals
Mingus Area PA/SI, Prescott National Forest, Arizona

Site Area	Sample Description	Date Sampled	SPLP Metals (EPA Method 1312/6010B) in mg/L																		
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Area 2 Excavated Soil Samples	MA2-ES 2-3	3/10/2015	<0.20	<0.20	<0.020	0.053	<0.020	<0.0080	<0.020	<0.020	<0.020	0.69	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA2-ES 3-1	3/10/2015	1.1	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.96	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.022	0.12
	MA2-ES 4-5	3/10/2015	<0.20	<0.20	<0.020	0.11	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA2-ES 5-4	3/10/2015	<0.20	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.041	<0.080
	MA2-ES 6-5	3/11/2015	<0.20	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.044	<0.080
	MA2-ES 6-5-DP	3/11/2015	<0.20	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.24	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	0.038	<0.080
Area 3 Excavated Soil Samples	MA3-ES 1-5	3/11/2015	1.6	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	1.1	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA3-ES 2-5	3/11/2015	0.73	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.39	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA3-ES 3-3	3/11/2015	2.4	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	1.4	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA3-ES 4-1	3/11/2015	0.53	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.29	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
Area 3 Surface and Near Surface Soil Samples	MA3-S 4-0-031115	3/11/2015	49	<0.20	0.092	0.21	<0.020	<0.0080	0.05	<0.020	**0.31**	29	**0.36**	0.45	<0.010	0.072	<0.20	<0.020	<0.20	0.048	0.32
	MA3-S 5-0-031115	3/11/2015	15	<0.20	<0.020	0.063	<0.020	<0.0080	0.02	<0.020	<0.020	9.6	**0.12**	0.14	<0.010	0.026	<0.20	<0.020	<0.20	0.032	<0.080
Sediment	MBO-SED 3-031015	3/10/2015	0.82	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	0.79	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MUN-SED 7-031015	3/10/2015	2.7	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	2	<0.080	0.035	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
Action Levels	AZ Water Quality Standards - A&We (acute)		NE	NE	0.440 D	NE	NE	0.0447 T [b]	3.372 D [b]	NE	0.0447 D[b]	NE	0.287 D[b]	NE	0.005 D	7.475 D[b]	0.033 T	0.01 D[b]	NE	NE	2.00 D[b]
	AZ Water Quality Standards - PBC		NE	0.747 T	0.280 T	98 T	1.867 T	0.7 T	1,400 T 2.8 T	NE	1.3 T	NE	0.015 T	130.66	0.28 T	28 T	4.67 T	4.67 T	0.075 T	NE	280

[a] Bolded sample ID is a field duplicate of the previously listed sample.

[b] Hardness dependent water quality standards calculated using a mid-range hardness value of 200 mg/L; Arizona Water Quality Standards = 18 A.A.C. 11, Art. 1, Effective January 31, 2009.

Bolded green result indicates sample result greater than Potential Action Levels.

-- = Not analyzed
A&We = Aquatic and wildlife (ephemeral)
D = Dissolved
mg/L = milligrams per Liter
PBC = Partial Body Contact
SPLP = Synthetic precipitation leaching procedure
T = Total Recoverable

Table E3 Soil Sample Results - TCLP Metals
Mingus Area PA/SI, Prescott National Forest, Arizona

Site Area	Sample Description	Date Sampled	TCLP Metals (EPA Method 1311/6010B) in mg/L																		
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Area 1 Excavated Soil Samples	MA1-ES 2-1	3/9/2015	<0.20	<0.20	0.076	0.33	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.18	<0.010	<0.020	<0.20	<0.020	<0.20	0.05	<0.080
	MA1-ES 3-1	3/9/2015	0.33	<0.20	<0.020	0.57	<0.020	<0.0080	<0.020	<0.020	<0.020	0.3	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 4-3	3/9/2015	0.27	<0.20	<0.020	0.68	<0.020	<0.0080	<0.020	<0.020	**0.047**	0.28	<0.080	0.79	<0.010	0.034	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 5-3	3/9/2015	<0.20	<0.20	0.03	0.63	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 6-3	3/10/2015	<0.20	<0.20	<0.020	0.78	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.18	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 7-5	3/9/2015	<0.20	<0.20	<0.020	0.68	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.036	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 8-5	3/10/2015	<0.20	<0.20	<0.020	0.68	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 8-5-DP	3/10/2015	<0.20	<0.20	<0.020	0.65	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 9-1	3/9/2015	<0.20	<0.20	<0.020	0.59	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 10-3	3/9/2015	<0.20	<0.20	<0.020	0.9	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 11-3	3/10/2015	<0.20	<0.20	<0.020	0.93	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.035	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-ES 11-3-DP	3/10/2015	<0.20	<0.20	<0.020	0.87	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.038	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
Area 1 Surface and Near Surface Soil Samples	MA1-S 4-0-031015	3/10/2015	<0.20	<0.20	0.028	0.73	<0.020	<0.0080	<0.020	<0.020	**0.2**	<0.20	**0.97**	0.095	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 4-1-031115	3/12/2015	<0.20	<0.20	0.034	0.77	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**1.3**	0.083	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 9-1	3/12/2015	<0.20	0.34	0.061	0.57	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**7**	0.14	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 10-1	3/12/2015	<0.20	<0.20	0.021	0.8	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.043	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 11-0	3/12/2015	<0.20	<0.20	0.026	0.64	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**1.2**	0.074	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 11-1	3/12/2015	<0.20	<0.20	0.022	0.64	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**0.33**	0.028	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 12-0	3/12/2015	<0.20	<0.20	0.065	0.61	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**0.55**	0.095	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 12-1	3/12/2015	<0.20	<0.20	0.05	0.61	<0.020	<0.0080	<0.020	<0.020	0.02	<0.20	**0.34**	0.07	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 14-0	3/12/2015	<0.20	<0.20	<0.020	0.63	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**0.78**	0.053	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 18-0	3/12/2015	<0.20	0.53	0.07	0.45	<0.020	<0.0080	<0.020	<0.020	0.033	<0.20	**34**	0.29	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 18-1	3/12/2015	<0.20	0.51	0.082	0.45	<0.020	<0.0080	<0.020	<0.020	0.025	<0.20	**33**	0.29	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 19-0	3/12/2015	<0.20	<0.20	0.041	0.87	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**1.2**	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 19-1	3/12/2015	<0.20	<0.20	0.034	0.9	<0.020	<0.0080	<0.020	<0.020	0.02	<0.20	**1.6**	0.15	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S20-1	3/12/2015	<0.20	<0.20	0.039	0.7	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**0.14**	0.064	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 22-0	3/12/2015	<0.20	<0.20	0.03	0.84	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**0.26**	0.087	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 23-0	3/12/2015	<0.20	1.2	0.27	0.35	<0.020	<0.0080	<0.020	<0.020	**0.088**	<0.20	**77**	0.56	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	0.11
	MA1-S 26-1	3/12/2015	<0.20	<0.20	<0.020	0.7	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.074	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA1-S 27-0	3/12/2015	<0.20	<0.20	0.044	0.8	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**1.8**	0.1	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
Action Levels	AZ Water Quality Standards - A&We (acute)		NE	NE	0.440 D	NE	NE	0.0447 T [b]	3.372 D [b]	NE	0.0447 D[b]	NE	0.287 D[b]	NE	0.005 D	7.475 D[b]	0.033 T	0.01 D[b]	NE	NE	2.00 D[b]
	AZ Water Quality Standards - PBC		NE	0.747 T	0.280 T	98 T	1.867 T	0.7 T	1,400 T 2.8 T	NE	1.3 T	NE	0.015 T	130.66	0.28 T	28 T	4.67 T	4.67 T	0.075 T	NE	280
	Federal RCRA - TCLP Criteria		NE	NE	5	100	NE	1	5	NE	NE	NE	5	NE	0.2	N	1	5	NE	NE	NE

[a] Bolded sample ID is a field duplicate of the previously listed sample.

[b] Hardness dependent water quality standards calculated using a mid-range hardness value of 200 mg/L; Arizona Water Quality Standards = 18 A.A.C. 11, Art. 1, Effective January 31, 2009.

Bolded red result indicates sample result is greater than RCRA TCLP limits; **Bolded green** result indicates sample result greater than one or more AZ Water Quality Standard.

-- = Not analyzed
D = Dissolved
PBC = Partial Body Contact
T = Total Recoverable
A&We = Aquatic and wildlife (ephemeral)
RCRA = Resource Conservation Recovery Act
SPLP = Synthetic precipitation leaching procedure
mg/L = milligrams per Liter

Table E3 Soil Sample Results - TCLP Metals
Mingus Area PA/SI, Prescott National Forest, Arizona

Site Area	Sample Description	Date Sampled	TCLP Metals (EPA Method 1311/6010B) in mg/L																		
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Area 2 Excavated Soil Samples	MA2-ES 2-3	3/10/2015	<0.20	<0.20	<0.020	0.74	<0.020	0.034	<0.020	<0.020	**0.056**	<0.20	<0.080	1.2	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	2
	MA2-ES 3-1	3/10/2015	<0.20	<0.20	<0.020	<0.040	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**0.15**	0.23	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	**5.2**
	MA2-ES 4-5	3/10/2015	<0.20	<0.20	<0.020	0.19	<0.020	0.0085	<0.020	<0.020	0.021	<0.20	<0.080	0.11	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA2-ES 5-4	3/10/2015	<0.20	<0.20	<0.020	0.18	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA2-ES 6-5	3/11/2015	<0.20	<0.20	<0.020	0.25	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	<0.020	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA2-ES 6-5-DP	3/11/2015	<0.20	<0.20	0.021	0.47	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.078	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
Area 3 Excavated Soil Samples	MA3-ES 1-5	3/11/2015	0.25	<0.20	<0.020	0.86	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	1	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA3-ES 2-5	3/11/2015	0.33	<0.20	<0.020	0.77	<0.020	<0.0080	<0.020	<0.020	<0.020	0.22	<0.080	0.03	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA3-ES 3-3	3/11/2015	0.29	<0.20	<0.020	1.2	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.026	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA3-ES 4-1	3/11/2015	<0.20	<0.20	<0.020	0.63	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.081	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
Area 3 Surface and Near Surface Soil Samples	MA3-S 4-0-031115	3/11/2015	<0.20	<0.20	0.072	1.2	<0.020	<0.0080	<0.020	<0.020	0.031	<0.20	<0.080	0.13	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
	MA3-S 5-0-031115	3/11/2015	<0.20	<0.20	0.021	1.4	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	**0.35**	0.18	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
Sediment	MBO-SED 3-031015	3/10/2015	<0.20	<0.20	<0.020	0.92	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.27	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	0.082
	MUN-SED 7-031015	3/10/2015	<0.20	<0.20	<0.020	1.3	<0.020	<0.0080	<0.020	<0.020	<0.020	<0.20	<0.080	0.17	<0.010	<0.020	<0.20	<0.020	<0.20	<0.020	<0.080
Action Levels	AZ Water Quality Standards - A&We (acute)		NE	NE	0.440 D	NE	NE	0.0447 T [b]	3.372 D [b]	NE	0.0447 D[b]	NE	0.287 D[b]	NE	0.005 D	7.475 D[b]	0.033 T	0.01 D[b]	NE	NE	2.00 D[b]
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	Federal RCRA - TCLP Criteria		NE	NE	5	100	NE	1	5	NE	N	NE	5	NE	0.2	N	1	5	NE	NE	N

[a] Bolded sample ID is a field duplicate of the previously listed sample.

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