

**M-222 SLOPE EVALUATION
ALLEGAN, MICHIGAN
SEDIMENT ANALYTICAL RESULTS
SME Project No. KG59756
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Constituent	CAS Number	Part 201 Soil Generic Residential and Commercial I Cleanup Criteria and Screening Levels							Sample ID Depth Below Grade (inches) Date Collected			
		Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria	Particulate Soil Inhalation Criteria	Direct Contact Criteria	B101 0" - 36" 11/10/2010	B102 0" - 26" 11/10/2010	B103 0" - 66" 11/10/2010	B104 0" - 26" 11/10/2010
		VOCs (ug/kg)										
VOCs	CS	CS	CS	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL
SVOCs (ug/kg)												
SVOCs	CS	CS	CS	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL
PCBs (ug/kg)												
PCBs	CS	CS	CS	CS	CS	CS	CS	CS	<330	<330	<330	<330
Metals (ug/kg)												
Arsenic	7440382	5,800 [^]	23,000 ^{***}	2,000,000	NLV	NLV	720,000	7,600	4,000	2,800	4,800	1,800
Barium	7440393	1,300,000	440,000 [*]	1,000,000,000	NLV	NLV	330,000,000	37,000,000	34,000	32,000	39,000	100,000
Cadmium	7440439	6,000	3,000 [*]	230,000,000	NLV	NLV	1,700,000	550,000	63	70	100	220
Chromium, total ^{**}	16065831	30,000	18,000 [^]	140,000,000	NLV	NLV	330,000,000	2,500,000	11,000	8,400	11,000	16,000
Copper	7440508	5,800,000	73,000 [*]	1,000,000,000	NLV	NLV	130,000,000	20,000,000	11,000	8,500	13,000	21,000
Lead	7439921	700,000	2,500,000 [*]	ID	NLV	NLV	100,000,000	400,000	7,400	5,700	9,500	11,000
Mercury	7439966	1,700	130 [^]	47000	48,000	52,000	20,000,000	160,000	<50	<50	67	54
Selenium	7782492	4,000	410[^]	78,000,000	NLV	NLV	130,000,000	2,600,000	280	220	310	1,000
Silver	7440224	4,500	1,000 [^]	200,000,000	NLV	NLV	6,700,000	2,500,000	<100	<100	<100	<100
Zinc	7440666	2,400,000	170,000 [*]	1,000,000,000	NLV	NLV	ID	170,000,000	43,000	24,000	45,000	79,000

NOTES:

1. VOCs - Volatile Organic Compounds; SVOCs - Semi-volatile Organic Compounds; PCBs - Polychlorinated Biphenyls
2. Concentrations reported in micrograms per kilogram (ug/kg).
3. Highlighted and bolded concentrations exceed the most restrictive applicable Part 201 cleanup criteria and screening levels, where available.
4. Criteria taken from RRD Operational Memorandum #1, Table 2. Soil: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels, dated January 23, 2006.
5. CS - Criterion is specific to individual constituent.
6. <RL - Analytical result was less than the respective reporting limit.
7. ID - Insufficient data to develop criterion.
8. NLV - Chemical is not likely to volatilize
9. ^ - Statewide Default Background Level used as criterion because it was greater than the listed Drinking Water Protection Criterion or the Groundwater Surface Water Interface Protection Criterion. For chromium, this is the statewide default value for total chromium.
10. * - Groundwater Surface Water Interface Protection Criterion depends on the water hardness of the receiving water. In accordance with MDEQ Operational Memo No. 5, a water hardness of 150 mg CaCO3/L was used for the waters of the southern lower peninsula of Michigan. The criteria are protective for surface water that is used as a drinking water source.
11. ** - Total chromium value is compared to the hexavalent chromium criteria.
12. *** - Criterion is protective of surface water that is used as a drinking water source.