

**Concrete Analytical Results
East Powder Manufacturing Area
UMore Park
Rosemount, Minnesota**

Compound/Parameter	Sample Identifier														Residential Soil Reference Value (SRV)	Industrial Soil Reference Value (SRV)	Tier I Soil Leaching Value (SLV)
	CS-49-220C	CS-50-220C	CS-51-222A	CS-52-240B	CS-54-239A	CS-55-1-239A	CS-55-2-239A	CS-56-1-238B	CS-56-2-238B	CS-57-2-238B	CS-58-237K	CS-59-235A	CS-62-1-236B	CS-62-2-236B			
Volatile Organic Compounds (VOCs) reported in mg/kg																	
All Reported VOCs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
Volatile Organic Compounds (VOCs) - Alcohols reported in mg/kg																	
All Reported VOCs - Alcohols	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
Base-Neutral Extractables (BNEs) reported in mg/kg																	
Bis(2-ethylhexyl)phthalate	< 0.18	NA	< 0.18	< 0.18	NA	< 0.18	NA	NA	NA	0.798	< 0.18	< 0.18	< 0.18	NA	570	2,100	40
Di-n-butyl phthalate	0.214	NA	< 0.16	< 0.16	NA	< 0.16	NA	NA	NA	< 0.16	< 0.16	< 0.16	< 0.16	NA	2,440	16,300	23
All Other Reported BNE's	ND	NA	ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	NA	NE	NE	NE
Polychlorinated Biphenyls (PCBs) reported in mg/kg																	
Total PCBs	NA	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	1.2	8	2.1
Explosives reported in mg/kg																	
All Reported Explosive Compounds	ND	NA	ND	ND	ND	NA	NA	ND	NA	NA	ND	ND	ND	NA	NE	NE	NE
Diphenylamine (DPA) and Aniline reported in mg/kg																	
Aniline	<1.6	NA	<1.6	<1.6	< 1.6	< 1.6	NA	< 1.6	NA	<1.6	<1.6	<1.6	<1.6	NA	NE	NE	NE
Diphenylamine	<0.108	NA	<0.108	<0.108	<0.108	<0.108	NA	<0.108	NA	<0.108	<0.108	<0.108	<0.108	NA	NE	NE	1.6
Metals reported in mg/kg																	
Arsenic	3.11	2.811	2.89	3.045	3.438	2.508	NA	3.822	NA	2.917	2.955	1.991	2.814	NA	5	20	15.1
Barium	38.75	51.11	65.83	44.48	40.16	41.28	NA	49.69	NA	51.72	50.59	51.93	39.25	NA	1,200	18,000	842
Cadmium	0.584	0.074	0.102	0.085	0.055	0.101	NA	0.195	NA	0.25	0.082	0.051	0.054	NA	25	200	4.4
Chromium	16.9	12.9	17.7	19.4	11.8	15.6	NA	15.6	NA	33	27.3	18.7	14.8	NA	44,000 ^a	100,000 ^a	1,000,000 ^a
Lead	27.5	18.6	5.56	3.47	1.73	3.95	NA	13.8	NA	2.76	4.15	< 1.43	< 1.47	NA	300	700	525
Mercury	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	NA	< 0.02	NA	< 0.02	< 0.02	< 0.02	< 0.02	NA	0.5	1.5	1.6
Selenium	< 0.241	< 0.245	< 0.244	< 0.248	< 0.24	< 0.244	NA	< 0.247	NA	< 0.246	< 0.247	< 0.239	< 0.246	NA	160	1,300	1.5
Silver	0.157	0.174	0.319	0.213	0.152	0.22	NA	1.458	NA	0.222	0.438	0.172	0.358	NA	160	1,300	3.9
Asbestos reported in percent																	
Asbestos	ND	ND	ND	ND	ND	ND	2	ND	3	NA	ND	ND	ND	16	NE	NE	NE

Notes:
mg/kg = Milligrams per kilogram.
NA = Not analyzed for this parameter.
ND = Not detected.
NE = Not established.
< 0.025 = Compound not detected at or above the listed value.
^a = No SRV or SLV is established for "total chromium"; the SRV/SLV listed is for chromium III and has been used because analysis of representative samples did not detect chromium VI (hexavalent chromium).

Soil Analytical Results
East Powder Manufacturing Area
UMore Park
Rosemount, Minnesota

Compound/Parameter	Sample Identifier																	Residential Soil Reference Value (SRV)	Industrial Soil Reference Value (SRV)	Tier I Soil Leaching Value (SLV)	
	TT-70-1(0-1")- 239A	TT-70-2(0-1")- 239A	TT-70-3(0-1")- 239A	TT-70-4(0-1")- 239A	TT-70-5(0-1")- 239A	TT-70(0-1")- 239A	TT-70(4")- 239A	TT-71-1(SURFACE)- 238B	TT-71-2(SURFACE)- 238B	TT-71-3(SURFACE)- 238B	TT-71(0-1")- 238B	TT-72-1(SURFACE)- 237K	TT-72-2(SURFACE)- 237K	TT-72-3(SURFACE)- 237K	TT-72(0-6")- 237K	TT-72(1.5")- 237K	TT-72(3.5")- 237K				TT-72(8")- 237K
Volatile Organic Compounds (VOCs) reported in mg/kg																					
Total VOCs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
Volatile Organic Compounds (VOCs) - Alcohols reported in mg/kg																					
Total VOCs - Alcohols	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
Base-Neutral Extractables (BNEs) reported in mg/kg																					
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	< 0.045	NA	NA	NA	NA	< 0.045	NA	NA	NA	0.244	< 0.045	NA	NA	50	355	0.001
2-Methylnaphthalene	NA	NA	NA	NA	NA	< 0.04	NA	NA	NA	NA	< 0.04	NA	NA	NA	< 0.08	< 0.04	NA	NA	100	369	NE
Acenaphthene	NA	NA	NA	NA	NA	< 0.036	NA	NA	NA	NA	< 0.036	NA	NA	NA	< 0.072	< 0.036	NA	NA	1,200	5,260	50
Acenaphthylene	NA	NA	NA	NA	NA	< 0.034	NA	NA	NA	NA	< 0.034	NA	NA	NA	< 0.068	< 0.034	NA	NA	NE	NE	NE
Anthracene	NA	NA	NA	NA	NA	< 0.032	NA	NA	NA	NA	< 0.032	NA	NA	NA	< 0.064	< 0.032	NA	NA	7,880	45,400	942
Benzo(a)anthracene	NA	NA	NA	NA	NA	< 0.031	NA	NA	NA	NA	< 0.031	NA	NA	NA	< 0.062	< 0.031	NA	NA	a	a	a
Benzo(a)pyrene	NA	NA	NA	NA	NA	< 0.038	NA	NA	NA	NA	< 0.038	NA	NA	NA	< 0.076	< 0.038	NA	NA	a	a	a
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	< 0.035	NA	NA	NA	NA	< 0.035	NA	NA	NA	< 0.07	< 0.035	NA	NA	a	a	a
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	< 0.09	NA	NA	NA	NA	< 0.09	NA	NA	NA	< 0.18	< 0.09	NA	NA	NE	NE	NE
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	< 0.031	NA	NA	NA	NA	< 0.031	NA	NA	NA	< 0.062	< 0.031	NA	NA	a	a	a
Bis(2-ethylhexyl)phthalate	NA	NA	NA	NA	NA	0.172	NA	NA	NA	NA	< 0.09	NA	NA	NA	< 0.18	0.116	NA	NA	570	2,100	40
Chrysene	NA	NA	NA	NA	NA	< 0.034	NA	NA	NA	NA	< 0.034	NA	NA	NA	< 0.068	< 0.034	NA	NA	a	a	a
Dibenz (a,j) Acridine	NA	NA	NA	NA	NA	< 0.09	NA	NA	NA	NA	< 0.09	NA	NA	NA	< 0.18	< 0.09	NA	NA	NE	NE	NE
Dibenzo(a,h)anthracene	NA	NA	NA	NA	NA	< 0.09	NA	NA	NA	NA	< 0.09	NA	NA	NA	< 0.18	< 0.09	NA	NA	a	a	a
Dibenzofuran	NA	NA	NA	NA	NA	< 0.035	NA	NA	NA	NA	< 0.035	NA	NA	NA	< 0.07	< 0.035	NA	NA	104	810	NE
Di-n-butyl phthalate	NA	NA	NA	NA	NA	< 0.08	NA	NA	NA	NA	< 0.08	NA	NA	NA	0.968	< 0.08	NA	NA	2,440	16,300	23
Di-n-octyl phthalate	NA	NA	NA	NA	NA	< 0.035	NA	NA	NA	NA	< 0.035	NA	NA	NA	< 0.07	< 0.035	NA	NA	520	3,700	NE
Ethyl Methanesulfonate	NA	NA	NA	NA	NA	< 0.04	NA	NA	NA	NA	< 0.04	NA	NA	NA	< 0.08	< 0.04	NA	NA	NE	NE	NE
Fluoranthene	NA	NA	NA	NA	NA	< 0.04	NA	NA	NA	NA	< 0.04	NA	NA	NA	< 0.08	< 0.04	NA	NA	1,080	6,800	295
Fluorene	NA	NA	NA	NA	NA	< 0.036	NA	NA	NA	NA	< 0.036	NA	NA	NA	< 0.072	< 0.036	NA	NA	850	4,120	47
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	< 0.08	NA	NA	NA	NA	< 0.08	NA	NA	NA	< 0.16	< 0.08	NA	NA	a	a	a
Naphthalene	NA	NA	NA	NA	NA	< 0.033	NA	NA	NA	NA	< 0.033	NA	NA	NA	< 0.066	< 0.033	NA	NA	10	28	7.5
Phenanthrene	NA	NA	NA	NA	NA	< 0.035	NA	NA	NA	NA	< 0.035	NA	NA	NA	< 0.07	< 0.035	NA	NA	NE	NE	NE
Pyrene	NA	NA	NA	NA	NA	< 0.03	NA	NA	NA	NA	< 0.03	NA	NA	NA	< 0.06	< 0.03	NA	NA	890	5,800	272
Benzo(a)pyrene Equivalent	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	ND	NA	NA	NA	0	0	NA	NA	2	3	10.2
Polychlorinated Biphenyls (PCBs) reported in mg/kg																					
Total PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.2	8	2.1
Explosives reported in mg/kg																					
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	< 0.18	< 0.19	NA	< 0.42	< 0.18	< 0.19	NA	NA	NA	1.06	< 0.53	< 0.49	< 0.18	50	355	0.001
Other Explosive Compounds	NA	NA	NA	NA	NA	ND	ND	NA	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	NE	NE	NE
Diphenylamine (DPA) and Aniline reported in mg/kg																					
Aniline	NA	NA	NA	NA	NA	< 0.8	< 0.8	NA	< 1.6	< 0.8	< 0.8	NA	NA	NA	< 1.6	< 0.8	< 0.8	< 0.8	NE	NE	NE
Diphenylamine	NA	NA	NA	NA	NA	< 0.054	< 0.054	NA	< 0.108	< 0.054	< 0.054	NA	NA	NA	< 0.108	< 0.054	< 0.054	< 0.054	NE	NE	1.6
Metals reported in mg/kg																					
Arsenic	NA	NA	NA	NA	NA	2.242	1.224	NA	10.24	15.03	4.307	NA	NA	NA	13.37	10.21	NA	1.338	5	20	15.1
Barium	NA	NA	NA	NA	NA	42.5	15.29	NA	117.4	139.4	157.8	NA	NA	NA	47.18	27.98	NA	12.99	1,200	18,000	842
Cadmium	NA	NA	NA	NA	NA	0.186	0.042	NA	1.8	2.95	0.117	NA	NA	NA	0.976	0.751	NA	0.031	25	200	4.4
Chromium	NA	NA	NA	NA	NA	11	6.1	NA	31.3	43.5	17.4	NA	NA	NA	17.9	15.1	NA	5.59	44,000 ^b	100,000 ^b	1,000,000 ^b
Lead	NA	NA	NA	NA	NA	23	84	NA	392	429	9.37	NA	NA	NA	72	69.8	NA	1.48	300	700	525
Mercury	NA	NA	NA	NA	NA	< 0.02	< 0.02	NA	0.03	0.04	0.03	NA	NA	NA	0.02	0.02	NA	< 0.02	0.5	1.5	1.6
Selenium	NA	NA	NA	NA	NA	< 0.125	< 0.125	NA	0.881	0.866	< 0.125	NA	NA	NA	0.583	0.232	NA	< 0.123	160	1,300	1.5
Silver	NA	NA	NA	NA	NA	0.111	0.068	NA	6.16	10.54	0.11	NA	NA	NA	3.434	4.203	NA	0.166	160	1,300	3.9
Asbestos reported in percent																					
Asbestos	~1	35	3	40	40	ND	NA	~1	ND	ND	ND	3	20	40	ND	ND	NA	NA	NE	NE	NE

Notes:

mg/kg = Milligrams per kilogram.

NA = Not analyzed for this parameter.

ND = Not detected (at or below concentration in parentheses where applicable).

NE = Not established.

< 0.025 = Compound not detected at or above the listed value.

a = Benzo(a)pyrene (BaP) equivalent is a calculated value based on the weighted concentration and toxicity of the following compounds:

benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

^b = No SRV or SLV is established for "total chromium"; the SRV/SLV listed is for chromium III and has been used because analysis of representative samples did not detect chromium VI (hexavalent chromium).

~ = Approximatley.