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## Tables

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**Table 3.1**  
**Sampling Summary**  
**USX Property**  
**Mt. Iron, Minnesota**

**Soil**

<u>Location</u>	<u>Depth (ft.)</u>	<u>Parameters</u>
T-1a	3-4	metals by XRF (field), SVOC, VOC, PCB, Pesticides, DRO
T-1b	5-6	metals by XRF (field), SVOC, VOC, PCB, Pesticides, DRO
T-4	3-4	metals by XRF (field), SVOC, VOC, PCB, Pesticides, DRO
T-5	5	metals by XRF (field), RCRA Metals (lab), SVOC, VOC, PCB, Pesticides, DRO
T-9	3.5	metals by XRF (field), SVOC, VOC, PCB, Pesticides, DRO
T-10	3	metals by XRF (field), SVOC, VOC, PCB, Pesticides, DRO
T-11	11	

**Groundwater**

<u>Location</u>	<u>Depth (ft.)</u>	<u>Parameters</u>
MW-1	2.3-12.3	RCRA Metals, SVOC, VOC, PCB, Pesticides, DRO
MW-2	4.5-14.5	RCRA Metals, SVOC, VOC, PCB, Pesticides, DRO
MW-3A	5-15	RCRA Metals, SVOC, VOC, PCB, Pesticides, DRO
MW-3B	12-22	RCRA Metals, SVOC, VOC, PCB, Pesticides, DRO
MW-4	5.5-15.5	RCRA Metals, SVOC, VOC, PCB, Pesticides, DRO

**Table 3.2**

**Analytical Methods Summary  
USX Property  
Mountain Iron, Minnesota**

<u>Analyte</u>	<u>Method</u>
RCRA Metals (8)	EPA 8160
Polychlorinated Biphenyls (PCB)	EPA 8082
Semi-Volatile Organic Compounds (SVOC)	EPA 8270
Pesticides	MDA list 1/EPA 8081A
Diesel Range Organics (DRO)	EPA 8015 mod. WI GRO
Volatile Organic Compounds (VOC)	MDH 465F/EPA 8260B
Metals by XRF	XLT500

**Table 4.1**

**Groundwater Elevations  
USX Property  
Mountain Iron, Minnesota**

	<u>TOR Elevation</u>	<u>5/29/03</u>		<u>6/2/03</u>	
		<u>DTW</u>	<u>Groundwater Elevation</u>	<u>DTW</u>	<u>Groundwater Elevation</u>
MW-1	1441.47	11.12	1430.35	11.06	1430.41
MW-2	1440.71	13.08	1427.63	13.01	1427.70
MW-3A	1440.16	11.44	1428.72	11.40	1428.76
MW-3B	1440.16	11.33	1428.83	11.30	1428.86
MW-4	1438.98	11.50	1427.48	11.32	1427.66

TOR: Top of riser

DTW: Depth to water, below TOR

Table 4.2

SVOCs in Soil and Benzo(a)pyrene (BaP) Equivalents

USX Property  
Mountain Iron, Minnesota

Benzo(a)pyrene (BaP) Equivalents

Chemical	Relative Potency Factor	I-1A	I-1B	I-1C	I-4	I-5	I-9	I-10	I-11
		Concn. (mg/kg)	Concn. (mg/kg)	Concn. (mg/kg)	Concn. (mg/kg)	Concn. (mg/kg)	Concn. (mg/kg)	Concn. (mg/kg)	Concn. (mg/kg)
Benzo(a)anthracene	0.1	26	11	8.2	0.96	0.72	10	1	0
Benzo(b)fluoranthene	0.1	20	8.9	8.1	0.94	0.85	8.3	0.83	0
Benzo(k)fluoranthene	0.1								
Benzo(a)pyrene (1)	1	21	10	8.5	0.93	0.93	10	1	0.52
Chrysene	0.01	20	10	8.3	0.9	0.75	8.9	8.9	2.9
Dibenz(a,h)acridine	0.1	23	10	7.8	0.0093	0.76	9.6	0.096	0
Dibenz(a,h)acridine	0.1								
Dibenz(a,h)anthracene (2)	0.56	0	0	0	0	0	0	0	0
7H-Dibenzof(c,g)carbazole	1								
Dibenzof(a,e)pyrene	1								
Dibenzof(a,h)pyrene	10								
Dibenzof(a,i)pyrene	10								
Dibenzof(a,j)pyrene	10								
7,12-Dimethylbenzanthracene (2)	34								
1,6-Dinitropyrene	10								
1,8-Dinitropyrene	1								
Indeno(1,2,3-c,d)pyrene	0.1	12	6	4.3	0.51	0.62	5.6	0.56	0
3-Methylcholanthrene (2)	3								
5-Methylchrysene	1								
5-Nitroacenaphthene (2)	0.02								
1-Nitropyrene	0.1								
4-Nitropyrene	0.1								
6-Nitrochrysene	10								
2-Nitrofluorene	0.01								
<b>Total BaP equivalents</b>		<b>28.13</b>	<b>13.69</b>	<b>11.288</b>	<b>1.243</b>	<b>1.070</b>	<b>12.386</b>	<b>4.004</b>	<b>0.052</b>
<b>Ind. BaP SRV</b>		<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>

(1) Oral slope factor utilized by MDH (MDH Rules Relating to Health Risk Values, 2002)  
 (2) "PEF" based on ratioing OEHA oral cancer slope factor to the BaP oral cancer slope factor utilized by MDH.

Source: MDH Memorandum 2001. Based on California EPA Office of Environmental Health Hazard Assessment (OEHA) 1999 Risk Assessment Guidelines, Part II: Technical Support Document for Describing Available Cancer Potency Factors. [http://www.oehha.org/air/cancer\\_guide/nsca2.html#download](http://www.oehha.org/air/cancer_guide/nsca2.html#download)

**Table 4.3**

**RCRA Metals in Soil**

**USX Property  
Mountain Iron, Minnesota**

	<b>Units</b>	<b>Indust. SRV</b> (Tier 2)	<b>I-1A</b>	<b>I-1B</b>	<b>I-1C</b>	<b>I-4</b>	<b>I-5</b>	<b>I-9</b>	<b>I-10</b>	<b>I-11</b>
Arsenic	mg/kg	25	NA	NA	NA	NA	<b>33</b>	NA	NA	NA
Barium	mg/kg	12,500	NA	NA	NA	NA	1,300	NA	NA	NA
Cadmium	mg/kg	250	NA	NA	NA	NA	4.4	NA	NA	NA
Chromium	mg/kg	425	NA	NA	NA	NA	100	NA	NA	NA
Lead	mg/kg	700	NA	NA	NA	NA	<b>1,200</b>	NA	NA	NA
Mercury	mg/kg	2	NA	NA	NA	NA	0.28	NA	NA	NA
Selenium	mg/kg	1,250	NA	NA	NA	NA	2.1	NA	NA	NA
Silver	mg/kg	1,250	NA	NA	NA	NA	0.98	NA	NA	NA

**Bold** indicates regulatory exceedence

NA = Not Analyzed

**Table 4.4**

**DRO in Soil**

**USX Property  
Mountain Iron, Minnesota**

<b>Units</b>	<b>I-1A</b>	<b>I-1B</b>	<b>I-1C</b>	<b>I-4</b>	<b>I-5</b>	<b>I-9</b>	<b>I-10</b>	<b>I-11</b>
<b>DRO</b>	260	160	420	18	67	630	63	28

Table 4.5

Metals in Soil by XRF  
 USX Property  
 Mountain Iron, Minnesota

Analyte	Indust. SRV (mg/kg)	Trench Sample ID															
		T-1A (mg/kg)	T-1A (mg/kg)	T-1B (mg/kg)	T-1B (mg/kg)	T-4 (mg/kg)	T-4 (mg/kg)	T-5 (mg/kg)	T-5 (mg/kg)	T-9 (mg/kg)	T-9 (mg/kg)	T-9 DUP (mg/kg)	T-9 DUP (mg/kg)	T-10 (mg/kg)	T-10 (mg/kg)	T-11 (mg/kg)	T-11 (mg/kg)
Arsenic	25	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Chromium	100,000 or 425	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Cobalt	13,000	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Copper	9,000	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Iron	46,000	35,098	34,381	21,594	33,382	52,685	49,485	57,190	66,970	76,083	57,551	56,371	46,899	32,179	29,594	64,358	48,794
Lead	700	533	454	272	303	270	335	506	716	263	229	309	217	197	255	1,620	1,000
Manganese	5,600	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Mercury	2	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Molybdenum	NP	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Nickel	3,000	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Rubidium	NP	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Strontium	NP	213	157	214	195	183	222	172	274	107	119	157	170	104	72	<LOD	74
Zinc	70,000	1,250	822	556	793	342	407	1,960	3,259	1,310	1,130	1,020	554	183	217	298	240
Zirconium	NP	<LOD	61	113	101	104	96	<LOD	<LOD	29	33	43	70	75	77	2,149	3,738

LOD = Level of Detection  
 NP = Not Promulgated  
**Bold indicates regulatory exceedance**



**Table 4.6**

**DRO in Groundwater  
USX Property**

**Mountain Iron, Minnesota**

	<b>MW-1</b>	<b>MW-2</b>	<b>MW-3A</b>	<b>MW-3B</b>	<b>MW-4</b>	<b>MW-6</b>
<b>Units</b>						
<b>DRO</b>	mg/L	<100	170	NA	180	280
		<100				<100

NA = Not Analyzed