

**Table 1**  
Soil Investigation Data  
(in mg/kg)

Sample Location	Depth	BTEX <sup>1</sup>		Pentachlorophenol (PCP)			PAHs		
		IA <sup>2</sup>	Lab <sup>3</sup>	IA	Lab	Lab Eq. <sup>4</sup>	IA	Lab	Lab Eq.
TT 101	6	<b>65</b>		89		31	<b>&gt;500</b>		<b>&gt;68</b>
TT 102	1	<0.5		38		13	<b>55</b>		<b>11</b>
TT 102	1	<b>120</b>		<b>500</b>		<b>170</b>	<b>&gt;500</b>		<b>&gt;68</b>
TT 103	3	1.2		47		16	<b>80</b>		<b>16</b>
TT 103	1.5	<b>140</b>		<b>1250</b>		<b>430</b>	<b>1000</b>		<b>140</b>
TT 105	3.5	<b>64</b>		60		21	<b>840</b>		<b>110</b>
TT 106	3	1.7		5.6		<1.5	<b>930</b>		<b>130</b>
TT 108	4.5	<b>25</b>		<b>690</b>		<b>240</b>	<b>220</b>		<b>30</b>
TT 109	3	<1.0		19		3.1	<b>61</b>		<b>12</b>
TT 110	7	0.7		0.65		<1.5	<b>4.1</b>		0.82
TT 112	4	0.6		<0.15		<1.5	1.5		0.3
TT 113	2.5	<b>91</b>		<b>&gt;510</b>		<b>&gt;180</b>	<b>810</b>		<b>110</b>
TT 113	2.5	<b>180</b>		<b>&gt;1300</b>		<b>&gt;450</b>	<b>440</b>		<b>60</b>
TT 114	4.5	<b>97</b>	0.4	<b>600</b>	<b>130</b>	<b>210</b>	<b>370</b>	0.41	<b>51</b>
SB 101	34	<0.5		<0.05		<1.5	0.56		<0.3
SB 102	40	<0.5		<0.05		<1.5	<b>4.4</b>		0.88
SB 104	14	4.4	<0.05	22	8.4	7.6	<b>75</b>	<0.29	<b>&lt;15</b>
SB 104	76	<b>14</b>	<0.05	11	1.8	1.8	<b>15</b>	3.2	<b>3</b>
SB 104	81	3		15		2.5	2		0.4
SB 105	8	1.3		1.5		<1.5	2		0.4
SB 105	14	0.7		3.6		<1.5	1.2		<0.3
SB 105	36	<b>100</b>	<0.05	<b>250</b>	<b>170</b>	86	<b>630</b>	<b>81</b>	<b>86</b>
SB 107	6	<b>12</b>		45		16	<b>64</b>		<b>13</b>
SB 107	10	<0.5		0.13		<1.5	<1		<0.3
SB 107	16	<0.5/0.5		0.13/0.58		<1.5	0.7/1.2		0.14
SB 109	40	0.5		<0.05		<1.5	0.86		0.17
SB 110	36	<0.5		25		4.1	<b>10</b>		2
SB 112	4	<b>89</b>		<b>930</b>		<b>150</b>	<b>750</b>		<b>102</b>
SB 113	34	<b>27</b>	<0.05	46	16	16	<b>334</b>	<3.2	<b>&lt;46</b>
SB 114	38	<0.5	0.06	0.18	<1.7	<1.5	2.3	<0.33	<0.46
SB 115	44	<0.5		0.23		<1.5	2		0.4
SB 116	19	<0.5		<0.05		<1.5	0.13		<0.3
SB 116	28	<0.5		0.18		<1.5	1.7		0.34
SB 116	36	<0.5		<0.05		<1.5	0.5		<0.3
SB 116	42	<b>160</b>		2.4		<1.5	<b>620</b>		<b>85</b>
MPCA SRV (comm./industrial)		10 <sup>5</sup>			120			3	

**Bold** exceeds current MPCA industrial Soil Reference Value (SRV, 9/05)

<sup>1</sup> sum of benzene, toluene, ethylbenzene, xylenes

<sup>2</sup> Immunoassay result

<sup>3</sup> Fixed laboratory result

<sup>4</sup> Estimated laboratory equivalent value

<sup>5</sup> SRV for benzene

Source: Barr 1996

**Table 2**  
1997 Dioxin/Furan Soil Data

Dioxin/Furan	1998 WHO TEF	SS-1 (ug/kg)	TCDD-TEQ (ug/kg)	SS-2 (ug/kg)	TCDD-TEQ (ug/kg)	SB-1-6 (ug/kg)	TCDD-TEQ (ug/kg)	SB-5-C (ug/kg)	TCDD-TEQ (ug/kg)
2,3,7,8-TCDD	1	0.007*	0.007	0.0072	0.0072	0.0011*	0.0011	0.0041*	0.0041
1,2,3,7,8-PeCDD	1	0.18	0.18	0.69	0.69	0.0038	0.0038	0.041	0.041
1,2,3,4,7,8-HxCDD	0.1	1.8	0.18	0.24	0.024	0.028	0.0028	0.23	0.023
1,2,3,6,7,8-HxCDD	0.1	18	1.8	1.2	0.12	2.1	0.21	8.9	0.89
1,2,3,7,8,9-HxCDD	0.1	2.1	0.21	0.37	0.037	0.095	0.0095	0.64	0.064
1,2,3,4,6,7,8-HpCDD	0.01	430	4.3	31	0.31	61	0.61	210	2.1
OCDD	0.0001	4600	0.46	340	0.034	710	0.071	1900	0.19
2,3,7,8-TCDF	0.1	0.81	0.081	0.0099	0.00099	0.064	0.0064	0.33	0.033
1,2,3,7,8-PeCDF	0.05	4.5	0.225	0.063	0.00315	0.31	0.0155	1.6	0.08
2,3,4,7,8-PeCDF	0.5	9.6	4.8	0.19	0.095	0.56	0.28	3.7	1.85
1,2,3,4,7,8-HxCDF	0.1	28	2.8	0.8	0.08	1.8	0.18	9.2	0.92
1,2,3,6,7,8-HxCDF	0.1	4.9	0.49	0.25	0.025	0.45	0.045	2.2	0.22
2,3,4,6,7,8-HxCDF	0.1	2.6	0.26	0.36	0.036	0.62	0.062	3	0.3
1,2,3,7,8,9-HxCDF	0.1	11	1.1	0.27	0.027	0.8	0.08	4.5	0.45
1,2,3,4,6,7,8-HpCDF	0.01	120	1.2	7.6	0.076	16	0.16	65	0.65
1,2,3,4,7,8,9-HpCDF	0.01	15	0.15	0.67	0.0067	1.6	0.016	5.7	0.057
OCDF	0.0001	420	0.042	38	0.0038	56	0.0056	410	0.041

Total TCDD-TEQs	<b>18.29</b>	<b>1.58</b>	<b>1.76</b>	<b>7.91</b>
MPCA - Residential SRV	0.02			
MPCA - Industrial SRV	0.035			
ATSDR Screening Level	0.05			
EPA Action Level	1.0			

\*Non-Detect, reported as 1/2 of Detection Limit

Source: Barr 1997

**Table 3**  
1997 Dioxin/Furan Groundwater Sample Data

Dioxin/Furan	1998 WHO TEF	MW-126* (pg/L)	TCDD-TEQ (pg/L)
2,3,7,8-TCDD	1	ND	
1,2,3,7,8-PeCDD	1	ND	
1,2,3,4,7,8-HxCDD	0.1	2.4	0.24
1,2,3,6,7,8-HxCDD	0.1	7.6	0.76
1,2,3,7,8,9-HxCDD	0.1	3.3	0.33
1,2,3,4,6,7,8-HpCDD	0.01	210	2.1
OCDD	0.0001	2200	0.22
2,3,7,8-TCDF	0.1	ND	
1,2,3,7,8-PeCDF	0.05	2.2	0.11
2,3,4,7,8-PeCDF	0.5	2.1	1.05
1,2,3,4,7,8-HxCDF	0.1	7.1	0.71
1,2,3,6,7,8-HxCDF	0.1	2.8	0.28
2,3,4,6,7,8-HxCDF	0.1	3	0.3
1,2,3,7,8,9-HxCDF	0.1	ND	
1,2,3,4,6,7,8-HpCDF	0.01	65	0.65
1,2,3,4,7,8,9-HpCDF	0.01	5.5	0.055
OCDF	0.0001	200	0.02
Pentachlorophenol		3,900	

\* Sample Date 7/16/1997

Total TCDD-TEQs (pg/L)	<b>6.83</b>
EPA Maximum Contaminant Level (MCL)	30
EPA Drinking Water Exposure Limit (DWEL)	40
EPA Cancer Risk Health Advisory Value	2

**Table 4**  
**October 2004 Groundwater Data**  
 (detections only, in ug/L)

Compound	MDH HRL	MW02-82-T 10/21/2004	MW02-82-MS 10/18/2004	MW03-59-T 10/21/2004	MW03-59-I 10/19/2004	MW03-59-MS 10/20/2004	MW03-59-OPD 10/20/2004	MW04-79-MS 10/19/2004	MW04-79-OPD 10/19/2004	MW-5 10/21/2004	MW-101 10/21/2004	MW-106 10/22/2004	MW-106 (Dup)
Pentachlorophenol (PCP)	3		<b>1200</b>			<b>7700</b>	<b>860</b>	<b>5100</b>	<b>15</b>	<b>4.4</b>	<b>1200</b>	<b>65</b>	
2,3,4,5-tetrachlorophenol			17			91							
2,3,4,6-tetrachlorophenol			94			440		290			330	4	
2,3,5-trichlorophenol											260		
2,3,6-trichlorophenol											120		
2,4,5-trichlorophenol													
2,4,6-trichlorophenol	30												
2,4-dichlorophenol	20												
3,4-dichlorophenol													
3,5-dichlorophenol													
3-chlorophenol													

Compound	MDH HRL	MW-121 10/22/2004	MW-121 (Dup)	MW-126 10/20/2004	MW-136 10/20/2004	MW99-129 10/20/2004	MW99-139 10/21/2004	MW99-146 10/20/2004	MW99-149 10/21/2004	MW99-521 10/19/2004	MW99-541 10/19/2004
Pentachlorophenol (PCP)	3	<b>8800</b>	<b>12000</b>	<b>10000</b>	<b>7</b>	<b>2300</b>	<b>8600</b>	<b>16</b>	<b>2000</b>	<b>72</b>	<b>390</b>
2,3,4,5-tetrachlorophenol		860	1200	280							
2,3,4,6-tetrachlorophenol		840	1200	600						38	25
2,3,5-trichlorophenol				60							
2,3,6-trichlorophenol				5.5							
2,4,5-trichlorophenol				8.4							
2,4,6-trichlorophenol	30									6.6	
2,4-dichlorophenol	20										
3,4-dichlorophenol											
3,5-dichlorophenol				20							
3-chlorophenol											

MDH HRL = MDH Health Risk Limit

Source: AMEC 2005a

**Table 5**

Off-site Wells Pentachlorophenol Data, in ug/L

	CP Rail- Jax Café	Jax Café- Jax Café	MDA-Jax Café	CP Rail- Hard Chrome	MDA-Hard Chrome	Gluek Park	Universal Plating	Sander & Co. (Gen. Mills)	Marshall Concrete	NSP	Sharon Ellis Res.
<b>Unique No.</b>	200256			Not available		439817	175857	200264	200252	200258	255292
<b>Address</b>	1928 University Ave NE			2631 2nd St NE		2104 Marshall St NE	1900 Monroe St NE	1620 Central Ave NE	2610 Marshall St NE	31st Ave NE & river	1813 2nd Ave NE
<b>Date Sampled</b>											
5/13/1998			53			ND					
5/26/1998			56								
5/26/1998	40		53.4								
6/5/1998				25							
6/29/1998			32.6								
8/27/1998					29.3						
10/9/1998	49										
7/2/1999			12.2		17.7	<0.2	203	<0.2	<0.2	<0.2	
3/30/2000		44									
6/6/2000											Suspect
9/18/2002		<1.2									
12/30/2002					114						
4/9/2003			161								
5/20/2003			195		102		293	3.92			
8/7/2003			110								
4/23/2004			152		98.7	<0.5	422				
9/28/2004			141		68.3		278				
4/13/2005			193		99.8		260				
9/15/2005			158		126		349				

ND = not detected above reporting limit  
 Analysis by MDA lab unless noted otherwise  
 Source: MDA

MDH HRL = 3 ug/L

**Table 6**  
**Jax Café Analytical Data**  
 All results in ug/l

Sample Date: Sample Point: Compound	4/9/2003		5/20/2003			8/7/2003			4/23/2004			9/28/2004			4/13/2005			9/15/2005			MDH HRL
	A	B	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	
Pentachlorophenol (PCP)	<b>161</b>	<b>141</b>	<b>195</b>	<b>161</b>	<b>88.3</b>	<b>110</b>	<b>75.5</b>	<b>76.5</b>	<b>152</b>	<b>118</b>	<b>89.8</b>	<b>141</b>	<b>154</b>	<b>55.8</b>	<b>193</b>	<b>144</b>	<b>82.2</b>	<b>158</b>	<b>118</b>	<b>37.7</b>	3
2,3,4,5-Tetrachlorophenol	6.30	5.80	2.55	2.19	1.65	2.07	1.93	1.08	5.60	4.80	1.27	2.66	2.16	<1.5	1.90	1.64	1.36	2.5	2.54	1.04	--
2,3,4,6-Tetrachlorophenol	26.2	23.1	17.9	14.4	9.33	9.07	8.10	6.17	26.4	22.0	6.83	10.5	8.69	4.54	13.4	11.8	9.18	7.19	8.4	3.52	--
2,3,5-Trichlorophenol	0.54	<0.50	PP	PP	PP	PP	PP	PP	PP	PP	PP	<1.5	<1.5	<1.5	PP	0.70	0.54	PP	PP	PP	--
2,3,6-Trichlorophenol	PP	PP	PP	PP	PP	PP	PP	PP	PP	PP	PP	<1.5	<1.5	<1.5	PP	PP	PP	PP	PP	PP	--
2,4-Dichlorophenol	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<1.5	<1.5	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	20
2,4,5-Trichlorophenol	PP	PP	PP	PP	PP	PP	PP	PP	PP	PP	PP	<1.5	<1.5	<1.5	0.51	PP	PP	PP	PP	PP	--
2,4,6-Trichlorophenol	PP	<0.50	PP	<0.50	<0.50	PP	PP	PP	PP	PP	PP	<1.5	<1.5	<1.5	PP	PP	PP	PP	PP	PP	30
3-Chlorophenol	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<1.5	<1.5	<1.5	<0.5	<0.5	<0.5	PP	<0.5	<0.5	--
3,4-Dichlorophenol	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<1.5	<1.5	<1.5	<0.5	<0.5	<0.5	PP	<0.5	<0.5	--
3,5-Dichlorophenol	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<1.5	<1.5	<1.5	<0.5	<0.5	<0.5	PP	<0.5	<0.5	--

Key: **A** = Well    **B** = Pond below waterfall at start of stream    **C** = End of stream by water wheel

**Bold** indicates exceedance of MDH - Health Risk Limit    (-- indicates no HRL available)

Source: MDA

PP = compound detected in sample at concentration below its lab reporting limit

All samples collected and analyzed by MN Dept of Agriculture