

## Appendix S

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### Phase II Environmental Site Assessment Analytical Results

Table S.1: Soil Semi-Volatile Organic Compound Results in Micrograms Per Kilogram

Sample	Date Sampled	Sample Depth	Acenaphthylene	Anthracene	Benzo(G,H,I) Perylene	Benzoic Acid	Benzyl Alcohol	Bis(2-Ethylhexyl) Phthalate	O-Cresol	P-Cresol	Dibenzofuran	Diethyl Phthalate	Dimethyl Phthalate	Fluoranthene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Phenol	Pyrene
B-1-10	05/07/09	10	1.2 U <sup>(a)</sup>	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>3.6<sup>(b)</sup> J<sup>(c)</sup></b>	1.5 U
B-2-0-0.5	05/06/09	0.5	1.2 U	1.6 U	<b>3.0 J</b>	96 U	2.1 U	<b>7.3 J</b>	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	<b>7.1 J</b>	2.2 U	<b>4.0 J</b>	<b>5.5 J</b>	2.0 U	<b>5.6 J</b>
B-2-7	05/06/09	7	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>3.5 J</b>	1.5 U
B-3-0-0.5	05/06/09	0.5	1.2 U	1.6 U	<b>1.8 J</b>	96 U	2.1 U	<b>7.2 J</b>	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	<b>2.1 J</b>	2.2 U	2.3 U	<b>1.8 J</b>	<b>2.9 J</b>	<b>1.9 J</b>
B-3-6	05/06/09	6	1.2 U	1.6 U	1.5 U	96 U	2.1 U	<b>79 J</b>	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	<b>2.2 J</b>	2.2 U	<b>2.3 J</b>	1.4 U	<b>2.7 J</b>	<b>1.9 J</b>
B-4-0-0.5	05/06/09	0.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	<b>33 J</b>	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>2.0 J</b>	1.5 U
B-4-4.5	05/06/09	4.5	1.2 U	1.6 U	<b>1.8 J</b>	96 U	2.1 U	<b>7.5 J</b>	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>2.8 J</b>	1.5 U
B-5-0-0.5	05/06/09	0.5	1.2 U	1.6 U	<b>3.8 J</b>	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	<b>6.6 J</b>	2.2 U	<b>2.5 J</b>	<b>4.3 J</b>	<b>2.4 J</b>	<b>5.1 J</b>
B-5-12	05/06/09	12	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>3.7 J</b>	1.5 U
B-6-0-0.5	05/06/09	0.5	1.2 U	1.6 U	<b>2.2 J</b>	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	<b>3.5 J</b>	2.2 U	2.3 U	<b>2.0 J</b>	2.0 U	<b>2.9 J</b>
B-6-12.5	05/06/09	12.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>3.2 J</b>	1.5 U
B-7-9.5	05/07/09	9.5	1.2 U	1.6 U	<b>2.3 J</b>	96 U	2.1 U	7.0 U	1.5 U	<b>13</b>	1.2 U	1.3 U	1.0 U	<b>5.0 J</b>	2.2 U	2.3 U	<b>2.0 J</b>	<b>5.0 J</b>	<b>3.0 J</b>
B-8-3	05/07/09	3	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>6.4 J</b>	1.5 U
B-8-10	05/07/09	10	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>9.2 J</b>	1.5 U
B-9-0-0.5	05/07/09	0.5	1.2 U	1.6 U	<b>13</b>	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	<b>15</b>	2.2 U	<b>5.3 J</b>	<b>7.9 J</b>	<b>8.4 J</b>	<b>11</b>
B-9-4.5	05/07/09	4.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>8.1 J</b>	1.5 U
B-10-4.5	05/07/09	4.5	1.2 U	1.6 U	<b>3.7 J</b>	<b>98 J</b>	<b>5.9 J</b>	<b>69 J</b>	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	<b>6.0 J</b>	2.2 U	<b>3.5 J</b>	<b>3.3 J</b>	<b>8.1 J</b>	<b>3.9 J</b>
B-10-9.5	05/07/09	9.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>8.6 J</b>	1.5 U
B-11-4.5	05/07/09	4.5	<b>1.5 J</b>	<b>1.9 J</b>	<b>23</b>	<b>250</b>	<b>3.9 J</b>	<b>9.4 J</b>	<b>2.3 J</b>	<b>15</b>	<b>3.1 J</b>	<b>2.3 J</b>	<b>63</b>	<b>33</b>	<b>2.3 J</b>	<b>41</b>	<b>19</b>	<b>12 J</b>	<b>20</b>
B-11-9.5	05/07/09	9.5	1.2 U	1.6 U	1.5 U	<b>130 J</b>	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	<b>1.4 J</b>	1.0 U	1.6 U	2.2 U	2.3 U	<b>1.5 J</b>	<b>8.7 J</b>	1.5 U
Method B Soil Cleanup Level (Direct Contact Only) <sup>(d)</sup>			4.80E+06	2.40E+07	2.40E+06	3.20E+08	NC <sup>(e)</sup>	7.10E+04	NC	NC	NC	8.00E+07	8.00E+07	7.53E+06	1.60E+06	1.60E+06	2.40E+06	4.80E+07	2.40E+06
Method B Soil Cleanup Level (Leaching to Groundwater) <sup>(f)</sup>			1.51E+06	3.54E+06	1.04E+07	2.68E+05	NC	2.21E+05	NC	NC	NC	NC	NC	1.00E+07	6.21E+04	6.21E+04	1.04E+07	6.37E+04	1.04E+07

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b Bold indicates the compound was detected at a concentration above the Method Detection Limit.
- c J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- d MTCA Method B soil cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- e NC = Not calculated
- f MTCA Method B soil leaching to groundwater cleanup levels were calculated using the CLARC worksheets (June 2009).

Table S.2: Soil Carcinogenic Polynuclear Aromatic Hydrocarbon Results in Micrograms Per Kilogram

Sample	Date Sampled	Sample Depth	Total CPAH <sup>(a)</sup>	Benzo(K) Fluoranthene	Benzo(A) Anthracene	Benzo(A) Pyrene	Benzo(B) Fluoranthene	Chrysene	Dibenz(A,H) Anthracene	Indeno(1,2,3-C,D)Pyrene
B-1-10	05/07/09	10	1.22	1.4 U <sup>(b)</sup>	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-2-0-0.5	05/06/09	0.5	3.43	1.4 U	2.0 J <sup>(c)</sup>	2.4 J	4.0 J	4.8 J	1.5 U	2.4 J
B-2-7	05/06/09	7	1.22	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-3-0-0.5	05/06/09	0.5	2.55	1.4 U	1.7 U	1.8 J	2.8 J	2.0 J	1.5 U	2.2 J
B-3-6	05/06/09	6	1.49	1.4 U	1.7 U	1.7 U	2.4 J	2.2 J	1.5 U	1.5 J
B-4-0-0.5	05/06/09	0.5	ND <sup>(d)</sup>	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-4-4.5	05/06/09	4.5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-5-0-0.5	05/06/09	0.5	4.65	1.9 J	2.5 J	3.1 J	6.5 J	5.6 J	1.5 U	3.3 J
B-5-12	05/06/09	12	1.22	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-6-0-0.5	05/06/09	0.5	2.79	1.4 U	1.7 U	1.9 J	4.1 J	3.5 J	1.5 U	2.1 J
B-6-12.5	05/06/09	12.5	1.22	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-7-9.5	05/07/09	9.5	3.36	1.4 U	1.7 U	2.2 J	6.2 J	5.7 J	1.5 U	2.5 J
B-8-3	05/07/09	3	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-8-10	05/07/09	10	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-9-0-0.5	05/07/09	0.5	15.02	5.8 J	6.0 J	10 J	23	18	2.6 J	11
B-9-4.5	05/07/09	4.5	1.22	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-10-4.5	05/07/09	4.5	3.17	1.4 U	1.7 U	2.8 J	7.9 J	4.1 J	1.5 U	3.5 J
B-10-9.5	05/07/09	9.5	2.26	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-11-4.5	05/07/09	4.5	29.42	8.9 J	9.4 J	20	48	40	4.9 J	19
B-11-9.5	05/07/09	9.5	1.22	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
Method B Soil Cleanup Level (Direct Contact Only) <sup>(e)</sup>			140	NE <sup>(f)</sup>	NE	NE	NE	NE	NE	NE
Method B Soil Cleanup Level (Leaching to Groundwater) <sup>(g)</sup>			NC <sup>(h)</sup>	3,456	1,037	2,794	3,456	1,152	5,184	1,008

**Notes:**

- a Total cPAH concentrations were calculated by adding the toxicity equivalency quotient (TEQ) values of all of the cPAHs. One half the method detection limit was used in the calculation of the TEQs where the compound was not detected.
- b U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- c J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- d ND = not detected
- e MTCA Method B soil cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- f NE = not established
- g MTCA Method B soil leaching to groundwater cleanup levels were calculated by 1) dividing the benzo(a)pyrene Method B groundwater cleanup level by the respective cPAH toxicity equivalency factor and 2) using the converted groundwater cleanup level in the CLARC worksheet with the individual cPAH Koc value.
- h NC = not calculated

Table S.3: Soil Organochlorine Pesticides in Micrograms per Kilogram

Sample	Date Sampled	Sample Depth	Aldrin	Alpha-Endosulfan	Beta-BHC	Beta-Chlordane	4,4'-DDT	4,4'-DDD	Dieldrin	Endosulfan Sulfate	Endrin	Endrin Ketone	Heptachlor Epoxide	Lindane	Methoxychlor	4,4'-DDE
B-4-0-0.5	05/06/09	0.5	0.16 U <sup>(a)</sup>	0.063 U	0.18 U	0.09 U	<b>0.77</b> <sup>(b)</sup> J <sup>(c)</sup>	<b>10</b>	0.14 U	<b>14</b>	0.094 U	0.093 U	0.084 U	0.08 U	0.19 U	<b>9.7</b>
B-4-4.5	05/06/09	4.5	0.16 U	0.063 U	0.18 U	0.09 U	0.17 U	<b>0.38</b> J	0.14 U	<b>0.22</b> J	0.094 U	0.093 U	0.084 U	<b>0.11</b> J	0.19 U	<b>1.0</b>
B-5-0-0.5	05/06/09	0.5	<b>0.23</b> J	<b>0.28</b> JP <sup>(d)</sup>	0.18 U	<b>0.24</b> Ui <sup>(e)</sup>	<b>55</b> D <sup>(f)</sup>	<b>45</b> D	<b>67</b> D	<b>7.9</b>	0.094 U	<b>0.55</b> J	<b>0.16</b> J	0.08 U	0.41 Ui	<b>94</b> D
B-5-12	05/06/09	12	0.16 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.093 U	0.084 U	<b>0.17</b> J	0.19 U	0.11 U
B-6-0-0.5	05/06/09	0.5	<b>0.33</b> J	<b>0.51</b> JP	1.1 Ui	1.0 Ui	<b>180</b> D	<b>36</b>	<b>110</b> D	<b>10</b>	0.094 U	<b>1.1</b> P	<b>0.21</b> J	0.08 U	<b>6.0</b> P	<b>160</b> D
B-6-12.5	05/06/09	12.5	0.16 U	0.063 U	0.18 U	0.09 U	<b>0.36</b> JP	<b>0.48</b> J	<b>0.46</b> J	0.11 U	0.094 U	0.093 U	0.084 U	0.08 U	0.19 U	0.53 Ui
B-7-9.5	05/07/09	9.5	0.16 U	<b>0.18</b> JP	0.18 U	<b>0.42</b> JP	<b>5.2</b>	<b>24</b>	<b>9.9</b>	<b>1.2</b>	0.094 U	0.093 U	0.084 U	<b>0.16</b> J	0.28 Ui	<b>66</b> D
B-8-3	05/07/09	3	0.16 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.093 U	0.084 U	1.0 Ui	0.19 U	0.25 Ui
B-8-10	05/07/09	10	0.17 U	0.065 U	0.19 U	0.093 U	0.18 U	0.12 U	0.15 U	0.12 U	0.097 U	0.096 U	0.087 U	0.083 U	0.2 U	0.12 U
B-9-0-0.5	05/07/09	0.5	<b>0.7</b> J	0.23 Ui	0.48 Ui	<b>1.8</b>	<b>420</b> D	<b>8.7</b>	<b>330</b> D	<b>0.93</b> J	<b>0.55</b> JP	<b>4.2</b>	<b>0.53</b> J	0.15 Ui	2.4 Ui	<b>390</b> D
B-9-4.5	05/07/09	4.5	0.16 U	0.063 U	0.18 U	0.09 U	<b>0.6</b> JP	<b>0.35</b> J	<b>0.53</b> J	0.11 U	0.094 U	0.093 U	0.084 U	0.08 U	0.19 U	<b>1.1</b>
B-10-4.5	05/07/09	4.5	0.16 U	0.063 U	0.18 U	<b>0.38</b> JP	<b>1.4</b>	<b>9.9</b>	<b>26</b>	<b>1.3</b>	0.094 U	<b>0.12</b> J	0.084 U	<b>0.33</b> J	0.19 U	<b>11</b>
B-10-9.5	05/07/09	9.5	0.16 U	0.064 Ui	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.093 U	0.084 U	0.08 U	0.19 U	0.11 U
B-11-4.5	05/07/09	4.5	<b>1.2</b>	<b>0.36</b> JP	<b>0.36</b> JP	1.0 Ui	<b>20</b>	<b>250</b> D	<b>57</b> D	<b>19</b>	2.4 Ui	0.25 Ui	0.13 Ui	0.08 U	1.0 Ui	<b>140</b> D
B-11-9.5	05/07/09	9.5	0.16 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.093 U	0.084 U	1.0 Ui	<b>0.24</b> J	0.11 U
Method B Soil Cleanup Level (Direct Contact Only) <sup>(g)</sup>			59	480000	560	2,900	2,900	2,900	63	480000	24,000	24,000	110	770	NE <sup>(h)</sup>	2,900
Method B Soil Cleanup Level (Leaching to Groundwater) <sup>(i)</sup>			31	46,460	25	3,061	42,430	5,367	4,995	46,460	12,690	12,690	96	23	NC <sup>(j)</sup>	5,367

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- c J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- d P = The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- e i = The Method Detection Limit/Method Reporting Limit has been elevated due to chromatographic interference.
- f D = The reported result is from a dilution.
- g MTCA Method B soil cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- h NE = Not established
- i MTCA Method B soil leaching to groundwater cleanup levels were calculated using the CLARC worksheets (June 2009).
- j NC = Not calculated

Table S.4: Soil Metals Results in Milligrams Per Kilogram

Sample	Date Sampled	Sample Depth	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Silver	Thallium	Zinc
B-2-0-0.5	05/06/09	0.5	0.558	5.1	0.674	0.868	20.8	66.7	30800	70.8	1090 N* <sup>(a)</sup>	0.16	20.0	0.108	0.129	200
B-2-7	05/06/09	7	0.072	1.6	0.326	0.054	10.2	21.4	17500	3.37	170 N*	0.03	10.2	0.035	0.056	28.8
B-3-0-0.5	05/06/09	0.5	0.178	4.9	0.675	0.238	20.3	37.7	30500	22.6	806 N*	0.09	18.7	0.099	0.115	77.9
B-3-6	05/06/09	6	0.076	2.1	0.386	0.096	14.3	24.6	21500	6.8	298 N*	0.03	11.4	0.045	0.066	39.6
B-4-0-0.5	05/06/09	0.5	0.083	2.8	0.549	0.113	15.9	28.6	22300	4.63	268 N*	0.06	14.9	0.054	0.071	49.6
B-4-4.5	05/06/09	4.5	0.062	1.5	0.336	0.056	9.86	23	18100	2.46	247 N*	0.05	9.69	0.034	0.052	27.5
B-5-0-0.5	05/06/09	0.5	0.102	3.9	0.565	0.179	16.2	40.9	25700	7.13	334 N*	0.06	14.5	0.059	0.112	52.1
B-5-12	05/06/09	12	0.086	3.5	0.355	0.058	9.04	32.4	13800	3.03	101 N*	0.02	12.8	0.044	0.149	44.7
B-6-0-0.5	05/06/09	0.5	0.129	4.3	0.592	0.245	16.8	49.5	22200	8.08	272 N*	0.07	15.2	0.067	0.126	54.9
B-6-12.5	05/06/09	12.5	0.107	1.7	0.49	0.288	12.1	33.1	17500	4.27	155 N*	0.02	11.2	0.055	0.141	44.6
B-7-9.5	05/07/09	9.5	0.072	2.0	0.312	0.208	9.5	22.9	14700	5.41	340 N*	0.03	9.62	0.038	0.07	36.6
B-8-3	05/07/09	3	0.116	2.8	0.616	0.107	21.8	32.9	28300	6.15	268 N*	0.04	17.4	0.044	0.118	47.0
B-8-10	05/07/09	10	0.087	3.2	0.613	0.16	16.3	31.5	24400	4.71	237 N*	0.04	14.2	0.055	0.109	48.2
B-9-0-0.5	05/07/09	0.5	0.477	5.0	0.717	0.419	19.4	42.9	26100	12	501 N*	0.1	17.9	0.093	0.151	62.4
B-9-4.5	05/07/09	4.5	0.099	2.5	0.565	0.083	19.1	34.1	29900	5.64	195 N*	0.04	14.2	0.042	0.139	41.0
B-10-4.5	05/07/09	4.5	0.072	1.9	0.217	0.111	5.84	16.8	13700	2.73	171 N*	0.06	6.82	0.037	0.085	26.8
B-10-9.5	05/07/09	9.5	0.069	1.8	0.466	0.083	13.8	33.8	13500	4.61	128 N*	0.04	10.6	0.065	0.082	40.5
B-11-4.5	05/07/09	4.5	0.184	4.1	0.613	0.328	20.3	45.5	22400	27.9	294 N*	0.09	16.7	0.09	0.13	57.9
B-11-9.5	05/07/09	9.5	0.08	2.4	0.392	0.125	11.3	30.1	16900	3.78	175 N*	0.04	11.3	0.054	0.075	37.8
Method B Soil Cleanup Level (Direct Contact Only) <sup>(b)</sup>			32	0.67	160	80	240	3,000	NE <sup>(c)</sup>	NE	11,000	24	1,600	400	5.6	24,000
Method B Soil Cleanup Level (Leaching to Groundwater) <sup>(d)</sup>			5.8	2.8	506	1.1	18.43	262	NC <sup>(e)</sup>	3,000	NC	5	417	13.6	1.566	5,971
Background <sup>(f)</sup>			NA <sup>(g)</sup>	7	2	1	42	36	42100	17	1100	0.07	38	NA	NA	86

**Notes:**

a N\* = The matrix spike sample recovery and the duplicate sample analysis were not within control limits.

b MTCA Method B soil cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).

c NE = Not established

d MTCA Method B soil leaching to groundwater cleanup levels were calculated using the CLARC worksheets (June 2009).

e NC = Not calculated

f State wide background metals concentrations are from *Natural Background Soil Metals Concentrations in Washington State*, Publication #94-115, Washington State Department of Ecology, October 1994.

g NA = Not established

Table S.5: Reconnaissance Groundwater Petroleum Hydrocarbon Results in Micrograms Per Liter

Sample	Date Sampled	Gasoline Range Organics	Diesel Range Organics	Residual Range Organics
B-1-GW	05/07/09	250 U	630 U <sup>(a)</sup>	630 U
B-2-GW	05/07/09	<b>400</b> H <sup>(b)</sup>	<b>11,000</b> Y <sup>(c)</sup>	<b>1400</b> L <sup>(d)</sup>
B-3-GW	05/06/09	250 U	630 U	630 U
B-4-GW	05/06/09	250 U	630 U	630 U
MTCA Method A Cleanup Level <sup>(e)</sup>		800	500	500

Notes:

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b H = The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- c Y = The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- d L = The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- e MTCA Method A groundwater cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).

Table S.6: Reconnaissance Groundwater Volatile Organic Compound Results in Micrograms Per Liter

Sample	Date Sampled	Acetone	Benzene	Butyl Benzene	Sec-Butylbenzene	Tert-Butylbenzene	Carbon Disulfide	Chloro-methane	Cymene	Cis-1,2-Dichloroethene	1,2-Dichloro-propane	Ethylbenzene	Isopropy-benzene	Naphthalene	N-Propylbenzene	Toluene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Xylene, M,P-	Xylene, O-
B-1-GW	05/07/09	2.5 U <sup>(a)</sup>	0.045 U	0.056 U	0.036 U	0.038 U	<b>0.07</b> <sup>(b)</sup> J <sup>(c)</sup>	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	0.1 U	0.037 U	<b>0.09</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-2-GW	05/07/09	<b>12</b> J	<b>0.24</b> J	<b>0.41</b> J	<b>1.2</b> J	<b>0.13</b> J	0.045 U	<b>0.06</b> J	<b>0.28</b> J	0.045 U	0.042 U	<b>2.6</b>	<b>1.9</b> J	<b>3</b>	<b>1.3</b> J	<b>0.34</b> J	<b>2.8</b>	<b>0.12</b> J	<b>0.22</b> J	<b>1.1</b>
B-3-GW	05/06/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.053 U	0.044 U	<b>0.11</b> J	0.042 U	0.042 U	0.031 U	<b>0.12</b> J	0.037 U	0.048 U	0.037 U	0.042 U	0.078 U	0.037 U
B-4-GW	05/06/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	0.1 U	0.037 U	<b>0.61</b>	0.037 U	0.042 U	0.078 U	0.037 U
B-5-GW	05/06/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	<b>0.08</b> J	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	0.1 U	0.037 U	0.048 U	0.037 U	0.042 U	0.078 U	0.037 U
B-6-GW	05/06/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	<b>0.07</b> J	0.053 U	0.044 U	0.045 U	<b>0.16</b> J	0.042 U	0.031 U	0.1 U	0.037 U	<b>0.06</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-7-GW	05/07/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	0.1 U	0.037 U	<b>0.46</b> J	0.037 U	0.042 U	<b>0.1</b> J	0.037 U
B-8-GW	05/07/09	<b>2.8</b> J	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	0.1 U	0.037 U	<b>0.1</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-9-GW	05/07/09	<b>3.5</b> J	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	0.1 U	0.037 U	<b>0.09</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-10-GW	05/07/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	<b>0.06</b> J	<b>0.06</b> J	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	0.1 U	0.037 U	<b>0.08</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-11-GW	05/07/09	<b>4.9</b> J	<b>0.05</b> J	0.056 U	0.036 U	0.038 U	<b>0.09</b> J	<b>0.08</b> J	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	0.1 U	0.037 U	<b>0.1</b> J	0.037 U	0.042 U	0.078 U	0.037 U
MTCA Method B																				
Cleanup Level, most stringent value listed <sup>(d)</sup>																				
	80	NE <sup>(e)</sup>	NE <sup>(f)</sup>	NE	NE	NE	80	3.4	NE	NE	0.64	NA	NE	160	NE	NA	400	400	16,000	16,000
State Maximum Contaminant Level <sup>(g)</sup>																				
	NE	5	NE	NE	NE	NE	NE	NE	NE	NE	NE	700	NE	NE	NE	1,000	NE	NE	NE	NE

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- c J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- d MTCA Method B groundwater cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009)
- e NA = Not applicable
- f NE = Not established
- g Maximum contaminant levels are from the CLARC searchable database (researched June 2009).

Table S.7: Reconnaissance Groundwater Semivolatile Organic Compound Results in Micrograms Per Liter

Sample	Date Sampled	Benzoic Acid	Benzyl Alcohol	Bis(2-Ethylhexyl) Phthalate	Di-N-Butyl Phthalate	P-Cresol	2,4-Dichlorophenol	Diethyl Phthalate	Dimethyl Phthalate	Fluoranthene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Phenol	Pyrene	
B-1-GW	05/07/09	<b>1.4</b> <sup>(a)</sup>	J <sup>(b)</sup>	0.073 U <sup>(c)</sup>	<b>0.25</b> J	<b>0.03</b> J	0.12 U	<b>0.082</b> J	<b>0.079</b> J	0.021 U	<b>0.028</b> J	0.026 U	<b>0.062</b> J	<b>0.037</b> J	<b>0.18</b> J	<b>0.022</b> J
B-3-GW	05/06/09	<b>2.1</b> J	<b>0.15</b> J	<b>0.24</b> J	<b>0.1</b> J	0.12 U	<b>0.095</b> J	<b>0.18</b> J	<b>0.023</b> J	0.02 U	<b>0.026</b> J	<b>0.057</b> J	0.022 U	<b>0.18</b> J	0.019 U	
B-4-GW	05/06/09	<b>1.5</b> J	0.073 U	<b>0.36</b> J	<b>0.038</b> J	<b>0.37</b> J	0.047 U	<b>0.23</b>	0.021 U	<b>0.023</b> J	0.026 U	0.022 U	<b>0.022</b> J	<b>0.24</b> J	<b>0.02</b> J	
B-5-GW	05/06/09	<b>1.3</b> J	0.073 U	0.13 U	<b>0.029</b> J	0.12 U	0.047 U	<b>0.081</b> J	0.021 U	0.02 U	0.026 U	0.022 U	0.022 U	<b>0.095</b> J	<b>0.02</b> J	
B-6-GW	05/06/09	<b>1.9</b> J	<b>0.078</b> J	<b>2.60</b>	<b>0.032</b> J	0.12 U	0.047 U	<b>0.047</b> J	0.021 U	<b>0.027</b> J	0.026 U	<b>0.055</b> J	<b>0.044</b> J	<b>0.29</b> J	<b>0.025</b> J	
B-7-GW	05/07/09	<b>1.4</b> J	0.073 U	<b>1.70</b>	<b>0.035</b> J	<b>0.25</b> J	0.047 U	<b>0.042</b> J	0.021 U	<b>0.029</b> J	0.026 U	<b>0.025</b> J	0.022 U	<b>0.07</b> J	<b>0.022</b> J	
B-8-GW	05/07/09	<b>1.5</b> J	0.073 U	<b>0.28</b> J	<b>0.035</b> J	0.12 U	0.047 U	<b>0.044</b> J	0.021 U	<b>0.024</b> J	0.026 U	0.022 U	<b>0.024</b> J	0.063 U	0.019 U	
B-9-GW	05/07/09	<b>3.0</b> J	<b>0.17</b> J	<b>0.54</b> J	<b>0.052</b> J	0.12 U	<b>0.055</b> J	<b>2.3</b>	0.021 U	<b>0.032</b> J	0.026 U	<b>0.04</b> J	<b>0.036</b> J	<b>0.65</b>	<b>0.019</b> J	
B-10-GW	05/07/09	<b>2.2</b> J	<b>0.17</b> J	<b>0.24</b> J	0.023 U	0.12 U	0.047 U	<b>0.096</b> J	0.021 U	0.02 U	0.026 U	<b>0.063</b> J	0.022 U	<b>0.16</b> J	0.019 U	
B-11-GW	05/07/09	<b>4.0</b> J	<b>0.18</b> J	0.13 U	0.023 U	0.12 U	<b>0.11</b> J	<b>0.21</b>	<b>0.054</b> J	0.02 U	0.026 U	<b>0.029</b> J	0.022 U	<b>0.12</b> J	0.019 U	
MTCA Method B Cleanup Level, most stringent value listed <sup>(d)</sup>		64,000	2,400	NA <sup>(e)</sup>	NE <sup>(f)</sup>	NE	24	NE	16,000	640	NE	160	NE	4,800	480	
State Maximum Contaminant Level <sup>(g)</sup>		NE	NE	6	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	

**Notes:**

- a Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- b J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- c U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- d MTCA Method B groundwater cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- e NA = Not applicable
- f NE = Not established
- g Maximum contaminant levels are from the CLARC searchable database (researched June 2009).



Table S.8: Reconnaissance Groundwater Organochlorine Pesticides in Micrograms per Liter

Sample	Date Sampled	Aldrin	alpha-Chlordane	4,4'-DDT	4,4'-DDD'	4,4'-DDE	Dieldrin	Lindane
B-4-GW	05/06/09	0.00063 U <sup>(a)</sup>	0.00058 U	0.00067 Ui <sup>(b)</sup>	<b>0.014</b> <sup>(c)</sup>	<b>0.0099</b>	0.0022 U	0.0015 Ui
B-5-GW	05/06/09	0.00063 U	0.00058 U	<b>0.0014</b> JP <sup>(d,e)</sup>	<b>0.0026</b> J	0.0008 Ui	0.0022 U	0.0045 Ui
B-6-GW	05/06/09	0.0045 Ui	0.00058 U	<b>0.034</b>	<b>0.035</b>	<b>0.04</b>	<b>0.093</b>	0.0014 Ui
B-7-GW	05/07/09	<b>0.0026</b> JP	0.00071 Ui	0.0016 Ui	<b>0.0047</b> J	<b>0.0079</b> J	<b>0.0062</b> J	0.01 Ui
B-8-GW	05/07/09	0.0016 Ui	0.00058 U	0.0007 Ui	0.0013 U	<b>0.00099</b> JP	0.0022 U	0.00085 Ui
B-9-GW	05/07/09	<b>0.0016</b> JP	0.0016 Ui	<b>0.0034</b> JP	0.0016 Ui	<b>0.0015</b> JP	<b>0.0077</b> J	0.0098 Ui
B-10-GW	05/07/09	0.0021 Ui	0.00067 Ui	0.00039 U	<b>0.0051</b> J	<b>0.0016</b> JP	<b>0.016</b>	<b>0.0016</b> J
B-11-GW	05/07/09	<b>0.003</b> JP	<b>0.0039</b> J	0.0016 Ui	<b>0.012</b>	<b>0.0065</b> J	<b>0.0085</b> J	<b>0.00091</b> JP
MTCA Method B Cleanup Level, most stringent value listed <sup>(f)</sup>		0.0026	0.25	0.26	0.36	0.26	0.005	NA <sup>(g)</sup>
State Maximum Contaminant Level <sup>(h)</sup>		NE	NE	NE	NE	NE	NE	0.2

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b i = The Method Detection Limit/Method Reporting Limit has been elevated due to chromatographic interference.
- c Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- d J = The result is an estimated concentration that is less than the Method Reporting Limit, but greater than or equal to the Method Detection Limit.
- e P = The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- f MTCA Method B groundwater cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- g NA = Not applicable
- h Maximum contaminant levels are from the CLARC searchable database (researched June 2009).

Table S.9: Reconnaissance Groundwater Total Metals Results in Micrograms Per Liter

Sample	Date Sampled	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Silver	Thallium	Zinc
B-2-GW	05/07/09	0.2	13	0.25	0.074	8.51	18.7	48,300	2.88	4,860	0.05 U <sup>(a)</sup>	12.8	0.049	0.042	48.3
B-3-GW	05/06/09	0.06	6.5	0.06	0.016 B <sup>(b)</sup>	1.86	3.65	35,800	0.452	3,610	0.05 U	3.79	0.015 B	0.006 B	6.52
B-4-GW	05/06/09	0.16	1.6	0.11	0.028	4.17	8.64	11,100	0.714	997	0.05 U	6.34	0.044	0.014 B	11
B-5-GW	05/06/09	0.4	79.8	4.71	0.654	115	482	172,000	44	1,390	0.3	94.7	0.941	0.972	393
B-6-GW	05/06/09	0.34	28.4	2.98	0.917	86.3	289	114,000	36.9	1,880	0.24	68.4	0.53	0.638	275
B-7-GW	05/07/09	0.09	3.1	0.15	0.082	5.5	10.1	23,500	1.18	2,360	0.05 U	7.42	0.031	0.05	15.7
B-8-GW	05/07/09	0.09	5.6	0.23	0.144	6.19	24.3	36,300	2.03	3,730	0.05 U	10	0.072	0.084	28.5
B-9-GW	05/07/09	0.07	13.1	0.37	0.136	8.24	29.9	56,700	3.03	1,550	0.05 U	9.7	0.068	0.073	39.3
B-10-GW	05/07/09	0.31	40.8	3.64	1.18	101	283	185,000	36.2	3,240	0.24	86	0.657	1.03	312
B-11-GW	05/07/09	0.09	11.9	0.4	0.099	8.51	30.5	92,400	2.36	3,460	0.05 U	13.5	0.083	0.107	36.5
MTCA Method B Cleanup Level, most stringent value listed <sup>(c)</sup>		NE <sup>(d)</sup>	NA <sup>(e)</sup>	32	8	NE	590	NE	NE	2,200	4.8	NE	NE	NE	4800
State Maximum Contaminant Level <sup>(f)</sup>		NE	10	4	5	100	1300	NE	15	NE	2	NE	NE	NE	NE

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b B = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- c MTCA Method B groundwater cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- d NE = Not established
- e NA = Not applicable
- f Maximum contaminant levels are from the CLARC searchable database (researched June 2009).

Table S.10: Reconnaissance Groundwater Fluoride and Cyanide Results in Milligrams Per Liter

Sample	Date Sampled	Flouride	Cyanide
B-9-GW	05/07/09	<b>0.2</b> <sup>(a)</sup>	0.003 U <sup>(b)</sup>
B-10-GW	05/07/09	<b>0.4</b>	0.003 U
B-11-GW	05/06/09	<b>0.3</b>	0.003 U
State Maximum Contaminant Level <sup>(c)</sup>		4	0.2

**Notes:**

- a Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b Detection Limit.
- c Maximum contaminant levels are from the CLARC searchable database (researched June 2009).

Table S.11: Soil Semi-Volatile Organic Compound Results in Micrograms Per Kilogram

Sample	Date Sampled	Sample Depth	Acenaphthylene	Anthracene	Benzo(G,H,I) Perylene	Benzoic Acid	Benzyl Alcohol	Bis(2-Ethylhexyl) Phthalate	O-Cresol	P-Cresol	Dibenzofuran	Diethyl Phthalate	Dimethyl Phthalate	Fluoranthene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Phenol	Pyrene
B-1-10	05/07/09	10	1.2 U <sup>(a)</sup>	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	3.6 <sup>(b)</sup> J <sup>(c)</sup>	1.5 U
B-2-0-0.5	05/06/09	0.5	1.2 U	1.6 U	3.0 J	96 U	2.1 U	7.3 J	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	7.1 J	2.2 U	4.0 J	5.5 J	2.0 U	5.6 J
B-2-7	05/06/09	7	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	3.5 J	1.5 U
B-3-0-0.5	05/06/09	0.5	1.2 U	1.6 U	1.8 J	96 U	2.1 U	7.2 J	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	2.1 J	2.2 U	2.3 U	1.8 J	2.9 J	1.9 J
B-3-6	05/06/09	6	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.9 J	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	2.2 J	2.2 U	2.3 J	1.4 U	2.7 J	1.9 J
B-4-0-0.5	05/06/09	0.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	3.3 J	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.0 J	1.5 U
B-4-4.5	05/06/09	4.5	1.2 U	1.6 U	1.8 J	96 U	2.1 U	7.5 J	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.8 J	1.5 U
B-5-0-0.5	05/06/09	0.5	1.2 U	1.6 U	3.8 J	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	6.6 J	2.2 U	2.5 J	4.3 J	2.4 J	5.1 J
B-5-12	05/06/09	12	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	3.7 J	1.5 U
B-6-0-0.5	05/06/09	0.5	1.2 U	1.6 U	2.2 J	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	3.5 J	2.2 U	2.3 U	2.0 J	2.0 U	2.9 J
B-6-12.5	05/06/09	12.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	3.2 J	1.5 U
B-7-9.5	05/07/09	9.5	1.2 U	1.6 U	2.3 J	96 U	2.1 U	7.0 U	1.5 U	1.3	1.2 U	1.3 U	1.0 U	5.0 J	2.2 U	2.3 U	2.0 J	5.0 J	3.0 J
B-8-3	05/07/09	3	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	6.4 J	1.5 U
B-8-10	05/07/09	10	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	9.2 J	1.5 U
B-9-0-0.5	05/07/09	0.5	1.2 U	1.6 U	1.3	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.5	2.2 U	5.3 J	7.9 J	8.4 J	1.1
B-9-4.5	05/07/09	4.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	8.1 J	1.5 U
B-10-4.5	05/07/09	4.5	1.2 U	1.6 U	3.7 J	98 J	5.9 J	6.9 J	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	6.0 J	2.2 U	3.5 J	3.3 J	8.1 J	3.9 J
B-10-9.5	05/07/09	9.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	8.6 J	1.5 U
B-11-4.5	05/07/09	4.5	1.5 J	1.9 J	2.3	250	3.9 J	9.4 J	2.3 J	1.5	3.1 J	2.3 J	6.3	3.3	2.3 J	4.1	1.9	1.2 J	2.0
B-11-9.5	05/07/09	9.5	1.2 U	1.6 U	1.5 U	130 J	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.4 J	1.0 U	1.6 U	2.2 U	2.3 U	1.5 J	8.7 J	1.5 U
B-12-0-0.5	09/16/09	0.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.0 U	1.5 U
B-12-5.5	09/16/09	5.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.0 U	1.5 U
B-13-0-0.5	09/16/09	0.5	1.2 U	1.6 U	7.6	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	2.6 J	1.0 U	8.9	2.2 U	2.3 U	3.8 J	2.0 U	5.5 J
B-13-6	09/16/09	6	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.0 U	1.5 U
B-14-0-0.5	09/16/09	0.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	1.9 J	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.0 U	1.5 U
B-14-4.5	09/16/09	4.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.0 U	1.5 U
B-15-0-0.5	09/16/09	0.5	1.2 U	1.6 U	2.0 J	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	2.3 J	2.2 U	2.3 U	1.4 U	2.0 U	1.9 J
B-15-6	09/16/09	6	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.0 U	1.5 U
B-16-0-0.5	09/16/09	0.5	1.2 U	1.6 U	1.6 J	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	2.5 J	2.2 U	2.3 U	1.4 J	2.0 U	1.5 U
B-16-5	09/16/09	5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.0 U	1.5 U
B-17-0-0.5	09/17/09	0.5	1.2 U	1.6 U	2.1 J	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	3.4 J	2.2 U	2.3 U	1.7 J	2.3 J	1.7 J
B-17-6	09/17/09	6	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.4 J	1.5 U

Table S.11: Soil Semi-Volatile Organic Compound Results in Micrograms Per Kilogram

Sample	Date Sampled	Sample Depth	Acenaphthylene	Anthracene	Benzo(G,H,I) Perylene	Benzoic Acid	Benzyl Alcohol	Bis(2-Ethylhexyl) Phthalate	O-Cresol	P-Cresol	Dibenzofuran	Diethyl Phthalate	Dimethyl Phthalate	Fluoranthene	2-Methyl-naphthalene	Naphthalene	Phenanthrene	Phenol	Pyrene
B-18-0-0.5	09/17/09	0.5	1.2 U	1.6 U	<b>14</b>	96 U	2.1 U	7.0 U	1.5 U	1.5 U	<b>2.6 J</b>	1.3 U	1.0 U	<b>32</b>	2.2 U	<b>6.4</b>	<b>19</b>	2.0 U	<b>13</b>
B-18-7	09/17/09	7	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>3.7 J</b>	1.5 U
B-19-0-0.5	09/17/09	0.5	1.2 U	1.6 U	<b>5.5 J</b>	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	<b>8.1</b>	2.2 U	2.3 U	<b>6.6 J</b>	<b>2.5 J</b>	<b>4.2 J</b>
B-19-6	09/17/09	6	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>2.9 J</b>	1.5 U
B-20-0-0.5	09/17/09	0.5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	2.0 U	1.5 U
B-20-6	09/17/09	6	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>2.4 J</b>	1.5 U
B-21-0-0.5	09/17/09	0.5	1.2 U	1.6 U	<b>16</b>	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	<b>13</b>	2.2 U	<b>2.7 J</b>	<b>6.3</b>	<b>2.4 J</b>	<b>11</b>
B-21-5	09/17/09	5	1.2 U	1.6 U	1.5 U	96 U	2.1 U	7.0 U	1.5 U	1.5 U	1.2 U	1.3 U	1.0 U	1.6 U	2.2 U	2.3 U	1.4 U	<b>2.6 J</b>	1.5 U
Method B Soil Cleanup Level (Direct Contact Only) <sup>(d)</sup>			4.80E+06	2.40E+07	2.40E+06	3.20E+08	NC <sup>(e)</sup>	7.10E+04	NC	NC	NC	8.00E+07	8.00E+07	7.53E+06	1.60E+06	1.60E+06	2.40E+06	4.80E+07	2.40E+06
Method B Soil Cleanup Level (Leaching to Groundwater) <sup>(f)</sup>			1.51E+06	3.54E+06	1.04E+07	2.68E+05	NC	2.21E+05	NC	NC	NC	NC	NC	1.00E+07	6.21E+04	6.21E+04	1.04E+07	6.37E+04	1.04E+07

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b Bold indicates the compound was detected at a concentration above the Method Detection Limit.
- c J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- d MTCA Method B soil cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- e NC = Not calculated
- f MTCA Method B soil leaching to groundwater cleanup levels were calculated using the CLARC worksheets (June 2009).

Table S.12: Soil Carcinogenic Polynuclear Aromatic Hydrocarbon Results in Micrograms Per Kilogram

Sample	Date Sampled	Sample Depth	Total CPAH <sup>(a)</sup>	Benzo(K) Fluoranthene	Benzo(A) Anthracene	Benzo(A) Pyrene	Benzo(B) Fluoranthene	Chrysene	Dibenz(A,H) Anthracene	Indeno(1,2,3-C,D)Pyrene
B-1-10	05/07/09	10	ND <sup>(b)</sup>	1.4 U <sup>(c)</sup>	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-2-0-0.5	05/06/09	0.5	3.43	1.4 U	2.0 J <sup>(d)</sup>	2.4 J	4.0 J	4.8 J	1.5 U	2.4 J
B-2-7	05/06/09	7	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-3-0-0.5	05/06/09	0.5	2.55	1.4 U	1.7 U	1.8 J	2.8 J	2.0 J	1.5 U	2.2 J
B-3-6	05/06/09	6	1.49	1.4 U	1.7 U	1.7 U	2.4 J	2.2 J	1.5 U	1.5 J
B-4-0-0.5	05/06/09	0.5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-4-4.5	05/06/09	4.5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-5-0-0.5	05/06/09	0.5	4.65	1.9 J	2.5 J	3.1 J	6.5 J	5.6 J	1.5 U	3.3 J
B-5-12	05/06/09	12	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-6-0-0.5	05/06/09	0.5	2.79	1.4 U	1.7 U	1.9 J	4.1 J	3.5 J	1.5 U	2.1 J
B-6-12.5	05/06/09	12.5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-7-9.5	05/07/09	9.5	3.36	1.4 U	1.7 U	2.2 J	6.2 J	5.7 J	1.5 U	2.5 J
B-8-3	05/07/09	3	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-8-10	05/07/09	10	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-9-0-0.5	05/07/09	0.5	15.02	5.8 J	6.0 J	10 J	23	18	2.6 J	11
B-9-4.5	05/07/09	4.5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-10-4.5	05/07/09	4.5	3.17	1.4 U	1.7 U	2.8 J	7.9 J	4.1 J	1.5 U	3.5 J
B-10-9.5	05/07/09	9.5	2.26	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-11-4.5	05/07/09	4.5	29.42	8.9 J	9.4 J	20	48	40	4.9 J	19
B-11-9.5	05/07/09	9.5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-12-0-0.5	09/16/09	0.5	ND	1.4 U	1.7 U	1.7 U	1.9 J	1.5 U	1.5 U	1.5 U
B-12-5.5	09/16/09	5.5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-13-0-0.5	09/16/09	0.5	5.79	3.2 J	3.0 J	4.1 J	16	12	2.1 J	7.4
B-13-6	09/16/09	6	1.16	1.4 U	1.7 U	1.7 U	1.5 J	1.5 U	1.5 U	1.5 U
B-14-0-0.5	09/16/09	0.5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-14-4.5	09/16/09	4.5	1.16	1.4 U	1.7 U	1.7 U	1.2 J	1.5 U	1.5 U	1.5 U
B-15-0-0.5	09/16/09	0.5	1.32	1.4 U	1.7 U	1.7 U	4.2 J	3.5 J	1.5 U	2.0 J
B-15-6	09/16/09	6	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-16-0-0.5	09/16/09	0.5	1.25	1.4 U	1.7 U	1.7 U	2.9 J	1.8 J	1.5 U	1.5 J
B-16-5	09/16/09	5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-17-0-0.5	09/17/09	0.5	1.33	1.4 U	1.7 U	1.7 U	4.2 J	2.6 J	1.5 U	2.2 J
B-17-6	09/17/09	6	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U

Table S.12: Soil Carcinogenic Polynuclear Aromatic Hydrocarbon Results in Micrograms Per Kilogram

Sample	Date Sampled	Sample Depth	Total CPAH <sup>(a)</sup>	Benzo(K) Fluoranthene	Benzo(A) Anthracene	Benzo(A) Pyrene	Benzo(B) Fluoranthene	Chrysene	Dibenz(A,H) Anthracene	Indeno(1,2,3-C,D)Pyrene
B-18-0-0.5	09/17/09	0.5	10.00	4.7 J	4.9 J	7.7	25	16	3.1 J	12
B-18-7	09/17/09	7	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-19-0-0.5	09/17/09	0.5	4.20	2.1 J	2.5 J	3.1 J	9.0	5.9 J	1.5 J	4.3 J
B-19-6	09/17/09	6	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-20-0-0.5	09/17/09	0.5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-20-6	09/17/09	6	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
B-21-0-0.5	09/17/09	0.5	13.00	7.1	7.2	9.4	32	18	4.3 J	16
B-21-5	09/17/09	5	ND	1.4 U	1.7 U	1.7 U	1.2 U	1.5 U	1.5 U	1.5 U
Method B Soil Cleanup Level (Direct Contact Only) <sup>(e)</sup>			140	NE <sup>(f)</sup>	NE	NE	NE	NE	NE	NE
Method B Soil Cleanup Level (Leaching to Groundwater) <sup>(g)</sup>			NC <sup>(h)</sup>	3,456	1,037	2,794	3,456	1,152	5,184	1,008

**Notes:**

- a Total cPAH concentrations were calculated by adding the toxicity equivalency quotient (TEQ) values of all of the cPAHs. One half the method detection limit was used in the calculation of the TEQs where the compound was not detected.
- b ND = not detected
- c U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- d J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- e MTCA Method B soil cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- f NE = not established
- g MTCA Method B soil leaching to groundwater cleanup levels were calculated by 1) dividing the benzo(a)pyrene Method B groundwater cleanup level by the respective cPAH toxicity equivalency factor and 2) using the converted groundwater cleanup level in the CLARC worksheet with the individual cPAH Koc value.
- h NC = not calculated

Table S.13: Soil Organochlorine Pesticides in Micrograms per Kilogram

Sample	Date Sampled	Sample Depth	Aldrin	Alpha-Chlordane	Alpha-Endosulfan	Beta-BHC	Beta-Chlordane	4,4'-DDT	4,4'-DDD	Dieldrin	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor Epoxide	Lindane	Methiocarb	Methoxychlor	4,4'-DDE
B-4-0-0.5	05/06/09	0.5	0.16 U <sup>(a)</sup>	0.1 U	0.063 U	0.18 U	0.09 U	0.77 <sup>(b)</sup> J <sup>(c)</sup>	10	0.14 U	14	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.19 U	0.19 U	9.7
B-4-4.5	05/06/09	4.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.38 J	0.14 U	0.22 J	0.094 U	0.12 U	0.093 U	0.084 U	0.11 J	0.19 U	0.19 U	1.0
B-5-0-0.5	05/06/09	0.5	0.23 J	0.1 U	0.28 JP <sup>(d)</sup>	0.18 U	0.24 Ui <sup>(e)</sup>	55 D <sup>(f)</sup>	45 D	67 D	7.9	0.094 U	1.8 Ui	0.55 J	0.16 J	0.08 U	0.19 U	0.41 Ui	94 D
B-5-12	05/06/09	12	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.17 J	0.2 U	0.19 U	0.11 U
B-6-0-0.5	05/06/09	0.5	0.33 J	0.1 U	0.51 JP	1.1 Ui	1.0 Ui	180 D	36	110 D	10	0.094 U	3.0 Ui	1.1 P	0.21 J	0.08 U	0.21 U	6.0 P	160 D
B-6-12.5	05/06/09	12.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.36 JP	0.48 J	0.46 J	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.21 U	0.19 U	0.53 Ui
B-7-9.5	05/07/09	9.5	0.16 U	0.1 U	0.18 JP	0.18 U	0.42 JP	5.2	24	9.9	1.2	0.094 U	0.53 Ui	0.093 U	0.084 U	0.16 J	0.17 U	0.28 Ui	66 D
B-8-3	05/07/09	3	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	1.0 Ui	0.2 U	0.19 U	0.25 Ui
B-8-10	05/07/09	10	0.17 U	0.11 U	0.065 U	0.19 U	0.093 U	0.18 U	0.12 U	0.15 U	0.12 U	0.097 U	0.13 U	0.096 U	0.087 U	0.083 U	0.2 U	0.2 U	0.12 U
B-9-0-0.5	05/07/09	0.5	0.7 J	0.1 U	0.23 Ui	0.48 Ui	1.8	420 D	8.7	330 D	0.93 J	0.55 JP	3.6 Ui	4.2	0.53 J	0.15 Ui	0.21 U	2.4 Ui	390 D
B-9-4.5	05/07/09	4.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.6 JP	0.35 J	0.53 J	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.2 U	0.19 U	1.1
B-10-4.5	05/07/09	4.5	0.16 U	0.1 U	0.063 U	0.18 U	0.38 JP	1.4	9.9	26	1.3	0.094 U	0.12 U	0.12 J	0.084 U	0.33 J	0.19 U	0.19 U	11
B-10-9.5	05/07/09	9.5	0.16 U	0.1 U	0.064 Ui	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.23 U	0.19 U	0.11 U
B-11-4.5	05/07/09	4.5	1.2	1.0 Ui	0.36 JP	0.36 JP	1.0 Ui	20	250 D	57 D	19	2.4 Ui	1.4 Ui	0.25 Ui	0.13 Ui	0.08 U	0.23 U	1.0 Ui	140 D
B-11-9.5	05/07/09	9.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	1.0 Ui	0.22 U	0.24 J	0.11 U
B-12-0-0.5	09/16/09	0.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.84	0.11 U	0.29 J	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	0.56 J
B-12-5.5	09/16/09	5.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.61	0.11 U	0.35 J	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	0.5 J
B-13-0-0.5	09/16/09	0.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	44 D	1.1	7.4	0.13 J	0.094 U	1.3 P	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	82 D
B-13-6	09/16/09	6	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	1.0	0.11 U	1.1	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	1.8
B-14-0-0.5	09/16/09	0.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.25 J	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	0.46 J
B-14-4.5	09/16/09	4.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.25 J	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	0.35 J
B-15-0-0.5	09/16/09	0.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	3.7	0.11 U	1.3	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.39 J	0.19 U	4.4
B-15-6	09/16/09	6	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	0.11 U
B-16-0-0.5	09/16/09	0.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	2.2	0.16 JP	1.1	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	1.8
B-16-5	09/16/09	5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	0.11 U
B-17-0-0.5	09/17/09	0.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	6.6	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	1.0 U	0.19 U	7.2
B-17-6	09/17/09	6	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	1.0 U	0.19 U	0.11 U
B-18-0-0.5	09/17/09	0.5	0.54 JP	0.3 JP	0.48 J	0.18 U	0.58 Ui	74 D	48 D	230 D	13	0.65 Ui	2.1 Ui	2.3	0.86	0.08 U	0.28 U	3.6 Ui	220 D
B-18-7	09/17/09	7	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.21 J	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	0.28 U	0.19 U	0.24 J
B-19-0-0.5	09/17/09	0.5	0.16 U	0.1 U	0.063 U	0.33 Ui	0.09 U	32 D	0.76	33 D	0.6 Ui	0.67 Ui	1.8 P	0.63 Ui	0.084 U	0.097 Ui	0.28 U	4.8 Ui	39 D
B-19-6	09/17/09	6	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.24 J	0.11 U	0.22 J	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	1.0 U	0.19 U	0.74 P



Table S.13: Soil Organochlorine Pesticides in Micrograms per Kilogram

Sample	Date Sampled	Sample Depth	Aldrin	Alpha-Chlordane	Alpha-Endosulfan	Beta-BHC	Beta-Chlordane	4,4'-DDT	4,4'-DDD	Dieldrin	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor Epoxide	Lindane	Methiocarb	Methoxychlor	4,4'-DDE
B-20-0-0.5	09/17/09	0.5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	<b>0.38 J</b>	0.11 U	<b>0.36 J</b>	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	1.0 U	0.19 U	<b>0.49 J</b>
B-20-6	09/17/09	6	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	1.0 U	0.19 U	0.11 U
B-21-0-0.5	09/17/09	0.5	0.16 U	0.1 U	<b>0.13 JP</b>	<b>0.52 J</b>	<b>0.39 J</b>	<b>25 D</b>	<b>7.1</b>	<b>8.4 D</b>	0.11 U	0.094 U	0.58 Ui	0.093 U	0.13 Ui	0.08 U	1.0 U	0.19 U	<b>30 D</b>
B-21-5	09/17/09	5	0.16 U	0.1 U	0.063 U	0.18 U	0.09 U	0.17 U	0.11 U	0.14 U	0.11 U	0.094 U	0.12 U	0.093 U	0.084 U	0.08 U	1.0 U	0.19 U	0.11 U
Method B Soil Cleanup Level (Direct Contact Only) <sup>(g)</sup>			59	2,900	480000	560	2,900	2,900	2,900	63	480000	24,000	24,000	24,000	110	770	NE <sup>(h)</sup>	NE	2,900
Method B Soil Cleanup Level (Leaching to Groundwater) <sup>(i)</sup>			31	3061	46,460	25	3,061	42,430	5,367	4,995	46,460	12,690	12,690	12,690	96	23	NE	NC <sup>(j)</sup>	5,367

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- c J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- d P = The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- e i = The Method Detection Limit/Method Reporting Limit has been elevated due to chromatographic interference.
- f D = The reported result is from a dilution.
- g MTCA Method B soil cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- h NE = Not established
- i MTCA Method B soil leaching to groundwater cleanup levels were calculated using the CLARC worksheets (June 2009).
- j NC = Not calculated

Table S.14: Soil Metals Results in Milligrams Per Kilogram

Sample	Date Sampled	Sample Depth	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
B-2-0-0.5	05/06/09	0.5	0.558	5.1	0.674	0.868	20.8	66.7	30800	70.8	1090 N* <sup>(a)</sup>	0.16	20.0	0.8 U <sup>(b)</sup>	0.108	0.129	200
B-2-7	05/06/09	7	0.072	1.6	0.326	0.054	10.2	21.4	17500	3.37	170 N*	0.03	10.2	0.8 U	0.035	0.056	28.8
B-3-0-0.5	05/06/09	0.5	0.178	4.9	0.675	0.238	20.3	37.7	30500	22.6	806 N*	0.09	18.7	0.8 U	0.099	0.115	77.9
B-3-6	05/06/09	6	0.076	2.1	0.386	0.096	14.3	24.6	21500	6.8	298 N*	0.03	11.4	0.7 U	0.045	0.066	39.6
B-4-0-0.5	05/06/09	0.5	0.083	2.8	0.549	0.113	15.9	28.6	22300	4.63	268 N*	0.06	14.9	0.7 U	0.054	0.071	49.6
B-4-4.5	05/06/09	4.5	0.062	1.5	0.336	0.056	9.86	23	18100	2.46	247 N*	0.05	9.69	0.7 U	0.034	0.052	27.5
B-5-0-0.5	05/06/09	0.5	0.102	3.9	0.565	0.179	16.2	40.9	25700	7.13	334 N*	0.06	14.5	0.8 U	0.059	0.112	52.1
B-5-12	05/06/09	12	0.086	3.5	0.355	0.058	9.04	32.4	13800	3.03	101 N*	0.02	12.8	0.8 U	0.044	0.149	44.7
B-6-0-0.5	05/06/09	0.5	0.129	4.3	0.592	0.245	16.8	49.5	22200	8.08	272 N*	0.07	15.2	0.9 U	0.067	0.126	54.9
B-6-12.5	05/06/09	12.5	0.107	1.7	0.49	0.288	12.1	33.1	17500	4.27	155 N*	0.02	11.2	0.7 U	0.055	0.141	44.6
B-7-9.5	05/07/09	9.5	0.072	2.0	0.312	0.208	9.5	22.9	14700	5.41	340 N*	0.03	9.62	0.7 U	0.038	0.07	36.6
B-8-3	05/07/09	3	0.116	2.8	0.616	0.107	21.8	32.9	28300	6.15	268 N*	0.04	17.4	0.8 U	0.044	0.118	47.0
B-8-10	05/07/09	10	0.087	3.2	0.613	0.16	16.3	31.5	24400	4.71	237 N*	0.04	14.2	0.8 U	0.055	0.109	48.2
B-9-0-0.5	05/07/09	0.5	0.477	5.0	0.717	0.419	19.4	42.9	26100	12	501 N*	0.1	17.9	0.8 U	0.093	0.151	62.4
B-9-4.5	05/07/09	4.5	0.099	2.5	0.565	0.083	19.1	34.1	29900	5.64	195 N*	0.04	14.2	0.8 U	0.042	0.139	41.0
B-10-4.5	05/07/09	4.5	0.072	1.9	0.217	0.111	5.84	16.8	13700	2.73	171 N*	0.06	6.82	0.8 U	0.037	0.085	26.8
B-10-9.5	05/07/09	9.5	0.069	1.8	0.466	0.083	13.8	33.8	13500	4.61	128 N*	0.04	10.6	0.9 U	0.065	0.082	40.5
B-11-4.5	05/07/09	4.5	0.184	4.1	0.613	0.328	20.3	45.5	22400	27.9	294 N*	0.09	16.7	0.9 U	0.09	0.13	57.9
B-11-9.5	05/07/09	9.5	0.08	2.4	0.392	0.125	11.3	30.1	16900	3.78	175 N*	0.04	11.3	0.9 U	0.054	0.075	37.8
B-12-0-0.5	09/16/09	0.5	0.085	3.6	0.557	0.153	16.3	30	31200	5.92	618	0.054	16.1	0.5 J <sup>(c)</sup>	0.051	0.096	56.0
B-12-5.5	09/16/09	5.5	0.059	2.41	0.392	0.063	12.9	27.6	23300	3.68	268	0.032	11.7	0.4 J	0.027	0.08	35.7
B-13-0-0.5	09/16/09	0.5	0.115	4.01	0.616	0.175	16	30.3	39900	7.8	1040	0.078	16.9	0.8 J	0.115	0.133	62.9
B-13-6	09/16/09	6	0.082	2.46	0.379	0.071	13.2	33	24600	3.74	516	0.043	14.5	0.4 J	0.046	0.115	34.7
B-14-0-0.5	09/16/09	0.5	0.085	5.04	0.46	0.076	17.3	15.9	52700	6	330	0.03	13.1	0.6 J	0.075	0.079	53.7
B-14-4.5	09/16/09	4.5	0.058 J	2.75	0.305	0.049	8.86	24.3	24800	2.23	180	0.033	9.27	0.4 J	0.038	0.058	33.2
B-15-0-0.5	09/16/09	0.5	0.083	2.7	0.472	0.121	14.1	21.4	26100	5.3	577	0.046	13.1	0.6 J	0.049	0.095	53
B-15-6	09/16/09	6	0.05 J	2.6	0.356	0.054	9.71	24.5	21300	3	430	0.018	10.4	0.4 J	0.021 J	0.076	33.9
B-16-0-0.5	09/16/09	0.5	0.084	4.31	0.502	0.197	16.3	27	30600	6.67	816	0.059	15.8	0.7 J	0.057	0.101	63.5
B-16-5	09/16/09	5	0.062	3.69	0.425	0.082	14	26.1	29100	4.46	602	0.041	13.7	0.3 J	0.038	0.087	45.4
B-17-0-0.5	09/17/09	0.5	0.168	5.1	0.685	0.282	17.3	43.5	30400	12	529	0.045	18.3	0.7 J	0.069 J	0.149	87.3
B-17-6	09/17/09	6	0.033 J	2.14	0.406	0.089	14.2	33.1	25700	3.87	176	0.317	12.1	0.3 J	0.009 U	0.104	44.6
B-18-0-0.5	09/17/09	0.5	0.08 J	3.62	0.433	0.149	12.4	29.8	26400	6.17	435	0.102	12.2	0.3 J	0.05 J	0.097	62.7
B-18-7	09/17/09	7	0.023 J	2.82	0.408	0.075	12.9	33	24900	3.87	191	0.04	11.2	0.4 J	0.009 U	0.087	43.1

Table S.14: Soil Metals Results in Milligrams Per Kilogram

Sample	Date Sampled	Sample Depth	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
B-19-0-0.5	09/17/09	0.5	0.029 J	2.03	0.521	0.073	15	25.3	37400	5.5	189	0.044	11.7	0.4 J	0.008 U	0.098	46.7
B-19-6	09/17/09	6	0.042 J	2.38	0.412	0.079	13.5	36.5	20500	3.71	150	0.033	13.3	0.4 J	0.068 J	0.104	43.3
B-20-0-0.5	09/17/09	0.5	0.045 J	2.97	0.65	0.17	21.1	26.5	32700	6.6	343	0.042	17.8	0.4 J	0.047 J	0.105	62.3
B-20-6	09/17/09	6	0.01 U	2.51	0.341	0.075	11.1	21.2	35200	2.92	540	0.02	9.47	0.2 U	0.009 U	0.096	39.4
B-21-0-0.5	09/17/09	0.5	0.01 J	1.93	0.411	0.089	11.6	18	24600	3.52	354	0.035	11.2	0.2 U	0.01 J	0.073	48.2
B-21-5	09/17/09	5	0.009 U	1.06	0.251	0.072	5.59	17.2	17400	1.84	195	0.017 J	6.56	0.2 U	0.008 U	0.055	31.4
Method B Soil Cleanup Level (Direct Contact Only) <sup>(d)</sup>			32	0.67	160	80	240	3,000	NE <sup>(e)</sup>	NE	11,000	24	1,600	NE	400	5.6	24,000
Method B Soil Cleanup Level (Leaching to Groundwater) <sup>(f)</sup>			5.8	2.8	506	1.1	18.43	262	NC <sup>(g)</sup>	3,000	NC	5	417	NE	13.6	1.566	5,971
Background <sup>(h)</sup>			NA <sup>(i)</sup>	7	2	1	42	36	42100	17	1100	0.07	38	0.78	NA	NA	86

**Notes:**

- a N\* = The matrix spike sample recovery and the duplicate sample analysis were not within control limits.
- b U = Constituent not detected above the laboratory detection limit.
- c J = Estimated concentration. Constituent was detected above the laboratory detection limit but below the laboratory reporting limit.
- d MTCA Method B soil cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- e NE = Not established
- f MTCA Method B soil leaching to groundwater cleanup levels were calculated using the CLARC worksheets (June 2009).
- g NC = Not calculated
- h State-wide background metals concentrations are from *Natural Background Soil Metals Concentrations in Washington State*, Publication #94-115, Washington State Department of Ecology, October 1994.
- i NA = Not established

Table S.15: Reconnaissance Groundwater Volatile Organic Compound Results in Micrograms Per Liter

Sample	Date Sampled	Acetone	Benzene	Butyl Benzene	Sec-Butylbenzene	Tert-Butylbenzene	Carbon Disulfide	Chloroform	Chloroethane	Chloromethane	Cymene	Cis-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Isopropylbenzene	Methyl Ethyl Ketone	Naphthalene	N-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Xylene, M,P-	Xylene, O-
B-1-GW	05/07/09	2.5 U <sup>(a)</sup>	0.045 U	0.056 U	0.036 U	0.038 U	<b>0.07</b> <sup>(b)</sup> J <sup>(c)</sup>	0.042 U	0.13 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	3.8 U	0.1 U	0.037 U	<b>0.09</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-2-GW	05/07/09	<b>12</b> J	<b>0.24</b> J	<b>0.41</b> J	<b>1.2</b> J	<b>0.13</b> J	0.045 U	0.042 U	0.13 U	<b>0.06</b> J	<b>0.28</b> J	0.045 U	0.042 U	<b>2.6</b>	<b>1.9</b> J	3.8 U	<b>3</b>	<b>1.3</b> J	<b>0.34</b> J	<b>2.8</b>	<b>0.12</b> J	<b>0.22</b> J	<b>1.1</b>
B-3-GW	05/06/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.042 U	0.13 U	0.053 U	0.044 U	<b>0.11</b> J	0.042 U	0.042 U	0.031 U	3.8 U	<b>0.12</b> J	0.037 U	0.048 U	0.037 U	0.042 U	0.078 U	0.037 U
B-4-GW	05/06/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.042 U	0.13 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	3.8 U	0.1 U	0.037 U	<b>0.61</b>	0.037 U	0.042 U	0.078 U	0.037 U
B-5-GW	05/06/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	<b>0.08</b> J	0.042 U	0.13 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	3.8 U	0.1 U	0.037 U	0.048 U	0.037 U	0.042 U	0.078 U	0.037 U
B-6-GW	05/06/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	<b>0.07</b> J	0.042 U	0.13 U	0.053 U	0.044 U	0.045 U	<b>0.16</b> J	0.042 U	0.031 U	3.8 U	0.1 U	0.037 U	<b>0.06</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-7-GW	05/07/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.042 U	0.13 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	3.8 U	0.1 U	0.037 U	<b>0.46</b> J	0.037 U	0.042 U	<b>0.1</b> J	0.037 U
B-8-GW	05/07/09	<b>2.8</b> J	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.042 U	0.13 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	3.8 U	0.1 U	0.037 U	<b>0.1</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-9-GW	05/07/09	<b>3.5</b> J	0.045 U	0.056 U	0.036 U	0.038 U	0.045 U	0.042 U	0.13 U	0.053 U	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	3.8 U	0.1 U	0.037 U	<b>0.09</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-10-GW	05/07/09	2.5 U	0.045 U	0.056 U	0.036 U	0.038 U	<b>0.06</b> J	0.042 U	0.13 U	<b>0.06</b> J	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	3.8 U	0.1 U	0.037 U	<b>0.08</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-11-GW	05/07/09	<b>4.9</b> J	<b>0.05</b> J	0.056 U	0.036 U	0.038 U	<b>0.09</b> J	0.042 U	0.13 U	<b>0.08</b> J	0.044 U	0.045 U	0.042 U	0.042 U	0.031 U	3.8 U	0.1 U	0.037 U	<b>0.1</b> J	0.037 U	0.042 U	0.078 U	0.037 U
B-12-GW	09/16/09	3.3 U	0.038 U	0.42 U	0.048 U	0.053 U	<b>0.55</b>	0.064 U	0.16 U	0.053 U	0.051 U	0.067 U	0.095 U	0.05 U	0.091 U	1.9 U	0.088 U	0.53 U	0.052 U	0.069 U	0.089 U	0.091 U	0.074 U
B-13-GW	09/16/09	3.3 U	0.038 U	0.42 U	0.048 U	0.053 U	0.1 U	0.064 U	0.16 U	0.053 U	0.051 U	0.067 U	0.095 U	0.05 U	0.091 U	1.9 U	0.088 U	0.53 U	0.052 U	0.069 U	0.089 U	0.091 U	0.074 U
B-14-GW	09/16/09	3.3 U	0.038 U	0.42 U	0.048 U	0.053 U	0.1 U	0.064 U	0.16 U	0.053 U	0.051 U	0.067 U	0.095 U	0.05 U	0.091 U	1.9 U	0.088 U	0.53 U	0.052 U	0.069 U	0.089 U	0.091 U	0.074 U
B-15-GW	09/16/09	<b>4.5</b> J	0.038 U	0.42 U	0.048 U	0.053 U	0.1 U	0.14 J	0.16 U	0.053 U	<b>0.11</b> J	0.067 U	0.095 U	<b>0.12</b> J	0.091 U	1.9 U	<b>3.4</b>	0.53 U	<b>0.09</b> J	<b>0.1</b> J	0.089 U	<b>0.2</b> J	<b>0.08</b> J
B-16-GW	09/16/09	<b>8.3</b> J	0.038 U	0.42 U	0.048 U	0.053 U	0.1 U	0.064 U	0.16 U	0.053 U	0.051 U	0.067 U	0.095 U	0.05 U	0.091 U	1.9 U	<b>0.27</b> J	0.53 U	<b>0.1</b> J	0.069 U	0.089 U	<b>0.1</b> J	0.074 U
B-17-GW	09/17/09	3.3 U	0.038 U	0.42 U	0.048 U	0.053 U	0.1 U	0.064 U	0.16 U	0.053 U	0.051 U	0.067 U	0.095 U	0.05 U	0.091 U	1.9 U	0.088 U	0.53 U	0.052 U	0.069 U	0.089 U	0.091 U	0.074 U
B-18-GW	09/17/09	<b>9.4</b> J	0.038 U	0.42 U	0.048 U	0.053 U	0.1 U	0.064 U	1.1	0.053 U	0.051 U	0.067 U	0.095 U	0.05 U	0.091 U	1.9 U	<b>0.16</b> J	0.53 U	<b>0.06</b> J	0.069 U	0.089 U	0.091 U	0.074 U
B-19-GW	09/17/09	<b>23</b>	<b>0.11</b> J	0.42 U	0.048 U	0.053 U	<b>0.12</b> J	0.064 U	0.16 U	0.053 U	0.051 U	0.067 U	0.095 U	0.05 U	0.091 U	4.1 J	<b>0.14</b> J	0.53 U	<b>0.22</b> J	0.069 U	0.089 U	<b>0.1</b> J	0.074 U
B-20-GW	09/17/09	<b>37</b>	<b>0.1</b> J	0.42 U	0.048 U	0.053 U	<b>0.2</b> J	0.064 U	0.16 U	0.053 U	0.051 U	0.067 U	0.095 U	0.05 U	0.091 U	4.5 J	<b>0.11</b> J	0.53 U	<b>0.22</b> J	0.069 U	0.089 U	<b>0.11</b> J	0.074 U
B-21-GW	09/17/09	<b>12</b> J	<b>0.05</b> J	0.42 U	0.048 U	0.053 U	<b>0.12</b> J	0.064 U	0.16 U	0.053 U	0.051 U	0.067 U	0.095 U	0.05 U	0.091 U	1.9 U	<b>0.09</b> J	0.53 U	<b>0.14</b> J	0.069 U	0.089 U	0.091 U	0.074 U
MTCA Method B Cleanup Level, most stringent value listed <sup>(d)</sup>		800	0.80	NE <sup>(e)</sup>	NE	NE	800	7.2	NE	3.4	NE	NE	0.64	NA	NE	NE	160	NE	640	400	400	16,000	16,000
State Maximum Contaminant Level <sup>(f)</sup>		NE	5	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	700	NE	NE	NE	NE	1,000	NE	NE	NE	NE

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- c J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- d MTCA Method B groundwater cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009)
- e NE = Not established
- f Maximum contaminant levels are from the CLARC searchable database (researched June 2009).

Table S.16: Reconnaissance Groundwater Semivolatile Organic Compound Results in Micrograms Per Liter

Sample	Date Sampled	Benzoic Acid	Benzyl Alcohol	Bis(2-Ethylhexyl) Phthalate	Di-N-Butyl Phthalate	P-Cresol	2,4-Dichlorophenol	Diethyl Phthalate	Dimethyl Phthalate	Fluoranthene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Phenol	Pyrene
B-1-GW	05/07/09	<b>1.4</b> <sup>(a)</sup> J <sup>(b)</sup>	0.073 U <sup>(c)</sup>	<b>0.25</b> J	<b>0.03</b> J	0.12 U	<b>0.082</b> J	<b>0.079</b> J	0.021 U	<b>0.028</b> J	0.026 U	<b>0.062</b> J	<b>0.037</b> J	<b>0.18</b> J	<b>0.022</b> J
B-3-GW	05/06/09	<b>2.1</b> J	<b>0.15</b> J	<b>0.24</b> J	<b>0.1</b> J	0.12 U	<b>0.095</b> J	<b>0.18</b> J	<b>0.023</b> J	0.02 U	<b>0.026</b> J	<b>0.057</b> J	0.022 U	<b>0.18</b> J	0.019 U
B-4-GW	05/06/09	<b>1.5</b> J	0.073 U	<b>0.36</b> J	<b>0.038</b> J	<b>0.37</b> J	0.047 U	<b>0.23</b>	0.021 U	<b>0.023</b> J	0.026 U	0.022 U	<b>0.022</b> J	<b>0.24</b> J	<b>0.02</b> J
B-5-GW	05/06/09	<b>1.3</b> J	0.073 U	0.13 U	<b>0.029</b> J	0.12 U	0.047 U	<b>0.081</b> J	0.021 U	0.02 U	0.026 U	0.022 U	0.022 U	<b>0.095</b> J	<b>0.02</b> J
B-6-GW	05/06/09	<b>1.9</b> J	<b>0.078</b> J	<b>2.60</b>	<b>0.032</b> J	0.12 U	0.047 U	<b>0.047</b> J	0.021 U	<b>0.027</b> J	0.026 U	<b>0.055</b> J	<b>0.044</b> J	<b>0.29</b> J	<b>0.025</b> J
B-7-GW	05/07/09	<b>1.4</b> J	0.073 U	<b>1.70</b>	<b>0.035</b> J	<b>0.25</b> J	0.047 U	<b>0.042</b> J	0.021 U	<b>0.029</b> J	0.026 U	<b>0.025</b> J	0.022 U	<b>0.07</b> J	<b>0.022</b> J
B-8-GW	05/07/09	<b>1.5</b> J	0.073 U	<b>0.28</b> J	<b>0.035</b> J	0.12 U	0.047 U	<b>0.044</b> J	0.021 U	<b>0.024</b> J	0.026 U	0.022 U	<b>0.024</b> J	0.063 U	0.019 U
B-9-GW	05/07/09	<b>3.0</b> J	<b>0.17</b> J	<b>0.54</b> J	<b>0.052</b> J	0.12 U	<b>0.055</b> J	<b>2.3</b>	0.021 U	<b>0.032</b> J	0.026 U	<b>0.04</b> J	<b>0.036</b> J	<b>0.65</b>	<b>0.019</b> J
B-10-GW	05/07/09	<b>2.2</b> J	<b>0.17</b> J	<b>0.24</b> J	0.023 U	0.12 U	0.047 U	<b>0.096</b> J	0.021 U	0.02 U	0.026 U	<b>0.063</b> J	0.022 U	<b>0.16</b> J	0.019 U
B-11-GW	05/07/09	<b>4.0</b> J	<b>0.18</b> J	0.13 U	0.023 U	0.12 U	<b>0.11</b> J	<b>0.21</b>	<b>0.054</b> J	0.02 U	0.026 U	<b>0.029</b> J	0.022 U	<b>0.12</b> J	0.019 U
B-12-GW	09/16/09	<b>1.5</b> J	0.073 U	0.13 U	0.023 U	0.12 U	0.047 U	<b>0.042</b> J	0.021 U	0.02 U	0.026 U	0.022 U	0.022 U	0.063 U	0.019 U
B-13-GW	09/16/09	<b>1.5</b> J	0.073 U	0.13 U	<b>0.024</b> J	0.12 U	0.047 U	<b>0.14</b> J	0.021 U	0.02 U	0.026 U	0.022 U	0.022 U	0.063 U	0.019 U
B-14-GW	09/16/09	<b>2.3</b> J	0.073 U	0.13 U	<b>0.11</b> J	0.12 U	0.047 U	<b>0.69</b>	0.021 U	0.02 U	0.026 U	<b>0.039</b> J	0.022 U	<b>0.19</b> J	0.019 U
B-15-GW	09/16/09	<b>2.0</b> J	0.073 U	0.13 U	<b>0.031</b> J	0.12 U	0.047 U	<b>0.23</b>	0.021 U	0.02 U	0.026 U	<b>0.028</b> J	<b>0.028</b> J	0.063 U	0.019 U
B-16-GW	09/16/09	<b>2.7</b> J	0.073 U	<b>2.7</b>	0.023 U	0.12 U	0.047 U	<b>0.21</b>	0.021 U	0.02 U	0.026 U	<b>0.022</b> J	0.022 U	<b>0.072</b> J	0.019 U
B-17-GW	09/17/09	<b>1.8</b> J	0.073 U	0.13 U	<b>0.033</b> J	0.12 U	0.047 U	<b>0.038</b> J	0.021 U	0.02 U	0.026 U	0.022 U	<b>0.023</b> J	0.063 U	0.019 U
B-18-GW	09/17/09	<b>1.8</b> J	0.073 U	<b>0.16</b> J	<b>0.053</b> J	0.12 U	0.047 U	<b>0.25</b>	0.021 U	0.02 U	0.026 U	0.022 U	<b>0.025</b> J	0.063 U	0.019 U
B-19-GW	09/17/09	<b>2.4</b> J	0.073 U	0.13 U	<b>0.038</b> J	0.12 U	0.047 U	<b>0.19</b> J	0.021 U	0.02 U	0.026 U	<b>0.032</b> J	<b>0.033</b> J	<b>0.13</b> J	0.019 U
B-21-GW	09/17/09	<b>3.4</b> J	<b>0.13</b> J	<b>0.24</b> J	<b>0.037</b> J	0.13 U	<b>0.38</b> J	<b>0.87</b>	0.023 U	0.022 U	<b>0.03</b> J	<b>0.065</b> J	<b>0.047</b> J	<b>0.29</b> J	0.021 U
MTCA Method B Cleanup Level, most stringent value listed <sup>(d)</sup>		64,000	2,400	NA <sup>(e)</sup>	NE <sup>(f)</sup>	NE	24	NE	16,000	640	NE	160	NE	4,800	480
State Maximum Contaminant Level <sup>(g)</sup>		NE	NE	6	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

**Notes:**

- a Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- b J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- c U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- d MTCA Method B groundwater cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- e NA = Not applicable
- f NE = Not established
- g Maximum contaminant levels are from the CLARC searchable database (researched June 2009).

Table S.17: Reconnaissance Groundwater Organochlorine Pesticides in Micrograms per Liter

Sample	Date Sampled	Aldrin	alpha-Chlordane	4,4'-DDT	4,4'-DDD'	4,4'-DDE	Dieldrin	Lindane
B-4-GW	05/06/09	0.00063 U <sup>(a)</sup>	0.00058 U	0.00067 Ui <sup>(b)</sup>	<b>0.014</b> <sup>(c)</sup>	<b>0.0099</b>	0.0022 U	0.0015 Ui
B-5-GW	05/06/09	0.00063 U	0.00058 U	<b>0.0014</b> JP <sup>(d,e)</sup>	<b>0.0026</b> J	0.0008 Ui	0.0022 U	0.0045 Ui
B-6-GW	05/06/09	0.0045 Ui	0.00058 U	<b>0.034</b>	<b>0.035</b>	<b>0.04</b>	<b>0.093</b>	0.0014 Ui
B-7-GW	05/07/09	<b>0.0026</b> JP	0.00071 Ui	0.0016 Ui	<b>0.0047</b> J	<b>0.0079</b> J	<b>0.0062</b> J	0.01 Ui
B-8-GW	05/07/09	0.0016 Ui	0.00058 U	0.0007 Ui	0.0013 U	<b>0.00099</b> JP	0.0022 U	0.00085 Ui
B-9-GW	05/07/09	<b>0.0016</b> JP	0.0016 Ui	<b>0.0034</b> JP	0.0016 Ui	<b>0.0015</b> JP	<b>0.0077</b> J	0.0098 Ui
B-10-GW	05/07/09	0.0021 Ui	0.00067 Ui	0.00039 U	<b>0.0051</b> J	<b>0.0016</b> JP	<b>0.016</b>	<b>0.0016</b> J
B-11-GW	05/07/09	<b>0.003</b> JP	<b>0.0039</b> J	0.0016 Ui	<b>0.012</b>	<b>0.0065</b> J	<b>0.0085</b> J	<b>0.00091</b> JP
B-12-GW	09/16/09	0.00067 U	0.00062 U	0.00042 U	0.0018 Ui	0.00058 U	0.0024 U	0.00089 U
B-13-GW	09/16/09	0.012 Ui	0.00065 U	0.00044 U	0.003 Ui	0.00062 U	0.0025 U	0.00094 U
B-14-GW	09/16/09	0.0022 Ui	0.0006 U	<b>0.0026</b> JP	0.0014 U	0.00067 Ui	0.0023 U	0.00087 U
B-15-GW	09/16/09	0.0097 Ui	0.0097 Ui	0.00039 U	0.0073 Ui	0.00055 U	0.0097 Ui	0.00084 U
B-16-GW	09/16/09	0.01 Ui	0.00058 U	0.00039 U	0.013 Ui	0.01 Ui	0.0022 U	0.01 Ui
B-17-GW	09/17/09	0.013 Ui	0.0019 Ui	0.0005 U	0.0077 Ui	0.013 Ui	0.013 Ui	0.0011 U
B-18-GW	09/17/09	0.00072 U	0.00066 U	0.00045 U	0.006 Ui	0.012 Ui	<b>0.0035</b> J	0.00096 U
MTCA Method B Cleanup Level, most stringent value listed <sup>(f)</sup>		0.0026	0.25	0.26	0.36	0.26	0.005	NA <sup>(g)</sup>
State Maximum Contaminant Level <sup>(h)</sup>		NE	NE	NE	NE	NE	NE	0.2

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b i = The Method Detection Limit/Method Reporting Limit has been elevated due to chromatographic interference.
- c Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- d J = The result is an estimated concentration that is less than the Method Reporting Limit, but greater than or equal to the Method Detection Limit.
- e P = The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- f MTCA Method B groundwater cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- g NA = Not applicable
- h Maximum contaminant levels are from the CLARC searchable database (researched June 2009).

Table S.18: Reconnaissance Groundwater Total Metals Results in Micrograms Per Liter

Sample	Date Sampled	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
B-2-GW	05/07/09	0.2	13	0.25	0.074	8.51	18.7	48300	2.88	4860	0.05 U <sup>(a)</sup>	12.8	2.0 U	0.049	0.042	48.3
B-3-GW	05/06/09	0.06	6.5	0.06	0.016 B <sup>(b)</sup>	1.86	3.65	35800	0.452	3610	0.05 U	3.79	2.0 U	0.015 B	0.006 B	6.52
B-4-GW	05/06/09	0.16	1.6	0.11	0.028	4.17	8.64	11100	0.714	997	0.05 U	6.34	2.0 U	0.044	0.014 B	11
B-5-GW	05/06/09	0.4	79.8	4.71	0.654	115	482	172000	44	1390	0.3	94.7	10 U	0.941	0.972	393
B-6-GW	05/06/09	0.34	28.4	2.98	0.917	86.3	289	114000	36.9	1880	0.24	68.4	10 U	0.53	0.638	275
B-7-GW	05/07/09	0.09	3.1	0.15	0.082	5.5	10.1	23500	1.18	2360	0.05 U	7.42	2.0 U	0.031	0.05	15.7
B-8-GW	05/07/09	0.09	5.6	0.23	0.144	6.19	24.3	36300	2.03	3730	0.05 U	10	2.0 U	0.072	0.084	28.5
B-9-GW	05/07/09	0.07	13.1	0.37	0.136	8.24	29.9	56700	3.03	1550	0.05 U	9.7	2.0 U	0.068	0.073	39.3
B-10-GW	05/07/09	0.31	40.8	3.64	1.18	101	283	185000	36.2	3240	0.24	86	10 U	0.657	1.03	312
B-11-GW	05/07/09	0.09	11.9	0.4	0.099	8.51	30.5	92400	2.36	3460	0.05 U	13.5	2.0 U	0.083	0.107	36.5
B-12-GW	09/16/09	0.02 U	1.16	0.007 J	0.007 J	0.08 J	1.41	42.4	0.009 J	417	0.02 U	0.8	0.3 U	0.068	0.007 J	0.47 J
B-13-GW	09/16/09	0.02 U	2.53	0.009 J	0.007 J	0.11 J	0.47	6490	0.009 J	520	0.02 U	0.94	0.3 U	0.004 U	0.003 J	0.52
B-14-GW	09/16/09	0.02 U	2.48	0.009 J	0.008 J	0.17 J	0.3	17600	0.005 U	599	0.02 U	1.28	0.3 U	0.005 J	0.004 J	1.12
B-15-GW	09/16/09	0.02 U	1.12	0.005 J	0.003 U	0.07 J	0.38	12500	0.011 J	662	0.02 U	0.99	0.3 U	0.036	0.002 J	0.6
B-16-GW	09/16/09	0.04 J	1.06	0.019 J	0.028	0.21	6.7	1320	0.007 J	2060	0.02 U	12.8	1.3	0.018 J	0.016 J	2.08
B-17-GW	09/17/09	0.03 J	1.49	0.012 J	0.011 J	0.04 U	0.47	9140	0.013 J	799	0.02 U	2.6	0.2 U	0.048	0.002 U	0.71
B-18-GW	09/17/09	0.02 U	3.66	0.01 J	0.012 J	0.04 U	0.46	55900	0.005 U	2800	0.02 U	2.06	0.2 U	0.023	0.005 J	1.99
B-21-GW	09/17/09	0.02 U	0.49 J	0.004 J	0.017 J	0.04 U	1.74	32	0.008 J	670	0.02 U	4.43	0.2 U	0.036	0.007 J	1.71
MTCA Method B Cleanup Level, most stringent value listed <sup>(c)</sup>		NE <sup>(d)</sup>	NA <sup>(e)</sup>	32	8	NE	590	NE	NE	2,200	4.8	NE	NE	NE	NE	4800
State Maximum Contaminant Level <sup>(f)</sup>		NE	10	4	5	100	1300	NE	15	NE	2	NE	NE	NE	NE	NE

**Notes:**

- a U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- b B = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
- c MTCA Method B groundwater cleanup levels are from the Cleanup Levels and Risk Calculation (CLARC) searchable database (researched June 2009).
- d NE = Not established
- e NA = Not applicable
- f Maximum contaminant levels are from the CLARC searchable database (researched June 2009).

Table S.19: Reconnaissance Groundwater Fluoride and Cyanide Results in Milligrams Per Liter

Sample	Date Sampled	Flouride	Cyanide
B-9-GW	05/07/09	<b>0.2</b> <sup>(a)</sup>	0.003 U <sup>(b)</sup>
B-10-GW	05/07/09	<b>0.4</b>	0.003 U
B-11-GW	05/06/09	<b>0.3</b>	0.003 U
B-12-GW	09/16/09	<b>0.16</b> J	0.003 U
B-13-GW	09/16/09	<b>0.19</b> J	0.003 U
B-14-GW	09/16/09	<b>0.24</b>	0.003 U
B-15-GW	09/16/09	<b>0.15</b> J	0.003 U
B-16-GW	09/16/09	<b>0.16</b> J	0.003 U
B-17-GW	09/17/09	<b>0.15</b> J	0.003 U
B-18-GW	09/17/09	<b>0.3</b>	0.003 U
B-19-GW	09/17/09	<b>0.74</b>	NA
B-21-GW	09/17/09	<b>0.11</b> J	NA
State Maximum Contaminant Level <sup>(c)</sup>		4	0.2

**Notes:**

- a Bold indicates the compound was detected at a concentration above the laboratory Method Detection Limit.
- b U = The compound was analyzed for, but was not detected at or above the specified Method Detection Limit.
- c Maximum contaminant levels are from the CLARC searchable database (researched June 2009).
- d Concentration indicates free cyanide



## Appendix T

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### Sentinel Well Analytical Results

## Appendix T: Sentinel well Analytical Results

		Shallow Groundwater												
Method	Analyte	Units	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-6-Dup	SW-7	SW-9	SW-1	SW-7	SW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	8/13/2009	11/12/2009	11/12/2009
A2120B	Color, Apparent	color unit	10	35	10	15	40	40	40	25	20			
A2320B	Alkalinity, Total (As CaCO3)	mg/l	204	686	118	104	816	346	354	192	227			
A2340B	Hardness As CaCO3	mg/l	200	316	84	82	668	247	279	131	183			
A2510B	Conductivity	umhos/cm	418	1,250	237	227	1,360	691	684	400	393			
A2540C	Total Dissolved Solids (Residue, Filterable)	mg/l	242	700	150	153	804	406	384	223	250			
A4500SIO2C	Silica	mg/l	122	80	81	66	91	96	72	73	71			
A5310C	Total Organic Carbon	mg/l	7.0	26	3.1	3.9	25	23	25	5.9	6.9			
A5910B	UV254	cm -1	0.08	0.46	0.04	0.06	0.38	0.04	0.05	0.067	0.136			
A9221E	Fecal Coliform	mpn/100ml	2.0 U	2.0 XU	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U			
A9223B	Coliform	mpn/100ml	1.0 U	3.0 X	1.0 U	1.0 U	1.0 U	3.0	8.0	1.0 U	13			
CAS SOP	Methyl Mercury	ng/l	1.05	0.32	0.1	0.1 U	0.63	0.3	0.62	0.1 U				
E100.2	Amphibole	um	6.973 U					1.395 U	6.973 U	1.395 U	1.494 <			
E100.2	Chrysotile	um	6.973 U					1.395 U	6.973 U	1.395 U	1.494 <			
E150.1	pH	pH units	6.68	6.89	6.8	6.69	6.91	6.51	6.44	6.55	6.79			
E1613B	2,3,7,8-Tetrachlorodibenzo-P-Dioxin	pg/l	9.71 U	9.71 U	9.52 U	9.62 U	9.8 U	9.66 U	9.8 U	9.57 U	11 U			
E1632	Arsenic	ug/l	5.51	7.94	6.03	9.35	15	3.26	8.29	2.22	3.29			
E1632	Arsenic, Pentavalent	ug/l	1.83	4.56	2.75	2.37	12	1.46	5.03	0.84	0.86			
E1632	Arsenic, Trivalent	ug/l	3.68	3.38	3.28	6.98	2.88	2.0 U	3.26	1.38	2.43			
E1653A	2,3,4,6-Tetrachlorophenol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U			
E1653A	2,4,5-Trichlorophenol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U			
E1653A	2,4,6-Trichlorophenol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U			
E1653A	3,4,5-Trichlorocatechol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U			
E1653A	3,4,5-Trichloroguaiacol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U			
E1653A	3,4,6-Trichlorocatechol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U			
E1653A	3,4,6-Trichloroguaiacol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U			
E1653A	4,5,6-Trichloroguaiacol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U			
E1653A	Pentachlorophenol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U			
E1653A	Tetrachlorocatechol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U			
E1653A	Tetrachloroguaiacol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U			
E1653A	Trichlorosyringol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U			
E1694M	2-Hydroxy-4-Methoxybenzophenone	ng/l									11			
E1694M	Acetaminophen	ng/l									5.0 U			
E1694M	Alpha-Estradiol	ng/l									1.0 U			
E1694M	Androstenedione	ng/l									10 U			
E1694M	Atrazine	ng/l									1.0 U			
E1694M	Bisphenol A	ng/l									61			
E1694M	Caffeine	ng/l									5.0 U			
E1694M	Carbamazepine	ng/l									1.0 U			
E1694M	Diazepam	ng/l									1.0 U			
E1694M	Diethylstilbestrol	ng/l									2.0 U			
E1694M	Estradiol	ng/l									2.0 U			
E1694M	Estriol	ng/l									1.0 U			
E1694M	Estrone	ng/l									5.0 U			
E1694M	Ethinyl Estradiol	ng/l									2.0 U			
E1694M	Fluoxetine	ng/l									1.6 B			
E1694M	Hydrocodone	ng/l									1.0 U			
E1694M	Meprobamate	ng/l									5.0 U			
E1694M	Metadone	ng/l									5.0 U			
E1694M	N,N-Diethyl-3-Methyl Benzamide	ng/l									26			
E1694M	Pentoxifylline	ng/l									1.0 U			
E1694M	Progesterone	ng/l									10 U			
E1694M	Sulfamethoxazole	ng/l									1.0 U			
E1694M	Testosterone	ng/l									10 U			
E1694M	Trimethoprim	ng/l									5.0 U			

## Appendix T: Sentinel well Analytical Results

		Shallow Groundwater												
Method	Analyte	Units	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-6-Dup	SW-7	SW-9	SW-1	SW-7	SW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	8/13/2009	11/12/2009	11/12/2009
E180.1	Turbidity	ntu	875	83	120	83	610	131	436	95	247			
E200.7	Aluminum	ug/l	28,700	13,000	3,140	2,010	31,700	4,700	15,700	374	5,210	2,050	868	176
E200.7	Barium	ug/l		342			747							
E200.7	Calcium	ug/l	44,700	67,900	17,900	20,000	145,000	54,800	60,800	30,000	44,900	50,500	30,900	30,300
E200.7	Iron	ug/l	61,700	39,400	25,000	21,600	86,800	52,500	66,100	38,500	39,100	48,000	48,800	27,100
E200.7	Magnesium	ug/l	21,400	35,600	9,580	7,680	74,000	26,900	30,900	13,700	17,200	20,800	13,200	10,500
E200.7	Manganese	ug/l	3,960	1,440	1,420	1,060	3,230	1,340	1,560	1,340	1,610	4,400	1,280	1,300
E200.7	Potassium	ug/l	4,960	3,040	2,340	2,480	7,280	2,980	4,290	1,460	3,150	3,050	1,400	1,790
E200.7	Silicon	ug/l	68,700	37,200	31,000	30,600	80,700	40,100	61,400	26,100	44,300	32,800	31,100	31,500
E200.7	Sodium	ug/l	38,500	44,500	12,100	13,100	41,300	24,100	28,300	16,200	13,500	29,400	17,800	13,000
E200.7	Zinc	ug/l	100	44	12	6.0	108	16	45	3.4	20	21	12	6.7
E200.8	Antimony	ug/l	0.1 U	0.11	0.5 U	0.05 U	0.17	0.05 U	0.1 U	0.05 U	0.5 U,N	0.29	0.69	0.05 U
E200.8	Arsenic	ug/l	7.89	4.91	6.26	10	9.71	3.54	5.4	2.81	3.59	5.34	3.87	3.05
E200.8	Barium	ug/l	296		37	26		180	260	63	113	106	84	56
E200.8	Beryllium	ug/l	1.06	0.564	0.107	0.065	1.88	0.219	0.543	0.027	0.172	0.1	0.057	0.03
E200.8	Cadmium	ug/l	0.267	0.21	0.05	0.04	0.935	0.06	0.144	0.02 U	0.072	0.038	0.026	0.02 U
E200.8	Chromium, Total	ug/l	16	8.46	5.37	3.92	17	3.59	11	0.34	4.42	2.36	1.12	0.53
E200.8	Copper	ug/l	33	14	8.12	4.84	32	9.62	26	0.62	6.98	4.28	3.08	0.49
E200.8	Lead	ug/l	14	8.7	1.57	0.954	30	2.23	5.94	0.237	1.65	2.27	2.77	0.117
E200.8	Nickel	ug/l	18	8.85	2.45	1.65	20	4.8	10	1.45	5.05	4.86	1.78	1.1
E200.8	Selenium	ug/l	2.0 U	2.0 U	1.0 U	1.0 U	3.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
E200.8	Silver	ug/l	0.162	0.078	0.184	0.02 U	0.173	0.052	0.109	0.02 U	0.076	0.057	0.2 U	0.02 U
E200.8	Thallium	ug/l	0.185	0.124	0.033	0.022	0.397	0.044	0.118	0.02 U	0.025	0.035	0.2 U	0.02 U
E200.8	Uranium	ug/l	3.96	4.19	0.137	0.108	7.06	0.787	1.9	0.039	0.355	0.977	0.056	0.024
E245.1	Mercury	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
E300	Bromide	mg/l	0.2		0.2	0.2					0.1 U			
E300	Chloride	mg/l	5.0	4.1	6.4	9.5	4.3	7.2	7.1	4.2	2.4			
E300	Fluoride	mg/l	0.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.3	0.2			
E300	Nitrogen, Nitrate (As N)	mg/l	0.1 U	0.1 U	0.3	0.3	0.7	0.3	0.3	0.3	0.1 U			
E300	Nitrogen, Nitrite	mg/l	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U			
E300	Sulfate	mg/l	4.1	35	0.4	0.3	2.6	0.5	0.5	2.5	0.2			
E314.0	Perchlorate	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U			
E335.4	Cyanide	mg/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			
E350.1	Nitrogen, Ammonia (As N)	mg/l	2.2	26	0.49	0.93	22	15	15	7.75	6.64			
E365.3	Phosphate, Ortho-	mg/l	0.04	0.03	0.02	0.03	0.04	0.04	0.03	0.03	0.08			
E504.1	1,2,3-Trichloropropane	ug/l	0.048 U	0.048 U	0.049 U	0.048 U	0.048 U	0.049 U	0.048 U	0.049 U	0.049 U			
E504.1	1,2-Dibromo-3-Chloropropane	ug/l	0.0095 U	0.0095 U	0.0096 U	0.0096 U	0.0095 U	0.0096 U	0.0095 U	0.0097 U	0.0096 U			
E504.1	1,2-Dibromoethane	ug/l	0.0095 U	0.0095 U	0.0096 U	0.0096 U	0.0095 U	0.0096 U	0.0095 U	0.0097 U	0.0096 U			
E508.1	Aldrin	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Alpha-BHC	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Alpha-Endosulfan	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Beta Endosulfan	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Beta-BHC	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Chlordane	ug/l	0.097 U	0.098 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E508.1	Chlorinated Camphene	ug/l	0.097 U	0.098 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E508.1	DDT	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Dichlorodiphenyldichloroethane	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Dieldrin	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Endrin	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Heptachlor	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Heptachlor Epoxide	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Heptachlor Epoxide A	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Lindane	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	Methoxychlor	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			

Appendix T: Sentinel well Analytical Results

Shallow Groundwater														
Method	Analyte	Units	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-6-Dup	SW-7	SW-9	SW-1	SW-7	SW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	8/13/2009	11/12/2009	11/12/2009
E508.1	P,P'-DDE	ug/l	0.0097 U	0.0098 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0099 U	0.01 U	0.0099 U			
E508.1	PCB-1016 (Arochlor 1016)	ug/l	0.049 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
E508.1	PCB-1221 (Arochlor 1221)	ug/l	0.097 U	0.098 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E508.1	PCB-1232 (Arochlor 1232)	ug/l	0.097 U	0.098 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E508.1	PCB-1242 (Arochlor 1242)	ug/l	0.097 U	0.098 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E508.1	PCB-1248 (Arochlor 1248)	ug/l	0.097 U	0.098 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E508.1	PCB-1254 (Arochlor 1254)	ug/l	0.097 U	0.098 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E508.1	PCB-1260 (Arochlor 1260)	ug/l	0.097 U	0.098 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E515.4	2,4,5-T	ug/l	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U			
E515.4	2,4,5-TP (Silvex)	ug/l	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
E515.4	2,4-D	ug/l	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U			
E515.4	2,4-DB	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U			
E515.4	Dalapon	ug/l	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U			
E515.4	Dicamba	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U			
E515.4	Dinoseb	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U			
E515.4	Pentachlorophenol	ug/l	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U			
E515.4	Picloram	ug/l	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U			
E524.2	1,1,1,2-Tetrachloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,1,1-Trichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,1,2,2-Tetrachloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,1,2-Trichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,1-Dichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,1-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,1-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,2,3-Trichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,2,3-Trichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,2,4-Trichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,2,4-Trimethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,2-Dibromo-3-Chloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,2-Dibromoethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,2-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,2-Dichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,2-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,3,5-Trimethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,3-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,3-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	1,4-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	2,2-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	2-Chlorotoluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	4-Chlorotoluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Bromoform	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Butyl Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Carbon Tetrachloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Chlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Chlorobromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Chlorodibromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Chloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Chloroform	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Chloromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	cis-1,2-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	cis-1,3-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Cymene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E524.2	Dibromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			

## Appendix T: Sentinel well Analytical Results

Shallow Groundwater														
Method	Analyte	Units	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-6-Dup	SW-7	SW-9	SW-1	SW-7	SW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	8/13/2009	11/12/2009	11/12/2009
E524.2	Dichlorobromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Dichlorodifluoromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Di-Isopropyl Ether	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Ethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Hexachlorobutadiene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Isopropylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Methyl Bromide	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Methyl Ethyl Ketone	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
E524.2	Methyl Isobutyl Ketone	ug/l	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U
E524.2	Methyl Tert-Butyl Ether	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Methylene Chloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Mono Bromo Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Naphthalene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	N-Propylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Sec-Butylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Styrene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Tert-Butylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Tetrachloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Toluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	trans-1,2-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	trans-1,3-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Trichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Trichlorofluoromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Vinyl Chloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Xylene, m,p-	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Xylene, o-	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E525.2	Acenaphthene	ug/l	0.25 U	0.25 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
E525.2	Acetochlor	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	Alachlor	ug/l	0.35 U	0.35 U	0.07 U	0.072 U	0.36 U	0.072 U	0.36 U	0.072 U	0.071 U	0.071 U	0.071 U	0.071 U
E525.2	Ametryn	ug/l	0.2 U	1.0 U	0.2 U	0.2 U	1.0 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
E525.2	Anthracene	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	Atrazine	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	Benzo(A)Anthracene	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	Benzo(A)Pyrene	ug/l	0.097 U	0.098 U	0.076 U	0.02 U	0.1 U	0.1 U	0.099 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
E525.2	Benzo(B)Fluoranthene	ug/l	0.49 U	0.49 U	0.11 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	Benzo(K)Fluoranthene	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	Bis(2-Ethylhexyl) Phthalate	ug/l	2.9 U	3.0 U	7.2 D	4.7 D	3.0 U	3.0 U	3.0 U	0.6 U	0.59 U	0.6 U	0.59 U	0.59 U
E525.2	Butyl Benzyl Phthalate	ug/l	2.5 U	2.5 U	0.49 U	0.5 U	2.5 U	2.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E525.2	Butylate	ug/l	0.25 U	0.25 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
E525.2	Chlorothalonil	ug/l	0.5 U	0.5 U	0.1 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
E525.2	Chlorpyrifos	ug/l	0.5 U	0.5 U	0.1 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
E525.2	Chrysene	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	cis-Permethrin	ug/l	0.49 U	0.49 U	0.098 U	0.2 U	0.5 U	0.5 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	Cyanazine	ug/l	0.49 U	0.49 U	0.098 U	0.098 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	Diazinon	ug/l	0.099 U	0.49 U	0.098 U	0.099 U	0.5 U	0.1 U	0.5 U	0.098 U	0.099 U	0.099 U	0.099 U	0.099 U
E525.2	Dibenz(A,H)Anthracene	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U
E525.2	Dichlorovos	ug/l	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
E525.2	Diethyl Phthalate	ug/l	2.5 U	2.5 U	0.49 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E525.2	Dimethoate	ug/l	0.5 U	2.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E525.2	Di-N-Butyl Phthalate	ug/l	2.9 U	3.0 U	0.59 U	0.6 U	3.0 U	0.6 U	3.0 U	0.6 U	0.59 U	0.6 U	0.59 U	0.59 U
E525.2	Diocyl Adipate	ug/l	2.9 U	3.0 U	0.59 U	0.6 U	3.0 U	3.0 U	3.0 U	0.6 U	0.59 U	0.6 U	0.59 U	0.59 U
E525.2	Disulfoton	ug/l	1.0 U	1.0 U	0.2 U	0.2 U	1.0 U	0.2 U	1.0 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
E525.2	Fenamiphos (Nemacur)	ug/l	1.0 U	1.0 U	0.2 U	0.2 U	1.0 U	1.0 U	1.0 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
E525.2	Fluoranthene	ug/l	0.49 U	0.49 U	0.11 U	1.0 U	0.5 U	0.5 U	0.5 U	0.1 U	0.099 U	0.1 U	0.099 U	0.099 U

Appendix T: Sentinel well Analytical Results

		Shallow Groundwater												
Method	Analyte	Units	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-6-Dup	SW-7	SW-9	SW-1	SW-7	SW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	8/13/2009	11/12/2009	11/12/2009
E525.2	Fluorene	ug/l	0.25 U	0.25 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
E525.2	Hexachlorobenzene	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U	
E525.2	Hexachlorocyclopentadiene	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E525.2	Hexazinone	ug/l	0.5 U	0.5 U	0.1 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U	0.1 U			
E525.2	Indeno(1,2,3-C,D)Pyrene	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U	0.099 U			
E525.2	Isophorone	ug/l	0.25 U	0.25 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
E525.2	Malathion	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U			
E525.2	Metolachlor	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U			
E525.2	Metribuzin	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U			
E525.2	Napropamide	ug/l	0.25 U	0.25 U	0.049 U	0.05 U	0.25 U	0.25 U	0.25 U	0.05 U	0.05 U			
E525.2	Parathion, Ethyl	ug/l	0.97 U	0.98 U	0.2 U	0.2 U	1.0 U	0.2 U	0.99 U	0.2 U	0.2 U			
E525.2	Parathion, Methyl	ug/l	0.5 U	2.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E525.2	Pebulate	ug/l	0.25 U	0.25 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
E525.2	Prometon	ug/l	0.05 U	0.25 U	0.049 U	0.05 U	0.25 U	0.05 U	0.05 U	0.049 U	0.05 U			
E525.2	Prometryn	ug/l	0.099 U	0.49 U	0.098 U	0.099 U	0.5 U	0.1 U	0.1 U	0.098 U	0.099 U			
E525.2	Pronamide	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U			
E525.2	Propachlor	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E525.2	Propazine	ug/l	0.25 U	0.25 U	0.049 U	0.05 U	0.25 U	0.05 U	0.25 U	0.05 U	0.05 U			
E525.2	Pyrene	ug/l	0.25 U	0.25 U	0.1	0.051	0.25 U	0.25 U	0.25 U	0.05 U	0.05 U			
E525.2	S-Ethyl Di-N,N-Propylthiocarbamate	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E525.2	Simazine	ug/l	0.25 U	0.25 U	0.049 U	0.05 U	0.25 U	0.05 U	0.25 U	0.05 U	0.05 U			
E525.2	Tebuthiuron	ug/l	1.0 U	1.0 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U			
E525.2	Terbacil	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.099 U			
E525.2	Terbufos	ug/l	0.5 U	0.5 U	0.1 U	0.1 U	0.5 U	0.1 U	0.5 U	0.1 U	0.1 U			
E525.2	Terbutryn	ug/l	0.1 U	0.5 U	0.1 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U			
E525.2	Trans-Permethrin	ug/l	0.49 U	0.49 U	0.098 U	0.2 U	0.5 U	0.5 U	0.5 U	0.1 U	0.099 U			
E525.2	Trifluralin	ug/l	0.49 U	0.49 U	0.098 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.099 U			
E531.1	3-Hydroxycarbofuran	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U			
E531.1	Aldicarb	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E531.1	Aldicarb Sulfone	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E531.1	Aldicarb Sulfoxide	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E531.1	Carbaryl	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U			
E531.1	Carbofuran	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E531.1	Methiocarb	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U			
E531.1	Methyl N,N-Dimethyl-N-((Methylcarbamoyl)Oxy)-1-	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E531.1	Propoxur	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E531.1	S-Methyl-N-((Methylcarbamoyl)-Oxy)-Thioacetimidate	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
E547	Glyphosate	ug/l	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U			
E548.1	Endothal	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U			
E549.2	Diquat	ug/l	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U			
E900	Alpha, Gross	pci/l	5.7	28	0.58	-0.31	32	3.1	1.6	0.55	0.09			
E900	Beta, Gross	pci/l	9.3	30	4.0	5.5	38	3.9	6.2	0.72	7.2			
E903.1	Radium 226	pci/l	1.1	0.43	0.17	-0.03	4.3	0.34	0.53	0.17	0.18			
E904.0	Radium 228	pci/l	3.4	3.1	0.29	1.1	4.9	2.8	2.2	0.49	2.2			
NCASI85.02RA_FA	12-Chlorodehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCASI85.02RA_FA	14-Chlorodehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCASI85.02RA_FA	1-Phenanthrenecarboxylic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCASI85.02RA_FA	3,4,5-Trichloroguaiacol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCASI85.02RA_FA	9,10-Dichlorostearic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCASI85.02RA_FA	Abietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCASI85.02RA_FA	Dehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCASI85.02RA_FA	Dichlorodehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCASI85.02RA_FA	Linoleic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCASI85.02RA_FA	Oleic Acid/Linolenic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	8.4	5.0 U	5.0 U	5.0 U	10 U			

Appendix T: Sentinel well Analytical Results

			Shallow Groundwater											
Method	Analyte	Units	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-6-Dup	SW-7	SW-9	SW-1	SW-7	SW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	8/13/2009	11/12/2009	11/12/2009
NCAS185.02RA_FA	Pimanic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
NCAS185.02RA_FA	Tetrachloroguaiacol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U			
SW8081	Mirex	ug/l									0.0099 U			
SW8151	2,4,5-T	ug/l									0.2 U			
SW8151	2,4,5-TP (Silvex)	ug/l									0.2 U			
SW8151	2,4-D	ug/l									0.39 U			
SW8151	2,4-DB	ug/l									0.39 U			
SW8151	Dalapon	ug/l									0.39 U			
SW8151	Dicamba	ug/l									0.2 U			
SW8151	Dichlorprop	ug/l									0.39 U			
SW8151	Dinoseb	ug/l									0.2 U			
SW8151	MCPA (2-Methyl-4-Chlorophenoxy Acetic Acid)	ug/l									96 U			
SW8151	MCPP (2-(2-Methyl-4-Chlorophenoxy) Propanoic Acid)	ug/l									96 U			
SW8270	1,2,4,5-Tetrachlorobenzene	ug/l									9.8 U			
SW8270	1-Amino-3-Nitrobenzene	ug/l									0.95 U			
SW8270	1-Methylnaphthalene	ug/l									0.2 U			
SW8270	2,2'-Dichlorodiethylether	ug/l									0.19 U			
SW8270	2,3,4,6-Tetrachlorophenol	ug/l									0.95 U			
SW8270	2,4,5-Trichlorophenol	ug/l									0.48 U			
SW8270	2,4,6-Trchlorophenol	ug/l									0.48 U			
SW8270	2,4-Dichlorophenol	ug/l									0.48 U			
SW8270	2,4-Dimethylphenol	ug/l									3.8 U			
SW8270	2,4-Dinitrophenol	ug/l									3.8 U			
SW8270	2-Chloronaphthalene	ug/l									0.19 U			
SW8270	2-Chlorophenol	ug/l									0.48 U			
SW8270	2-Methylnaphthalene	ug/l									0.19 U			
SW8270	3,3'-Dichlorobenzidine	ug/l									1.9 U			
SW8270	4-Chloroaniline	ug/l									0.19 U			
SW8270	4-Nitroaniline	ug/l									0.95 U			
SW8270	Aniline	ug/l									0.95 U			
SW8270	Azobenzene	ug/l									0.19 U			
SW8270	Benzoic Acid	ug/l									4.8 U			
SW8270	Benzyl Alcohol	ug/l									0.48 U			
SW8270	Bis(2-Chloroethoxy) Methane	ug/l									0.19 U			
SW8270	Chlorobenzilate	ug/l									9.8 U			
SW8270	Demeton-O	ng/l									10 U			
SW8270	Demeton-S	ng/l									10 U			
SW8270	Dichlorovos	ng/l									10 U			
SW8270	EPN (O-Ethyl Phnyl (P-Nitrophenyl) Thiophosphate)	ng/l									10 U			
SW8270	Hexachloroethane	ug/l									0.19 U			
SW8270	Nitrobenzene	ug/l									0.19 U			
SW8270	N-Nitrosodimethylamine	ug/l									1.9 U			
SW8270	N-Nitrosodiphenylamine	ug/l									0.19 U			
SW8270	N-Nitrosodipropylamine	ug/l									0.19 U			
SW8270	O-Cresol	ug/l									0.48 U			
SW8270	Parathion, Methyl	ng/l									10 U			
SW8270	Parathion, Methyl	ug/l									9.8 U			
SW8270	P-Cresol	ug/l									0.48 U			
SW8270	Pentachlorobenzene	ug/l									9.8 U			
SW8270	Pentachloronitrobenzene	ug/l									49 U			
SW8270	Phenol	ug/l									0.48 U			
SW8270	Phorate	ng/l									10 U			
SW8270	Phorate	ug/l									9.8 U			
SW8270	S,S,S-Tributyl Phosphorotrithioate	ng/l									10 U			

## Appendix T: Sentinel well Analytical Results

			Shallow Groundwater											
Method	Analyte	Units	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-6-Dup	SW-7	SW-9	SW-1	SW-7	SW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	8/13/2009	11/12/2009	11/12/2009
SW8270	Stirophos	ng/l									10 U			
SW8270	Sulfotep	ng/l									10 U			
SW8270	Sulfotep	ug/l									9.8 U			
SW8270SIM	PBDE 100	ng/l									0.99 U			
SW8270SIM	PBDE 128	ng/l									0.99 U			
SW8270SIM	PBDE 138	ng/l									0.99 U			
SW8270SIM	PBDE 153	ng/l									0.99 U			
SW8270SIM	PBDE 154	ng/l									0.99 U			
SW8270SIM	PBDE 17	ng/l									0.99 U			
SW8270SIM	PBDE 183	ng/l									0.99 U			
SW8270SIM	PBDE 190	ng/l									0.99 U			
SW8270SIM	PBDE 203	ng/l									0.99 U			
SW8270SIM	PBDE 206	ng/l									9.9 U			
SW8270SIM	PBDE 209	ng/l									9.9 U			
SW8270SIM	PBDE 28	ng/l									0.99 U			
SW8270SIM	PBDE 47	ng/l									0.99 U			
SW8270SIM	PBDE 66	ng/l									0.99 U			
SW8270SIM	PBDE 71	ng/l									0.99 U			
SW8270SIM	PBDE 85	ng/l									0.99 U			
SW8270SIM	PBDE 99	ng/l									1.0 U			

### Notes:

- 1 B = The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- 2 U = The compound was analyzed for, but was not detected at or above the MRL or MDL.
- 3 P = The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results
- 4 < =The compound was not detected at the reported analytical sensitivity.

- 5 N =The Matrix Spike sample recovery is not within the control limits.
- 6 D = The reported result is from a dilution.
- 7 X = See case narrative.
- 8 mg/l = milligrams per liter
- 9 umhos/cm = micromhos per centimeter
- 10 cm<sup>-1</sup> = absorbance per centimeter

- 11 mpn/100ml = most probable number of organisms per 100 milliliters
- 12 ng/l = nanograms per liter
- 13 um = micrometers
- 14 pg/l = picogram per liter
- 15 ug/l = micrograms per liter
- 16 ntu = nephelometric turbidity units
- 17 pci/l = picocuries per liter



## Appendix T: Sentinel well Analytical Results

		Deep Groundwater													
Method	Analyte	Units	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9	DW-1	DW-3	DW-7	DW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/9/2009	8/13/2009	11/11/2009	11/12/2009	11/12/2009	11/12/2009
A2120B	Color, Apparent	color unit	10	5.0	10	10	10	5.0 U	5.0 U	5.0	10	15		25	20
A2320B	Alkalinity, Total (As CaCO3)	mg/l	85	133	163	170	112	112	86	112	112	85		87	89
A2340B	Hardness As CaCO3	mg/l	70	103	151	134	99	86	73	88	93	74		74	70
A2510B	Conductivity	umhos/cm	194	293	407	377	273	239	197	239	435	189		191	194
A2540C	Total Dissolved Solids (Residue, Filterable)	mg/l	160	182	247	233	165	161	150	160	161	144		147	145
A4500HB	pH	pH units											7.6	7.22	7.38
A4500SIO2C	Silica	mg/l	75	53	73	54	67	64	70	77	60	55		55	55
A5310C	Total Organic Carbon	mg/l	1.3	2.1	1.8	4.3	2.3	2.5	1.4	1.5	1.9	1.28		1.17	1.2
A5910B	UV254	cm -1	0.06	0.04	0.04	0.05	0.03	0.03	0.04	0.04	0.037	0.053		0.054	0.055
A9221E	Fecal Coliform	mpn/100ml	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U		2.0 U	2.0 U
A9223B	Coliform	mpn/100ml	1.0 U	7.0	1.0 U	248	22	1.0	12	7.0	2.0	1.0 U		1.0 U	1.0 U
CAS SOP	Methyl Mercury	ng/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U		0.1 U	0.1 U
E100.2	Amphibole	um	0.186 U	0.186 U			0.174 U	0.174 U	0.186 U	0.186 U	0.187 <	0.194 U		0.162 U	0.185 U
E100.2	Chrysotile	um	0.186 U	0.186 U			0.174 U	0.174 U	0.186 U	0.186 U	0.187 <	0.194 U		0.162 U	0.185 U
E150.1	pH	pH units	7.46	8.05	7.83	7.55	8.04	7.83	7.53	7.61	7.78	7.26			
E1613B	2,3,7,8-Tetrachlorodibenzo-P-Dioxin	pg/l	9.33 U	9.43 U	9.43 U	9.66 U	9.52 U	9.35 U	9.39 U	9.36 U	10 U	9.13 U		9.62 U	9.76 U
E1632	Arsenic	ug/l	2.87	6.5	7.07	6.57	4.15	2.41	2.62	9.74	3.67	4.6		5.2	5.5
E1632	Arsenic, Pentavalent	ug/l	2.71	2.04	2.03	2.07	1.22	1.0 U	0.69	1.59	1.27	1.0 U		1.0 U	1.0
E1632	Arsenic, Trivalent	ug/l	0.2 U	4.46	5.04	4.5	2.93	1.52	1.93	8.15	2.4	4.2		4.8	4.5
E1653A	2,3,4,6-Tetrachlorophenol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U
E1653A	2,4,5-Trichlorophenol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U
E1653A	2,4,6-Trichlorophenol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U
E1653A	3,4,5-Trichlorocatechol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U	5.0 U
E1653A	3,4,5-Trichloroguaiacol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U
E1653A	3,4,6-Trichlorocatechol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U	5.0 U
E1653A	3,4,6-Trichloroguaiacol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U
E1653A	4,5,6-Trichloroguaiacol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U
E1653A	Pentachlorophenol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U	5.0 U
E1653A	Tetrachlorocatechol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U	5.0 U
E1653A	Tetrachloroguaiacol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U	5.0 U
E1653A	Trichlorosyringol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U
E1694M	2-Hydroxy-4-Methoxybenzophenone	ng/l									8.9	2.0 U		2.0 U	2.0 U
E1694M	Acetaminophen	ng/l									5.0 U	5.0 U		5.0 U	5.0 U
E1694M	Alpha-Estradiol	ng/l									1.0 U	1.0 U		1.0 U	1.0 U
E1694M	Androstenedione	ng/l									10 U	10 U		10 U	10 U
E1694M	Atrazine	ng/l									1.0 U	1.0 U		1.0 U	1.0 U
E1694M	Bisphenol A	ng/l									76	10 U		10 U	10 U
E1694M	Caffeine	ng/l									5.3	5.0 U		5.0 U	5.0 U
E1694M	Carbamazepine	ng/l									1.0 U	1.0 U		1.0 U	1.0 U
E1694M	Diazepam	ng/l									1.0 U	1.0 U		1.0 U	1.0 U
E1694M	Diethylstilbestrol	ng/l									2.0 U	2.0 U		2.0 U	2.0 U
E1694M	Estradiol	ng/l									2.0 U	2.0 U		2.0 U	2.0 U
E1694M	Estriol	ng/l									1.0 U	1.0 U		1.0 U	1.0 U
E1694M	Estrone	ng/l									5.0 U	5.0 U		5.0 U	5.0 U
E1694M	Ethinyl Estradiol	ng/l									2.0 U	2.0 U		2.0 U	2.0 U
E1694M	Fluoxetine	ng/l									1.7 B	1.0 U		1.0 U	1.0 U
E1694M	Hydrocodone	ng/l									1.0 U	1.0 U		1.0 U	1.0 U
E1694M	Meprobamate	ng/l									5.0 U	5.0 U		5.0 U	5.0 U
E1694M	Methadone	ng/l									5.0 U	5.0 U		5.0 U	5.0 U
E1694M	N,N-Diethyl-3-Methyl Benzamide	ng/l									23	5.0 U		5.0 U	5.0 U
E1694M	Pentoxifylline	ng/l									1.0 U	1.0 U		1.0 U	1.0 U
E1694M	Progesterone	ng/l									10 U	10 U		10 U	10 U
E1694M	Sulfamethoxazole	ng/l									1.0 U	1.0 U		1.0 U	1.0 U
E1694M	Testosterone	ng/l									10 U	10 U		10 U	10 U

## Appendix T: Sentinel well Analytical Results

			Deep Groundwater													
Method	Analyte	Units	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9	DW-1	DW-3	DW-7	DW-9	
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/9/2009	8/13/2009	11/11/2009	11/12/2009	11/12/2009	11/12/2009	
E1694M	Trimethoprim	ng/l									5.0 U	5.0 U		5.0 U	5.0 U	
E180.1	Turbidity	ntu	8.8	12	4.2	34	0.5	1.3	3.3	6.7	3.3	12		2.58	0.99	
E200.7	Aluminum	ug/l	4.3	435	38	1,460	23	48	4.7	4.3	23	2.0 U		2.0 U	2.5	
E200.7	Calcium	ug/l	20,200	27,000	44,600	41,900	26,400	24,100	20,800	24,800	26,500	21,500		21,600	22,600	
E200.7	Iron	ug/l	2,250	895	966	5,030	308	450	1,220	1,840	1,060	2,370		1,220	637	
E200.7	Magnesium	ug/l	4,740	8,660	9,730	7,030	8,070	6,270	4,950	6,280	6,500	4,810		4,950	5,010	
E200.7	Manganese	ug/l	605	216	377	804	233	371	671	593	587	548		662	513	
E200.7	Potassium	ug/l	2,730	5,610	3,960	3,740	4,050	3,670	3,010	4,140	3,620	2,650		2,950	3,200	
E200.7	Silicon	ug/l	23,400	17,900	21,500	24,000	20,400	21,100	23,200	22,600	24,600	24,500		24,200	25,300	
E200.7	Sodium	ug/l	8,650	14,000	18,800	23,700	12,000	10,800	8,990	11,500	10,300	8,850		8,620	8,890	
E200.7	Zinc	ug/l	2.0 U	2.0 U	2.0 U	8.5	2.0 U	2.0 U	2.0 U	2.3	3.6	2.0 U		2.0 U	2.0 U	
E200.8	Antimony	ug/l	0.05 U	0.07	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U,N	0.05 U		0.05 U	0.05 U	
E200.8	Arsenic	ug/l	2.44	4.88	5.82	6.32	3.75	2.29	2.95	9.17	3.46	3.77		4.3	4.14	
E200.8	Barium	ug/l	12	28	31	25	13	13	13	25	14	11		11	10	
E200.8	Beryllium	ug/l	0.02 U	0.021	0.02 U	0.043	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	
E200.8	Cadmium	ug/l	0.02 U	0.039	0.02 U	0.029	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	
E200.8	Chromium, Total	ug/l	0.2 U	0.63	0.2 U	2.59	0.2 U	0.2 U	0.2 U	0.2 U	0.73	0.27		0.2 U	0.2 U	
E200.8	Copper	ug/l	0.1 U	0.8	0.17	2.27	0.1 U	0.1 U	0.1 U	0.1 U	0.3	0.1 U		0.1 U	0.1 U	
E200.8	Lead	ug/l	0.02 U	0.177	0.022	0.355	0.02 U	0.033	0.02 U	0.02 U	0.05	0.02 U		0.02 U	0.02 U	
E200.8	Nickel	ug/l	0.74	1.26	1.51	2.59	0.96	0.91	0.77	0.86	1.68	0.57		0.61	0.63	
E200.8	Selenium	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		1.0 U	1.0 U	
E200.8	Silver	ug/l	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	
E200.8	Thallium	ug/l	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	
E200.8	Uranium	ug/l	0.02 U	0.02 U	0.02 U	0.052	0.02 U	0.025	0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	
E245.1	Mercury	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U	0.2 U	
E300	Bromide	mg/l	0.2		0.2	0.2					0.1 U	0.1 U		0.1 U	0.1 U	
E300	Chloride	mg/l	5.4	12	32	19	16	12	5.7	7.9	6.5	5.17		6.3	5.28	
E300	Fluoride	mg/l	0.2	0.3	0.2 U	0.2 U	0.2 U	0.2	0.3	0.2 U	0.2 U	0.31		0.28	0.27	
E300	Nitrogen, Nitrate (As N)	mg/l	0.3	0.1 U	0.3	0.3	0.3	0.3	0.3	0.3	0.1 U	0.1 U		0.1 U	0.1 U	
E300	Nitrogen, Nitrite	mg/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1	0.1 U	0.1 U	0.1 U		0.1 U	0.1 U	
E300	Sulfate	mg/l	1.6	3.4	0.5	1.0	0.7	1.7	2.4	0.3	0.4	1.26		1.61	1.42	
E314.0	Perchlorate	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		1.0 U	1.0 U	
E335.4	Cyanide	mg/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	
E350.1	Nitrogen, Ammonia (As N)	mg/l	0.32	0.05 U	0.16	0.51	0.05 U	0.1	0.25	0.34	0.13	0.345		0.232	0.15	
E365.3	Phosphate, Ortho-	mg/l	0.17	0.34	0.21	0.09	0.53	0.45	0.35	0.25	0.41					
E365.3	Phosphorus, Total (As P)	mg/l												0.404	0.566	
E365.3	Phosphorus, Total Orthophosphate (As P)	mg/l										0.102	0.24	0.247	0.386	
E504.1	1,2,3-Trichloropropane	ug/l	0.048 U	0.048 U	0.049 U	0.049 U	0.048 U	0.049 U	0.048 U	0.049 U	0.049 U	0.05 U		0.049 U	0.05 U	
E504.1	1,2-Dibromo-3-Chloropropane	ug/l	0.0095 U	0.0094 U	0.0097 U	0.0096 U	0.0095 U	0.0096 U	0.0096 U	0.0095 U	0.0097 U	0.0098 U		0.0097 U	0.0099 U	
E504.1	1,2-Dibromoethane	ug/l	0.0095 U	0.0094 U	0.0097 U	0.0096 U	0.0095 U	0.0096 U	0.0096 U	0.0095 U	0.0097 U	0.0098 U		0.0097 U	0.0099 U	
E508.1	Aldrin	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U		0.0098 U	0.0098 U	
E508.1	Alpha-BHC	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U		0.0098 U	0.0098 U	
E508.1	Alpha-Endosulfan	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U	
E508.1	Beta-Endosulfan	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.014 U	0.0098 U	
E508.1	Beta-BHC	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U	
E508.1	Chlordane	ug/l	0.099 U	0.098 U	0.097 U	0.1	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.098 U	
E508.1	Chlorinated Camphene	ug/l	0.099 U	0.098 U	0.097 U	0.1	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.098 U	
E508.1	DDT	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U	
E508.1	Dichlorodiphenyldichloroethane	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U	
E508.1	Dieldrin	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U	
E508.1	Endrin	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U	
E508.1	Heptachlor	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U	
E508.1	Heptachlor Epoxide	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U	
E508.1	Heptachlor Epoxide A	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U	

Appendix T: Sentinel well Analytical Results

		Deep Groundwater													
Method	Analyte	Units	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9	DW-1	DW-3	DW-7	DW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/9/2009	8/13/2009	11/11/2009	11/12/2009	11/12/2009	11/12/2009
E508.1	Lindane	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01 U	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U
E508.1	Methoxychlor	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01 U	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U
E508.1	P,P'-DDE	ug/l	0.0099 U	0.0098 U	0.0097 U	0.01 U	0.0099 U	0.0099 U	0.0099 U	0.0096 U	0.0097 U	0.0098 U		0.0098 U	0.0098 U
E508.1	PCB-1016 (Arochlor 1016)	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U		0.049 U	0.049 U
E508.1	PCB-1221 (Arochlor 1221)	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.098 U
E508.1	PCB-1232 (Arochlor 1232)	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.098 U
E508.1	PCB-1242 (Arochlor 1242)	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.098 U
E508.1	PCB-1248 (Arochlor 1248)	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.098 U
E508.1	PCB-1254 (Arochlor 1254)	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.098 U
E508.1	PCB-1260 (Arochlor 1260)	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.098 U
E515.4	2,4,5-T	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.1 U	0.1 U	0.2 U		0.2 U	0.2 U
E515.4	2,4,5-TP (Silvex)	ug/l	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U
E515.4	2,4-D	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	0.1 U
E515.4	2,4-DB	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U	0.2 U
E515.4	Dalapon	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U		1.0 U	1.0 U
E515.4	Dicamba	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U	0.2 U
E515.4	Dinoseb	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U	0.2 U
E515.4	Pentachlorophenol	ug/l	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U		0.04 U	0.04 U
E515.4	Picloram	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.099 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	0.1 U
E524.2	1,1,1,2-Tetrachloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,1,1-Trichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,1,2,2-Tetrachloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,1,2-Trichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,1-Dichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,1-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,1-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,2,3-Trichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,2,3-Trichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,2,4-Trichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,2,4-Trimethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,2-Dibromo-3-Chloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,2-Dibromoethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,2-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,2-Dichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,2-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,3,5-Trimethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,3-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,3-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	1,4-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	2,2-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	2-Chlorotoluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	4-Chlorotoluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Bromoform	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Butyl Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Carbon Tetrachloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Chlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Chlorobromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Chlorodibromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Chloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Chloroform	ug/l	0.5 U	2.4	0.5 U	0.5 U	0.5 U	0.86	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	Chloromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	cis-1,2-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E524.2	cis-1,3-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U

Appendix T: Sentinel well Analytical Results

		Deep Groundwater													
Method	Analyte	Units	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9	DW-1	DW-3	DW-7	DW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/9/2009	8/13/2009	11/11/2009	11/12/2009	11/12/2009	11/12/2009
E524.2	Cymene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Dibromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Dichlorobromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Dichlorodifluoromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Di-Isopropyl Ether	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Ethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Hexachlorobutadiene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Isopropylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Methyl Bromide	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Methyl Ethyl Ketone	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
E524.2	Methyl Isobutyl Ketone	ug/l	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U
E524.2	Methyl Tert-Butyl Ether	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Methylene Chloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Mono Bromo Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Naphthalene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	N-Propylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Sec-Butylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Styrene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Tert-Butylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Tetrachloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Toluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	trans-1,2-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	trans-1,3-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Trichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Trichlorofluoromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Vinyl Chloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Xylene, M,P-	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Xylene, O-	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E525.2	Acenaphthene	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U	0.049 U	0.049 U	0.05 U
E525.2	Acetochlor	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Alachlor	ug/l	0.071 U	0.07 U	0.07 U	0.072 U	0.071 U	0.071 U	0.071 U	0.069 U	0.07 U	0.07 U	0.07 U	0.07 U	0.071 U
E525.2	Ametryn	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U
E525.2	Anthracene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Atrazine	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Benzo(A)Anthracene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Benzo(A)Pyrene	ug/l	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
E525.2	Benzo(B)Fluoranthene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Benzo(K)Fluoranthene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Bis(2-Ethylhexyl) Phthalate	ug/l	0.59 U	0.59 U	0.58 U	1.0	0.59 U	0.59 U	0.59 U	0.58 U	0.68	0.59 U	0.59 U	0.59 U	0.59 U
E525.2	Butyl Benzyl Phthalate	ug/l	0.5 U	0.49 U	0.49 U	0.5 U	0.5 U	0.5 U	0.5 U	0.48 U	0.49 U	0.49 U	0.49 U	0.49 U	0.5 U
E525.2	Butylate	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U	0.049 U	0.049 U	0.05 U
E525.2	Chlorothalonil	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Chlorpyrifos	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Chrysene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	cis-Permethrin	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Cyanazine	ug/l	0.1 U	0.098 U	0.097 U	0.099 U	0.099 U	0.099 U	0.099 U	0.098 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Diazinon	ug/l	0.097 U	0.098 U	0.097 U	0.099 U	0.1 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Dibenz(A,H)Anthracene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Dichlorovos	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.098 U	0.099 U	0.099 U
E525.2	Diethyl Phthalate	ug/l	0.5 U	0.49 U	0.49 U	0.5 U	0.5 U	0.5 U	0.5 U	0.48 U	0.49 U	0.49 U	0.49 U	0.49 U	0.5 U
E525.2	Dimethoate	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
E525.2	Di-N-Butyl Phthalate	ug/l	0.59 U	0.59 U	0.58 U	0.6 U	0.59 U	0.59 U	0.59 U	0.58 U	0.58 U	0.59 U	0.59 U	0.59 U	0.59 U
E525.2	Diocetyl Adipate	ug/l	0.59 U	0.59 U	0.58 U	1.8	0.59 U	0.59 U	0.59 U	0.58 U	0.58 U	0.59 U	0.59 U	0.59 U	0.59 U
E525.2	Disulfoton	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.098 U	0.098 U	0.099 U	0.099 U

## Appendix T: Sentinel well Analytical Results

		Deep Groundwater													
Method	Analyte	Units	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9	DW-1	DW-3	DW-7	DW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/9/2009	8/13/2009	11/11/2009	11/12/2009	11/12/2009	11/12/2009
E525.2	Fenamiphos (Nemacur)	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.098 U		0.098 U	0.099 U
E525.2	Fluoranthene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Fluorene	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U		0.049 U	0.05 U
E525.2	Hexachlorobenzene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Hexachlorocyclopentadiene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Hexazinone	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U		0.098 U	0.099 U
E525.2	Indeno(1,2,3-C,D)Pyrene	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Isophorone	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.1	0.048 U	0.049 U	0.049 U		0.049 U	0.05 U
E525.2	Malathion	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Metolachlor	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Metribuzin	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Napropamide	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U		0.049 U	0.05 U
E525.2	Parathion, Ethyl	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U	0.2 U
E525.2	Parathion, Methyl	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.49 U		0.49 U	0.5 U
E525.2	Pebulate	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U		0.049 U	0.05 U
E525.2	Prometon	ug/l	0.049 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U		0.049 U	0.05 U
E525.2	Prometryn	ug/l	0.097 U	0.098 U	0.097 U	0.099 U	0.1 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Pronamide	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Propachlor	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Propazine	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U		0.049 U	0.05 U
E525.2	Pyrene	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U		0.049 U	0.05 U
E525.2	S-Ethyl Di-N,N-Propylthiocarbamate	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Simazine	ug/l	0.05 U	0.049 U	0.049 U	0.05 U	0.05 U	0.05 U	0.05 U	0.048 U	0.049 U	0.049 U		0.049 U	0.05 U
E525.2	Tebuthiuron	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U	0.2 U
E525.2	Terbacil	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Terbufos	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U		0.098 U	0.099 U
E525.2	Terbutryn	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	0.1 U
E525.2	Trans-Permethrin	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E525.2	Trifluralin	ug/l	0.099 U	0.098 U	0.097 U	0.1 U	0.099 U	0.099 U	0.099 U	0.096 U	0.097 U	0.098 U		0.098 U	0.099 U
E531.1	3-Hydroxycarbofuran	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		1.0 U	1.0 U
E531.1	Aldicarb	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E531.1	Aldicarb Sulfone	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E531.1	Aldicarb Sulfoxide	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E531.1	Carbaryl	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		1.0 U	1.0 U
E531.1	Carbofuran	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E531.1	Methiocarb	ug/l	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		1.0 U	1.0 U
E531.1	Methyl N,N'-Dimethyl-N-((Methylcarbamoyl)Oxy)-1-	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E531.1	Propoxur	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E531.1	S-Methyl-N-((Methylcarbamoyl)-Oxy)-Thioacetimidate	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
E547	Glyphosate	ug/l	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U		6.0 U	6.0 U
E548.1	Endothal	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U	5.0 U
E549.2	Diquat	ug/l	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U		0.4 U	0.4 U
E900	Alpha, Gross	pci/l	0.37	-0.5	0.47	0.57	-0.26	0.34	3.8	0.28					
E900	Beta, Gross	pci/l	2.4	6.6	1.6	4.2	2.9	3.9	3.3	3.6	3.7	0.7		2.0	1.2
E903.1	Radium 226	pci/l	0.02	0.01	0.07	0.04	0.04	-0.05	-0.01	-0.04	0.27	0.03		0.01	0.04
E904.0	Radium 228	pci/l	0.41	0.32	0.63	1.2	0.21	0.22	0.58	1.1	0.99	1.1		1.3	1.0
NCAS185.02RA_FA	12-Chlorodehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCAS185.02RA_FA	14-Chlorodehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCAS185.02RA_FA	1-Phenanthrenecarboxylic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCAS185.02RA_FA	3,4,5-Trichloroguaiacol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCAS185.02RA_FA	9,10-Dichlorostearic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCAS185.02RA_FA	Abietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCAS185.02RA_FA	Dehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCAS185.02RA_FA	Dichlorodehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U

Appendix T: Sentinel well Analytical Results

		Deep Groundwater													
Method	Analyte	Units	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9	DW-1	DW-3	DW-7	DW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/9/2009	8/13/2009	11/11/2009	11/12/2009	11/12/2009	11/12/2009
NCASI85.02RA_FA	Linoleic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCASI85.02RA_FA	Oleic Acid/Linolenic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCASI85.02RA_FA	Pimaric Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
NCASI85.02RA_FA	Tetrachloroguaiacol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U		10 U	10 U
SW8081	Mirex	ug/l									0.0099 U	0.0097 U		0.0098 U	0.0097 U
SW8151	2,4,5-T	ug/l									0.2 U				
SW8151	2,4,5-TP (Silvex)	ug/l									0.2 U				
SW8151	2,4-D	ug/l									0.39 U				
SW8151	2,4-DB	ug/l									0.39 U				
SW8151	Dalapon	ug/l									0.39 U				
SW8151	Dicamba	ug/l									0.2 U				
SW8151	Dichlorprop	ug/l									0.39 U				
SW8151	Dinoseb	ug/l									0.2 U				
SW8151	MCPA (2-Methyl-4-Chlorophenoxy Acetic Acid)	ug/l									96 U				
SW8151	MCPP (2-(2-Methyl-4-Chlorophenoxy) Propanoic Acid)	ug/l									96 U				
SW8151A	MCPA (2-Methyl-4-Chlorophenoxy Acetic Acid)	ug/l										96 U		96 U	96 U
SW8151A	MCPP (2-(2-Methyl-4-Chlorophenoxy) Propanoic Acid)	ug/l										96 U		96 U	96 U
SW8270	1,2,4,5-Tetrachlorobenzene	ug/l									9.5 U	9.6 U		9.5 U	9.5 U
SW8270	1-Amino-3-Nitrobenzene	ug/l									0.95 U	0.96 U		0.95 U	0.96 U
SW8270	1-Methylnaphthalene	ug/l									0.2 U	0.2 U		0.2 U	0.2 U
SW8270	2,2'-Dichlorodiethylether	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	2,3,4,6-Tetrachlorophenol	ug/l									0.95 U	0.96 U		0.95 U	0.96 U
SW8270	2,4,5-Trichlorophenol	ug/l									0.48 U	0.48 U		0.48 U	0.48 U
SW8270	2,4,6-Trchlorophenol	ug/l									0.48 U	0.48 U		0.48 U	0.48 U
SW8270	2,4-Dichlorophenol	ug/l									0.48 U	0.48 U		0.48 U	0.48 U
SW8270	2,4-Dimethylphenol	ug/l									3.8 U	3.9 U		3.8 U	3.9 U
SW8270	2,4-Dinitrophenol	ug/l									3.8 U	3.9 U		3.8 U	3.9 U
SW8270	2-Chloronaphthalene	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	2-Chlorophenol	ug/l									0.48 U	0.48 U		0.48 U	0.48 U
SW8270	2-Methylnaphthalene	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	3,3'-Dichlorobenzidine	ug/l									1.9 U	2.0 U		1.9 U	2.0 U
SW8270	4-Chloroaniline	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	4-Nitroaniline	ug/l									0.95 U	0.96 U		0.95 U	0.96 U
SW8270	Aniline	ug/l									0.95 U	0.96 U		0.95 U	0.96 U
SW8270	Azobenzene	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	Benzoic Acid	ug/l									4.8 U	4.8 U		4.8 U	4.8 U
SW8270	Benzyl Alcohol	ug/l									0.48 U	0.48 U		0.48 U	0.48 U
SW8270	Bis(2-Chloroethoxy) Methane	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	Chlorobenzilate	ug/l									9.5 U	9.6 U		9.5 U	9.5 U
SW8270	Demeton-O	ng/l									10 U	10 U		9.9 U	9.7 U
SW8270	Demeton-S	ng/l									10 U	10 U		10 U	10 U
SW8270	Dichlorovos	ng/l									10 U	10 U		9.9 U	9.7 U
SW8270	EPN (O-Ethyl Phnyl (P-Nitrophenyl) Thiophosphonate)	ng/l									10 U	10 U		9.9 U	9.7 U
SW8270	Hexachloroethane	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	Nitrobenzene	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	N-Nitrosodimethylamine	ug/l									1.9 U	2.0 U		1.9 U	2.0 U
SW8270	N-Nitrosodiphenylamine	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	N-Nitrosodipropylamine	ug/l									0.19 U	0.2 U		0.19 U	0.2 U
SW8270	O-Cresol	ug/l									0.48 U	0.48 U		0.48 U	0.48 U
SW8270	Parathion, Methyl	ng/l									10 U	10 U		9.9 U	9.7 U
SW8270	Parathion, Methyl	ug/l									9.5 U	9.6 U		9.5 U	9.5 U
SW8270	P-Cresol	ug/l									0.48 U	0.48 U		0.48 U	0.48 U
SW8270	Pentachlorobenzene	ug/l									9.5 U	9.6 U		9.5 U	9.5 U
SW8270	Pentachloronitrobenzene	ug/l									48 U	48 U		48 U	48 U

## Appendix T: Sentinel well Analytical Results

			Deep Groundwater												
Method	Analyte	Units	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9	DW-1	DW-3	DW-7	DW-9
			6/9/2009	6/12/2009	6/12/2009	6/11/2009	6/11/2009	6/10/2009	6/10/2009	6/9/2009	8/13/2009	11/11/2009	11/12/2009	11/12/2009	11/12/2009
SW8270	Phenol	ug/l									0.48 U	0.48 U		0.48 U	0.48 U
SW8270	Phorate	ng/l									10 U	10 U		9.9 U	9.7 U
SW8270	Phorate	ug/l									9.5 U	9.6 U		9.5 U	9.5 U
SW8270	S,S,S-Tributyl Phosphorotrithioate	ng/l									10 U	10 U		9.9 U	9.7 U
SW8270	Stirophos	ng/l									10 U	10 U		9.9 U	9.7 U
SW8270	Sulfotep	ng/l									10 U	10 U		9.9 U	9.7 U
SW8270	Sulfotep	ug/l									9.5 U	9.6 U		9.5 U	9.5 U
SW8270SIM	PBDE 100	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 128	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 138	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 153	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 154	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 17	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 183	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 190	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 203	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 206	ng/l									10 U	9.7 U		9.7 U	9.7 U
SW8270SIM	PBDE 209	ng/l									10 U	9.7 U		9.7 U	9.7 U
SW8270SIM	PBDE 28	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 47	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 66	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 71	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 85	ng/l									1.0 U	0.97 U		0.97 U	0.97 U
SW8270SIM	PBDE 99	ng/l									1.0 U	1.0 U		1.0 U	1.0 U

### Notes:

- 1 B = The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- 2 U = The compound was analyzed for, but was not detected at or above the MRL or MDL.
- 3 P = The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- 4 < = The compound was not detected at the reported analytical sensitivity.

- 5 N = The Matrix Spike sample recovery is not within the control limits.
- 6 D = The reported result is from a dilution.
- 7 X = See case narrative.
- 8 mg/l = milligrams per liter
- 9 umhos/cm = micromhos per centimeter
- 10 cm<sup>-1</sup> = absorbance per centimeter

- 11 mpn/100ml = most probable number of organisms per 100 milliliters
- 12 ng/l = nanograms per liter
- 13 um = micrometers
- 14 pg/l = picogram per liter
- 15 ug/l = micrograms per liter
- 16 ntu = nephelometric turbidity units
- 17 pci/l = picocuries per liter

## Appendix U

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### Potential Raw Source Water Analytical Results



## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures 7/14/2009	RSW-2 (Mint Farm Energy Well) 6/8/2009	RSW-1 (Columbia River) 6/8/2009	RSW-3 (Cowlitz River) 6/8/2009
A2120B	Color, Apparent	color unit	5.0	5.0	10	10
A2320B	Alkalinity, Total (As CaCO <sub>3</sub> )	mg/l	164	104	43	27
A2340B	Hardness As CaCO <sub>3</sub>	mg/l	140	88	43	24
A2510B	Conductivity	umhos/cm	376	247	128	83
A2540C	Total Dissolved Solids (Residue, Filterable)	mg/l	235	164	62	55
A4500SIO2C	Silica	mg/l	43	59	11	24
A5310C	Total Organic Carbon	mg/l	1.9	0.8	2.2	1.3
A5910B	UV254	cm <sup>-1</sup>	0.048	29	33	41
A9221E	Fecal Coliform	mpn/100ml	2.0 U	2.0 U	2.0 U	11
A9223B	Coliform	mpn/100ml	1.0 U	1.0 U	205	210
CAS SOP	Methyl Mercury	ng/l	0.1 U	0.1 U	0.1 U	0.1 U
E100.2	Amphibole	um	0.174 U	0.199 U	0.174 U	0.174 U
E100.2	Chrysotile	um	0.174 U	0.199 U	0.174 U	0.174 U
E150.1	pH	pH units	7.73	7.56	7.55	7.54
E1613B	2,3,7,8-Tetrachlorodibenzo-P-Dioxin	pg/l	9.01 U	9.43 U	9.43 U	9.43 U
E1632	Arsenic	ug/l	11	7.5	0.624	0.161
E1632	Arsenic, Pentavalent	ug/l	4.19	2.12	0.563	0.12
E1632	Arsenic, Trivalent	ug/l	6.81	5.38	0.061	0.041
E1653A	2,3,4,6-Tetrachlorophenol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U
E1653A	2,4,5-Trichlorophenol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U
E1653A	2,4,6-Trchlorophenol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U
E1653A	3,4,5-Trichlorocatechol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
E1653A	3,4,5-Trichloroguaiacol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U
E1653A	3,4,6-Trichlorocatechol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
E1653A	3,4,6-Trichloroguaiacol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U
E1653A	4,5,6-Trichloroguaiacol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U
E1653A	Pentachlorophenol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
E1653A	Tetrachlorocatechol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
E1653A	Tetrachloroguaiacol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
E1653A	Trichlorosyringol	ug/l	2.5 U	2.5 U	2.5 U	2.5 U
E1694M	2-Hydroxy-4-Methoxybenzophenone	ng/l	2.0 U	2.0 U	2.0 U	2.0 U
E1694M	5,5-Diphenylhydantoin	ng/l	5.0 U	5.0 U	5.0 U	5.0 U
E1694M	Acetaminophen	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Alpha-Estradiol	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Androstenedione	ng/l	10 U	10 U	10 U	10 U

## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)
			7/14/2009	6/8/2009	6/8/2009	6/8/2009
E1694M	Atrazine	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Bisphenol A	ng/l	10 U	10 U	10 U	10 U
E1694M	Caffeine	ng/l	5.0 U	5.0 U	5.0 U	5.0 U
E1694M	Carbamazepine	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Diazepam	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Diclofenac	ng/l	2.0 U	2.0 U	2.0 U	2.0 U
E1694M	Diethylstilbestrol	ng/l	2.0 U	2.0 U	2.0 U	2.0 U
E1694M	Estradiol	ng/l	2.0 U	2.0 U	2.0 U	2.0 U
E1694M	Estriol	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Estrone	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Ethinyl Estradiol	ng/l	2.0 U	2.0 U	2.0 U	2.0 U
E1694M	Fluoxetine	ng/l	1.0 U	1.0 U	4.2	1.0 U
E1694M	Gemfibrozil	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Hydrocodone	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Ibuprofen	ng/l	5.0 U	10 U	10 U	10 U
E1694M	Iopromide	ng/l	10 U	10 U	10 U	10 U
E1694M	Meprobamate	ng/l	5.0 U	5.0 U	5.0 U	5.0 U
E1694M	Methadone	ng/l	5.0 U	5.0 U	5.0 U	5.0 U
E1694M	N,N-Diethyl-3-Methyl Benzamide	ng/l	5.0 U	5.0 U	5.0 U	5.0 U
E1694M	Naproxen	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Pentoxifylline	ng/l	1.0 U	1.0 U	1.0 U	1.0 U
E1694M	Progesterone	ng/l	10 U	10 U	10 U	10 U
E1694M	Salicylic Acid	ng/l	10 U	10 U	10 U	10 U
E1694M	Sulfamethoxazole	ng/l	1.0 U	1.0 U	2.3	1.0 U
E1694M	Testosterone	ng/l	10 U	10 U	10 U	10 U
E1694M	Triclosan	ng/l	10 U	10 U	10 U	10 U
E1694M	Trimethoprim	ng/l	5.0 U	5.0 U	5.0 U	5.0 U
E180.1	Turbidity	ntu	3.9	3.6	6.0	8.0
E200.7	Aluminum	ug/l	50 U	54	392	704
E200.7	Calcium	ug/l	36,900	24,400	11,300	7,100
E200.7	Iron	ug/l	808	1,110	358	492
E200.7	Magnesium	ug/l	11,500	6,530	3,630	1,530
E200.7	Manganese	ug/l	415	498	17	17
E200.7	Potassium	ug/l	5,040	4,040	1,170	584
E200.7	Silicon	ug/l	21,500	24,100	5,630	7,550

## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)
			7/14/2009	6/8/2009	6/8/2009	6/8/2009
E200.7	Sodium	ug/l	16,400	9,580	9,470	5,030
E200.7	Zinc	ug/l	2.0 U	2.0 U	22	2.0 U
E200.8	Antimony	ug/l	0.05 U	0.05 U	0.12	0.05 U
E200.8	Arsenic	ug/l	7.6	7.24	0.85	0.5 U
E200.8	Barium	ug/l	26	20	18	4.01
E200.8	Beryllium	ug/l	0.02 U	0.02 U	0.02 U	0.02 U
E200.8	Cadmium	ug/l	0.02 U	0.02 U	0.02 U	0.02 U
E200.8	Chromium, Total	ug/l	0.15 U	0.2 U	0.34	0.26
E200.8	Copper	ug/l	0.15	0.33	1.48	2.08
E200.8	Lead	ug/l	0.061 U	0.061	0.267	0.105
E200.8	Nickel	ug/l	0.48	0.26	0.45	0.34
E200.8	Selenium	ug/l	1.0 U	1.0 U	1.0 U	1.0 U
E200.8	Silver	ug/l	0.02 U	0.02 U	0.02 U	0.02 U
E200.8	Thallium	ug/l	0.02 U	0.02 U	0.02 U	0.02 U
E200.8	Uranium	ug/l	0.02 U	0.02 U	0.375	0.02 U
E245.1	Mercury	ug/l	0.2 U	0.2 U	0.2 U	0.2 U
E300	Bromide	mg/l	0.1 U	0.2	0.1 U	0.1 U
E300	Chloride	mg/l	19	12	5.4	3.3
E300	Fluoride	mg/l	0.3	0.2	0.2 U	0.2 U
E300	Nitrogen, Nitrate (As N)	mg/l	0.1 U	0.1 U	0.4	0.3
E300	Nitrogen, Nitrite	mg/l	0.1 U	0.1 U	0.1 U	0.1 U
E300	Sulfate	mg/l	0.2	0.3	6.9	5.8
E314.0	Perchlorate	ug/l	1.0 U	1.0 U	1.0 U	1.0 U
E335.4	Cyanide	mg/l	0.01 U	0.01 U	0.01 U	0.01 U
E350.1	Nitrogen, Ammonia (As N)	mg/l	0.26	0.28	0.05 U	0.05 U
E365.3	Phosphate, Ortho-	mg/l	0.35	0.58	0.03	0.03
E504.1	1,2,3-Trichloropropane	ug/l	0.049 U	0.049 U	0.048 U	0.049 U
E504.1	1,2-Dibromo-3-Chloropropane	ug/l	0.0096 U	0.0097 U	0.0095 U	0.0096 U
E504.1	1,2-Dibromoethane	ug/l	0.0096 U	0.0097 U	0.0095 U	0.0096 U
E508.1	Aldrin	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Alpha-BHC	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Alpha-Endosulfan	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Beta Endosulfan	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Beta-BHC	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Chlordane	ug/l	0.098 U	0.1 U	0.1 U	0.099 U

## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)
			7/14/2009	6/8/2009	6/8/2009	6/8/2009
E508.1	Chlorinated Camphene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E508.1	DDT	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Dichlorodiphenyldichloroethane	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Dieldrin	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Endrin	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Heptachlor	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Heptachlor Epoxide	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Heptachlor Epoxide (Isomer A)	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Lindane	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	Methoxychlor	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	P,P'-DDE	ug/l	0.0098 U	0.01 U	0.01 U	0.0099 U
E508.1	PCB-1016 (Arochlor 1016)	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E508.1	PCB-1221 (Arochlor 1221)	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E508.1	PCB-1232 (Arochlor 1232)	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E508.1	PCB-1242 (Arochlor 1242)	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E508.1	PCB-1248 (Arochlor 1248)	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E508.1	PCB-1254 (Arochlor 1254)	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E508.1	PCB-1260 (Arochlor 1260)	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E515.4	2,4,5-T	ug/l	0.1 U	0.1 U	0.1 U	0.1 U
E515.4	2,4,5-TP (Silvex)	ug/l	0.05 U	0.05 U	0.05 U	0.05 U
E515.4	2,4-D	ug/l	0.1 U	0.1 U	0.1 U	0.1 U
E515.4	2,4-DB	ug/l	0.2 U	0.2 U	0.2 U	0.2 U
E515.4	Dalapon	ug/l	1.0 U	1.0 U	1.0 U	1.0 U
E515.4	Dicamba	ug/l	0.2 U	0.2 U	0.2 U	0.2 U
E515.4	Dinoseb	ug/l	0.2 U	0.2 U	0.2 U	0.2 U
E515.4	Pentachlorophenol	ug/l	0.04 U	0.04 U	0.04 U	0.04 U
E515.4	Picloram	ug/l	0.1 U	0.1 U	0.1 U	0.1 U
E524.2	1,1,1,2-Tetrachloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,1,1-Trichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,1,2,2-Tetrachloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,1,2-Trichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,1-Dichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,1-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,1-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,2,3-Trichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U

## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures 7/14/2009	RSW-2 (Mint Farm Energy Well) 6/8/2009	RSW-1 (Columbia River) 6/8/2009	RSW-3 (Cowlitz River) 6/8/2009
E524.2	1,2,3-Trichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,2,4-Trichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,2,4-Trimethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,2-Dibromo-3-Chloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,2-Dibromoethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,2-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,2-Dichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,2-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,3,5-Trimethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,3-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,3-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	1,4-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	2,2-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	2-Chlorotoluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	4-Chlortoluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Bromoform	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Butyl Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Carbon Tetrachloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Chlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Chlorobromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Chlorodibromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Chloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Chloroform	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Chloromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Cis-1,2-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Cis-1,3-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Cymene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Dibromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Dichlorobromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Dichlorodifluoromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Di-Isopropyl Ether (Dipe)	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Ethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Hexachlorobutadiene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Isopropybenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U

## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures 7/14/2009	RSW-2 (Mint Farm Energy Well) 6/8/2009	RSW-1 (Columbia River) 6/8/2009	RSW-3 (Cowlitz River) 6/8/2009
E524.2	Methyl Bromide	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Methyl Ethyl Ketone	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
E524.2	Methyl Isobutyl Ketone	ug/l	7.0 U	7.0 U	7.0 U	7.0 U
E524.2	Methyl Tert-Butyl Ether	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Methylene Chloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Mono Bromo Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Naphthalene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	N-Propylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Sec-Butylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Styrene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Tert-Butylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Tetrachloroethene (PCE)	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Toluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Trans-1,2-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Trans-1,3-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Trichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Trichlorofluoromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Vinyl Chloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Xylene, M,P-	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E524.2	Xylene, O-	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E525.2	Acenaphthene	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E525.2	Acetochlor	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Alachlor	ug/l	0.07 U	0.072 U	0.072 U	0.071 U
E525.2	Ametryn	ug/l	0.2 U		0.2 U	0.2 U
E525.2	Anthracene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Atrazine	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Benzo(K)Fluoranthene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Benzo(A)Anthracene	ug/l	0.02 U	0.02 U	0.02 U	0.02 U
E525.2	Benzo(A)Pyrene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Benzo(B)Fluoranthene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Bis(2-Ethylhexyl) Phthalate	ug/l	0.59 U	0.6 U	0.6 U	0.59 U
E525.2	Butyl Benzyl Phthalate	ug/l	0.49 U	0.5 U	0.5 U	0.5 U
E525.2	Butylate	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E525.2	Chlorothalonil	ug/l	0.1 U	0.1 U	0.1 U	0.1 U
E525.2	Chlorpyrifos	ug/l	0.1 U	0.1 U	0.1 U	0.1 U

## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures 7/14/2009	RSW-2 (Mint Farm Energy Well) 6/8/2009	RSW-1 (Columbia River) 6/8/2009	RSW-3 (Cowlitz River) 6/8/2009
E525.2	Chrysene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Cis-Permethrin	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Cyanazine	ug/l	0.098 U		0.097 U	0.098 U
E525.2	Diazinon	ug/l	0.098 U		0.098 U	0.098 U
E525.2	Dibenz(A,H)Anthracene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Dichlorovos	ug/l	0.1 U	0.1 U	0.1 U	0.1 U
E525.2	Diethyl Phthalate	ug/l	0.49 U	0.5 U	0.5 U	0.5 U
E525.2	Dimethoate	ug/l	0.5 U		0.5 U	0.5 U
E525.2	Di-N-Butyl Phthalate	ug/l	0.59 U	0.6 U	0.6 U	0.59 U
E525.2	Diocetyl Adipate	ug/l	0.59 U	0.6 U	0.6 U	0.59 U
E525.2	Disulfoton	ug/l	0.2 U	0.2 U	0.2 U	0.2 U
E525.2	Fenamiphos (Nemacur)	ug/l	0.2 U	0.2 U	0.2 U	0.2 U
E525.2	Fluoranthene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Fluorene	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E525.2	Hexachlorobenzene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Hexachlorocyclopentadiene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Hexazinone	ug/l	0.1 U	0.1 U	0.1 U	0.1 U
E525.2	Indeno(1,2,3-C,D)Pyrene	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Isophorone	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E525.2	Malathion	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Metolachlor	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Metribuzin	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Napropamide	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E525.2	Parathion, Ethyl	ug/l	0.2 U	0.2 U	0.2 U	0.2 U
E525.2	Parathion, Methyl	ug/l	0.5 U		0.5 U	0.5 U
E525.2	Pebulate	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E525.2	Prometon	ug/l	0.049 U		0.049 U	0.049 U
E525.2	Prometryn	ug/l	0.098 U		0.098 U	0.098 U
E525.2	Pronamide	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Propachlor	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Propazine	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E525.2	Pyrene	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E525.2	S-Ethyl Di-N,N-Propylthiocarbamate	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Simazine	ug/l	0.049 U	0.05 U	0.05 U	0.05 U
E525.2	Tebuthiuron	ug/l	0.2 U	0.2 U	0.2 U	0.2 U

## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)
			7/14/2009	6/8/2009	6/8/2009	6/8/2009
E525.2	Terbacil	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Terbufos	ug/l	0.1 U	0.1 U	0.1 U	0.1 U
E525.2	Terbutryn	ug/l	0.1 U		0.1 U	0.1 U
E525.2	Trans-Permethrin	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E525.2	Trifluralin	ug/l	0.098 U	0.1 U	0.1 U	0.099 U
E531.1	3-Hydroxycarbofuran	ug/l	1.0 U	0.5 U	0.5 U	0.5 U
E531.1	Aldicarb	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E531.1	Aldicarb Sulfone	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E531.1	Aldicarb Sulfoxide	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E531.1	Carbaryl	ug/l	1.0 U	0.5 U	0.5 U	0.5 U
E531.1	Carbofuran	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E531.1	Methiocarb	ug/l	1.0 U	0.5 U	0.5 U	0.5 U
E531.1	Methyl N',N'-Dimethyl-N-((Methylcarbamoyl)Oxy)-1-	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E531.1	Propoxur	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E531.1	S-Methyl-N-((Methylcarbamoyl)-Oxy)-Thioacetimidate	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
E547	Glyphosate	ug/l	6.0 U	6.0 U	6.0 U	6.0 U
E548.1	Endothal	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
E549.2	Diquat	ug/l	0.4 U	0.4 U	0.4 U	0.4 U
E900	Alpha, Gross	pci/l		0.79	1.5	1.5
E900	Beta, Gross	pci/l	4.0	6.4	3.8	0.85
E903.1	Radium 226	pci/l	0.04	0.04	0.13	-0.01
E904.0	Radium 228	pci/l	-0.18	0.6	0.99	1.5
NCASI85.02RA_FA	12-Chlorodehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	14-Chlorodehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	1-Phenanthrenecarboxylic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	3,4,5-Trichloroguaiacol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	9,10-Dichlorostearic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	Abietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	Dehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	Dichlorodehydroabietic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	Linoleic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	Oleic Acid/Linolenic Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	Pimaric Acid	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
NCASI85.02RA_FA	Tetrachloroguaiacol	ug/l	5.0 U	5.0 U	5.0 U	5.0 U
SW8081	Mirex	ug/l	0.0099 U	0.01 U	0.01 U	0.0099 U



## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures 7/14/2009	RSW-2 (Mint Farm Energy Well) 6/8/2009	RSW-1 (Columbia River) 6/8/2009	RSW-3 (Cowlitz River) 6/8/2009
SW8151	2,4,5-T	ug/l		0.2 U	0.2 U	0.2 U
SW8151	2,4,5-TP (Silvex)	ug/l		0.2 U	0.2 U	0.2 U
SW8151	2,4-D	ug/l		0.39 U	0.39 U	0.39 U
SW8151	2,4-DB	ug/l		0.39 U	0.39 U	0.39 U
SW8151	Dalapon	ug/l		0.39 U	0.39 U	0.39 U
SW8151	Dicamba	ug/l		0.2 U	0.2 U	0.2 U
SW8151	Dichlorprop	ug/l		0.39 U	0.39 U	0.39 U
SW8151	Dinoseb	ug/l		0.2 U	0.2 U	0.2 U
SW8151	Mcpa (2-Methyl-4-Chlorophenoxy Acetic Acid)	ug/l		96 U	97 U	96 U
SW8151	Mcpp (2-(2-Methyl-4-Chlorophenoxy) Propanoic Acid)	ug/l		96 U	97 U	96 U
SW8151A	Mcpa (2-Methyl-4-Chlorophenoxy Acetic Acid)	ug/l	98 U			
SW8151A	Mcpp (2-(2-Methyl-4-Chlorophenoxy) Propanoic Acid)	ug/l	98 U			
SW8270	1,2,4,5-Tetrachlorobenzene	ug/l	9.9 U		9.8 U	9.8 U
SW8270	1-Amino-3-Nitrobenzene	ug/l	0.97 U	0.95 U	0.99 U	0.96 U
SW8270	1-Methylnaphthalene	ug/l	0.2 U	0.2 U	0.2 U	0.2 U
SW8270	2,2'-Dichlorodiethylether	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	2,3,4,6-Tetrachlorophenol	ug/l	0.97 U	0.95 U	0.99 U	0.96 U
SW8270	2,4,5-Trichlorophenol	ug/l	0.49 U	0.48 U	0.5 U	0.48 U
SW8270	2,4,6-Trchlorophenol	ug/l	0.49 U	0.48 U	0.5 U	0.48 U
SW8270	2,4-Dichlorophenol	ug/l	0.49 U	0.48 U	0.5 U	0.48 U
SW8270	2,4-Dimethylphenol	ug/l	3.9 U	3.8 U	4.0 U	3.9 U
SW8270	2,4-Dinitrophenol	ug/l	3.9 U	3.8 U	4.0 U	3.9 U
SW8270	2-Chloronaphthalene	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	2-Chlorophenol	ug/l	0.49 U	0.48 U	0.5 U	0.48 U
SW8270	2-Methylnaphthalene	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	3,3'-Dichlorobenzidine	ug/l	2.0 U	1.9 U	2.0 U	2.0 U
SW8270	4-Chloroaniline	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	4-Nitroaniline	ug/l	0.97 U	0.95 U	0.99 U	0.96 U
SW8270	Aniline	ug/l	0.97 U	0.95 U	0.99 U	0.96 U
SW8270	Azobenzene	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	Benzoic Acid	ug/l	4.9 U	4.8 U	5.0 U	4.8 U
SW8270	Benzyl Alcohol	ug/l	0.49 U	0.48 U	0.5 U	0.48 U
SW8270	Bis(2-Chloroethoxy) Methane	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	Chlorobenzilate	ug/l	9.9 U		9.8 U	9.8 U
SW8270	Demeton-O	ng/l	9.6 U	10 U	10 U	10 U

## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)
			7/14/2009	6/8/2009	6/8/2009	6/8/2009
SW8270	Demeton-S	ng/l	10 U	10 U	10 U	10 U
SW8270	Dichlorovos	ng/l	9.6 U	10 U	10 U	10 U
SW8270	EPN (O-Ethyl Phnyl (P-Nitrophenyl) Thiophophonate)	ng/l	9.6 U	10 U	10 U	10 U
SW8270	Hexachloroethane	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	Nitrobenzene	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	N-Nitrosodimethylamine	ug/l	2.0 U	1.9 U	2.0 U	2.0 U
SW8270	N-Nitrosodiphenylamine	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	N-Nitrosodipropylamine	ug/l	0.2 U	0.19 U	0.2 U	0.2 U
SW8270	O-Cresol	ug/l	0.49 U	0.48 U	0.5 U	0.48 U
SW8270	Parathion, Methyl	ng/l	9.6 U	10 U	10 U	10 U
SW8270	Parathion, Methyl	ug/l	9.9 U		9.8 U	9.8 U
SW8270	P-Cresol	ug/l	0.49 U	0.48 U	0.5 U	0.48 U
SW8270	Pentachlorobenzene	ug/l	9.9 U		9.8 U	9.8 U
SW8270	Pentachloronitrobenzene	ug/l	50 U		49 U	49 U
SW8270	Phenol	ug/l	0.49 U	0.48 U	0.5 U	0.48 U
SW8270	Phorate	ng/l	9.6 U	10 U	10 U	10 U
SW8270	Phorate	ug/l	9.9 U		9.8 U	9.8 U
SW8270	S,S,S-Tributyl Phosphorotrithioate	ng/l	9.6 U	10 U	10 U	10 U
SW8270	Stirophos	ng/l	9.6 U	10 U	10 U	10 U
SW8270	Sulfotep	ng/l	9.6 U	10 U	10 U	10 U
SW8270	Sulfotep	ug/l	9.9 U		9.8 U	9.8 U
SW8270SIM	PBDE 100	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 128	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 138	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 153	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 154	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 17	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 183	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 190	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 203	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 206	ng/l	9.7 U	10 U	10 U	10 U
SW8270SIM	PBDE 209	ng/l	9.7 U	10 U	10 U	10 U
SW8270SIM	PBDE 28	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 47	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 66	ng/l	0.97 U	1.0 U	1.0 U	1.0 U

## Appendix U: Potential Raw Source Water Analytical Results

Method	Analyte	Units	Deep Groundwater		Surface Water	
			Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)
			7/14/2009	6/8/2009	6/8/2009	6/8/2009
SW8270SIM	PBDE 71	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 85	ng/l	0.97 U	1.0 U	1.0 U	1.0 U
SW8270SIM	PBDE 99	ng/l	1.0 U	1.0 U	1.0 U	1.0 U

**Notes:**

- 1 U = The compound was analyzed for, but was not detected at or above the MRL or MDL.
- 2 P = The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than
- 3 mg/l = milligrams per liter
- 4 umhos/cm = micromhos per centimeter
- 5 cm<sup>-1</sup> = absorbance per centimeter
- 6 mpn/100ml = most probable number of organisms per 100 milliliters
- 7 ng/l = nanograms per liter
- 8 um = micrometers
- 9 pg/l = picogram per liter
- 10 ug/l = micrograms per liter
- 11 ntu = nephelometric turbidity units
- 12 pci/l = picocuries per liter

## Appendix V

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### Production Well 1 Analytical Results

## Appendix V: Production Well 1 Analytical Results

Method	Compound	Units	PW-1	PW-1	PW-1	PW-1	PW-1	PW-1	PW-1
			10/5/09	10/7/09	10/15/09	10/21/09	10/29/09	11/4/09	11/11/09
A2120B	Color, Apparent	color unit	25					20	15
A2320B	Alkalinity, Total (As CaCO3)	mg/l	105	111	107	107	101	102	104
A2340B	Hardness As CaCO3	mg/l	99					87	88
A2510B	Conductivity	umhos/cm	240	248	230	238	230	232	228
A2540C	Total Dissolved Solids (Residue, Filterable)	mg/l	187	170	172			166	175
A4500HB	pH	pH units	7.34						
A4500SIO2C	Silica	mg/l	51	52	57	57	59	59	59
A5310C	Dissolved Organic Carbon	mg/l		3.02	1.27	1.68	2.55	2.68	2.24
A5310C	Total Organic Carbon	mg/l	1.62	1.57	1.43	1.41	1.49	1.45	1.29
A5540C	Methylene Blue Active Substances	mg/l	0.05 U					0.05 U	0.05 U
A5910B	UV254	cm -1	0.039					0.04	0.05
A9221E	Fecal Coliform	mpn/100ml	2.0 U					2.0 U	2.0 U
A9223B	Coliform	mpn/100ml	7.4					1.0	1.0 U
A9223B	E. Coli	mpn/100ml							1.0 U
E100.2	Amphibole	ug/l	5.0 U						
E100.2	Amphibole	um						10 U	0.194 U
E100.2	Chrysotile	ug/l	5.0 U						
E100.2	Chrysotile	um						10 U	0.194 U
E150.1	pH	pH units						7.91	7.37
E1613B	2,3,7,8-Tetrachlorodibenzo-P-Dioxin	pg/l	9.09 U					9.52 U	9.17 U
E1632	Arsenic	ug/l	7.7					7.3	7.2
E1632	Arsenic, Pentavalent	ug/l	2.0 U					1.0 U	1.1
E1632	Arsenic, Trivalent	ug/l	6.7					6.6	6.1
E180.1	Turbidity	ntu	2.97					2.01	1.28
E200.7	Aluminum	ug/l	5.0 U					2.0 U	2.3
E200.7	Calcium	ug/l	28,200					23,900	25,500
E200.7	Iron	ug/l	1,050	1,010	903	889	893	867	901
E200.7	Magnesium	ug/l	7,020					6,670	5,790
E200.7	Manganese	ug/l	681	696			549	554	574
E200.7	Potassium	ug/l	3,570					3,620	3,250
E200.7	Silicon	ug/l	26,400					27,200	24,700
E200.7	Sodium	ug/l	11,000					10,100	9,280
E200.7	Zinc	ug/l	2.0 U					2.0 U	2.0 U
E200.8	Aluminum	ug/l		2.0 U	2.0 U	2.8	2.0 U		
E200.8	Antimony	ug/l	0.05 U					0.05 U	0.05 U
E200.8	Arsenic	ug/l	6.1	6.2	5.4	5.5	5.5	5.7	5.85
E200.8	Barium	ug/l	14					12	13
E200.8	Beryllium	ug/l	0.02 U					0.02 U	0.02 U
E200.8	Cadmium	ug/l	0.02 U					0.02 U	0.02 U
E200.8	Chromium, Total	ug/l	0.2 U					0.2	0.2 U
E200.8	Copper	ug/l	0.2					0.1 U	0.1 U
E200.8	Lead	ug/l	0.02 U					0.02 U	0.02 U
E200.8	Manganese	ug/l			560	536			
E200.8	Nickel	ug/l	0.6					0.7	0.67
E200.8	Selenium	ug/l	1.0 U					1.0 U	1.0 U
E200.8	Silver	ug/l	0.07					0.08	0.033
E200.8	Thallium	ug/l	0.02 U					0.02 U	0.02 U
E200.8	Uranium	ug/l	0.02 U					0.02 U	0.02 U
E245.1	Mercury	ug/l	0.2 U					0.2 U	0.2 U
E300	Chloride	mg/l	8.36	8.53	8.23	7.86	7.66	7.48	7.56
E300	Fluoride	mg/l	0.2 U					0.21	0.24
E300	Nitrogen, Nitrate (As N)	mg/l	0.1 U					0.1 U	0.1 U
E300	Nitrogen, Nitrite	mg/l	0.1 U					0.1 U	0.1 U
E300	Sulfate	mg/l	0.45	0.31	0.45	0.45	0.54	0.57	0.6
E335.4	Cyanide	mg/l	0.01 U					0.01 U	0.01 U
E350.1	Nitrogen, Ammonia (As N)	mg/l	0.194	0.194	0.202	0.2	0.192	0.197	0.213
E365.3	Phosphorus, Total (As P)	mg/l							0.585
E365.3	Phosphorus, Total Orthophosphate (As P)	mg/l	0.329					0.346	0.575
E504.1	1,2-Dibromo-3-Chloropropane	ug/l	0.0097 U					0.0096 U	0.0097 U
E504.1	1,2-Dibromoethane	ug/l	0.0097 U					0.0096 U	0.0097 U
E508.1	Chlordane	ug/l	0.098 U					0.098 U	0.098 U
E508.1	Chlorinated Camphene	ug/l	0.098 U					0.098 U	0.098 U
E508.1	Endrin	ug/l	0.0098 U					0.0098 U	0.0098 U
E508.1	Heptachlor	ug/l	0.0098 U					0.0098 U	0.0098 U

## Appendix V: Production Well 1 Analytical Results

Method	Compound	Units	PW-1	PW-1	PW-1	PW-1	PW-1	PW-1	PW-1
			10/5/09	10/7/09	10/15/09	10/21/09	10/29/09	11/4/09	11/11/09
E508.1	Heptachlor Epoxide	ug/l	0.0098 U					0.0098 U	0.0098 U
E508.1	Lindane	ug/l	0.0098 U					0.0098 U	0.0098 U
E508.1	Methoxychlor	ug/l	0.0098 U					0.0098 U	0.0098 U
E508.1	PCB-1016 (Arochlor 1016)	ug/l	0.049 U					0.049 U	0.049 U
E508.1	PCB-1221 (Arochlor 1221)	ug/l	0.098 U					0.098 U	0.098 U
E508.1	PCB-1232 (Arochlor 1232)	ug/l	0.098 U					0.098 U	0.098 U
E508.1	PCB-1242 (Arochlor 1242)	ug/l	0.098 U					0.098 U	0.098 U
E508.1	PCB-1248 (Arochlor 1248)	ug/l	0.098 U					0.098 U	0.098 U
E508.1	PCB-1254 (Arochlor 1254)	ug/l	0.098 U					0.098 U	0.098 U
E508.1	PCB-1260 (Arochlor 1260)	ug/l	0.098 U					0.098 U	0.098 U
E515.4	2,4,5-TP (Silvex)	ug/l	0.05 U					0.05 U	0.05 U
E515.4	2,4-D	ug/l	0.1 U					0.1 U	0.1 U
E515.4	Dalapon	ug/l	1.0 U					1.0 U	1.0 U
E515.4	Dinoseb	ug/l	0.2 U					0.2 U	0.2 U
E515.4	Pentachlorophenol	ug/l	0.04 U					0.04 U	0.04 U
E515.4	Picloram	ug/l	0.1 U					0.1 U	0.1 U
E524.2	1,1,1-Trichloroethane	ug/l	0.5 U					0.5 U	0.5 U
E524.2	1,1,2-Trichloroethane	ug/l	0.5 U					0.5 U	0.5 U
E524.2	1,1-Dichloroethene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	1,2,4-Trichlorobenzene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	1,2-Dibromo-3-Chloropropane	ug/l	0.5 U					0.5 U	0.5 U
E524.2	1,2-Dibromoethane	ug/l	0.5 U					0.5 U	0.5 U
E524.2	1,2-Dichlorobenzene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	1,2-Dichloroethane	ug/l	0.5 U					0.5 U	0.5 U
E524.2	1,2-Dichloropropane	ug/l	0.5 U					0.5 U	0.5 U
E524.2	1,4-Dichlorobenzene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Benzene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Bromoform	ug/l						0.5 U	0.5 U
E524.2	Carbon Tetrachloride	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Chlorobenzene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Chlorodibromomethane	ug/l						2.1	1.9
E524.2	Chloroform	ug/l						53	42
E524.2	cis-1,2-Dichloroethene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Dichlorobromomethane	ug/l						10	8.9
E524.2	Ethylbenzene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Methylene Chloride	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Styrene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Tetrachloroethene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Toluene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	trans-1,2-Dichloroethene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Trichloroethene	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Vinyl Chloride	ug/l	0.5 U					0.5 U	0.5 U
E524.2	Xylene, Total	ug/l	1.0 U					1.0 U	1.0 U
E525.2	Alachlor	ug/l	0.07 U					0.07 U	0.07 U
E525.2	Atrazine	ug/l	0.098 U					0.098 U	0.098 U
E525.2	Benzo(A)Pyrene	ug/l	0.02 U					0.02 U	0.02 U
E525.2	Bis(2-Ethylhexyl) Phthalate	ug/l	0.59 U					0.59 U	0.59 U
E525.2	Diethyl Adipate	ug/l	0.59 U					0.59 U	0.59 U
E525.2	Hexachlorobenzene	ug/l	0.098 U					0.098 U	0.098 U
E525.2	Hexachlorocyclopentadiene	ug/l	0.098 U					0.098 U	0.098 U
E525.2	Simazine	ug/l	0.049 U					0.049 U	0.049 U
E531.1	Aldicarb	ug/l	0.5 U					0.5 U	0.5 U
E531.1	Aldicarb Sulfone	ug/l	0.5 U					0.5 U	0.5 U
E531.1	Aldicarb Sulfoxide	ug/l	0.5 U					0.5 U	0.5 U
E531.1	Carbofuran	ug/l	0.5 U					0.5 U	0.5 U
E531.1	Methyl N,N'-Dimethyl-N-((Methylcarbamoyl)Oxy)-1-	ug/l	0.5 U					0.5 U	0.5 U
E547	Glyphosate	ug/l	6.0 U					6.0 U	6.0 U
E548.1	Endothal	ug/l	5.0 U					5.0 U	5.0 U
E549.2	Diquat	ug/l	0.4 U					0.4 U	0.4 U
E552.2	Bromoacetic Acid	ug/l						1.0 U	1.0 U
E552.2	Chloroacetic Acid	ug/l						2.0 U	2.0 U
E552.2	Dibromoacetic Acid	ug/l						1.0 U	1.0 U
E552.2	Dichloroacetic Acid	ug/l						1.0 U	1.0 U
E552.2	Trichloroacetic Acid	ug/l						1.0 U	1.0 U

## Appendix V: Production Well 1 Analytical Results

Method	Compound	Units	PW-1	PW-1	PW-1	PW-1	PW-1	PW-1	PW-1
			10/5/09	10/7/09	10/15/09	10/21/09	10/29/09	11/4/09	11/11/09
E900	Alpha, Gross	pci/l	-0.56					-3.1	0.21
E900	Beta, Gross	pci/l	2.9					1.2	5.0
E903.1	Radium 226	pci/l	0.05					0.15	-0.05
E904.0	Radium 228	pci/l	1.8					2.9	0.9
GC/SCD	Hydrogen Sulfide	ug/l	0.84 U					0.84 U	1.4
SM2540C	Total Dissolved Solids (Residue, Filterable)	mg/l				173	169		

**Notes:**

- 1 U = The compound was analyzed for, but was not detected at or above the MRL or MDL.
- 2 mg/l = milligrams per liter
- 3 umhos/cm = micromhos per centimeter
- 4 cm -1 = absorbance per centimeter
- 5 mpn/100ml = most probable number of organisms per 100 milliliters
- 6 pg/l = picogram per liter
- 7 ug/l = micrograms per liter
- 8 ntu = nephelometric turbidity units

## Appendix W

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### Technical Memorandum 5: Human Health Risk Assessment



## Technical Memorandum 5 Human Health Risk Assessment

Date: 4 January 2010

To: Ms. Amy Blain  
City of Longview

From: Laura Kennedy  
William C. McCarthy, P.E.

Reviewed by: Tom Peters, P.E.  
Stephen Booth, P.E.  
Don Larson

Subject: Human Health Risk Assessment  
City of Longview  
Design of Groundwater Source and Regional Water Treatment Facilities  
K/J 0997003\*00

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### Introduction and Objective

Kennedy/Jenks Consultants (Kennedy/Jenks) conducted a Human Health Risk Assessment (HHRA) as part of a more comprehensive Environmental Risk Assessment (ERA) for the City of Longview, Washington on use of groundwater in a deep aquifer below the Mint Farm Industrial Park (Mint Farm) as a raw drinking water source. The purpose of this memorandum is to document the objective, procedure and results of the HHRA.

### Method and Procedures

The following discussion presents the methods and procedures used to conduct the HHRA on the deep aquifer raw water source and other local surface water sources.

### **Components of the Human Health Risk Assessment**

The HHRA is comprised of the following component activities, conducted in the order presented:

- Water quality investigation and data collection
- Screening of data based on health-protective levels
- Analysis of impact to human health for water quality analyte concentrations found above the screening level; characterization of probability of risk to human health

The description of HHRA components, and method and procedures employed in completing these components, is discussed in more detail below.

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### **Definitions of Key Terms and Concepts used in this HHRA**

In order to precisely and clearly communicate the procedures and findings of the HHRA this report defines key terms and concepts used throughout the work. The following are definitions of these key terms and concepts. Note that most laboratory analyses of these water quality analytes use electronic probe methods of detection – hence the occasional reference to “signal”.

**Analyte** – An element or a compound, either man-made or naturally occurring in a water quality sample, for the detection of which a known and approved laboratory analytical method was used.

**Method Detection Limit (MDL)** – The concentration of an analyte that, when processed through the complete analytical method, produces a signal with a 99 percent probability that it is different from the blank. The lowest concentration at which an analyte can be confirmed present in a sample.

**Method Reporting Limit (MRL)** – The lowest concentration normally reported by an analytical laboratory. It represents a conservative, nominal reporting limit designed to be representative of the minimum quantifiable concentration level for a particular analyte in a real environmental matrix as opposed to the statistically derived calculated MDL (method detection limit) as per 40 CFR 136 Appendix B, Procedure. This MRL defined by the laboratory must be greater than the statistically derived MDL and is typically the lowest calibration level used by the lab.

**Primary Maximum Contaminant Level (MCL)** – Enforceable state and federal drinking water quality standards developed for protection of human health under the Safe Drinking Water Act, promulgated by the EPA under authority of the Safe Drinking Water Act.

**Screening Level** – The concentration of an analyte used to assess the potential for human health risks; concentrations below the screening level are considered to not have adverse effects on human health. Concentrations above the screening level do not necessarily indicate the potential for adverse effects, but rather a need for further assessment. For the purposes of this HHRA, the MCL, where established, is used as the Screening Level. Where an MCL is not established, other appropriate sources for screening levels are cited.

**Human Health Risk** – The probability of adverse impact (chronic or acute disease, chronic or acute toxicity, carcinogenicity, or teratogenicity) to human health from exposure to analytes

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### Water Quality Investigation and Data Gathering

**Description.** The ERA (as reflected in this specific HHRA) conducted water quality assessment based upon water samples collected and analyzed for a wide range of constituents that is much greater in number and diversity than the list of analytes currently regulated at state and federal levels for drinking water. This HHRA includes a number of organic chemicals based upon the historical and current industrial activities in the Mint Farm and adjacent areas. A number of contaminants of emerging concern (CECs), including endocrine-disrupting compounds (EDCs), candidates for potential future regulation, were also included. Thus, this HHRA was not only concerned with analytes in current drinking water regulations but was more stringent and mindful of public concern and public health in considering a wider range of analytes with potential to affect human health. Over 14,500 individual analyses were performed on soil and water samples taken between July and November of 2009.

**Procedure.** Samples were collected from the three potentially feasible raw water sources: the deep groundwater aquifer, the Cowlitz River (the City's current source of supply), and the Columbia River. For purposes of the HHRA, only water quality data were considered in evaluating the water sources. Other feasibility factors (e.g., water rights, costs, permitting) were not addressed in the HHRA.

Kennedy/Jenks collected samples from nine deep (DW-1 through DW-9) groundwater sentinel wells in addition to two existing water wells, Chinook Ventures and Puget Sound Energy Well #1 (RSW-2) to characterize the deep groundwater aquifer. The Columbia River water sample was taken at the Weyerhaeuser Company intake to be representative of the surface water quality of the Columbia River (RSW-1). The Cowlitz River (RSW-3) water sample was taken at the City of Longview Regional Water Treatment Plant, to represent the water quality for the current City raw water source. All sample locations are shown on Figure 1.

The sampling protocol for this water source investigation was organized into three tiers. These tiers were developed to meet the objectives of the different sample types. The sampling protocol (Technical Memorandum 2, May 5, 2009) is included in the Appendix to this report.

The three sample tiers are as follows:

- **Tier 1** – Analytes related to historic industrial and commercial activities in the area of the current industrial park. Results and data from the Tier 1 sampling are presented and evaluated in the *Phase I and Phase II ESA Report* and are not discussed further in this report.
- **Tier 2** – **(a)** Analytes regulated by the State of Washington Department of Health (DOH) Office of Drinking Water, and **(b)** Analytes related to historic industrial and

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commercial activities in the Mint Farm area, as determined by the Phase I ESA and public input.

- **Tier 3** – CECs and other analytes that are not currently regulated in drinking water but are being studied by the Federal EPA, and may be regulated in the future.

### Screening of Water Quality Data

**Description.** The screening level evaluation is used as a health-protective approach to determine whether a more detailed risk assessment is required. In a screening level evaluation, detected concentrations (above the MRLs) are compared directly against health-based screening levels. The presence of a chemical at concentrations below its respective screening level can generally be assumed not to pose a significant, long-term (chronic) or short-term (acute) threat to human health. Concentrations above a screening level do not necessarily indicate an unacceptable risk to human health, but rather the need for further evaluation.

As the intended use of the deep aquifer groundwater is as a municipal water supply, screening levels for protection of drinking water were used in the HHRA. To evaluate the potential use of groundwater as a drinking water source, MCLs were used as screening levels in the HHRA. If a state or federal primary MCL was not listed for a detected chemical, then the following hierarchy was used to identify an appropriate screening level:

- Washington Administrative Code (WAC) 173-200-040 Table 1 Groundwater Quality Criteria. The purpose of WAC Groundwater Quality Criteria is to establish maximum contaminant concentrations for the protection of a variety of beneficial uses of Washington's groundwater. Drinking water is the beneficial use generally requiring the highest quality of groundwater.
- Washington Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method B cleanup levels for groundwater. MTCA Method B cleanup levels were developed by Ecology's Toxic Cleanup Program for potable groundwater assessed for Cleanup Program sites. MTCA Method B cleanup levels are considered to be human health based screening levels and are not enforceable drinking water quality standards.
- United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tap Water. The USEPA RSLs were developed for sites assessed under the Comprehensive Environmental Response, Compensation,

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and Liability Act (CERCLA). RSLs are considered to be human health based screening levels and are not enforceable drinking water quality standards.

All of the screening levels used in the HHRA are based on long-term exposure to water used as drinking water. Assumptions used in developing the screening levels, such as duration of exposure or amount of water consumed, are intended to be protective of human health. Margins of safety are also incorporated in the toxicity values used in developing the screening levels. Comparing all detected analyte concentrations to these screening levels, without consideration of treatment to reduce concentrations, results in a HHRA that provides a conservative assessment of human health risk.

**Procedure.** Kennedy/Jenks conducted a health-based screening of the water quality data, presented in Table A in the Appendix of this report, by comparing detected concentrations for each chemical against the respective health-based screening level.

The HHRA did not screen analytical data for general parameters, microbial parameters, and the majority of the naturally occurring minerals and salts. Naturally occurring minerals and salts are not of health concern and are common constituents in most groundwater supplies. Microbial parameters were not considered because the proposed future production wells will be disinfected and tested for microbial parameters guided by Washington State regulations.

### Findings of Water Quality Investigation

Under the sampling protocol discussed above and included in the Appendix of this report, a total of over 300 analytes for the three raw water sources were tested for by Columbia Analytical Services (CAS) located in Kelso, Washington. Only analyte results that are greater than or equal to the MRL are reported. Table A in the Appendix presents water quality analytical results.

### Findings of Water Quality Screening

There were no analytes detected above the respective screening levels. Additional information on the results of the water quality screening is provided below.

#### **Detections of Tier 2(a) Analytes - Regulated Raw Water Constituents**

There were no exceedances of respective health-based screening levels for the deep groundwater samples. There also were no exceedances of respective screening levels for surface water samples collected from either the Columbia or Cowlitz Rivers.

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While iron and manganese are not of a health concern, these metals can cause objectionable color and odor, and staining of plumbing fixtures. The City will provide a groundwater treatment plant as part of this groundwater project. The treatment will address iron and manganese such that the iron levels are below 0.05 milligrams per liter (mg/L) and the manganese levels are below 0.02 mg/L in the distributed water. Treatment will also ensure that arsenic levels remain below 5 micrograms per liter ( $\mu\text{g/L}$ ) in the distributed water.

### Detection of Tier 2(b) Analytes – Constituents of Local Historical Concern

No Tier 2(b) analytes were detected above screening levels.

### Detections of Tier 3 Analytes – CECs and Other Compounds of Concern

Several unregulated Tier 3 chemicals including pharmaceuticals, personal care products, and a plastic additive, were detected above the MRL in the deep groundwater and surface water samples. See Table A for analyte concentrations. With the exception of bisphenol A, State or Federal health-based screening levels do not exist for the detected analytes because they have only recently emerged as being of potential concern. Recent research studies have reviewed the toxicological effects of various unregulated chemicals and proposed acceptable daily intakes (ADIs). The ADIs were converted to drinking water equivalent levels (DWELs) for use as screening levels following the methodology used by the USEPA in developing maximum contaminant level goals, as presented in Table 1 below. None of the analytes was detected at a concentration above their respective screening levels and they are not considered a significant human health risk.

**Table 1. Screening Levels for Unregulated Analytes**

Analyte	ADI <sup>1</sup> ( $\mu\text{g/kg-day}$ )	DWEL <sup>2</sup> ( $\mu\text{g/L}$ )	Source
2-Hydroxy-4-Methoxybenzophenone	133 <sup>3</sup>	4655	NTP 1992
Bisphenol A	-- <sup>4</sup>	--	--
Caffeine	2500	87500	Nawrot 2003
Fluoxetine	0.097	3.4	Snyder 2009
N,N-Diethyl-3-Methyl Benzamide	2.3	81	Nellor 2009
Sulfamethoxazole	4.3	151	Snyder 2009

<sup>1</sup> Acceptable daily intake

<sup>2</sup> Drinking water equivalent level

<sup>3</sup> ADI calculated using a no observed adverse effects level of 400 milligrams per kilogram per day and an uncertainty factor of 3000.

<sup>4</sup> The MTCA Method B cleanup level for groundwater was used as the screening level for bisphenol A.

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Note that in Table 1, only analytes detected at concentrations greater than or equal to the MRL are listed and that the DWEL, calculated from the ADI, is consistent with USEPA methodology for MCL goals, where

$$DWEL = (ADI * 70 \text{ kg}) / 2 \text{ L/day, where ADI is in } \mu\text{g/kg-day}$$

### Conclusions on Human Health Risk of Analyzed Raw Water Sources

Of the more than 300 analytes evaluated in the HHRA, no analytes were found above their screening levels in the potential raw water source samples. Specific conclusions that have been developed based upon the analysis presented in this Technical Memorandum are as follows:

- The sampling and analysis yields no evidence of contamination due to the previous use of various chemicals associated with the historical farming and industrial activities in or near the Mint Farm. For example, the industrial and agricultural chemicals PCBs, dioxins and furans, cyanide, perchlorate, atrazine and mercury were not detected in the deep groundwater samples.
- Iron and manganese were detected at levels that are not of health concern in the deep groundwater samples, however, these metals can cause objectionable color and odor, and staining of plumbing fixtures. Although the EPA does not regulate these metals, the DOH regulates them in drinking water due to their aesthetic problems. Treatment will be provided to prevent such aesthetic problems by removing iron and manganese from the water to meet specific treated water quality goals (0.05 mg/l and 0.02 mg/l, respectively) lower than the state MCL.
- Iron and manganese did not exceed the screening levels in either of the surface water supplies. However, iron concentrations were above the state's secondary MCL and treatment would be required for either surface water source.
- Based upon the analysis presented in this Technical Memorandum, the raw water sources with appropriate treatment would meet all State and Federal water quality regulations as safe sources of drinking water supply.

### Ongoing Water Quality Investigations

Kennedy/Jenks is performing a hydrogeologic study of the deep groundwater aquifer. A three-dimensional numerical groundwater model is also being developed to simulate groundwater flow and evaluate potential contaminants with potential to impact

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production wells. Data collected from the current production well test pumping will be used to evaluate analyte transport from outside the sentinel well network, if any, as well as evaluate the degree of hydraulic connection between the shallow groundwater and deep aquifer. Production well test pumping results are presented in Part 2 of the Preliminary Design Report.

Certain activities will continue in order to monitor ongoing water quality for the life of the groundwater facility:

- The completed groundwater model will evaluate travel time zones for the production well field, serve as a tool to assist in delineation of a well head protection area, and inform a long-term groundwater monitoring program for the sentinel well network.
- Now and in the future, sentinel wells will be monitored for select water quality parameters and groundwater levels. If analytes of concern are detected in these wells a new HHRA may be requested by the City to determine changes in human health risk.

## References

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Method	Tier	Analyte	Cas #	Units	Screening Level		Surface Water					Deep Groundwater Aquifer													
					Value	Source	RSW-1 (Columbia River) 06/08/2009	RSW-3 (Cowlitz River) 06/08/2009	RSW-2 (Puget Sound Energy) 06/08/2009	Chinook Ventures 07/14/2009	PW-1 10/05/2009	PW-1 11/04/2009	PW-1 11/11/2009	DW-9 08/13/2009	DW-9 11/12/2009	DW-8 06/09/2009	DW-7 06/10/2009	DW-7 11/12/2009	DW-6 06/10/2009	DW-5 06/11/2009	DW-4 06/11/2009	DW-3 06/12/2009	DW-2 06/12/2009	DW-1 06/09/2009	DW-1 11/11/2009
<b>General Parameters</b>																									
A2120B	2a	Color, Apparent	COLOR	color unit	--	--	10	10	5	5	25	20	15	10	20	5	ND	25	ND	10	10	10	5	10	15
A2320B	2a	Alkalinity, Total (As CaCO3)	ALK	mg/l	--	--	43	27	104	164	105	102	104	112	89	112	86	87	112	112	170	163	133	85	85
A2340B	2a	Hardness As CaCO3	HARDNESS	mg/l	--	--	43.2	24	87.8	140	99	87	88	92.9	70	87.9	72.5	74	85.9	99.2	134	151	103	69.8	74
A2510B	2a	Conductivity	COND	umhos/cm	--	--	128	83	247	376	240	232	228	435	194	239	197	191	239	273	377	407	293	194	189
A2540C	2a	Total Dissolved Solids (Residue, Filterable)	TDS	mg/l	--	--	62	55	164	235	187	166	175	161	145	160	150	147	161	165	233	247	182	160	144
A4500SIO2	2a	Silica	7631-86-9	mg/l	--	--	10.7	23.9	58.8	43.1	51	59	59	59.7	55	76.9	70.3	55	64.2	67	54.3	72.5	52.6	74.7	55
A5310C	2a	Total Organic Carbon	TOC	mg/l	--	--	2.2	1.3	0.8	1.9	1.62	1.45	1.29	1.9	1.2	1.5	1.4	1.17	2.5	2.3	4.3	1.8	2.1	1.3	1.28
A5910B	2a	UV254	CASID10075	cm -1	--	--	33.4	40.9	29	0.048	0.039	0.04	0.05	0.037	0.04	0.04	0.054	0.03	0.03	0.05	0.04	0.04	0.06	0.053	0.053
E150.1	2a	pH	pH	pH units	--	--	7.55	7.54	7.56	7.73	7.34	7.91	7.37	7.78	7.38	7.61	7.53	7.22	7.83	8.04	7.55	7.83	8.05	7.46	7.26
E180.1	2a	Turbidity	TURBIDITY	ntu	--	--	6	8	3.6	3.9	2.97	2.01	1.28	3.3	0.99	6.7	3.3	2.58	1.3	0.5	33.7	4.2	11.5	8.8	12
<b>Microbial Parameters</b>																									
A9221E	2a	Fecal Coliform	FECCOLI	mpn/100ml	--	--	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A9223B	2a	Coliform	COLIF	mpn/100ml	--	--	205	210	ND	ND	7.4	1.0	ND	2	ND	7	12	ND	1	22	248	ND	7	ND	ND
<b>Contaminants To Be Removed Using Treatment</b>																									
E200.8	2a	Arsenic	7440-38-2	µg/l	10	MCL	0.85	ND	7.24	7.6	6.1	5.7	5.85	3.46	4.14	9.17	2.95	4.3	2.29	3.75	6.32	5.82	4.88	2.44	3.77
E200.7	2a	Iron	7439-89-6	µg/l	26,000	EPA RSL <sup>2</sup>	358	492	1,110	808	1,050	867	901	1,060	637	1,840	1,220	1,220	450	308	5,030	966	895	2,250	2,370
E200.7	2a	Manganese	7439-96-5	µg/l	2,200	MTCA Method B <sup>2</sup>	17.2	17	498	415	681	554	574	587	513	593	671	662	371	233	804	377	216	605	548
<b>Naturally Occurring Minerals and Salts</b>																									
E200.7	2a	Calcium	7440-70-2	µg/l	--	--	11,300	7,100	24,400	36,900	28,200	23,900	25,500	26,500	22,600	24,800	20,800	21,600	24,100	26,400	41,900	44,600	27,000	20,200	21,500
E200.7	2a	Magnesium	7439-95-4	µg/l	--	--	3,630	1,530	6,530	11,500	7,020	6,670	5,790	6,500	5,010	6,280	4,950	4,950	6,270	8,070	7,030	9,730	8,660	4,740	4,810
E200.7	2a	Potassium	7440-09-7	µg/l	--	--	1,170	584	4,040	5,040	3,570	3,620	3,250	3,620	3,200	4,140	3,010	2,950	3,670	4,050	3,740	3,960	5,610	2,730	2,650
E200.7	2a	Silicon	Si	µg/l	--	--	5,630	7,550	24,100	21,500	26,400	27,200	24,700	24,600	25,300	22,600	23,200	24,200	21,100	20,400	24,000	21,500	17,900	23,400	24,500
E200.7	2a	Sodium	7440-23-5	µg/l	--	--	9,470	5,030	9,580	16,400	11,000	10,100	9,280	10,300	8,890	11,500	8,990	8,620	10,800	12,000	23,700	18,800	14,000	8,650	8,850
E300	2a	Bromide	BROMIDE	mg/l	--	--	ND	ND	0.2	ND	NA	NA	NA	ND	NA	NA	NA	NA	0.2	NA	0.2	NA	0.2	ND	ND
E300	2a	Chloride	CHLORIDE	mg/l	--	--	5.4	3.3	12.1	19.2	8.36	7.48	7.56	6.5	5.28	7.9	5.7	6.3	12.3	16.4	18.7	32.4	12.1	5.4	5.17
E300	2a	Fluoride	FL_T	mg/l	4	MCL	ND	ND	0.2	0.3	ND	0.21	0.24	ND	0.27	ND	0.3	0.28	0.2	ND	ND	ND	0.3	0.2	0.31
E300	2a	Nitrogen, Nitrate (As N)	N_NO3	mg/l	10	MCL	0.4	0.3	ND	ND	ND	ND	ND	ND	ND	0.3	0.3	ND	0.3	0.3	0.3	0.3	0.3	ND	ND
E300	2a	Nitrogen, Nitrite	NO2N	mg/l	1	MCL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND
E350.1	2a	Nitrogen, Ammonia (As N)	N_NH3	mg/l	--	--	ND	ND	0.28	0.26	0.194	0.197	0.213	0.13	ND	0.34	0.25	0.232	0.1	ND	0.51	0.16	ND	0.32	0.345
E365.3	2a	Phosphate, Ortho-	14265-44-2	mg/l	--	--	0.03	0.03	0.58	0.35	NA	NA	NA	0.41	NA	0.25	0.35	NA	0.45	0.53	0.09	0.21	0.34	0.17	NA
E365.3	2a	Phosphorus, Total (As P)		mg/l	--	--	NA	NA	NA	NA	NA	NA	0.585	NA	0.566	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E365.3	2a	Phosphorus, Total Orthophosphate (As P)		mg/l	--	--	NA	NA	NA	NA	0.329	0.346	0.575	NA	0.386	NA	NA	0.247	NA	NA	NA	NA	NA	NA	0.102
E300	2a	Sulfate	SULFATE	mg/l	--	--	6.9	5.8	0.3	0.2	0.45	0.57	0.6	0.4	1.42	0.3	2.4	1.61	1.7	0.7	1	0.5	3.4	1.6	1.26
<b>Metals</b>																									
E200.7	2a	Aluminum	7429-90-5	µg/l	37,000	EPA RSL	392	704	54	ND	ND	ND	2.3	23.2	2.5	4.3	4.7	ND	47.6	23.2	1,460	37.9	435	4.3	ND
E200.7	2a	Zinc	7440-66-6	µg/l	4,800	MTCA Method B	22.3	ND	ND	ND	ND	ND	3.6	ND	ND	2.3	ND	ND	ND	ND	8.5	ND	ND	ND	ND
E200.8	2a	Antimony	7440-36-0	µg/l	6	MCL	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07	ND	ND	ND
E200.8	2a	Barium	7440-39-3	µg/l	2,000	MCL	18.1	4.01	20.4	25.7	14	12	13	13.8	10	25.1	12.9	11	12.5	13.2	24.8	30.9	27.7	12	11
E200.8	2a	Beryllium	7440-41-7	µg/l	4	MCL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.043	ND	0.021	ND	ND
E200.8	2a	Cadmium	7440-43-9	µg/l	5	MCL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.029	ND	0.039	ND	ND	ND
E200.8	2a	Chromium, Total	7440-47-3	µg/l	100	MCL	0.34	0.26	ND	ND	0.2	ND	0.73	ND	ND	ND	ND	ND	ND	2.59	ND	0.63	ND	0.27	ND
E200.8	2a	Copper	7440-50-8	µg/l	1,300	MCL	1.48	2.08	0.33	0.15	0.2	ND	0.3	ND	ND	ND	ND	ND	ND	2.27	0.17	0.8	ND	ND	ND
E200.8	2a	Lead	7439-92-1	µg/l	15	MCL	0.267	0.105	0.061	ND	ND	ND	0.05	ND	ND	ND	ND	0.033	ND	0.355	0.022	0.177	ND	ND	ND
E200.8	2a	Nickel	7440-02-0	µg/l	100	MCL	0.45	0.34	0.26	0.48	0.6	0.67	0.67	1.68	0.63	0.86	0.77	0.61	0.91	0.96	2.59	1.51	1.26	0.74	0.57
E200.8	2a	Silver	7440-22-4	µg/l	50	WA GQC	ND	ND	ND	ND	0.07	0.08	0.033	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
E200.8	2a	Uranium	U	µg/l	30	MCL	0.375	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.025	ND	0.052	ND	ND	ND	ND	ND
<b>Volatile and Synthetic Organics</b>																									
E524.2	2a	Chloroform	00067-66-3	µg/l	80	MCL (total trihalomethanes)	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	0.86	ND	ND	ND	2.4	ND	ND	ND
E525.2	2a	Bis(2-Ethylhexyl) Phthalate	00117-81-7	µg/l	6	MCL	ND	ND	ND	ND	ND	ND	ND	0.68	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND
E525.2	2b	Diocetyl Adipate	103-23-1	µg/l	56	EPA RSL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND
E525.2	2b	Fluoranthene	00206-44-0	µg/l	640	MTCA Method B	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
E525.2	2b	Isophorone	00078-59-1	µg/l	46	MTCA Method B	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND
<b>Radiation</b>																									
E900	2a	Alpha, Gross	ALPHA	pci/l	15	MCL	1.5	1.5	0.79		-0.56	-3.1	0.21		0.28	3.8		0.34	-0.26	0.57	0.47	-0.5	0.37		
E900	2a	Beta, Gross	BETA	pci/l	50	WA GQC (MCL is 4 millirems/year)	3.8	0.85	6.4	4	2.9	1.2	5.0	3.7	1.2	3.6	3.3	2.0	3.9	2.9					