Appendix E
Duwamish Marine Center Historical Data

E–1. Chemicals Detected in Soil

E–2. Chemicals Detected in Groundwater

E–3. Historical Owners and Tenants

E–4. Relevant Pages from Duwamish Marine Center Documents

Table E-1
Chemicals Detected in Soil
Duwamish Marine Center

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	1-Methylnaphthalene	0.72	24		<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	1-Methylnaphthalene	0.33	24		<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	1-Methylnaphthalene	0.078	24		<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	2-Methylnaphthalene	1.3	320	1.4	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	2-Methylnaphthalene	0.48	320	1.4	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	2-Methylnaphthalene	0.21	320	0.073	2.9
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	2-Methylnaphthalene	0.14	320	1.4	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	2-Methylnaphthalene	0.061	320	1.4	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Acenaphthene	3	4800	0.06	50
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Acenaphthene	0.68	4800	1.2	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Acenaphthene	0.14	4800	1.2	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Acenaphthene	0.061	4800	1.2	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Acenaphthene	0.013	4800	1.2	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Acenaphthylene	0.68		1.4	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Acenaphthylene	0.062		0.069	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Acenaphthylene	0.061		1.4	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Anthracene	2.4	2400	1.2	2.0
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Anthracene	0.42	2400	24	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Anthracene	0.13	2400	24	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Anthracene	0.13	2400	24	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Anthracene	0.098	2400	24	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Anthracene	0.014	2400	24	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Anthracene	0.01	2400	24	<1
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Antimony	47	32		1.5
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	Antimony	37	32		1.2
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Antimony	21	32		<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Aroclor 1242	34	0.5		68
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Aroclor 1242	6.0	0.5		12
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Aroclor 1242	5.8	0.5		12
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Aroclor 1242	5	0.5		10
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Aroclor 1242	3.7	0.5		7.4
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5.5	Aroclor 1242	2.3	0.5		4.6
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Aroclor 1242	1.7	0.5		3.4
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Aroclor 1242	1	0.5		2.0

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Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	Aroclor 1242	0.53	0.5		1.1
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Aroclor 1242	0.50	0.5		1.0
Farallon Consulting 2002d	Mar-02	B7-6-7.5	6-7.5	Aroclor 1242	0.24	1		<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Aroclor 1242	0.12	0.5		<1
Farallon Consulting 2002d	Mar-02	MW-1-5-6.5	5-6.5	Aroclor 1242	0.068	0.5		<1
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Aroclor 1254	3.1	0.5	0.065	48
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Aroclor 1254	2.5	0.5	1.3	5.0
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Aroclor 1254	1.8	0.5	1.3	3.6
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Aroclor 1254	1.7	0.5	1.3	3.4
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Aroclor 1254	1.7	0.5	1.3	3.4
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	Aroclor 1254	1.6	0.5	1.3	3.2
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Aroclor 1254	0.97	0.5	1.3	1.9
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Aroclor 1254	0.38	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B7-6-7.5	6-7.5	Aroclor 1254	0.19	1	0.065	2.9
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Aroclor 1254	0.14	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Aroclor 1254	0.13	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	MW-2-2-4	2-4	Aroclor 1254	0.091	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Aroclor 1254	0.086	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Aroclor 1260	2.4	0.5	1.3	4.8
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Aroclor 1260	1.7	0.5	0.065	26
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Aroclor 1260	0.79	0.5	1.3	1.6
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Aroclor 1260	0.39	0.5	1.3	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Aroclor 1260	0.15	0.5	0.065	2.3
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Aroclor 1260	0.15	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Aroclor 1260	0.12	0.5	1.3	<1
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Aroclor 1260	0.11	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Aroclor 1260	0.11	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B7-6-7.5	6-7.5	Aroclor 1260	0.11	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	Aroclor 1260	0.10	0.5	1.3	<1
The Riley Group, Inc. 2000	Jul-00	TP-2-4.5'	4.5	Aroclor 1260	0.09	0.5	1.3	<1
The Riley Group, Inc. 2000	Jul-00	TP-1-2.5'	2.5	Aroclor 1260	0.081	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B17-0-3	0-3	Aroclor 1260	0.060	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Aroclor 1260	0.057	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B10-1-3	1-3	Arsenic	12	0.67	12000	18

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The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Benzo(a)anthracene	2.4		0.27	8.9
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Benzo(a)anthracene	0.43		5.4	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Benzo(a)anthracene	0.25		5.4	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Benzo(a)anthracene	0.17		5.4	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Benzo(a)anthracene	0.051		5.4	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Benzo(a)anthracene	0.018		5.4	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Benzo(a)pyrene	0.91	0.1	0.21	9.1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Benzo(a)pyrene	0.38	0.1	4.2	3.8
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Benzo(a)pyrene	0.37	0.1	4.2	3.7
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Benzo(a)pyrene	0.15	0.1	4.2	1.5
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Benzo(a)pyrene	0.043	0.1	4.2	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Benzo(a)pyrene	0.012	0.1	4.2	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Benzo(b)fluoranthene	1		0.45	2.2
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Benzo(b)fluoranthene	0.39		9.0	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Benzo(b)fluoranthene	0.36		9.0	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Benzo(b)fluoranthene	0.19		9.0	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Benzo(b)fluoranthene	0.046		9.0	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Benzo(b)fluoranthene	0.031		9.0	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Benzo(g,h,i)perylene	0.28		1.6	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Benzo(g,h,i)perylene	0.23		1.6	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Benzo(g,h,i)perylene	0.10		1.6	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Benzo(g,h,i)perylene	0.028		1.6	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Benzo(g,h,i)perylene	0.013		1.6	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Benzo(g,h,j)perylene	0.32		0.078	4.1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Benzo(k)fluoranthene	0.8		0.45	1.8
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Benzo(k)fluoranthene	0.34		9.0	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Benzo(k)fluoranthene	0.23		9.0	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Benzo(k)fluoranthene	0.13		9.0	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Benzo(k)fluoranthene	0.029		9.0	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Benzo(k)fluoranthene	0.024		9.0	<1
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Cadmium	43	2	1.7	25
The Riley Group, Inc. 2000	Jul-00	TP-1-1.5'	1.5	Cadmium	7.1	2	34	3.6
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5.5	Cadmium	5.3	2	34	2.7
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Cadmium	2.4	2	34	1.2

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Farallon Consulting 2002d	Mar-02	B5-6-9	6-9	Cadmium	1.9	2	34	<1
Farallon Consulting 2002d	Mar-02	B5-6-9	6-9	Cadmium	1.9	2	34	<1
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	Cadmium	1.4	2	34	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Cadmium	1.1	2	1.7	<1
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Cadmium	1.1	2	34	<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Cadmium	0.86	2	34	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Cadmium	0.65	2	34	<1
The Riley Group, Inc. 2000	Jul-00	TP-2-3.5'	3.5	Cadmium	0.64	2	34	<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Cadmium	0.53	2	34	<1
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Chromium	2700	19	5400	142
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Chromium	400	19	5400	21
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Chromium	260	19	5400	14
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Chromium	230	19	5400	12
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	Chromium	150	19	5400	7.9
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Chromium	110	19	5400	5.8
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Chromium	80	19	270	4.2
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5.5	Chromium	61	19	5400	3.2
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Chromium	40	19	5400	2.1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Chromium	40	19	5400	2.1
Farallon Consulting 2002d	Mar-02	MW2-2-4	2-4	Chromium	38	19	5400	2.0
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	Chromium	36	19	5400	1.9
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Chromium	33	19	5400	1.7
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Chromium	28	19	5400	1.5
Farallon Consulting 2002d	Mar-02	B17-0-3	0-3	Chromium	26	19	5400	1.4
Farallon Consulting 2002d	Mar-02	MW1-5-6.5	5-6.5	Chromium	25	19	5400	1.3
Farallon Consulting 2002d	Mar-02	B12-0-1	0-1	Chromium	24	19	5400	1.3
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Chromium	23	19	5400	1.2
The Riley Group, Inc. 2000	Jul-00	TP-2-3.5'	3.5	Chromium	22	19	5400	1.2
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Chromium	21	19	270	1.1
Farallon Consulting 2002d	Mar-02	MW3-3.5-4	3.5-4	Chromium	21	19	5400	1.1
Farallon Consulting 2002d	Mar-02	MW-3-2.5-4	2.5-4	Chromium	21	19	5400	1.1
The Riley Group, Inc. 2000	Jul-00	TP-1-1.5'	1.5	Chromium	19	19	5400	1.0
Farallon Consulting 2002d	Mar-02	MW1-3-4.5	3-4.5	Chromium	16	19	5400	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Chromium	15	19	5400	<1

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Farallon Consulting 2002d	Mar-02	MW1-7.5-9	7.5-9	Chromium	13	19	270	<1
The Riley Group, Inc. 2000	Aug-00	B-4-3	10-11.5	Chromium	12	19	270	<1
Farallon Consulting 2002d	Mar-02	B6-0-3	0-3	Chromium	12	19	5400	<1
Farallon Consulting 2002d	Mar-02	B9-1.5-2	1.5-2	Chromium	10	19	5400	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Chromium	8.1	19	5400	<1
Farallon Consulting 2002d	Mar-02	B10-1-3	1-3	Chromium	7.4	19	5400	<1
Farallon Consulting 2002d	Mar-02	B10-1-3	1-3	Chromium	7.4	19	5400	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Chromium	7.2	19	5400	<1
Farallon Consulting 2002d	Mar-02	B11-0-3	0-3	Chromium	7	19	5400	<1
Farallon Consulting 2002d	Mar-02	B4-3-6	3-6	Chromium	5.1	19	5400	<1
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Chromium (hexavalent)	2.23	19	5400	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Chrysene	3.4		0.46	7.4
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Chrysene	0.52		9.2	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Chrysene	0.52		9.2	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Chrysene	0.45		9.2	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Chrysene	0.29		9.2	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Chrysene	0.1		9.2	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Chrysene	0.031		9.2	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Chrysene	0.031		9.2	<1
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Copper	7400	3000	780	9.5
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Copper	6900	3000	780	8.8
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Copper	530	3000	780	<1
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Copper	320	3000	780	<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Copper	290	3000	780	<1
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Copper	220	3000	780	<1
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	Copper	210	3000	780	<1
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Copper	190	3000	780	<1
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5.5	Copper	150	3000	780	<1
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Copper	100	3000	780	<1
The Riley Group, Inc. 2000	Jul-00	TP-1-1.5'	1.5	Copper	99	3000	780	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Copper	91	3000	39	2.3
Farallon Consulting 2002d	Mar-02	B17-0-3	0-3	Copper	91	3000	780	<1
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	Copper	85	3000	780	<1
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Copper	71	3000	780	<1

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Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Copper	71	3000	780	<1
Farallon Consulting 2002d	Mar-02	MW3-3.5-4	3.5-4	Copper	62	3000	780	<1
Farallon Consulting 2002d	Mar-02	MW-3-2.5-4	2.5-4	Copper	62	3000	780	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Copper	58	3000	780	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Copper	58	3000	780	<1
The Riley Group, Inc. 2000	Jul-00	TP-2-3.5'	3.5	Copper	45	3000	780	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Copper	43	3000	780	<1
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Copper	41	3000	780	<1
Farallon Consulting 2002d	Mar-02	MW2-2-4	2-4	Copper	36	3000	780	<1
The Riley Group, Inc. 2000	Aug-00	B-4-3	10-11.5	Copper	26	3000	39	<1
Farallon Consulting 2002d	Mar-02	MW1-3-4.5	3-4.5	Copper	23	3000	780	<1
Farallon Consulting 2002d	Mar-02	MW1-7.5-9	7.5-9	Copper	23	3000	39	<1
Farallon Consulting 2002d	Mar-02	B10-1-3	1-3	Copper	21	3000	780	<1
Farallon Consulting 2002d	Mar-02	B10-1-3	1-3	Copper	21	3000	780	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Copper	16	3000	780	<1
Farallon Consulting 2002d	Mar-02	B6-0-3	0-3	Copper	15	3000	780	<1
Farallon Consulting 2002d	Mar-02	B9-1.5-2	1.5-2	Copper	14	3000	780	<1
Farallon Consulting 2002d	Mar-02	B12-0-1	0-1	Copper	12	3000	780	<1
Farallon Consulting 2002d	Mar-02	MW1-5-6.5	5-6.5	Copper	12	3000	780	<1
Farallon Consulting 2002d	Mar-02	B11-0-3	0-3	Copper	9.5	3000	780	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Dibenzo(a,h)anthracene	0.096		0.033	2.9
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Dibenzo(a,h)anthracene	0.087		0.66	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Dibenzo(a,h)anthracene	0.011		0.66	<1
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Diesel-Range Hydrocarbons	5100	2000		2.6
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Diesel-Range Hydrocarbons	4800	2000		2.4
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Diesel-Range Hydrocarbons	4800	2000		2.4
Farallon Consulting 2002d	Mar-02	B7-6-7.5	6-7.5	Diesel-Range Hydrocarbons	1400	2000		<1
Farallon Consulting 2002d	Mar-02	B7-6-7.5	6-7.5	Diesel-Range Hydrocarbons	1400	2000		<1
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Diesel-Range Hydrocarbons	730	2000		<1
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Diesel-Range Hydrocarbons	730	2000		<1
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Diesel-Range Hydrocarbons	350	2000		<1
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Diesel-Range Hydrocarbons	350	2000		<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Diesel-Range Hydrocarbons	210	2000		<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Diesel-Range Hydrocarbons	180	2000		<1

Table E-1
Chemicals Detected in Soil
Duwamish Marine Center

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Diesel-Range Hydrocarbons	180	2000		<1
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Diesel-Range Hydrocarbons	160	2000		<1
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Diesel-Range Hydrocarbons	97	2000		<1
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Diesel-Range Hydrocarbons	97	2000		<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Fluoranthene	12	3200	1.2	10
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Fluoranthene	1.3	3200	24	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Fluoranthene	0.38	3200	24	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Fluoranthene	0.3	3200	24	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Fluoranthene	0.082	3200	24	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Fluoranthene	0.028	3200	24	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Fluorene	4.3	3200	0.081	53
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Fluorene	0.63	3200	1.6	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Fluorene	0.17	3200	1.6	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Fluorene	0.064	3200	1.6	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Fluorene	0.021	3200	1.6	<1
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Heavy Oil-Range Hydrocarbons	21000	2000		11
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Heavy Oil-Range Hydrocarbons	10000	2000		5.0
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Heavy Oil-Range Hydrocarbons	10000	2000		5.0
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Heavy Oil-Range Hydrocarbons	3700	2000		1.9
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Heavy Oil-Range Hydrocarbons	3700	2000		1.9
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Heavy Oil-Range Hydrocarbons	3700	2000		1.9
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Heavy Oil-Range Hydrocarbons	3700	2000		1.9
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Heavy Oil-Range Hydrocarbons	1800	2000		<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Heavy Oil-Range Hydrocarbons	1800	2000		<1
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Heavy Oil-Range Hydrocarbons	1800	2000		<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Heavy Oil-Range Hydrocarbons	1800	2000		<1
Farallon Consulting 2002d	May-02	TP-1-1.5	1.5	Heavy Oil-Range Hydrocarbons	1600	2000		<1
The Riley Group, Inc. 2000	Jul-00	TP-1-1.5'	1.5	Heavy Oil-Range Hydrocarbons	1600	2000		<1
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	Heavy Oil-Range Hydrocarbons	1600	2000		<1
Farallon Consulting 2002d	Mar-02	MW-2-2-4	2-4	Heavy Oil-Range Hydrocarbons	1400	2000		<1
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Heavy Oil-Range Hydrocarbons	1400	2000		<1
Farallon Consulting 2002d	Mar-02	MW2-2-4	2-4	Heavy Oil-Range Hydrocarbons	1400	2000		<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Heavy Oil-Range Hydrocarbons	850	2000		<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Heavy Oil-Range Hydrocarbons	850	2000		<1

Table E-1
Chemicals Detected in Soil
Duwamish Marine Center

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Heavy Oil-Range Hydrocarbons	820	2000		<1
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Heavy Oil-Range Hydrocarbons	820	2000		<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Heavy Oil-Range Hydrocarbons	810	2000		<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Heavy Oil-Range Hydrocarbons	810	2000		<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Heavy Oil-Range Hydrocarbons	790	2000		<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Heavy Oil-Range Hydrocarbons	790	2000		<1
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Heavy Oil-Range Hydrocarbons	720	2000		<1
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Heavy Oil-Range Hydrocarbons	720	2000		<1
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	Heavy Oil-Range Hydrocarbons	580	2000		<1
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	Heavy Oil-Range Hydrocarbons	580	2000		<1
Farallon Consulting 2002d	Mar-02	B5-6-9	6-9	Heavy Oil-Range Hydrocarbons	570	2000		<1
Farallon Consulting 2002d	Mar-02	B5-6-9	6-9	Heavy Oil-Range Hydrocarbons	570	2000		<1
Farallon Consulting 2002d	Mar-02	B7-6-7.5	6-7.5	Heavy Oil-Range Hydrocarbons	540	2000		<1
Farallon Consulting 2002d	Mar-02	B7-6-7.5	6-7.5	Heavy Oil-Range Hydrocarbons	540	2000		<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Heavy Oil-Range Hydrocarbons	440	2000		<1
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Heavy Oil-Range Hydrocarbons	390	2000		<1
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Heavy Oil-Range Hydrocarbons	390	2000		<1
Farallon Consulting 2002d	Mar-02	B17-0-3	0-3	Heavy Oil-Range Hydrocarbons	270	2000		<1
Farallon Consulting 2002d	Mar-02	B17-0-3	0-3	Heavy Oil-Range Hydrocarbons	270	2000		<1
Farallon Consulting 2002d	Mar-02	B9-1.5-2	1.5-2	Heavy Oil-Range Hydrocarbons	160	2000		<1
Farallon Consulting 2002d	Mar-02	MW-3-2.5-4	2.5-4	Heavy Oil-Range Hydrocarbons	160	2000		<1
Farallon Consulting 2002d	Mar-02	B9-1.5-2	1.5-2	Heavy Oil-Range Hydrocarbons	160	2000		<1
Farallon Consulting 2002d	Mar-02	MW3-2.5-4	2.5-4	Heavy Oil-Range Hydrocarbons	160	2000		<1
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5.5	Heavy Oil-Range Hydrocarbons	140	2000		<1
Farallon Consulting 2002d	Mar-02	MW-1-3-4.5	3-4.5	Heavy Oil-Range Hydrocarbons	120	2000		<1
Farallon Consulting 2002d	Mar-02	MW1-3-4.5	3-4.5	Heavy Oil-Range Hydrocarbons	120	2000		<1
Farallon Consulting 2002d	Mar-02	B6-0-3	0-3	Heavy Oil-Range Hydrocarbons	100	2000		<1
Farallon Consulting 2002d	Mar-02	B6-0-3	0-3	Heavy Oil-Range Hydrocarbons	100	2000		<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Heavy Oil-Range Hydrocarbons	82	2000		<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Heavy Oil-Range Hydrocarbons	82	2000		<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Indeno(1,2,3-c,d)pyrene	0.26		1.8	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Indeno(1,2,3-c,d)pyrene	0.23		1.8	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Indeno(1,2,3-c,d)pyrene	0.093		1.8	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Indeno(1,2,3-c,d)pyrene	0.016		1.8	<1

Table E-1
Chemicals Detected in Soil
Duwamish Marine Center

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Indeno(1,2,3-c,d)pyrene	0.013		1.8	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Indeno(1,2,3-cd)pyrene	0.31		0.088	3.5
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Lead	12000	250	67	179
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5.5	Lead	1400	250	1300	5.6
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Lead	850	250	1300	3.4
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Lead	670	250	1300	2.7
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Lead	540	250	1300	2.2
The Riley Group, Inc. 2000	Jul-00	TP-1-1.5'	1.5	Lead	430	250	1300	1.7
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Lead	360	250	1300	1.4
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	Lead	340	250	1300	1.4
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Lead	340	250	1300	1.4
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Lead	330	250	1300	1.3
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Lead	310	250	1300	1.2
Farallon Consulting 2002d	Mar-02	MW2-2-4	2-4	Lead	210	250	1300	<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Lead	200	250	1300	<1
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Lead	170	250	1300	<1
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	Lead	140	250	1300	<1
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Lead	140	250	1300	<1
The Riley Group, Inc. 2000	Jul-00	TP-2-3.5'	3.5	Lead	120	250	1300	<1
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Lead	85	250	1300	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Lead	70	250	67	1.0
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Lead	70	250	1300	<1
Farallon Consulting 2002d	Mar-02	MW3-3.5-4	3.5-4	Lead	70	250	1300	<1
Farallon Consulting 2002d	Mar-02	MW-3-2.5-4	2.5-4	Lead	70	250	1300	<1
Farallon Consulting 2002d	Mar-02	B17-0-3	0-3	Lead	67	250	1300	<1
Farallon Consulting 2002d	Mar-02	B6-0-3	0-3	Lead	67	250	1300	<1
Farallon Consulting 2002d	Mar-02	MW1-3-4.5	3-4.5	Lead	60	250	1300	<1
Farallon Consulting 2002d	Mar-02	MW1-5-6.5	5-6.5	Lead	47	250	1300	<1
The Riley Group, Inc. 2000	Aug-00	B-4-3	10-11.5	Lead	24	250	67	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Lead	12	250	1300	<1
Farallon Consulting 2002d	Mar-02	B9-1.5-2	1.5-2	Lead	9.9	250	1300	<1
Farallon Consulting 2002d	Mar-02	B10-1-3	1-3	Lead	8.5	250	1300	<1
Farallon Consulting 2002d	May-02	EX1-11.0-11.5	11.0-11.5	Lead (total)	1500	250	67	22
Farallon Consulting 2002d	May-02	SP3		Lead (total)	1300	250	67	19

Table E-1
Chemicals Detected in Soil
Duwamish Marine Center

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Farallon Consulting 2002d	May-02	EX1-8.5-10.0	8.5-10.0	Lead (total)	510	250	67	7.6
Farallon Consulting 2002d	May-02	EX1-ESW-4.0	4.0	Lead (total)	510	250	1300	2.0
Farallon Consulting 2002d	May-02	EX1-SSW-3-4.0	3-4	Lead (total)	140	250	1300	<1
Farallon Consulting 2002d	May-02	EX1-ESW2-4.0	4.0	Lead (total)	99	250	1300	<1
Farallon Consulting 2002d	May-02	EX1-NSW-4.0	4.0	Lead (total)	95	250	1300	<1
Farallon Consulting 2002d	May-02	EX1-15.0-15.5	15.0-15.5	Lead (total)	79	250	67	1.2
Farallon Consulting 2002d	May-02	EX1-WSW-4.0	4.0	Lead (total)	45	250	1300	<1
Farallon Consulting 2002d	May-02	SP1		Lead (total)	19	250	67	<1
Farallon Consulting 2002d	May-02	SP2		Lead (total)	14	250	67	<1
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Mercury	1.5	2	0.030	50
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Mercury	1.1	2	0.59	1.9
The Riley Group, Inc. 2000	Jul-00	TP-1-1.5'	1.5	Mercury	0.85	2	0.59	1.4
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Mercury	0.51	2	0.59	<1
The Riley Group, Inc. 2000	Jul-00	TP-2-3.5'	3.5	Mercury	0.45	2	0.59	<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Mercury	0.43	2	0.59	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Mercury	0.28	2	0.59	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Naphthalene	3.4	5	3.8	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Naphthalene	0.8	5	0.20	4.0
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Naphthalene	0.49	5	3.8	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Naphthalene	0.11	5	3.8	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Naphthalene	0.059	5	3.8	<1
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Nickel	510			
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Nickel	450			
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Nickel	320			
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Nickel	200			
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	Nickel	200			
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5.5	Nickel	150			
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Nickel	140			
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Nickel	120			
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Nickel	58			
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Nickel	58			
Farallon Consulting 2002d	Mar-02	B17-0-3	0-3	Nickel	52			
Farallon Consulting 2002d	Mar-02	MW2-2-4	2-4	Nickel	45			
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Nickel	42			

Table E-1
Chemicals Detected in Soil
Duwamish Marine Center

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Nickel	42			
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Nickel	39			
The Riley Group, Inc. 2000	Jul-00	TP-2-3.5'	3.5	Nickel	38			
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	Nickel	37			
Farallon Consulting 2002d	Mar-02	MW3-3.5-4	3.5-4	Nickel	36			
Farallon Consulting 2002d	Mar-02	MW-3-2.5-4	2.5-4	Nickel	36			
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Nickel	35			
Farallon Consulting 2002d	Mar-02	B12-0-1	0-1	Nickel	34			
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Nickel	29			
The Riley Group, Inc. 2000	Jul-00	TP-1-1.5'	1.5	Nickel	27			
Farallon Consulting 2002d	Mar-02	MW1-3-4.5	3-4.5	Nickel	15			
Farallon Consulting 2002d	Mar-02	MW1-5-6.5	5-6.5	Nickel	13			
Farallon Consulting 2002d	Mar-02	MW1-7.5-9	7.5-9	Nickel	13			
Farallon Consulting 2002d	Mar-02	B10-1-3	1-3	Nickel	12			
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Nickel	11			
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Nickel	11			
Farallon Consulting 2002d	Mar-02	B6-0-3	0-3	Nickel	11			
Farallon Consulting 2002d	Mar-02	B9-1.5-2	1.5-2	Nickel	8.2			
Farallon Consulting 2002d	Mar-02	B11-0-3	0-3	Nickel	7.9			
The Riley Group, Inc. 2000	Aug-00	B-4-3	10-11.5	Nickel	3.2			
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	PAHs (total)	2.29	0.14		16
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	PAHs (total)	2.01	0.14		14
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	PAHs (total)	1.02	0.14		7.3
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	PAHs (total)	0.3	0.14		2.1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	PAHs (total)	0.13	0.14		<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	PCBs (total)	34	0.5	1.3	68
The Riley Group, Inc. 2000	Jul-00	B-3-3	12.5-14	PCBs (total)	9.8	0.5	0.065	151
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	PCBs (total)	8.5	0.5	1.3	17
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	PCBs (total)	8.29	0.5	1.3	17
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	PCBs (total)	5.9	0.5	1.3	12
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	PCBs (total)	5.4	0.5	1.3	11
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5..5	PCBs (total)	2.3	0.5	1.3	4.6
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	PCBs (total)	2.13	0.5	1.3	4.3
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	PCBs (total)	1.86	0.5	1.3	3.7

Table E-1
Chemicals Detected in Soil
Duwamish Marine Center

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
The Riley Group, Inc. 2000	Jul-00	B-2-1	2.5-4.0	PCBs (total)	1.49	0.5	1.3	3.0
Farallon Consulting 2002d	Mar-02	B7-6-7.5	6-7.5	PCBs (total)	0.54	0.5	0.065	8.3
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	PCBs (total)	0.4	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	PCBs (total)	0.206	0.5	1.3	<1
The Riley Group, Inc. 2000	Jul-00	B-1-6	14-14.5	PCBs (total)	0.15	0.5	0.065	2.3
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	PCBs (total)	0.14	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	PCBs (total)	0.11	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	PCBs (total)	0.1	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	MW2-2-4	2-4	PCBs (total)	0.091	0.5	1.3	<1
The Riley Group, Inc. 2000	Jul-00	TP-2-4.5'	4.5	PCBs (total)	0.09	0.5	1.3	<1
The Riley Group, Inc. 2000	Jul-00	TP-1-2.5'	2.5	PCBs (total)	0.081	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	MW1-5-6.5	5-6.5	PCBs (total)	0.068	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B17-0-3	0-3	PCBs (total)	0.06	0.5	1.3	<1
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	PCBs (total)	0.057	0.5	1.3	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Phenanthrene	14		0.49	29
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Phenanthrene	1.6		9.7	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Phenanthrene	0.66		9.7	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Phenanthrene	0.35		9.7	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Phenanthrene	0.087		9.7	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Phenanthrene	0.014		9.7	<1
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Pyrene	8.2	2400	1.4	5.9
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Pyrene	1	2400	28	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Pyrene	0.41	2400	28	<1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Pyrene	0.33	2400	28	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Pyrene	0.13	2400	28	<1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Pyrene	0.024	2400	28	<1
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Silver	4.6	400	0.61	7.5
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Silver	2.3	400	12	<1
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Silver	1.5	400	12	<1
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Silver	1.1	400	12	<1
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Silver	1	400	12	<1
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5.5	Silver	0.84	400	12	<1
The Riley Group, Inc. 2000	Jul-00	TP-2-3.5'	3.5	Silver	0.62	400	12	<1
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Silver	0.56	400	12	<1

Table E-1
Chemicals Detected in Soil
Duwamish Marine Center

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Thallium	6.2			
The Riley Group, Inc. 2000	Aug-00	B-3-3	12.5-14	Zinc	31000	24000	38	816
The Riley Group, Inc. 2000	Aug-00	B-1-6	14-14.5	Zinc	2100	24000	38	55
The Riley Group, Inc. 2000	Jul-00	TP-3-5.5'	5.5	Zinc	1700	24000	770	2.2
Farallon Consulting 2002d	Mar-02	B4-0-3	0-3	Zinc	1400	24000	770	1.8
Farallon Consulting 2002d	Mar-02	B5-3-4	3-4	Zinc	860	24000	770	1.1
Farallon Consulting 2002d	Mar-02	B7-2-4	2-4	Zinc	480	24000	770	<1
Farallon Consulting 2002d	Mar-02	B3-0-3	0-3	Zinc	300	24000	770	<1
The Riley Group, Inc. 2000	Jul-00	TP-1-1.5'	1.5	Zinc	290	24000	770	<1
Farallon Consulting 2002d	Mar-02	B18-0-3	0-3	Zinc	290	24000	770	<1
Farallon Consulting 2002d	Mar-02	B16-0-1.5	0-1.5	Zinc	250	24000	770	<1
The Riley Group, Inc. 2000	Jul-00	TP-4-2'	2	Zinc	240	24000	770	<1
Farallon Consulting 2002d	Mar-02	B13-0-3	0-3	Zinc	230	24000	770	<1
Farallon Consulting 2002d	Mar-02	B1-0-3	0-3	Zinc	170	24000	770	<1
The Riley Group, Inc. 2000	Aug-00	B-2-1	2.5-4.0	Zinc	150	24000	770	<1
The Riley Group, Inc. 2000	Jul-00	TP-2-3.5'	3.5	Zinc	150	24000	770	<1
Farallon Consulting 2002d	Mar-02	MW3-3.5-4	3.5-4	Zinc	110	24000	770	<1
Farallon Consulting 2002d	Mar-02	MW-3-2.5-4	2.5-4	Zinc	110	24000	770	<1
Farallon Consulting 2002d	Mar-02	B2-0-3	0-3	Zinc	100	24000	770	<1
Farallon Consulting 2002d	Mar-02	B15-0-3	0-3	Zinc	99	24000	770	<1
Farallon Consulting 2002d	Mar-02	B17-0-3	0-3	Zinc	94	24000	770	<1
Farallon Consulting 2002d	Mar-02	B19-1.5-3	1.5-3	Zinc	83	24000	770	<1
Farallon Consulting 2002d	Mar-02	MW2-2-4	2-4	Zinc	83	24000	770	<1
Farallon Consulting 2002d	Mar-02	MW2-2-4	2-4	Zinc	83	24000	770	<1
Farallon Consulting 2002d	Mar-02	B8-2-3	2-3	Zinc	79	24000	770	<1
Farallon Consulting 2002d	Mar-02	MW1-7.5-9	7.5-9	Zinc	66	24000	38	1.7
Farallon Consulting 2002d	Mar-02	MW1-3-4.5	3-4.5	Zinc	64	24000	770	<1
The Riley Group, Inc. 2000	Aug-00	B-4-3	10-11.5	Zinc	42	24000	38	1.1
Farallon Consulting 2002d	Mar-02	B14-2-3	2-3	Zinc	41	24000	770	<1
Farallon Consulting 2002d	Mar-02	B6-0-3	0-3	Zinc	32	24000	770	<1
Farallon Consulting 2002d	Mar-02	B12-0-1	0-1	Zinc	29	24000	770	<1
Farallon Consulting 2002d	Mar-02	B9-1.5-2	1.5-2	Zinc	26	24000	770	<1
Farallon Consulting 2002d	Mar-02	B10-1-3	1-3	Zinc	24	24000	770	<1
Farallon Consulting 2002d	Mar-02	B11-0-3	0-3	Zinc	19	24000	770	<1

Table E-1
Chemicals Detected in Soil
Duwamish Marine Center

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	MW1-5-6.5	5-6.5	Zinc	18	24000	770	<1

Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA cleanup level or soil-to-sediment screening lalue, whichever is lower.

mg/kg - Milligram per kilogram
DW - Dry weight
MTCA - Model Toxics Control Act
CSL - SMS Cleanup Screening Level

PAH - Polycyclic aromatic hydrocarbon
PCB - Polychlorinated biphenyl
SMS - Sediment Management Standard (Washington Administrative Code 173-204)

[a] - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
[b] - Soil-to-sediment screening level, based on sediment CSLs (from SAIC 2006).

Table E-2
Chemicals Detected in Groundwater
Duwamish Marine Center

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	MW-3	1,1-Dichloroethene	2.2	400		<1
Farallon Consulting 2002d	Mar-02	MW-2	1,2,4-Trimethylbenzene	1	400		<1
Farallon Consulting 2002d	Mar-02	MW-2	1,2,4-Trimethylbenzene	1	400		<1
Farallon Consulting 2002d	Mar-02	MW-2	1,3,5-Trimethylbenzene	0.31	400		<1
Farallon Consulting 2002d	Mar-02	MW-2	1,3,5-Trimethylbenzene	0.31	400		<1
Farallon Consulting 2002d	Mar-02	MW-2	1-Methylnaphthalene	8.4	2.4		3.5
Farallon Consulting 2002d	Mar-02	MW-1	1-Methylnaphthalene	1.9	2.4		<1
Farallon Consulting 2002d	Mar-02	MW-3	1-Methylnaphthalene	1.1	2.4		<1
Farallon Consulting 2002d	Mar-02	MW-2	2-Methylnaphthalene	11	32	31	<1
Farallon Consulting 2002d	Mar-02	MW-1	2-Methylnaphthalene	3.8	32	31	<1
Farallon Consulting 2002d	Mar-02	MW-3	2-Methylnaphthalene	0.67	32	31	<1
Farallon Consulting 2002d	Mar-02	MW-2	Acenaphthene	13	960	9.3	1.4
Farallon Consulting 2002d	Mar-02	MW-3	Acenaphthene	5	960	9.3	<1
Farallon Consulting 2002d	Mar-02	MW-1	Acenaphthene	3.8	960	9.3	<1
Farallon Consulting 2002d	Mar-02	MW-2	Acenaphthylene	0.92		11	<1
Farallon Consulting 2002d	Mar-02	MW-3	Acetone	15	800		<1
Farallon Consulting 2002d	Mar-02	MW-2	Anthracene	5.7	4800	59	<1
Farallon Consulting 2002d	Mar-02	MW-2	Anthracene	5.7	4800	59	<1
Farallon Consulting 2002d	Mar-02	MW-2	Antimony	56	6.4		8.8
Farallon Consulting 2002d	Mar-02	MW-3	Antimony	7.9	6.4		1.2
Farallon Consulting 2002d	Mar-02	MW-1	Antimony	7.1	6.4		1.1
Farallon Consulting 2002d	Mar-02	MW-4	Antimony	5.6	6.4		<1
Farallon Consulting 2002d	Mar-02	MW-4	Aroclor 1242	0.67	0.1		6.7
Farallon Consulting 2002d	Mar-02	MW-2	Aroclor 1242	0.15	0.1		1.5
Farallon Consulting 2002d	Mar-02	MW-4	Aroclor 1254	0.17	0.1	0.86	1.7
Farallon Consulting 2002d	Mar-02	MW-2	Aroclor 1260	0.13	0.1	0.86	1.3
Farallon Consulting 2002d	Mar-02	MW-4	Aroclor 1260	0.11	0.1	0.31	1.1
Farallon Consulting 2002d	Mar-02	MW-2	Arsenic	220	0.058	370	3793
Farallon Consulting 2002d	May-02	MW-2	Arsenic	13	0.058	370	224
Farallon Consulting 2002d	Mar-02	MW-3	Arsenic	12	0.058	370	207

Table E-2
Chemicals Detected in Groundwater
Duwamish Marine Center

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	MW-4	Arsenic	8	0.058	370	138
Farallon Consulting 2002d	May-02	MW-4	Arsenic	5.7	0.058	370	98
The Riley Group, Inc. 2000	Aug-00	B-3-W	Arsenic	3.9	0.058	370	67
The Riley Group, Inc. 2000	Aug-00	B-2-W	Arsenic	3.6	0.058	370	62
The Riley Group, Inc. 2000	Aug-00	B-3-W	Benzene	2.7	0.8		3.4
Farallon Consulting 2002d	Mar-02	MW-2	Benzo(a)anthracene	11		0.63	17
Farallon Consulting 2002d	Mar-02	MW-3	Benzo(a)anthracene	0.1		0.63	<1
Farallon Consulting 2002d	Mar-02	MW-4	Benzo(a)anthracene	0.023		0.63	<1
Farallon Consulting 2002d	Mar-02	MW-2	Benzo(a)pyrene	13	0.012	0.27	1083
Farallon Consulting 2002d	Mar-02	MW-3	Benzo(a)pyrene	0.084	0.012	0.27	7.0
Farallon Consulting 2002d	Mar-02	MW-2	Benzo(b)fluoranthene	9.6		0.56	17
Farallon Consulting 2002d	Mar-02	MW-3	Benzo(b)fluoranthene	0.074		0.56	<1
Farallon Consulting 2002d	Mar-02	MW-4	Benzo(b)fluoranthene	0.018		0.56	<1
Farallon Consulting 2002d	Mar-02	MW-2	Benzo(g,h,i)perylene	7		0.029	241
Farallon Consulting 2002d	Mar-02	MW-3	Benzo(g,h,i)perylene	0.05		0.029	1.7
Farallon Consulting 2002d	Mar-02	MW-2	Benzo(k)fluoranthene	13		0.029	448
Farallon Consulting 2002d	Mar-02	MW-3	Benzo(k)fluoranthene	0.072		0.57	<1
Farallon Consulting 2002d	Mar-02	MW-4	Benzo(k)fluoranthene	0.017		0.57	<1
Farallon Consulting 2002d	Mar-02	MW-2	Cadmium	12	5	3.4	3.5
Farallon Consulting 2002d	Mar-02	MW-3	Chloroethane	0.51	150		<1
Farallon Consulting 2002d	Mar-02	MW-2	Chromium	140	50	320	2.8
Farallon Consulting 2002d	Mar-02	MW-3	Chromium	58	50	320	1.2
Farallon Consulting 2002d	Mar-02	MW-4	Chromium	24	50	320	<1
Farallon Consulting 2002d	Mar-02	MW-1	Chromium	20	50	320	<1
Farallon Consulting 2002d	May-02	MW-3	Chromium	19	50	320	<1
Farallon Consulting 2002d	Mar-02	MW-2	Chrysene	15		1.9	7.9
Farallon Consulting 2002d	Mar-02	MW-3	Chrysene	0.14		1.9	<1
Farallon Consulting 2002d	Mar-02	MW-4	Chrysene	0.031		1.9	<1
Farallon Consulting 2002d	Mar-02	MW-2	cis-1,2-Dichloroethene	0.24	80		<1
Farallon Consulting 2002d	Mar-02	MW-2	cis-1,2-Dichloroethene	0.24	80		<1

Table E-2
Chemicals Detected in Groundwater
Duwamish Marine Center

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	MW-2	Copper	810	590	120	6.8
Farallon Consulting 2002d	Mar-02	MW-3	Copper	140	590	120	1.2
Farallon Consulting 2002d	Mar-02	MW-1	Copper	49	590	120	<1
Farallon Consulting 2002d	Mar-02	MW-4	Copper	45	590	120	<1
Farallon Consulting 2003a	Dec-02	MW-2	Copper	39	590	120	<1
Farallon Consulting 2002d	Mar-02	MW-2	Dibenzo(a,h)anthracene	0.68		0.013	52
Farallon Consulting 2002d	Mar-02	MW-3	Dibenzo(a,h)anthracene	0.021		0.013	1.6
Farallon Consulting 2002d	Apr-02	MW-2	Diesel-Range Hydrocarbons	2700	500		5.4
Farallon Consulting 2002d	Mar-02	MW-2	Diesel-Range Hydrocarbons	2700	500		5.4
The Riley Group, Inc. 2000	Aug-00	B-2-W	Diesel-Range Hydrocarbons	520	500		1.0
The Riley Group, Inc. 2000	Aug-00	B-3-W	Diesel-Range Hydrocarbons	520	500		1.0
Farallon Consulting 2004	Feb-04	MW-3	Diesel-Range Hydrocarbons	370	500		<1
Farallon Consulting 2004	Aug-04	MW-3	Diesel-Range Hydrocarbons	320	500		<1
Farallon Consulting 2004	Nov-03	MW-3	Diesel-Range Hydrocarbons	280	500		<1
The Riley Group, Inc. 2000	Aug-00	B-2-W	Ethylbenzene	15	700		<1
Farallon Consulting 2002d	Aug-00	B-2R-W	Ethylbenzene	15	700		<1
The Riley Group, Inc. 2000	Aug-00	B-3-W	Ethylbenzene	2.1	700		<1
Farallon Consulting 2002d	Aug-00	B-3R-W	Ethylbenzene	2.1	700		<1
Farallon Consulting 2002d	Mar-02	MW-2	Ethylbenzene	0.4	700		<1
Farallon Consulting 2002d	Mar-02	MW-2	Ethylbenzene	0.4	700		<1
Farallon Consulting 2002d	Mar-02	MW-2	Fluoranthene	24	640	170	<1
Farallon Consulting 2002d	Mar-02	MW-2	Fluorene	9.7	640	7.0	1.4
Farallon Consulting 2002d	Mar-02	MW-3	Fluorene	1.5	640	7.0	<1
Farallon Consulting 2002d	Mar-02	MW-1	Fluorene	1	640	7.0	<1
Farallon Consulting 2002d	Apr-02	MW-2	Heavy Oil-Range Hydrocarbons	4900	500		9.8
Farallon Consulting 2002d	Mar-02	MW-2	Heavy Oil-Range Hydrocarbons	4900	500		9.8
The Riley Group, Inc. 2000	Aug-00	B-3-W	Heavy Oil-Range Hydrocarbons	1600	500		3.2
Farallon Consulting 2002d	Apr-02	MW-4	Heavy Oil-Range Hydrocarbons	820	500		1.6
Farallon Consulting 2002d	Mar-02	MW-4	Heavy Oil-Range Hydrocarbons	820	500		1.6
The Riley Group, Inc. 2000	Aug-00	B-2-W	Heavy Oil-Range Hydrocarbons	650	500		1.3

Table E-2
Chemicals Detected in Groundwater
Duwamish Marine Center

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Farallon Consulting 2004	Feb-04	MW-3	Heavy Oil-Range Hydrocarbons	550	500		1.1
Farallon Consulting 2002d	Mar-02	MW-2	Indeno(1,2,3-c,d)pyrene	6.8		0.033	206
Farallon Consulting 2002d	Mar-02	MW-3	Indeno(1,2,3-c,d)pyrene	0.05		0.033	1.5
Farallon Consulting 2002d	Mar-02	MW-2	Lead	2100	15	13	162
Farallon Consulting 2002d	Mar-02	MW-3	Lead	89	15	13	6.8
Farallon Consulting 2002d	Mar-02	MW-1	Lead	59	15	13	4.5
Farallon Consulting 2002d	Mar-02	MW-4	Lead	7	15	13	<1
Farallon Consulting 2002d	May-02	MW-3	Lead	1.2	15	13	<1
Farallon Consulting 2002d	Mar-02	MW-2	Mercury	2	2	0.0074	270
Farallon Consulting 2002d	Mar-02	MW-3	Mercury	0.55	2	0.0074	74
Farallon Consulting 2004	May-04	MW-3	Mercury (total)	0.5	2	0.0074	68
Farallon Consulting 2002d	Mar-02	MW-2	Naphthalene	140	160	92	1.5
Farallon Consulting 2002d	Mar-02	MW-3	Naphthalene	49	160	92	<1
Farallon Consulting 2002d	Mar-02	MW-2	Naphthalene	41	160	92	<1
Farallon Consulting 2002d	Mar-02	MW-3	Naphthalene	17	160	92	<1
Farallon Consulting 2002d	Mar-02	MW-1	Naphthalene	2.7	160	92	<1
Farallon Consulting 2002d	Mar-02	MW-2	Nickel	240			
Farallon Consulting 2002d	Mar-02	MW-4	Nickel	37			
The Riley Group, Inc. 2000	Aug-00	B-2-W	Nickel	21			
Farallon Consulting 2003a	Dec-02	MW-2	Nickel	7.2			
Farallon Consulting 2002d	Mar-02	MW-2	PAHs (total)	69.08			
Farallon Consulting 2002d	Mar-02	MW-3	PAHs (total)	0.541			
Farallon Consulting 2002d	Mar-02	MW-4	PAHs (total)	0.089			
Farallon Consulting 2002d	Mar-02	MW-4	PCB (total)	0.95	0.044	1.5	22
Farallon Consulting 2002d	Mar-02	MW-2	PCB (total)	0.28	0.044	1.5	6.4
Farallon Consulting 2002d	Mar-02	MW-2	Pentachlorophenol	3.5	0.73	10	4.8
Farallon Consulting 2002d	Mar-02	MW-2	Phenathrene	29		23	1.3
Farallon Consulting 2002d	Mar-02	MW-2	Pyrene	24	480	20	1.2
Farallon Consulting 2002d	Mar-02	MW-2	Selenium	34	80		<1
Farallon Consulting 2002d	Mar-02	MW-4	Selenium	33	80		<1

Table E-2
Chemicals Detected in Groundwater
Duwamish Marine Center

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Farallon Consulting 2002d	Mar-02	MW-3	Selenium	10	80		<1
The Riley Group, Inc. 2000	Aug-00	B-3-W	Selenium	6.4	80		<1
Farallon Consulting 2002d	Mar-02	MW-1	Tetrachloroethene	0.69	0.081		8.5
Farallon Consulting 2002d	Mar-02	MW-2	Tetrachloroethene	0.69	0.081		8.5
The Riley Group, Inc. 2000	Aug-00	B-3-W	Toluene	3.1	640		<1
Farallon Consulting 2002d	Aug-00	B-3R-W	Toluene	3.1	640		<1
The Riley Group, Inc. 2000	Aug-00	B-2-W	Toluene	2.7	640		<1
Farallon Consulting 2002d	Aug-00	B-2R-W	Toluene	2.7	640		<1
Farallon Consulting 2002d	Mar-02	MW-2	Toluene	0.27	640		<1
Farallon Consulting 2002d	Mar-02	MW-2	Toluene	0.27	640		<1
Farallon Consulting 2002d	Aug-00	B-3R-W	Xylenes (m&p)	6.5	1000		<1
Farallon Consulting 2002d	Aug-00	B-2R-W	Xylenes (m&p)	6.2	1000		<1
Farallon Consulting 2002d	Mar-02	MW-2	Xylenes (m&p)	0.86	1000		<1
Farallon Consulting 2002d	Mar-02	MW-2	Xylenes (m&p)	0.86	1000		<1
Farallon Consulting 2002d	Aug-00	B-3R-W	Xylenes (o)	4.4	1000		<1
Farallon Consulting 2002d	Aug-00	B-2R-W	Xylenes (o)	4.1	1000		<1
Farallon Consulting 2002d	Mar-02	MW-2	Xylenes (o)	0.55	1000		<1
Farallon Consulting 2002d	Mar-02	MW-2	Xylenes (o)	0.55	1000		<1
The Riley Group, Inc. 2000	Aug-00	B-3-W	Xylenes (total)	10.9	1000		<1
The Riley Group, Inc. 2000	Aug-00	B-2-W	Xylenes (total)	10.3	1000		<1
Farallon Consulting 2002d	Mar-02	MW-2	Zinc	2000	4800	76	26
Farallon Consulting 2002d	Mar-02	MW-1	Zinc	500	4800	76	6.6
The Riley Group, Inc. 2000	Aug-00	B-3-W	Zinc	300	4800	76	3.9
Farallon Consulting 2002d	Mar-02	MW-3	Zinc	150	4800	76	2.0
The Riley Group, Inc. 2000	Aug-00	B-2-W	Zinc	65	4800	76	<1

Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Groundwater-to-Sediment Screening Value, whichever is lower.

Table E-2
Chemicals Detected in Groundwater
Duwamish Marine Center

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor

ug/L - Microgram per Liter
MTCA - Model Toxics Control Act
CSL - SMS Cleanup Screening Level
PAH - Polycyclic aromatic hydrocarbon
PCB - Polychlorinated biphenyl
SMS - Sediment Management Standard (Washington Administrative Code 173-204)

[a] - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
[b] - Groundwater-to-sediment screening level, based on sediment CSLs (from SAIC 2006).

Table E-3
Historical Owners and Tenants
Duwamish Marine Center

Company	Approximate Dates of Operation[a]
Arrow Fuel Co.	1951-1966
Truax Machine & Tool Co.	1951-1976
Utility Machine Co.	1951-1966
American Sawmill Equipment Co.	1961-1966
Crosby Bankert (manufacturing agent)	1966-1986?
Gibson Tractor Agency	1961-1966
Junk House Co.	1961-1976
Myron Smith Merchandise Broker	1961-1986?
ResistoFlex (manufacturing agent)	1961-1966
Seattle Machine Co.	1961-1966
Tubesales Tubing & Pipe	1961-1966
AAA Building Maintenance	1966-1971
DeWar & Associates (manufacturing agent)	1966-1986?
Lippincott Co. (manufacturing agent)	1966-1986?
NW Plastics Industries (manufacturing agent)	1966-1986?
Boger Manufacturing & Fabrication	1976-1981?
Eppo Machine Works	1976-1981?
Precision Northwest Grinding	1976-1986
River Rock Distribution Quarry	1976-1981
Brockery Plastics	1981-1986
Hale's Construction and Associates	1981-1986
Kipper & Sons Engineering Plant	1981-1986
Load Cells, Inc.	1981-1991
Smokeeter® Distribution Office	1981-1998
Alaska General Freight	1986-1991
Hanson Metal Fabricators	1986-1991
L.S. Bitter Co.	1991-1996
Service Battery	1991-1996
Strousse Geis & Associates	1991-1998
J. Hoov	1996-1998
Accurate Machining	1998-unknown
CMG, Inc.	1998-unknown

[a] Approximate dates of operation are based on a review of Polk and Cole Street directories previously performed by Environmental Associates, Inc. (Environmental Associates 2000).

Appendix E-4
Relevant Pages from
Duwamish Marine Center Documents

The Riley Group, Inc.

Geotechnical Engineering • Environmental • Wetland Services

PRELIMINARY PHASE II SUBSURFACE INVESTIGATION

DUWAMISH MARINE CENTER PROPERTY
6365 FIRST AVENUE SOUTH
SEATTLE, WASHINGTON 98108

September 13, 2000

PREPARED BY:

The Riley Group, Inc.
10728 Lake City Way NE
Seattle, WA 98125

PREPARED FOR:

Mr. Jim Gilmur
% Duwamish Marine Center
16 South Michigan Street
Seattle, Washington 98108

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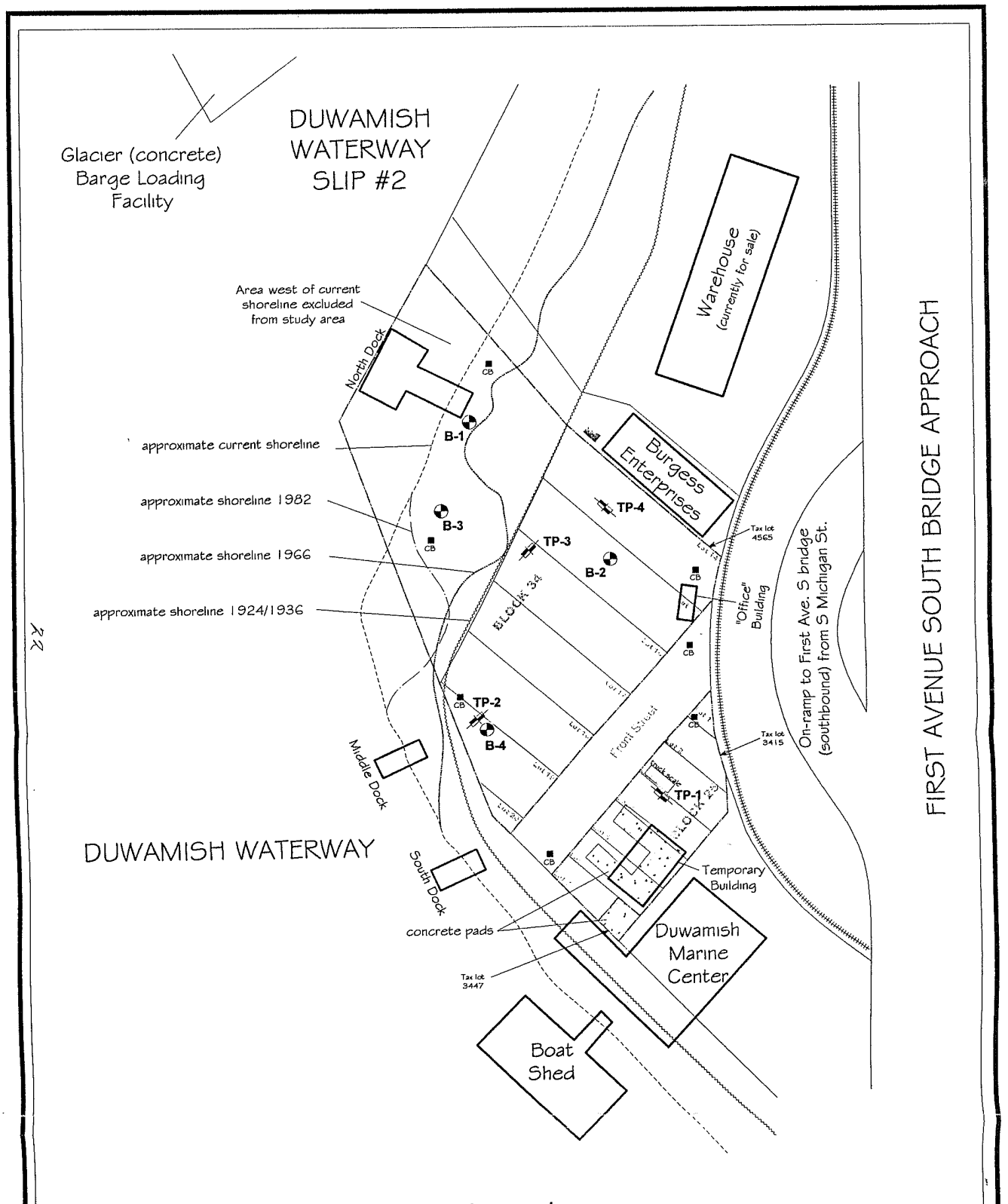
Riley Project No. 2000-122

Offices located in Washington, Oregon and California

10728 Lake City Way N.E. • Seattle, WA 98125 • Tel (206) 417-0551 • Fax (206) 417-0552
http:www.Riley-Group.com



Legend

- Subject property boundaries (3 tax lots)
- Other property line/feature
- TP-1 Location of test pit (TP) excavation completed 7/17/2000
- B-1 Location of boring (B) completed 8/3/2000
- Former Burgess Enterprises UST location
- CB On-site catch basin
- Inferred direction of shallow-seated groundwater flow (may be different at south and west edges of the upland portion of the site)

NOTE: Development locations are approximate and are based upon building permit plans.

The Riley Group, Inc.
10728 LAKE CITY WAY NE
SEATTLE, WASHINGTON 98125

Duwamish Marine Center Property

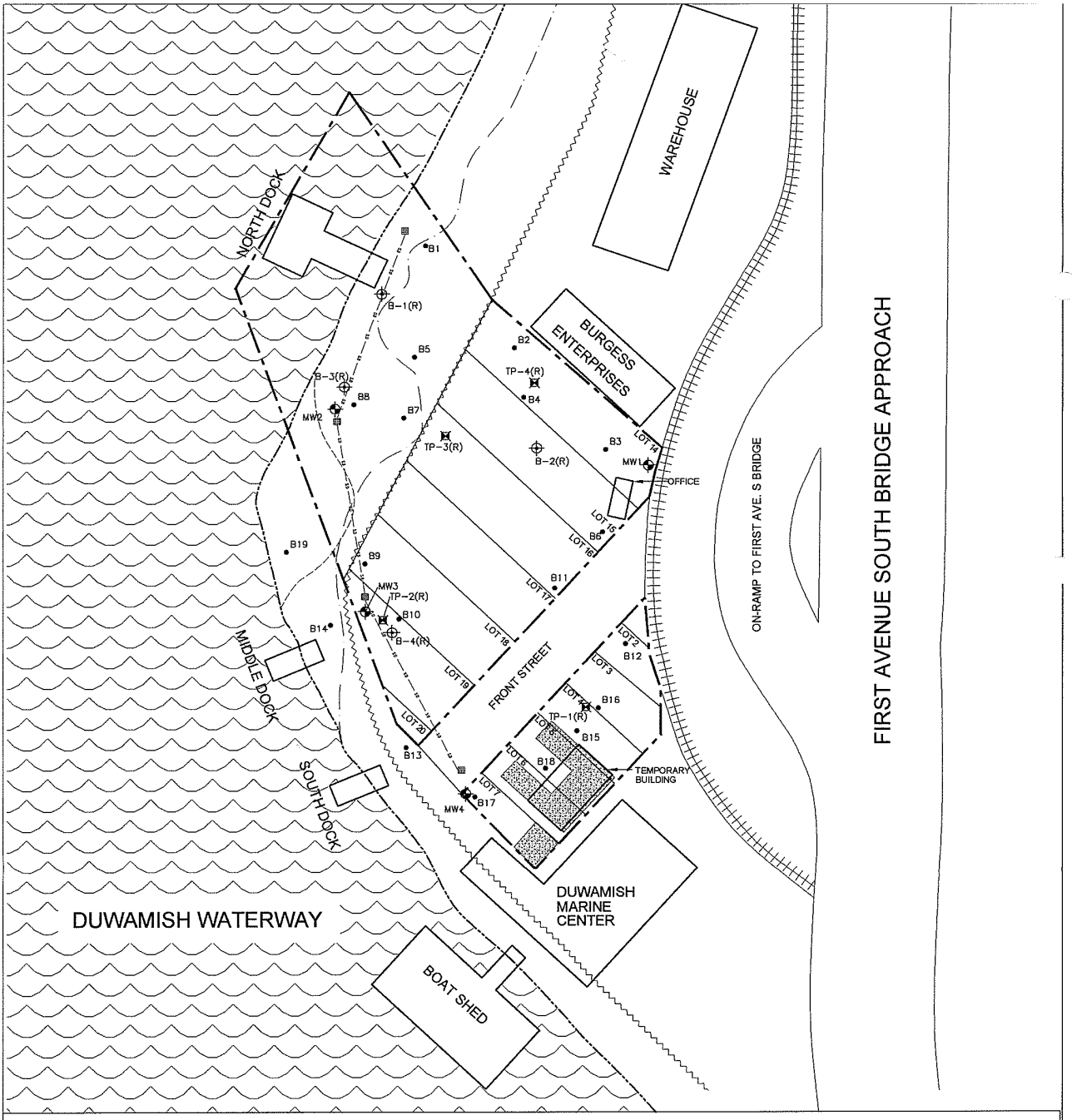
Riley Project #2000-122	Site Exploration Plan	Figure 2
Drawn by: D. Holmes	Date: 8/31/2000	

Site Address: 6365 First Avenue South, Seattle WA 98108

N

0 100'

Approximate scale: 1" = 100'



LEGEND

TP-1(R)	TEST PIT 7/17/2000 (THE RILEY GROUP)		SUBJECT PROPERTY BOUNDARY
B-1(R)	BORING 8/3/2000 (THE RILEY GROUP)		APPROXIMATE CURRENT SHORELINE
B1	BORING 3/13-14/2002 (FARALLON)		APPROXIMATE SHORELINE 1982
MW-4	MONITORING WELL 3/18/2002 (FARALLON)		APPROXIMATE SHORELINE 1966
	CONCRETE PADS		APPROXIMATE SHORELINE 1982/1936
	CATCH BASIN AND DRAINAGE LINE		

0 100 200
APPROXIMATE SCALE IN FEET

N

FARALLON CONSULTING
320 3rd Ave. NE, Suite 200
Issaquah, WA 98027

FIGURE 2

SITE PLAN
DUWAMISH MARINE CENTER
6365 FIRST AVE SOUTH
SEATTLE, WASHINGTON

FARALLON PN: 781-001

Drawn By: DEW	Checked By: PJ	Date: 4/4/02	Disk Reference: 781-001

FARALLON CONSULTING
Quality Service for Environmental Solutions

320 3rd Ave. NE, Suite 200
Issaquah, WA 98027

T: 425 . 427.0061
F: 425 . 427.0067

SITE CLOSURE REPORT

GILMUR/HALE FAMILY TRUST SITE
6365 FIRST AVENUE SOUTH
SEATTLE, WASHINGTON

Submitted by:
Farallon Consulting, L.L.C.
320 3rd Avenue NE, Suite 200
Issaquah, Washington 98027

Farallon PN: 781-001

For:
Mr. Jim Gilmur
16 South Michigan Street
Seattle, Washington 98108

September 25, 2002

State of Washington
Hydrogeologist
1952
Licensed Geologist
Lauren L. G. Carroll

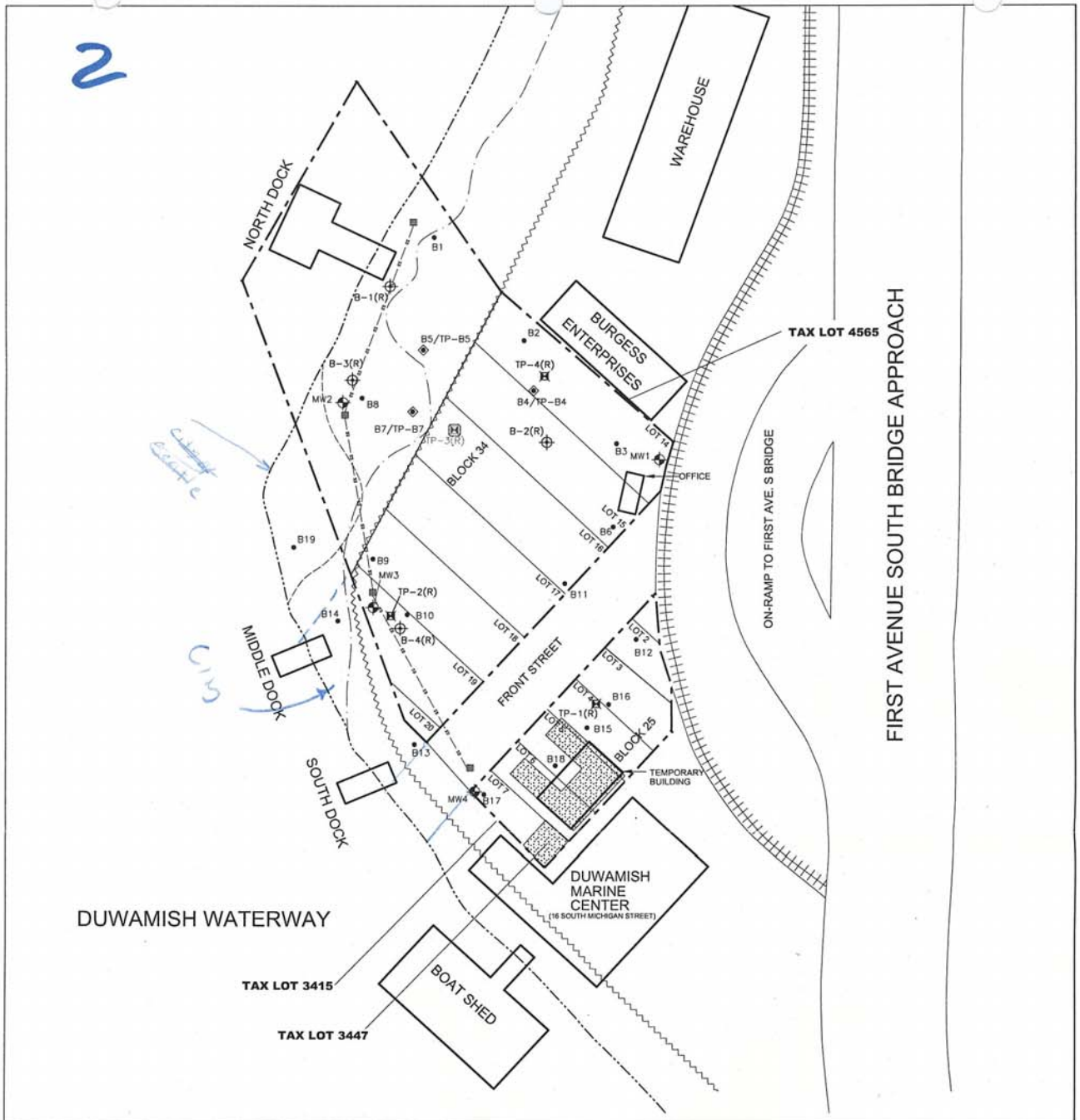
Prepared by:

Lauren Carroll
Senior Hydrogeologist

Reviewed by:

Peter Jewett
Principal

2



LEGEND

TP-1(R)	TEST PIT 7/17/2000 (THE RILEY GROUP)		CONCRETE PADS
B-1(R)	BORING 8/3/2000 (THE RILEY GROUP)		CATCH BASIN AND DRAINAGE LINE
B1	BORING 3/13-14/2002 (FARALLON)		SITE BOUNDARY
MW-4	MONITORING WELL 3/18/2002 (FARALLON)		APPROXIMATE CURRENT SHORELINE
TP-B7	TEST PIT 5/13/02 (FARALLON)		APPROXIMATE SHORELINE 1982
TP-3(R)	TEST PIT IN AREA EXCAVATED FOR INTERIM ACTION		APPROXIMATE SHORELINE 1966
	AREA EXCAVATED FOR INTERIM ACTION MAY 2002		APPROXIMATE SHORELINE 1924/1936
		LOT 19	LOT BOUNDARY AND LOT NUMBER

0 100 200
APPROXIMATE SCALE IN FEET

N

FARALLON CONSULTING
320 3rd Ave. NE, Suite 200
Issoquah, WA 98027

FIGURE 2

SITE PLAN
GILMUR/HALE FAMILY TRUST
6365 FIRST AVE SOUTH
SEATTLE, WASHINGTON

FARALLON PN: 781-001

Drawn By: DEW	Checked By: LC	Date: 8/9/02	Disk Reference: 781-001

FARALLON CONSULTING
Quality Service for Environmental Solutions

320 3rd Ave. NE, Suite 200
Issaquah, WA 98027

T: 425 . 427.0061
F: 425 . 427.0067

December 8, 2004

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DEPT OF ECOLOGY

Mr. John Keeling
Toxics Cleanup Program
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, Washington 98008

RE: REPORT OF COMPLIANCE MONITORING AND REQUEST FOR NO FURTHER ACTION DETERMINATION FOR GROUNDWATER AND SOIL
GILMUR/HALE FAMILY TRUST SITE
6365 FIRST AVENUE SOUTH, SEATTLE, WASHINGTON
FARALLON PN: 781-001
VCP # 21945598

Dear Mr. Keeling:

Farallon Consulting, L.L.C. (Farallon) has prepared this *Report of Compliance Monitoring and Request for No Further Action Determination for Groundwater and Soil* for the Gilmur/Hale Family Trust Site located at 6365 First Avenue South in Seattle, Washington (herein referred to as the Site). This letter report was prepared to document the activities and results of compliance groundwater monitoring conducted to provide sufficient data to meet the requirements for a No Further Action (NFA) determination for groundwater at the Site in accordance with the Washington State Department of Ecology (Ecology) Model Toxics Control Act Cleanup Regulation (MTCA) (Washington Administrative Code 173-340-350 [WAC 173-340-350]). The compliance monitoring activities were conducted pursuant to the comments provided by Ecology in correspondence to Farallon dated August 11, 2003.

SITE DESCRIPTION

The Site is located in the northeast quarter of Section 30, Township 24 North, Range 4 East in Seattle, Washington. The Site is located on the east side of the Duwamish Waterway, between Slip No. 2 and Slip No. 3, in an area zoned for industrial use. A Site Location Map and Site Plan are provided as Figures 1 and 2, respectively.

The Site consists of three tax parcels which are identified as Tax Lots 4565, 3415, and 3447. Front Street is located between Tax Lot 4565 to the northwest, and Tax Lots 3415 and 3447 to the southeast (Figure 2). Tax Lot 4565 consists of approximately 98,720 square feet of property. A portion of Tax Lot 4565 (approximately 23,360 square feet) is submerged in the Duwamish Waterway beneath Slip No. 2. Tax Lots 3415 and 3447 consist of a total of approximately 22,762 square feet of property.

Table 1
Summary of Groundwater Compliance Monitoring Analytical Results
Gilmur/Hale Family Trust
Seattle, Washington
Farallon PN: 781-001

Well	Date Sampled	Total Petroleum Hydrocarbons[1]	PCB Mixtures[2]	Metals	
				Dissolved Copper[3]	Total Mercury[4]
MW-3	11/5/2003	<690	ND<0.047	ND<11	ND<0.50
MW-3	2/6/2004	920	ND<0.048	ND<10	ND<0.50
MW-3	5/12/2004	ND<660	ND<0.047	ND<10	0.5
MW-3	8/20/2004	<720	ND<0.10	ND<10	ND<0.50
Surface Water Marine Chronic Criterion (µg/l) [6]		1,000 [7]	0.03	3	0.025

NOTE:

Results in BOLD denote concentrations are above site-specific cleanup levels.

ND < - constituent was not detected above the laboratory practical quantitation limit .

< - TPH summation of DRO and ORO was not detected above the indicated concentration.

[1]Summation of DRO and ORO, as analyzed by Washington State Department of Ecology Method NWTPH-Dx.

[2]Analyzed by EPA Method 8082

[3]Analyzed by EPA Method 200.8

[4]Analyzed by EPA Method 7470A

[5]MTCA Chapter 173-340 WAC.

[6]WAC 173-201A-040

[7]Surface water cleanup level for TPH mixtures was calculated based on a summation of the MTCA Method A groundwater cleanup levels, per WAC 173-340-720.

DRO= total petroleum hydrocarbons as diesel-range organics

MTCA = Washington State Department of Ecology Model Toxics Control Act

ORO=total petroleum hydrocarbons as oil-range organics

PCBs = polychlorinated biphenyls

µg/l = micrograms per liter