Appendix B

Glacier Marine Services Sampling Results

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Appendix B–1

Fox Street/Slip 3 Sampling and Analysis
Marine Power & Equipment
1984
Sample Results

	FOX ST.	UPSTREAM DRAIN	DRAIN	DOWN STREAM SYNCRO	WEST DRY DOCK	EAST DRY DOCK	EPA SLIP 3	MPCC runoff (water)	dry dock solids	MICHIGAN ST DUST	4 MILE ROCK
)	1389**	50.8	148**	82.6	117	148**	157**	6.16*	125	460	126
NIC	3709**	21.1**	212**	26.5**	317**	215**	60**	6.5*	1481	41	15
JC	5583**	159	996**	248	220	580**	375**	43*	1124	540	359
PPER	1245**	60.5	284**	195**	140**	287**	273**	39.2*	456	117	92
DMIUM	4.88**	ND	.521	ND	.684	.422	.8**	.031	.521	1.5	.7
CKEL	48.4	31.7	33.0	33.0	27.3	35.7	29	.37	1049	36	
HROMIUM	92.6	29.3	40.1	31.1	37.7	47.5	35	.71	769	50	
ERCURY	.109	.480	.140	.148	.719	.285	.18		.024	.05	1.1
L+GREASE	33,000**	1100	1600	840	3800	3500					

.57

* Exceeds EPA acute criteria for water

** Exceeds EPA criteria for 4 mile Rock disposal Sediment

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Relative concentrations of heavy metals

	upper	Fox St drain	below ~~drain~~ drain	dock runoff	Syncrolift (sediment)	Syncrolift (water)	dry dock solids	west drydock	Gov dry
Pb	.17	.12	.09	.06	.10	.06	.03	.15	.1
As	.07	.31	.13	.07	.05	.06	.46	.39	.
Zn	.54	.46	.61	.45	.48	.46	.35	.27	.
Cu	.21	.10	.17	.41	.37	.41	.14	.17	.
Cave	total metal concentrations 292	11926	1640	94.8	522	110	3185	794	12

Appendix B–2

Storm Drain and Sediment Sampling
Marine Power & Equipment
1986
Sample Results

Table

Parameter (mg/kg)	#1 4/84 (MPE #1)	#1 2/85 (MPE #1)	#1 3/86 (MPE #1)	#2 (River St #1)	#3 (Fox St #1)	#4
As	3,766.2	1,200	1,153.8	183.3	111.8	211.5
Cd	4.4	6.7	5.38	7.5	6.2	.5
Cr	92.2	113.3	101.9	266.7	120.6	40.4
Cu	1246.8	900	711.5	466.7	382.4	288.5
Hg	.11	1.0	.65	.45	.56	.14
Ni	48.1	53.3	36.5	41.7	50	32.7
Pb	1428.6	900	730.8	683.3	617.6	148.1
Zn	5,584.4	2,266.7	2,307.7	1,300	852.9	1,000

Parameter	#5	#6	#7	#8	#11	#12
As	20.8	26.1	326.5	212.8	1814.8	1,152
Cd	<.3	<.3	.69	.43	13.1	17.9
Cr	28.3	30.4	38.8	48.9	203.7	239.4
Cu	60.4	195.7	140.9	297.9	4,814.8	6,061
Hg	.5	.15	.71	.28	.63	.68
Ni	32.1	32.6	86.5	36.2	64.8	60.6
Pb	50.9	52.2	118.4	148.9	1,093	1,485
Zn	158.5	239.1	224.5	595.7	8,333	13,939

Parameter	#13	#14	#15	#16	#17	#18
As	2,043.5	2,597.4	2,564.1	1,045.5	2,373	3,871
Cd	11.5	14.3	9.5	13.2	18.6	17.7
Cr	184.8	207.8	166.7	140.9	237.3	225.8
Cu	4,565.2	4,155.8	3,333.3	2,272.7	7,627	7,258
Hg	.26	.25	.31	.75	.13	.09
Ni	62.6	105.2	58.9	70.5	67.8	37.1
Pb	1,891.3	1,129.9	1,538.5	954.5	1,525	1,774
Zn	6,956.5	10,779	6,153.8	5,454.5	13,559	15,323

Parameter	#19
As	2,181.8
Cd	13.2
Cr	236.4
Cu	5,272.7
Hg	.32
Ni	69.1
Pb	1,381.8
Zn	9,818.2