



Pre-Permitting Environmental / Socio-Economic Data Report Series

Report Series L- Iliamna Lake Studies

Report L-4 Laboratory Data Tables – Sediment Samples 2005-2007

Submitted to the Alaska Department of Natural Resources October 2009

Preliminary data. Do not cite or quote.

The Pebble Partnership is providing environmental and socio-economic baseline data collected to inform the development of the Pebble Project to state and federal agencies, project stakeholders and the general public prior to project permitting as part of its commitment to full and open disclosure.

A comprehensive Environmental Baseline Document (EBD) will subsequently be prepared and appended to future project permit applications. The EBD will also be made publicly available when complete.

Collected for the Pebble Partnership by:



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2004-2007 Iliamna Lake Sediment Results Summary

Key:

Bold Results = Parameter undetected by test, value shown is 1/2 MDL or 1/2 MRL.

Green Results = Estimate result reported by laboratory below reporting limit (MRL).

MDL = Method Detection Limit.

MRL = Method Reporting Limit.

NA = Not Applicable.

SEM = Simultaneously Extracted Metals (Simultaneous with Acid Volatile Sulfides)

If result was not detected at the lab MDL, the value shown is 1/2 MDL.

If result was validation flagged U or UJ, the value shown is 1/2 MRL.

Note: All results reported on dry weight basis, except total solids reported on wet weight basis.

The location identifications for all samples collected at one meter below water surface end in "A"; location identifications for samples collected at half of the total depth end in "B"; location identifications for samples collected one meter above the bottom of the lake or at a maximum total depth of 20 meters below the surface end in "C."

2004-2007 Iliamna Lake Sediment Results Summary

	Parameters	Total Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Total Cyanide	Ammonia	Acid Volatile Sulfides	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Cadmium-SEM	Calcium	Chromium	Cobalt
	Basis	Wet	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	Units	percent	percent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bucket Lake C																					
	Sample Date																				
	09/28/05	27.1	10.8	9.4	1.84	54.4	0.035	233		12600	0.188	4.98	114	0.19	0.110	2.65	22.3		5600	10.50	3.95
	09/12/06	66.8		7.3	0.64	3.3	0.080	37	0.35	8600	0.022	4.76	119	0.12	0.045	2.51	0.045	0.05	3130	5.61	4.15
	Mean	47.0	10.8	8.4	1.24	28.9	0.058	135	0.35	10600	0.105	4.87	117	0.16	0.077	2.58	11.2	0.05	4365	8.06	4.05
	Median	47.0	10.8	8.4	1.24	28.9	0.058	135	0.35	10600	0.105	4.87	117	0.16	0.077	2.58	11.2	0.05	4365	8.06	4.05
	St. Deviation	28.1	NA	1.5	0.85	36.1	0.032	138	NA	2828	0.117	0.16	4	0.04	0.046	0.10	15.7	NA	1747	3.46	0.14
	# of values	2.0	1.0	2.0	2.00	2.0	2.000	2	1	2	2.000	2.00	2	2.00	2.000	2.00	2.0	1	2	2.00	2.00
	Minimum	27.1	10.8	7.3	0.64	3.3	0.035	37	0.35	8600	0.022	4.76	114	0.12	0.045	2.51	0.0	0.05	3130	5.61	3.95
	Maximum	66.8	10.8	9.4	1.84	54.4	0.080	233	0.35	12600	0.188	4.98	119	0.19	0.110	2.65	22.3	0.05	5600	10.50	4.15
	% of values undetected				50%				100%		50%			100%		50%	100%				
	# of values between MDL and MRL				1		1				1			2		1					
Flat Island C																					
	Sample Date																				
	06/14/05		11.1	18.3	53.7	426	0.430	570		4420	0.102	1.85	28	0.20	0.031	3.55	0.162		3960	2.72	1.19
	09/29/05	14.6	13.9	10.8	3.41	67.3	0.015	335		3380	0.106	1.06	19	0.26	0.212	2.41	0.212		2900	1.37	0.51
	09/11/06	12.1		9.0	3.64	14.9	0.042	508	0.35	6090	0.127	3.07	34	0.13	0.253	4.08	0.253	0.35	5000	1.23	1.64
	Mean	13.4	12.5	12.7	20.25	169.4	0.162	471	0.35	4630	0.112	1.99	27	0.20	0.165	3.35	0.209	0.35	3953	1.77	1.11
	Median	13.4	12.5	10.8	3.64	67.3	0.042	508	0.35	4420	0.106	1.85	28	0.20	0.212	3.55	0.212	0.35	3960	1.37	1.19
	St. Deviation	1.8	2.0	4.9	28.97	223.8	0.232	122	NA	1367	0.013	1.01	8	0.07	0.118	0.85	0.046	NA	1050	0.82	0.57
	# of values	2.0	2.0	3.0	3.00	3.0	3.000	3	1	3	3.000	3.00	3	3.00	3.000	3.00	3.000	1	3	3.00	3.00
	Minimum	12.1	11.1	9.0	3.41	14.9	0.015	335	0.35	3380	0.102	1.06	19	0.13	0.031	2.41	0.162	0.35	2900	1.23	0.51
	Maximum	14.6	13.9	18.3	53.70	426.0	0.430	570	0.35	6090	0.127	3.07	34	0.26	0.253	4.08	0.253	0.35	5000	2.72	1.64
	% of values undetected				33%		33%		100%		67%	33%		33%	100%	33%	67%	100%		33%	33%
	# of values between MDL and MRL				1		1				1			1		2	1			1	1
Finn Bay C																					
	Sample Date																				
	06/14/05		5.36	17.0	25.2	399	0.260	303		5280	0.089	3.29	36	0.15	0.031	1.54	0.090		1940	3.02	1.67
	09/11/06	16.8		18.5	0.92	49.5	0.088	494	16.8	6590	0.091	7.71	42	0.09	0.181	6.19	0.181	0.25	3060	1.46	2.36
	Mean	16.8	5.36	17.8	13.06	224.3	0.174	399	16.8	5935	0.090	5.50	39	0.12	0.106	3.87	0.135	0.25	2500	2.24	2.02
	Median	16.8	5.36	17.8	13.06	224.3	0.174	399	16.8	5935	0.090	5.50	39	0.12	0.106	3.87	0.135	0.25	2500	2.24	2.02
	St. Deviation	NA	NA	1.1	17.17	247.1	0.122	135	NA	926	0.001	3.13	5	0.04	0.106	3.29	0.064	NA	792	1.10	0.49
	# of values	1.0	1.00	2.0	2.00	2.0	2.000	2	1	2	2.000	2.00	2	2.00	2.000	2.00	2.000	1	2	2.00	2.00
	Minimum	16.8	5.36	17.0	0.92	49.5	0.088	303	16.8	5280	0.089	3.29	36	0.09	0.031	1.54	0.090	0.25	1940	1.46	1.67
	Maximum	16.8	5.36	18.5	25.20	399.0	0.260	494	16.8	6590	0.091	7.71	42	0.15	0.181	6.19	0.181	0.25	3060	3.02	2.36
	% of values undetected				50%						50%			50%	100%	50%	50%	100%			
	# of values between MDL and MRL										1						1			1	1

2004-2007 Iliamna Lake Sediment Results Summary

	Parameters	Copper	Copper-SEM	Iron	Lead	Lead-SEM	Magnesium	Manganese	Mercury	Mercury-SEM	Molybdenum	Nickel	Nickel-SEM	Potassium	Selenium	Silver	Sodium	Sulfur	Thallium	Tin	Vanadium	Zinc	Zinc-SEM
	Basis	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bucket Lake C																							
	Sample Date																						
	09/28/05	18.3		11900	79.10		3190	208	0.064		0.55	6.43		641	0.27	0.055	481		0.011	6.78	40.8	88.2	
	09/12/06	5.8	2.2	15400	4.58	8.9	4080	272	0.009	0.01	0.22	5.73	0.6	521	1.28	0.022	277	313	0.043	0.59	29.9	44.0	11.2
	Mean	12.1	2.2	13700	41.84	8.9	3635	240	0.036	0.01	0.39	6.08	0.6	581	0.77	0.039	379	313	0.027	3.69	35.4	66.1	11.2
	Median	12.1	2.2	13700	41.84	8.9	3635	240	0.036	0.01	0.39	6.08	0.6	581	0.77	0.039	379	313	0.027	3.69	35.4	66.1	11.2
	St. Deviation	8.8	NA	2500	52.69	NA	629	45	0.039	NA	0.23	0.49	NA	85	0.72	0.023	144	NA	0.023	4.37	7.7	31.3	NA
	# of values	2.0	1	2	2.00	1	2	2	2.000	1	2.00	2.00	1	2	2.00	2.000	2	1	2.000	2.00	2.0	2.0	1
	Minimum	5.8	2.2	11900	4.58	8.9	3190	208	0.009	0.01	0.22	5.73	0.6	521	0.27	0.022	277	313	0.011	0.59	29.9	44.0	11.2
	Maximum	18.3	2.2	15400	79.10	8.9	4080	272	0.064	0.01	0.55	6.43	0.6	641	1.28	0.055	481	313	0.043	6.78	40.8	88.2	11.2
	% of values undetected								50%	100%	100%				50%	100%			50%				
	# of values between MDL and MRL								1											1			
Flat Island C																							
	Sample Date																						
	06/14/05	11.5		4180	1.78		615	89	0.023		2.03	1.65		203	1.54	0.015	417		0.020	0.50	12.9	12.6	
	09/29/05	12.4		1850	1.29		483	39	0.040		1.06	1.55		106	0.51	0.106	339		0.021	3.42	3.2	13.7	
	09/11/06	16.0	8.5	2570	3.39	7.15	994	118	0.049	0.06	2.86	2.62	1.45	343	12.50	0.127	554	2070	0.082	1.27	16.0	24.8	14.6
	Mean	13.3	8.5	2870	2.15	7.15	697	82	0.037	0.06	1.98	1.94	1.45	217	4.85	0.083	437	2070	0.041	1.73	10.7	17.0	14.6
	Median	12.4	8.5	2570	1.78	7.15	615	89	0.040	0.06	2.03	1.65	1.45	203	1.54	0.106	417	2070	0.021	1.27	12.9	13.7	14.6
	St. Deviation	2.4	NA	1190	1.10	NA	265	40	0.013	NA	0.90	0.59	NA	119	6.65	0.059	109	NA	0.035	1.51	6.7	6.7	NA
	# of values	3.0	1	3	3.00	1	3	3	3.000	1	3.00	3.00	1	3	3.00	3.000	3	1	3.000	3.00	3.0	3.0	1
	Minimum	11.5	8.5	1850	1.29	7.15	483	39	0.023	0.06	1.06	1.55	1.45	106	0.51	0.015	339	2070	0.020	0.50	3.2	12.6	14.6
	Maximum	16.0	8.5	4180	3.39	7.15	994	118	0.049	0.06	2.86	2.62	1.45	343	12.50	0.127	554	2070	0.082	3.42	16.0	24.8	14.6
	% of values undetected					100%			67%	100%	33%		100%	33%	33%	100%			67%	100%	33%		
	# of values between MDL and MRL				1				1		1			1			2					1	
Finn Bay C																							
	Sample Date																						
	06/14/05	9.4		11200	2.57		707	98	0.018		4.58	1.55		268	0.77	0.015	455		0.040	0.50	23.1	24.4	
	09/11/06	13.5	8.5	15000	2.73	4.75	838	132	0.035	0.04	6.77	3.08	0.95	389	9.02	0.091	534	2840	0.058	0.91	27.8	33.7	19.9
	Mean	11.4	8.5	13100	2.65	4.75	773	115	0.027	0.04	5.68	2.32	0.95	329	4.90	0.053	495	2840	0.049	0.70	25.5	29.1	19.9
	Median	11.4	8.5	13100	2.65	4.75	773	115	0.027	0.04	5.68	2.32	0.95	329	4.90	0.053	495	2840	0.049	0.70	25.5	29.1	19.9
	St. Deviation	2.9	NA	2700	0.11	NA	93	24	0.012	NA	1.55	1.08	NA	86	5.83	0.053	56	NA	0.013	0.29	3.3	6.6	NA
	# of values	2.0	1	2	2.00	1	2	2	2.000	1	2.00	2.00	1	2	2.00	2.000	2	1	2.000	2.00	2.0	2.0	1
	Minimum	9.4	8.5	11200	2.57	4.75	707	98	0.018	0.04	4.58	1.55	0.95	268	0.77	0.015	455	2840	0.040	0.50	23.1	24.4	19.9
	Maximum	13.5	8.5	15000	2.73	4.75	838	132	0.035	0.04	6.77	3.08	0.95	389	9.02	0.091	534	2840	0.058	0.91	27.8	33.7	19.9
	% of values undetected					100%			50%	100%			100%			100%			50%	100%			
	# of values between MDL and MRL								1					1			1						

2004-2007 Iliamna Lake Sediment Results Summary

	Parameters	Total Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Total Cyanide	Ammonia	Acid Volatile Sulfides	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Cadmium-SEM	Calcium	Chromium	Cobalt
	Basis	Wet	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	Units	percent	percent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Knutson Bay C																					
	Sample Date																				
	06/14/05	62.0	1.27	7.28	8.78	42.3	0.077	79		4540	0.036	0.91	27	0.13	0.030	1.50	0.065		2200	2.03	1.44
	09/29/05	65.6	0.68	2.37	0.76	2.7	0.014	59		5980	0.023	0.71	31	0.11	0.045	1.07	0.099		2540	3.08	2.12
	10/14/05	22.7		5.80	2.20	67.7	0.056	362		11200	0.068	2.86	60	0.18	0.135	5.25	0.135		3810	6.34	2.68
	Mean	50.1	0.98	5.15	3.91	37.6	0.049	167		7240	0.042	1.49	39	0.14	0.070	2.61	0.100		2850	3.82	2.08
	Median	62.0	0.98	5.80	2.20	42.3	0.056	79		5980	0.036	0.91	31	0.13	0.045	1.50	0.099		2540	3.08	2.12
	St. Deviation	23.8	0.41	2.52	4.28	32.8	0.032	170		3504	0.023	1.19	18	0.04	0.057	2.30	0.035		849	2.25	0.62
	# of values	3.0	2.00	3.00	3.00	3.0	3.000	3	0	3	3.000	3.00	3	3.00	3.000	3.00	3.000	0	3	3.00	3.00
	Minimum	22.7	0.68	2.37	0.76	2.7	0.014	59		4540	0.023	0.71	27	0.11	0.030	1.07	0.065		2200	2.03	1.44
	Maximum	65.6	1.27	7.28	8.78	67.7	0.077	362		11200	0.068	2.86	60	0.18	0.135	5.25	0.135		3810	6.34	2.68
	% of values undetected				67%		33%				67%			100%	33%	33%					
	# of values between MDL and MRL										1	3		2		1	2				
Northeast Bay C																					
	Sample Date																				
	06/16/05	37.5	2.47	28.2	13.0	146	0.190	99		9000	0.118	6.02	111	0.24	0.031	1.55	0.262		4180	8.08	4.07
	09/28/05	28.1	2.98	62.3	1.78	7.0	0.016	245		10200	0.112	5.48	138	0.12	0.108	2.70	0.324		5430	8.85	4.58
	Mean	32.8	2.73	45.3	7.4	76.5	0.103	172		9600	0.115	5.75	125	0.18	0.069	2.12	0.293		4805	8.47	4.33
	Median	32.8	2.73	45.3	7.4	76.5	0.103	172		9600	0.115	5.75	125	0.18	0.069	2.12	0.293		4805	8.47	4.33
	St. Deviation	6.6	0.36	24.1	7.9	98.3	0.123	103		849	0.004	0.38	19	0.08	0.054	0.82	0.044		884	0.54	0.36
	# of values	2.0	2.00	2.0	2.0	2.0	2.000	2	0	2	2.000	2.00	2	2.00	2.000	2.00	2.000	0	2	2.00	2.00
	Minimum	28.1	2.47	28.2	1.78	7.0	0.016	99		9000	0.112	5.48	111	0.12	0.031	1.55	0.262		4180	8.08	4.07
	Maximum	37.5	2.98	62.3	13.0	146.0	0.190	245		10200	0.118	6.02	138	0.24	0.108	2.70	0.324		5430	8.85	4.58
	% of values undetected				50%		50%							100%	50%						
	# of values between MDL and MRL										1			1		1	1				
Pile Bay C																					
	Sample Date																				
	06/14/05	55.6	0.95	3.11	3.99	88.8	0.058	87		8360	0.107	4.22	98	0.11	0.116	1.54	0.157		3630	7.21	4.76
	09/29/05	50.8	1.08	1.53	0.98	19.7	0.014	40		10700	0.093	5.48	123	0.06	0.156	3.23	0.158		4670	9.23	6.66
	Mean	53.2	1.01	2.32	2.49	54.3	0.036	64		9530	0.100	4.85	110	0.09	0.136	2.38	0.158		4150	8.22	5.71
	Median	53.2	1.01	2.32	2.49	54.3	0.036	64		9530	0.100	4.85	110	0.09	0.136	2.38	0.158		4150	8.22	5.71
	St. Deviation	3.4	0.10	1.12	2.13	48.9	0.031	33		1655	0.010	0.89	18	0.03	0.028	1.20	0.001		735	1.43	1.34
	# of values	2.0	2.00	2.00	2.00	2.0	2.000	2	0	2	2.000	2.00	2	2.00	2.000	2.00	2.000	0	2	2.00	2.00
	Minimum	50.8	0.95	1.53	0.98	19.7	0.014	40		8360	0.093	4.22	98	0.06	0.116	1.54	0.157		3630	7.21	4.76
	Maximum	55.6	1.08	3.11	3.99	88.8	0.058	87		10700	0.107	5.48	123	0.11	0.156	3.23	0.158		4670	9.23	6.66
	% of values undetected				50%		50%									50%					
	# of values between MDL and MRL			1							1			1	2		2				

2004-2007 Iliamna Lake Sediment Results Summary

	Parameters	Copper	Copper-SEM	Iron	Lead	Lead-SEM	Magnesium	Manganese	Mercury	Mercury-SEM	Molybdenum	Nickel	Nickel-SEM	Potassium	Selenium	Silver	Sodium	Sulfur	Thallium	Tin	Vanadium	Zinc	Zinc-SEM
	Basis	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Knutson Bay C																							
	Sample Date																						
	06/14/05	6.7		8940	7.76		1770	195	0.006		0.59	2.68		381	0.07	0.015	154		0.019	0.48	12.6	27.9	
	09/29/05	7.9		7490	4.50		2400	279	0.009		0.23	5.91		572	0.11	0.023	159		0.005	0.74	15.3	37.0	
	10/14/05	16.1		26400	3.61		1070	172	0.026		8.47	4.32		453	1.09	0.068	636		0.037	2.18	42.3	43.7	
	Mean	10.2		14280	5.29		1747	215	0.014		3.09	4.30		469	0.42	0.035	316		0.020	1.13	23.4	36.2	
	Median	7.9		8940	4.50		1770	195	0.009		0.59	4.32		453	0.11	0.023	159		0.019	0.74	15.3	37.0	
	St. Deviation	5.1		10520	2.18		665	56	0.011		4.66	1.62		96	0.58	0.028	277		0.016	0.92	16.4	7.9	
	# of values	3.0	0	3	3.00	0	3	3	3.000	0	3.00	3.00	0	3	3.00	3.000	3	0	3.000	3.00	3.0	3.0	0
	Minimum	6.7		7490	3.61		1070	172	0.006		0.23	2.68		381	0.07	0.015	154		0.005	0.48	12.6	27.9	
	Maximum	16.1		26400	7.76		2400	279	0.026		8.47	5.91		572	1.09	0.068	636		0.037	2.18	42.3	43.7	
	% of values undetected								100%						100%	100%				33%	100%		
	# of values between MDL and MRL										1									2			
Northeast Bay C																							
	Sample Date																						
	06/16/05	22.4		10700	4.57		3840	196	0.015		3.35	4.96		1030	0.77	0.015	544		0.077	0.50	36.2	42.8	
	09/28/05	23.6		12600	4.75		3870	235	0.021		3.67	6.39		1590	1.07	0.054	971		0.011	1.73	37.7	51.3	
	Mean	23.0		11700	4.66		3855	216	0.018		3.51	5.68		1310	0.92	0.034	758		0.044	1.11	37.0	47.1	
	Median	23.0		11700	4.66		3855	216	0.018		3.51	5.68		1310	0.92	0.034	758		0.044	1.11	37.0	47.1	
	St. Deviation	0.8		1300	0.13		21	28	0.004		0.23	1.01		396	0.21	0.027	302		0.047	0.87	1.1	6.0	
	# of values	2.0	0	2	2.00	0	2	2	2.000	0	2.00	2.00	0	2	2.00	2.000	2	0	2.000	2.00	2.0	2.0	0
	Minimum	22.4		10700	4.57		3840	196	0.015		3.35	4.96		1030	0.77	0.015	544		0.011	0.50	36.2	42.8	
	Maximum	23.6		12600	4.75		3870	235	0.021		3.67	6.39		1590	1.07	0.054	971		0.077	1.73	37.7	51.3	
	% of values undetected								50%							100%				50%	100%		
	# of values between MDL and MRL								1						1								
Pile Bay C																							
	Sample Date																						
	06/14/05	56.9		17000	5.75		3860	307	0.019		2.23	4.02		1150	0.63	0.015	428		0.061	0.50	37.8	45.2	
	09/29/05	90.6		24100	6.01		4510	591	0.012		2.93	6.07		1580	0.15	0.081	591		0.028	0.97	48.8	58.3	
	Mean	73.8		20600	5.88		4185	449	0.015		2.58	5.05		1365	0.39	0.048	510		0.044	0.73	43.3	51.8	
	Median	73.8		20600	5.88		4185	449	0.015		2.58	5.05		1365	0.39	0.048	510		0.044	0.73	43.3	51.8	
	St. Deviation	23.8		5000	0.18		460	201	0.005		0.49	1.45		304	0.34	0.046	115		0.023	0.33	7.8	9.3	
	# of values	2.0	0	2	2.00	0	2	2	2.000	0	2.00	2.00	0	2	2.00	2.000	2	0	2.000	2.00	2.0	2.0	0
	Minimum	56.9		17000	5.75		3860	307	0.012		2.23	4.02		1150	0.15	0.015	428		0.028	0.50	37.8	45.2	
	Maximum	90.6		24100	6.01		4510	591	0.019		2.93	6.07		1580	0.63	0.081	591		0.061	0.97	48.8	58.3	
	% of values undetected								50%						50%	50%							100%
	# of values between MDL and MRL								1							1				1			

2004-2007 Iliamna Lake Sediment Results Summary

	Parameters	Total Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Total Cyanide	Ammonia	Acid Volatile Sulfides	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Boron	Cadmium	Cadmium-SEM	Calcium	Chromium	Cobalt
	Basis	Wet	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	Units	percent	percent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Roadhouse Bay C																					
	Sample Date																				
	06/15/05									4920	0.070	5.12	71	0.12	0.030	1.51	0.127		2710	5.31	1.86
	09/28/05	55.7	0.62	37.8	0.90	5.0	0.016	69		4800	0.061	4.47	64	0.12	0.054	1.14	0.136		2670	5.20	1.96
	Mean	55.7	0.62	37.8	0.90	5.0	0.016	69	NA	4860	0.066	4.80	68	0.12	0.042	1.33	0.132		2690	5.26	1.91
	Median	55.7	0.62	37.8	0.90	5.0	0.016	69	NA	4860	0.066	4.80	68	0.12	0.042	1.33	0.132		2690	5.26	1.91
	St. Deviation	NA	NA	NA	NA	NA	NA	NA	NA	85	0.006	0.46	5	0.00	0.017	0.26	0.006		28	0.08	0.07
	# of values	1.0	1.00	1.0	1.00	1.0	1.000	1	0	2	2.000	2.00	2	2.00	2.000	2.00	2.000	0	2	2.00	2.00
	Minimum	55.7	0.62	37.8	0.90	5.0	0.016	69	NA	4800	0.061	4.47	64	0.12	0.030	1.14	0.127		2670	5.20	1.86
	Maximum	55.7	0.62	37.8	0.90	5.0	0.016	69	NA	4920	0.070	5.12	71	0.12	0.054	1.51	0.136		2710	5.31	1.96
	% of values undetected				100%		100%								100%	50%					
	# of values between MDL and MRL										2			1		1	2				
Whistlewing Bay C																					
	Sample Date																				
	09/11/06	19.2		97.6	3.65	61.7	0.400	512	4.4	7000	0.077	7.28	71	0.42	0.154	6.33	0.154	0.2	3870	4.35	3.35
	Mean	19.2		97.6	3.65	61.7	0.400	512	4.4	7000	0.077	7.28	71	0.42	0.154	6.33	0.154	0.2	3870	4.35	3.35
	Median	19.2		97.6	3.65	61.7	0.400	512	4.4	7000	0.077	7.28	71	0.42	0.154	6.33	0.154	0.2	3870	4.35	3.35
	St. Deviation	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	# of values	1.0	0	1.0	1.00	1.0	1.000	1	1	1	1.000	1.00	1	1.00	1.000	1.00	1.000	1	1	1.00	1.00
	Minimum	19.2		97.6	3.65	61.7	0.400	512	4.4	7000	0.077	7.28	71	0.42	0.154	6.33	0.154	0.2	3870	4.35	3.35
	Maximum	19.2		97.6	3.65	61.7	0.400	512	4.4	7000	0.077	7.28	71	0.42	0.154	6.33	0.154	0.2	3870	4.35	3.35
	% of values undetected										100%				100%		100%	100%			
	# of values between MDL and MRL					1								1							

2004-2007 Iliamna Lake Sediment Results Summary

	Parameters	Copper	Copper-SEM	Iron	Lead	Lead-SEM	Magnesium	Manganese	Mercury	Mercury-SEM	Molybdenum	Nickel	Nickel-SEM	Potassium	Selenium	Silver	Sodium	Sulfur	Thallium	Tin	Vanadium	Zinc	Zinc-SEM
	Basis	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Roadhouse Bay C																							
	Sample Date																						
	06/15/05	5.3		8290	2.70		1840	169	0.006		1.36	2.30		486	0.16	0.015	360		0.020	0.49	20.2	23.9	
	09/28/05	4.6		9010	2.09		1730	150	0.011		1.30	2.70		507	0.13	0.027	339		0.005	0.87	21.0	23.2	
	Mean	5.0		8650	2.40		1785	160	0.008		1.33	2.50		497	0.15	0.021	350		0.013	0.68	20.6	23.6	
	Median	5.0		8650	2.40		1785	160	0.008		1.33	2.50		497	0.15	0.021	350		0.013	0.68	20.6	23.6	
	St. Deviation	0.5		510	0.43		78	13	0.003		0.04	0.28		15	0.02	0.008	15		0.011	0.27	0.6	0.5	
	# of values	2.0	0	2	2.00	0	2	2	2.000	0	2.00	2.00	0	2	2.00	2.000	2	0	2.000	2.00	2.0	2.0	0
	Minimum	4.6		8290	2.09		1730	150	0.006		1.30	2.30		486	0.13	0.015	339		0.005	0.49	20.2	23.2	
	Maximum	5.3		9010	2.70		1840	169	0.011		1.36	2.70		507	0.16	0.027	360		0.020	0.87	21.0	23.9	
	% of values undetected								100%						50%	100%			50%	100%			
	# of values between MDL and MRL										1				1								
Whistlewing Bay C																							
	Sample Date																						
	09/11/06	13.9	7.1	9690	3.81	3.95	1910	292	0.031	0.03	5.02	4.22	0.8	684	6.64	0.077	423	2110	0.050	0.77	28.8	31.2	15.7
	Mean	13.9	7.1	9690	3.81	3.95	1910	292	0.031	0.03	5.02	4.22	0.8	684	6.64	0.077	423	2110	0.050	0.77	28.8	31.2	15.7
	Median	13.9	7.1	9690	3.81	3.95	1910	292	0.031	0.03	5.02	4.22	0.8	684	6.64	0.077	423	2110	0.050	0.77	28.8	31.2	15.7
	St. Deviation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	# of values	1.0	1	1	1.00	1	1	1	1.000	1	1.00	1.00	1	1	1.00	1.000	1	1	1.000	1.00	1.0	1.0	1
	Minimum	13.9	7.1	9690	3.81	3.95	1910	292	0.031	0.03	5.02	4.22	0.8	684	6.64	0.077	423	2110	0.050	0.77	28.8	31.2	15.7
	Maximum	13.9	7.1	9690	3.81	3.95	1910	292	0.031	0.03	5.02	4.22	0.8	684	6.64	0.077	423	2110	0.050	0.77	28.8	31.2	15.7
	% of values undetected					100%			100%	100%			100%			100%			100%	100%			
	# of values between MDL and MRL																1						