

Arthur D. Little, Inc.

Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	MMS TOX TEST REF	98-AC-AC1-01-00-MET-S	98-AC-AC1-02-00-MET-S	98-AC-AC1-02-00-MET-S
Lab ID	MMS TOX TEST REF	98-AC-AC1-01-00-MET-S	98-AC-AC1-02-00-MET-S #1	98-AC-AC1-02-00-MET-S #2
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	QC
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	NA NA	0.4667 g	0.4496 g	0.5204 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	6/30/1998	6/27/1998	6/27/1998	6/27/1998
Extract Date	NA	8/5/1998	8/5/1998	8/5/1998
Analysis Date	NA	8/5/1998	8/5/1998	8/5/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---

METALS				
Ag - Silver (ug/g)	0.01	0.03	0.04	0.03
Al - Aluminum (%)	7.69	8.57	8.52	7.69
As - Arsenic (ug/g)	21.5	4.7	4.3	3.7
Ba - Barium (ug/g)	1002	707	720	671
Be - Beryllium (ug/g)	1.63	1.1	1.1	1.1
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.14	0.11	0.1	0.1
Cr - Chromium (ug/g)	108	107	87	91.8
Cu - Copper (ug/g)	51	31.6	32.8	31.8
Fe - Iron (%)	5.13	5.83	5.81	5.64
Hg - Mercury (ug/g)	0.064	0.062	0.063	0.06
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	1360	808	812	771
Ni - Nickel (ug/g)	50.2	52.9	53.2	50.4
Pb - Lead (ug/g)	17.1	15	14.9	14.3
Sb - Antimony (ug/g)	1.24	0.61	0.62	0.58
Se - Selenium (ug/g)	0.2	0.38	0.35	0.3
Sn - Tin (ug/g)	2.45	1.44	1.45	1.38
Tl - Thallium (ug/g)	0.54	0.37	0.37	0.37
V - Vanadium (ug/g)	NA	171	178	179
Zn - Zinc (ug/g)	123	121	122	130

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Field ID	98-AC-AC1-03-00-MET-S	98-0-F1-01-00-MET-S	98-0-F1-02-00-MET-S	98-0-F1-03-00-MET-S
Lab ID	98-AC-AC1-03-00-MET-S	98-0-F1-01-00-MET-S	98-0-F1-02-00-MET-S	98-0-F1-03-00-MET-S
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4504 g	0.4871 g	0.4717 g	0.4616 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	6/27/1998	7/3/1998	7/3/1998	7/3/1998
Extract Date	8/5/1998	7/21/1998	7/21/1998	7/21/1998
Analysis Date	8/5/1998	7/21/1998	7/21/1998	7/21/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---

METALS				
Ag - Silver (ug/g)	0.03	0.07	0.05	0.05
Al - Aluminum (%)	8.31	7.79	7.91	7.27
As - Arsenic (ug/g)	4	14.3	14	14.6
Ba - Barium (ug/g)	682	868	874	833
Be - Beryllium (ug/g)	1	1.3	1.3	1.3
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.1	0.11	0.1	0.1
Cr - Chromium (ug/g)	86.9	94.6	89.5	83.1
Cu - Copper (ug/g)	31.3	47.1	48.6	47.3
Fe - Iron (%)	5.64	4.71	4.87	4.65
Hg - Mercury (ug/g)	0.068	0.11	0.116	0.112
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	771	826	892	792
Ni - Nickel (ug/g)	51.1	48.9	49.7	48
Pb - Lead (ug/g)	14.2	14	14	13.3
Sb - Antimony (ug/g)	0.57	1.53	1.51	1.5
Se - Selenium (ug/g)	0.36	0.51	0.55	0.4
Sn - Tin (ug/g)	1.33	1.36	1.45	1.41
Tl - Thallium (ug/g)	0.36	0.45	0.45	0.43
V - Vanadium (ug/g)	177	173	167	159
Zn - Zinc (ug/g)	116	120	121	113

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Field ID	98-0-F2-01-00-MET-S	98-0-F2-01-00-MET-S	98-0-F4-01-00-MET-S	98-0-F5-01-00-MET-S
Lab ID	98-0-F2-01-00-MET-S	98-0-F2-01-00-MET-S	98-0-F4-01-00-MET-S	98-0-F5-01-00-MET-S
	#1	#2		
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	QC	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.5109 g	0.4656 g	0.4669 g	0.4944 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/3/1998	7/3/1998	7/2/1998	7/2/1998
Extract Date	7/21/1998	7/21/1998	7/21/1998	7/21/1998
Analysis Date	7/21/1998	7/21/1998	7/21/1998	7/21/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.02	0.02	0.01	0.04
Al - Aluminum (%)	6.6	6.8	6.92	7.92
As - Arsenic (ug/g)	4.1	2.1	2.5	14
Ba - Barium (ug/g)	675	693	571	957
Be - Beryllium (ug/g)	1.1	1.1	1	1.4
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.1	0.1	0.08	0.11
Cr - Chromium (ug/g)	52.7	47.6	47.5	72.9
Cu - Copper (ug/g)	20	20.6	21.7	39.7
Fe - Iron (%)	2.75	2.72	3.63	4.11
Hg - Mercury (ug/g)	0.039	NA	0.032	0.057
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	611	609	881	999
Ni - Nickel (ug/g)	25.9	25.8	28.7	39.9
Pb - Lead (ug/g)	8.3	8.3	8	14
Sb - Antimony (ug/g)	0.48	0.48	0.48	1.08
Se - Selenium (ug/g)	0.19	0.14	0.21	0.36
Sn - Tin (ug/g)	0.79	0.77	0.71	1.46
Tl - Thallium (ug/g)	0.41	0.41	0.34	0.51
V - Vanadium (ug/g)	91	87.6	122	143
Zn - Zinc (ug/g)	64.6	67.3	73.5	112

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Field ID	98-0-F6-01-00-MET-S	98-0-F8-01-00-MET-S	98-0-F13-01-00-MET-S	98-0-F14-01-00-MET-S
Lab ID	98-0-F6-01-00-MET-S	98-0-F8-01-00-MET-S	98-0-F13-01-00-MET-S	98-0-F14-01-00-MET-S #1
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4629 g	0.463 g	0.4514 g	0.4525 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/2/1998	7/2/1998	7/3/1998	7/3/1998
Extract Date	7/21/1998	7/21/1998	7/21/1998	7/21/1998
Analysis Date	7/21/1998	7/21/1998	7/21/1998	7/21/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.02	0.04	0.04	0.08
Al - Aluminum (%)	7.79	7.65	7.43	7.55
As - Arsenic (ug/g)	5.9	9.1	7.1	8.9
Ba - Barium (ug/g)	782	878	722	757
Be - Beryllium (ug/g)	1.2	1.4	1.4	1.2
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.09	0.09	0.07	0.1
Cr - Chromium (ug/g)	61.3	72.9	64.5	91.6
Cu - Copper (ug/g)	30.3	32.7	25	43.3
Fe - Iron (%)	4.14	4.1	3.46	4.46
Hg - Mercury (ug/g)	0.028	0.033	0.044	0.109
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	909	889	709	808
Ni - Nickel (ug/g)	32.2	36.2	32.1	45.1
Pb - Lead (ug/g)	10.5	12.6	10.9	12
Sb - Antimony (ug/g)	0.73	0.96	0.72	1.01
Se - Selenium (ug/g)	0.14	0.24	0.2	0.37
Sn - Tin (ug/g)	1.08	1.38	1.08	1.53
Tl - Thallium (ug/g)	0.37	0.46	0.41	0.4
V - Vanadium (ug/g)	147	141	114	144
Zn - Zinc (ug/g)	90.4	100	82.7	109

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Field ID	98-0-F14-01-00-MET-S	98-1-F1-01-00-MET-S	98-1-F1-01-00-MET-S	98-1-F1-02-00-MET-S
Lab ID	98-0-F14-01-00-MET-S #2	98-1-F1-01-00-MET-S #1	98-1-F1-01-00-MET-S #2	98-1-F1-02-00-MET-S
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	QC	SAMP	QC	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0 g	0.4589 g	0.5109 g	0.4575 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/3/1998	7/2/1998	7/2/1998	7/2/1998
Extract Date	7/21/1998	7/21/1998	7/21/1998	7/21/1998
Analysis Date	7/21/1998	7/21/1998	7/21/1998	7/21/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---

METALS				
Ag - Silver (ug/g)	NA	0.06	0.06	0.05
Al - Aluminum (%)	NA	7.58	7.55	7.74
As - Arsenic (ug/g)	NA	7.7	7.4	7.7
Ba - Barium (ug/g)	NA	805	817	804
Be - Beryllium (ug/g)	NA	1.4	1.4	1.4
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	NA	0.1	0.09	0.09
Cr - Chromium (ug/g)	NA	65.1	60	67
Cu - Copper (ug/g)	NA	28.2	27.5	27.1
Fe - Iron (%)	NA	3.91	3.86	3.89
Hg - Mercury (ug/g)	0.109	0.045	NA	0.04
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	NA	817	805	919
Ni - Nickel (ug/g)	NA	32.8	33.3	32.7
Pb - Lead (ug/g)	NA	11.7	12	11.8
Sb - Antimony (ug/g)	NA	0.78	0.78	0.75
Se - Selenium (ug/g)	NA	0.23	0.23	0.23
Sn - Tin (ug/g)	NA	1.11	1.4	1.18
Tl - Thallium (ug/g)	NA	0.41	0.41	0.4
V - Vanadium (ug/g)	NA	124	128	125
Zn - Zinc (ug/g)	NA	97.7	96.6	98

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Field ID	98-1-F1-03-00-MET-S	98-1-F2-01-00-MET-S	98-1-F2-01-00-MET-S	98-1-16-01-00-MET-S
Lab ID	98-1-F1-03-00-MET-S	98-1-F2-01-00-MET-S	98-1-F2-01-00-MET-S	98-1-16-01-00-MET-S
		#1	#2	
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	QC	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4847 g	0.4544 g	0.485 g	0.4622 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/2/1998	6/28/1998	6/28/1998	7/2/1998
Extract Date	7/21/1998	8/20/1998	8/20/1998	7/21/1998
Analysis Date	7/21/1998	8/20/1998	8/20/1998	7/21/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.06	0.08	0.07	0.06
Al - Aluminum (%)	7.82	7.6	7.65	7.53
As - Arsenic (ug/g)	7.4	7.3	7.7	8.5
Ba - Barium (ug/g)	841	810	825	775
Be - Beryllium (ug/g)	1.4	1.2	1.3	1.4
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.09	0.19	0.13	0.09
Cr - Chromium (ug/g)	68	77.4	71.1	71.4
Cu - Copper (ug/g)	27.8	31.2	30.9	30.4
Fe - Iron (%)	3.89	4.37	4.19	3.98
Hg - Mercury (ug/g)	0.043	0.05	0.053	0.054
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	830	1016	1013	1049
Ni - Nickel (ug/g)	33.6	36.3	36.6	33.3
Pb - Lead (ug/g)	12.2	13.1	13.2	11.8
Sb - Antimony (ug/g)	0.79	0.86	0.88	0.77
Se - Selenium (ug/g)	0.26	0.31	0.35	0.23
Sn - Tin (ug/g)	1.13	1.38	1.4	1.09
Tl - Thallium (ug/g)	0.42	0.41	0.41	0.39
V - Vanadium (ug/g)	135	125	123	124
Zn - Zinc (ug/g)	82.5	108	104	97

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1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	98-1-17-01-00-MET-S	98-1-17-01-00-MET-S	98-1-19-01-00-MET-S	98-1-21-01-00-MET-S
Lab ID	98-1-17-01-00-MET-S	98-1-17-01-00-MET-S	98-1-19-01-00-MET-S	98-1-21-01-00-MET-S
	#1	#2		
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	QC	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4825 g	0.4869 g	0.4589 g	0.4498 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/2/1998	7/2/1998	7/2/1998	7/2/1998
Extract Date	8/20/1998	8/20/1998	7/21/1998	7/21/1998
Analysis Date	8/20/1998	8/20/1998	7/21/1998	7/21/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.03	0.04	0.07	0.01
Al - Aluminum (%)	8.04	7.97	7.85	8.57
As - Arsenic (ug/g)	5.2	5.4	11.6	6.3
Ba - Barium (ug/g)	633	626	806	752
Be - Beryllium (ug/g)	1	1	1.1	1
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.09	0.09	0.09	0.08
Cr - Chromium (ug/g)	60	58	48.3	57.9
Cu - Copper (ug/g)	21.5	21.3	33	22.6
Fe - Iron (%)	4.45	4.51	3.79	3.99
Hg - Mercury (ug/g)	0.033	0.035	0.048	0.028
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	927	949	777	833
Ni - Nickel (ug/g)	26.2	26	32.4	28.4
Pb - Lead (ug/g)	10.1	9.8	11.7	10.6
Sb - Antimony (ug/g)	0.67	0.61	0.91	0.72
Se - Selenium (ug/g)	0.34	0.27	0.24	0.13
Sn - Tin (ug/g)	1.01	0.98	1.57	1.75
Tl - Thallium (ug/g)	0.33	0.32	0.42	0.43
V - Vanadium (ug/g)	135	134	124	127
Zn - Zinc (ug/g)	85.9	91.2	91.2	79.7

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Field ID	98-1-22-01-00-MET-S	98-1-23-01-00-MET-S	98-2-F1-01-00-MET-S	98-2-F2-01-00-MET-S
Lab ID	98-1-22-01-00-MET-S	98-1-23-01-00-MET-S	98-2-F1-01-00-MET-S	98-2-F2-01-00-MET-S
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4652 g	0.468 g	0.4613 g	0.4604 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/2/1998	7/2/1998	7/1/1998	7/1/1998
Extract Date	7/21/1998	7/21/1998	8/5/1998	8/20/1998
Analysis Date	7/21/1998	7/21/1998	8/5/1998	8/20/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.03	0.05	0.06	0.03
Al - Aluminum (%)	7.61	9.37	8.11	7.5
As - Arsenic (ug/g)	5.7	13.1	11.7	10.2
Ba - Barium (ug/g)	785	888	912	893
Be - Beryllium (ug/g)	1	1.2	1.2	1.4
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.09	0.09	0.11	0.11
Cr - Chromium (ug/g)	46	77.1	69	90
Cu - Copper (ug/g)	21.8	41.9	38.5	39
Fe - Iron (%)	3.42	4.37	4.68	4.45
Hg - Mercury (ug/g)	0.028	0.049	0.054	0.063
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	708	997	974	1565
Ni - Nickel (ug/g)	28.7	38.6	40.7	39.6
Pb - Lead (ug/g)	10.5	13.8	14	14.2
Sb - Antimony (ug/g)	0.7	1.11	1.04	1.04
Se - Selenium (ug/g)	0.16	0.23	0.28	0.39
Sn - Tin (ug/g)	1.38	1.71	1.8	1.52
Tl - Thallium (ug/g)	0.4	0.5	0.47	0.46
V - Vanadium (ug/g)	111	145	150	153
Zn - Zinc (ug/g)	73.8	118	116	122

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Field ID	98-2-F2-02-00-MET-S	98-2-F2-03-00-MET-S	98-2-F3-01-00-MET-S	98-2-F3-02-00-MET-S
Lab ID	98-2-F2-02-00-MET-S	98-2-F2-03-00-MET-S	98-2-F3-01-00-MET-S	98-2-F3-02-00-MET-S
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4812 g	0.4653 g	0.4487 g	0.4578 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/1/1998	7/1/1998	6/30/1998	6/30/1998
Extract Date	8/20/1998	8/20/1998	8/5/1998	8/5/1998
Analysis Date	8/20/1998	8/20/1998	8/5/1998	8/5/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.03	0.04	0.07	0.07
Al - Aluminum (%)	7.71	8.15	7.2	7.24
As - Arsenic (ug/g)	8	8.5	7.5	9.7
Ba - Barium (ug/g)	887	893	721	709
Be - Beryllium (ug/g)	1.3	1.4	1	1.1
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.14	0.12	0.12	0.11
Cr - Chromium (ug/g)	81.8	83.1	58.7	70.7
Cu - Copper (ug/g)	37.3	38.5	34.2	34.8
Fe - Iron (%)	4.41	4.61	4.14	4.21
Hg - Mercury (ug/g)	0.069	0.066	0.063	0.061
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	883	1040	666	732
Ni - Nickel (ug/g)	37.6	38.8	34.1	33.9
Pb - Lead (ug/g)	14.2	14.3	12.5	12.3
Sb - Antimony (ug/g)	1.04	1.05	0.85	0.83
Se - Selenium (ug/g)	0.42	0.41	0.38	0.31
Sn - Tin (ug/g)	1.51	1.53	1.72	1.56
Tl - Thallium (ug/g)	0.45	0.46	0.41	0.39
V - Vanadium (ug/g)	147	152	136	128
Zn - Zinc (ug/g)	117	124	116	105

Arthur D. Little, Inc.

Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	98-2-F3-03-00-MET-S	98-2-F4-01-00-MET-S	98-2-F4-01-00-MET-S	98-2-F4-02-00-MET-S
Lab ID	98-2-F3-03-00-MET-S	98-2-F4-01-00-MET-S	98-2-F4-01-00-MET-S	98-2-F4-02-00-MET-S
		#1	#2	#1
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	QC	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4484 g	0.4503 g	0 g	0.4549 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	6/30/1998	7/1/1998	7/1/1998	7/1/1998
Extract Date	8/5/1998	8/5/1998	NA	8/5/1998
Analysis Date	8/5/1998	8/5/1998	NA	8/5/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.08	0.1	NA	0.1
Al - Aluminum (%)	7.01	6.79	NA	6.72
As - Arsenic (ug/g)	7.4	10.9	NA	8.6
Ba - Barium (ug/g)	719	744	NA	735
Be - Beryllium (ug/g)	1	1	NA	1
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.14	0.18	NA	0.14
Cr - Chromium (ug/g)	68.9	67	NA	74.4
Cu - Copper (ug/g)	32.8	30	NA	31
Fe - Iron (%)	3.98	3.3	NA	3.38
Hg - Mercury (ug/g)	0.064	0.054	NA	0.053
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	667	570	NA	565
Ni - Nickel (ug/g)	33.9	29.1	NA	31.1
Pb - Lead (ug/g)	12.6	12	NA	12.1
Sb - Antimony (ug/g)	0.88	0.84	NA	0.87
Se - Selenium (ug/g)	0.4	0.32	NA	0.41
Sn - Tin (ug/g)	1.72	1.5	NA	1.44
Tl - Thallium (ug/g)	0.4	0.4	NA	0.4
V - Vanadium (ug/g)	124	94.3	NA	105
Zn - Zinc (ug/g)	101	85.1	NA	87.3

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Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	98-2-F4-02-00-MET-S	98-2-F4-03-00-MET-S	98-2-16-01-00-MET-S	98-2-17-01-00-MET-S
Lab ID	98-2-F4-02-00-MET-S	98-2-F4-03-00-MET-S	98-2-16-01-00-MET-S	98-2-17-01-00-MET-S
	#2			
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	QC	SAMP	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0 g	0.4443 g	0.4516 g	0.4662 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/1/1998	7/1/1998	7/1/1998	7/1/1998
Extract Date	NA	8/5/1998	8/20/1998	8/20/1998
Analysis Date	NA	8/5/1998	8/20/1998	8/20/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	NA	0.08	0.05	0.05
Al - Aluminum (%)	NA	6.69	7.65	7.77
As - Arsenic (ug/g)	NA	10	11.4	11.4
Ba - Barium (ug/g)	NA	715	895	870
Be - Beryllium (ug/g)	NA	1	1.3	1.4
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	NA	0.13	0.11	0.11
Cr - Chromium (ug/g)	NA	72.9	85.6	82.9
Cu - Copper (ug/g)	NA	30.4	38.8	35.8
Fe - Iron (%)	NA	3.3	4.39	4.33
Hg - Mercury (ug/g)	NA	0.052	0.068	0.062
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	NA	564	1154	1054
Ni - Nickel (ug/g)	NA	29.8	37.4	32.4
Pb - Lead (ug/g)	NA	11.7	13.4	12.8
Sb - Antimony (ug/g)	NA	0.82	1	0.92
Se - Selenium (ug/g)	NA	0.29	0.37	0.16
Sn - Tin (ug/g)	NA	1.38	1.49	1.43
Tl - Thallium (ug/g)	NA	0.39	0.44	0.42
V - Vanadium (ug/g)	NA	102	144	145
Zn - Zinc (ug/g)	NA	86.2	121	114

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Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	98-2-19-01-00-MET-S	98-2-19-01-00-MET-S	98-2-20-01-00-MET-S	98-2-21-01-00-MET-S
Lab ID	98-2-19-01-00-MET-S	98-2-19-01-00-MET-S	98-2-20-01-00-MET-S	98-2-21-01-00-MET-S
	#1	#2		
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	QC	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4497 g	0 g	0.4571 g	0.4468 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/1/1998	7/1/1998	7/1/1998	7/1/1998
Extract Date	8/20/1998	NA	8/20/1998	8/5/1998
Analysis Date	8/20/1998	NA	8/20/1998	8/5/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.08	NA	0.06	0.06
Al - Aluminum (%)	8.44	NA	7.93	8.03
As - Arsenic (ug/g)	13.5	NA	11.3	13.5
Ba - Barium (ug/g)	964	NA	923	880
Be - Beryllium (ug/g)	1.4	NA	1.4	1.2
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.1	NA	0.11	0.1
Cr - Chromium (ug/g)	86	NA	81.5	82.8
Cu - Copper (ug/g)	40.8	NA	38.3	40
Fe - Iron (%)	4.41	NA	4.34	4.86
Hg - Mercury (ug/g)	0.055	NA	0.069	0.063
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	863	NA	1156	1458
Ni - Nickel (ug/g)	33	NA	33	41.7
Pb - Lead (ug/g)	13.4	NA	13.4	14.5
Sb - Antimony (ug/g)	1.08	NA	1.02	1.03
Se - Selenium (ug/g)	0.1	NA	0.14	0.27
Sn - Tin (ug/g)	1.57	NA	1.49	1.71
Tl - Thallium (ug/g)	0.47	NA	0.46	0.48
V - Vanadium (ug/g)	145	NA	148	162
Zn - Zinc (ug/g)	119	NA	120	124

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Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	98-2-23-01-00-MET-S	98-3-F1-01-00-MET-S	98-3-F2-01-00-MET-S	98-3-F2-02-00-MET-S
Lab ID	98-2-23-01-00-MET-S	98-3-F1-01-00-MET-S	98-3-F2-01-00-MET-S	98-3-F2-02-00-MET-S
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4462 g	0.454 g	0.4478 g	0.455 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	7/1/1998	6/30/1998	6/30/1998	6/30/1998
Extract Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Analysis Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.06	0.06	0.06	0.06
Al - Aluminum (%)	8	7.87	7.98	8.04
As - Arsenic (ug/g)	14	9.8	8.7	8.6
Ba - Barium (ug/g)	898	916	916	925
Be - Beryllium (ug/g)	1.2	1.3	1.3	1.3
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.1	0.14	0.14	0.15
Cr - Chromium (ug/g)	84.1	82.7	69	74.4
Cu - Copper (ug/g)	39.8	37.8	37	37.7
Fe - Iron (%)	4.68	4.56	4.59	4.55
Hg - Mercury (ug/g)	0.06	0.056	0.061	0.059
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	1156	897	950	816
Ni - Nickel (ug/g)	41.3	40.1	38	39.2
Pb - Lead (ug/g)	14.8	14.6	14	14.6
Sb - Antimony (ug/g)	1.04	1.12	1.05	1.12
Se - Selenium (ug/g)	0.2	0.26	0.25	0.29
Sn - Tin (ug/g)	1.8	1.77	1.71	1.77
Tl - Thallium (ug/g)	0.5	0.52	0.5	0.51
V - Vanadium (ug/g)	167	158	160	158
Zn - Zinc (ug/g)	120	124	123	121

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Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	98-3-F2-03-00-MET-S	98-3-7-01-00-MET-S	98-3-11-01-00-MET-S	98-3-14-01-00-MET-S
Lab ID	98-3-F2-03-00-MET-S	98-3-07-01-00-MET-S	98-3-11-01-00-MET-S	98-3-14-01-00-MET-S
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4684 g	0.4459 g	0.4604 g	0.4464 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	6/30/1998	6/28/1998	6/29/1998	6/29/1998
Extract Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Analysis Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.05	0.06	0.06	0.06
Al - Aluminum (%)	8.17	7.82	8.13	8
As - Arsenic (ug/g)	11.2	9.2	8.4	8
Ba - Barium (ug/g)	899	846	886	874
Be - Beryllium (ug/g)	1.2	1.3	1.3	1.3
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.13	0.12	0.18	0.18
Cr - Chromium (ug/g)	81.7	84.2	79.9	85.7
Cu - Copper (ug/g)	38	33	36	35.7
Fe - Iron (%)	4.57	4.49	4.58	4.6
Hg - Mercury (ug/g)	0.057	0.066	0.061	0.062
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	934	981	937	926
Ni - Nickel (ug/g)	38.4	37.8	39.8	38.6
Pb - Lead (ug/g)	14.2	14	14.8	14.7
Sb - Antimony (ug/g)	1.08	0.95	1.14	1.11
Se - Selenium (ug/g)	0.2	0.22	0.26	0.3
Sn - Tin (ug/g)	1.72	1.64	1.74	1.71
Tl - Thallium (ug/g)	0.49	0.47	0.51	0.5
V - Vanadium (ug/g)	159	149	156	155
Zn - Zinc (ug/g)	120	114	122	126

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Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	98-3-16-01-00-MET-S	98-3-17-01-00-MET-S	98-3-18-01-00-MET-S	98-4-F1-01-00-MET-S
Lab ID	98-3-16-01-00-MET-S	98-3-17-01-00-MET-S	98-3-18-01-00-MET-S	98-4-F1-01-00-MET-S
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4625 g	0.4616 g	0.4566 g	0.4515 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	6/29/1998	6/29/1998	6/30/1998	6/30/1998
Extract Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Analysis Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.07	0.06	0.06	0.06
Al - Aluminum (%)	8.09	7.92	8.01	7.72
As - Arsenic (ug/g)	9.1	7.4	9.9	6
Ba - Barium (ug/g)	904	857	906	826
Be - Beryllium (ug/g)	1.3	1.2	1.4	1.2
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.16	0.16	0.15	0.17
Cr - Chromium (ug/g)	82.7	73.3	75.7	78.2
Cu - Copper (ug/g)	37.1	37.2	37.6	31.3
Fe - Iron (%)	4.59	4.18	4.65	4.15
Hg - Mercury (ug/g)	0.059	0.059	0.061	0.067
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	959	687	945	689
Ni - Nickel (ug/g)	38.8	35.6	39.3	34.8
Pb - Lead (ug/g)	14.7	13.6	14.6	13.8
Sb - Antimony (ug/g)	1.12	1.03	1.13	0.98
Se - Selenium (ug/g)	0.21	0.21	0.2	0.3
Sn - Tin (ug/g)	1.8	1.68	1.76	1.58
Tl - Thallium (ug/g)	0.5	0.47	0.5	0.45
V - Vanadium (ug/g)	155	144	151	141
Zn - Zinc (ug/g)	125	116	120	113

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Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	98-4-F1-02-00-MET-S	98-4-F1-03-00-MET-S	98-4-F2-01-00-MET-S	98-4-F2-02-00-MET-S
Lab ID	98-4-F1-02-00-MET-S	98-4-F1-03-00-MET-S	98-4-F2-01-00-MET-S	98-4-F2-02-00-MET-S
SDG	NA	NA	NA	NA
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	SAMP
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.451 g	0.4561 g	0.4641 g	0.448 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	6/30/1998	6/30/1998	6/28/1998	6/28/1998
Extract Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Analysis Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.07	0.06	0.06	0.06
Al - Aluminum (%)	7.54	7.46	7.88	7.78
As - Arsenic (ug/g)	6.3	7.9	7.9	7.7
Ba - Barium (ug/g)	840	808	839	900
Be - Beryllium (ug/g)	1.2	1.3	1.3	1.4
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.16	0.14	0.15	0.16
Cr - Chromium (ug/g)	71.8	77.4	84	83.8
Cu - Copper (ug/g)	31.3	30.9	34.4	32.9
Fe - Iron (%)	4.08	4.19	4.46	4.38
Hg - Mercury (ug/g)	0.067	0.068	0.065	0.067
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	716	840	878	869
Ni - Nickel (ug/g)	36.4	33.6	34.9	40.9
Pb - Lead (ug/g)	13.9	13.8	14.2	14.9
Sb - Antimony (ug/g)	0.96	0.9	1.02	1.15
Se - Selenium (ug/g)	0.24	0.27	0.25	0.3
Sn - Tin (ug/g)	1.73	1.62	1.62	1.69
Tl - Thallium (ug/g)	0.46	0.44	0.47	0.47
V - Vanadium (ug/g)	142	140	149	148
Zn - Zinc (ug/g)	113	111	118	120

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Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Not Surrogate Corrected) - Surface Sediment - METALS

Field ID	98-4-F2-03-00-MET-S	98-4-F4-01-00-MET-S	98-4-F4-02-00-MET-S	98-4-F4-02-00-MET-S
Lab ID	98-4-F2-03-00-MET-S	98-4-F4-01-00-MET-S	98-4-F4-02-00-MET-S	98-4-F4-02-00-MET-S
SDG	NA	NA	#1	#2
File	NA	NA	NA	NA
Sample Type	SAMP	SAMP	SAMP	QC
Matrix	Sediment	Sediment	Sediment	Sediment
Sample Size	0.4591 g	0.4484 g	0.4476 g	0.496 g
Weight Basis	DRY	DRY	DRY	DRY
Associated Blank	NA	NA	NA	NA
Field Date	6/28/1998	6/30/1998	6/30/1998	6/30/1998
Extract Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Analysis Date	8/5/1998	8/5/1998	8/5/1998	8/5/1998
Min Reporting Limit	NA	NA	NA	NA
Units	---	---	---	---
METALS				
Ag - Silver (ug/g)	0.06	0.05	0.05	0.05
Al - Aluminum (%)	7.78	7.77	7.98	7.89
As - Arsenic (ug/g)	9.3	11.1	8.9	8.5
Ba - Barium (ug/g)	848	867	868	884
Be - Beryllium (ug/g)	1.3	1.3	1.3	1.3
Ca - Calcium (%)	NA	NA	NA	NA
Cd - Cadmium (ug/g)	0.14	0.13	0.14	0.14
Cr - Chromium (ug/g)	78.5	82	78.9	80.1
Cu - Copper (ug/g)	32.1	34.2	34.3	33.4
Fe - Iron (%)	4.4	4.54	4.43	4.43
Hg - Mercury (ug/g)	0.065	0.063	0.06	0.064
K - potassium (%)	NA	NA	NA	NA
Mg - Magnesium (%)	NA	NA	NA	NA
Mn - Manganese (ug/g)	927	1177	870	870
Ni - Nickel (ug/g)	38.6	39.5	39.3	41.2
Pb - Lead (ug/g)	14	14.5	14.4	14.4
Sb - Antimony (ug/g)	1.06	1.08	1.07	1.1
Se - Selenium (ug/g)	0.22	0.17	0.15	0.16
Sn - Tin (ug/g)	1.49	1.47	1.75	1.5
Tl - Thallium (ug/g)	0.46	0.47	0.46	0.46
V - Vanadium (ug/g)	139	148	155	150
Zn - Zinc (ug/g)	117	123	123	119