

**Arthur D. Little, Inc.**

Environmental Monitoring and Analysis

**Minerals Management Service - Shelikof Strait and Outermost Cook Inlet**

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BM26				BM26			
SDG	SDGS002				SDGS001			
File	09199807.D				09189812.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.05 mg				5.05 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	9/19/1998				9/18/1998			
Min Reporting Limit	0.2				0.2			
Units	ug/mg	T	%D	Q	ug/mg	T	%D	Q
<b>SHC</b>								
nC9	5.2	4.8	8.3		5	4.8	4.2	
nC10	4.4	4.2	4.8		4.2	4.2	0	
nC11	4.3	4.3	0		4.1	4.3	-4.6	
nC12	4	4	0		3.7	4	-7.5	
nC13	4.1	4	2.5		3.6	4	-10	
1380	0.77	1	-23		1	1	0	
nC14	4.4	4.2	4.8		4.8	4.2	14	
1470	1.4	1.4	0		1.3	1.4	-7.1	
nC15	4.1	3.7	11		3.5	3.7	-5.4	
nC16	3.1	3.2	-3.1		2.9	3.2	-9.4	
1650	1.2	1.5	-20		1.5	1.5	0	
nC17	3.4	3.2	6.2		2.9	3.2	-9.4	
pristane	2	2.2	-9.1		2.2	2.2	0	
nC18	2.2	2.9	-24		2.6	2.9	-10	
phytane	1.6	1.6	0		1.5	1.6	-6.2	
nC19	2.2	2.6	-15		2.7	2.6	3.8	
nC20	2	2.7	-26		2.6	2.7	-3.7	
nC21	2.1	2.4	-12		2.5	2.4	4.2	
nC22	2	2.2	-9.1		2	2.2	-9.1	
nC23	1.9	2	-5		1.9	2	-5	
nC24	1.9	2	-5		2	2	0	
nC25	1.7	1.7	0		1.6	1.7	-5.9	
nC26	1.5	1.5	0		1.4	1.5	-6.7	
nC27	1.2	1.2	0		1.1	1.2	-8.3	
nC28	0.8	0.88	-9.1		0.78	0.88	-11	
nC29	0.74	0.81	-8.6		0.81	0.81	0	
nC30	0.71	0.65	9.2		0.59	0.65	-9.2	
nC31	0.61	0.58	5.2		0.56	0.58	-3.4	
nC32	0.5	0.44	14		0.46	0.44	4.5	
nC33	0.36	0.4	-10		0.35	0.4	-12	
nC34	0.32	0.35	-8.6		0.28	0.35	-20	
nC35	0.36	0.35	2.8		0.29	0.35	-17	
nC36	0.23	0.23	0		0.22	0.23	-4.3	
nC37	0.26	0.23	13		0.18 J	0.23	-22	
nC38	0.23	0.22	4.5		0.19 J	0.22	-14	
nC39	0.17 J	0.18	-5.6		0.15 J	0.18	-17	
nC40	0.18 J	0.19	-5.3		0.14 J	0.19	-26	
Total Resolved	200	220	-9.1		190	220	-14	
TPHC	660	660	0		590	660	-11	
OTP	93				97			
5AA	93				95			
D50T	102				99			

**Arthur D. Little, Inc.**

Environmental Monitoring and Analysis

**Minerals Management Service - Shelikof Strait and Outermost Cook Inlet**

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BM26				BM26			
SDG	SDGS004				SDGS005			
File	10099806.D				10109825.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.05 mg				5.05 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	10/10/1998				10/11/1998			
Min Reporting Limit	0.2				0.2			
Units	ug/mg	T	%D	Q	ug/mg	T	%D	Q
<b>SHC</b>								
nC9	4.9	4.8	2.1		5.1	4.8	6.2	
nC10	4.2	4.2	0		4.3	4.2	2.4	
nC11	4	4.3	-7		4.2	4.3	-2.3	
nC12	3.8	4	-5		4	4	0	
nC13	4	4	0		3.8	4	-5	
1380	0.71	1	-29		1	1	0	
nC14	3.6	4.2	-14		3.4	4.2	-19	
1470	1.2	1.4	-14		1.5	1.4	7.1	
nC15	4.1	3.7	11		3.6	3.7	-2.7	
nC16	3.2	3.2	0		3.6	3.2	12	
1650	1.1	1.5	-27		1.6	1.5	6.7	
nC17	3	3.2	-6.2		3.3	3.2	3.1	
pristane	2	2.2	-9.1		2.1	2.2	-4.5	
nC18	2.4	2.9	-17		3	2.9	3.4	
phytane	1.7	1.6	6.2		1.6	1.6	0	
nC19	2.3	2.6	-12		2.8	2.6	7.7	
nC20	2.4	2.7	-11		2.4	2.7	-11	
nC21	2.3	2.4	-4.2		2.4	2.4	0	
nC22	2.1	2.2	-4.5		2.2	2.2	0	
nC23	2	2	0		2.1	2	5	
nC24	1.9	2	-5		1.9	2	-5	
nC25	1.8	1.7	5.9		1.8	1.7	5.9	
nC26	1.5	1.5	0		1.5	1.5	0	
nC27	1.2	1.2	0		1.1	1.2	-8.3	
nC28	0.85	0.88	-3.4		0.89	0.88	1.1	
nC29	0.82	0.81	1.2		0.92	0.81	14	
nC30	0.7	0.65	7.7		0.75	0.65	15	
nC31	0.57	0.58	-1.7		0.56	0.58	-3.4	
nC32	0.54	0.44	23		0.42	0.44	-4.5	
nC33	0.37	0.4	-7.5		0.46	0.4	15	
nC34	0.32	0.35	-8.6		0.41	0.35	17	
nC35	0.41	0.35	17		0.34	0.35	-2.8	
nC36	0.25	0.23	8.7		0.25	0.23	8.7	
nC37	0.2	0.23	-13		0.21	0.23	-8.7	
nC38	0.24	0.22	9.1		0.22	0.22	0	
nC39	0.15 J	0.18	-17		0.16 J	0.18	-11	
nC40	0.15 J	0.19	-21		0.18 J	0.19	-5.3	
Total Resolved	200	220	-9.1		210	220	-4.5	
TPHC	630	660	-4.5		620	660	-6.1	
OTP	97				111			
5AA	96				110			
D50T	105				106			

**Arthur D. Little, Inc.**

Environmental Monitoring and Analysis

**Minerals Management Service - Shelikof Strait and Outermost Cook Inlet**

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude			
Lab ID	BM26			
SDG	SDGS005			
File	10109826.D			
Sample Type	NSC			
Matrix	Oil			
Sample Size	5.05 mg			
Weight Basis	OIL			
Associated Blank	NA			
Field Date	NA			
Extract Date	NA			
Analysis Date	10/11/1998			
Min Reporting Limit	0.2			
Units	ug/mg	T	%D	Q
SHC				
nC9	5.1	4.8	6.2	
nC10	4	4.2	-4.8	
nC11	4.3	4.3	0	
nC12	4	4	0	
nC13	3.7	4	-7.5	
1380	1.2	1	20	
nC14	4.4	4.2	4.8	
1470	1.4	1.4	0	
nC15	3.6	3.7	-2.7	
nC16	3.3	3.2	3.1	
1650	1.6	1.5	6.7	
nC17	3.2	3.2	0	
pristane	2.1	2.2	-4.5	
nC18	2.8	2.9	-3.4	
phytane	1.4	1.6	-12	
nC19	2.5	2.6	-3.8	
nC20	2.2	2.7	-18	
nC21	2.3	2.4	-4.2	
nC22	2.2	2.2	0	
nC23	2.1	2	5	
nC24	1.8	2	-10	
nC25	1.8	1.7	5.9	
nC26	1.5	1.5	0	
nC27	1.1	1.2	-8.3	
nC28	0.89	0.88	1.1	
nC29	0.86	0.81	6.2	
nC30	0.65	0.65	0	
nC31	0.59	0.58	1.7	
nC32	0.41	0.44	-6.8	
nC33	0.36	0.4	-10	
nC34	0.34	0.35	-2.8	
nC35	0.44	0.35	26	
nC36	0.24	0.23	4.3	
nC37	0.26	0.23	13	
nC38	0.22	0.22	0	
nC39	0.17 J	0.18	-5.6	
nC40	0.18 J	0.19	-5.3	
Total Resolved	210	220	-4.5	
TPHC	620	660	-6.1	
OTP	104			
5AA	107			
D50T	106			

**Arthur D. Little, Inc.**

Environmental Monitoring and Analysis

**Minerals Management Service - Shelikof Strait and Outermost Cook Inlet**

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BM26				BM26			
SDG	SDGS003				SDGS003			
File	10029813.D				10029814.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.05 mg				5.05 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	10/3/1998				10/3/1998			
Min Reporting Limit	0.2				0.2			
Units	ug/mg	T	%D	Q	ug/mg	T	%D	Q
<b>SHC</b>								
nC9	5.4	4.8	12		4.9	4.8	2.1	
nC10	4.2	4.2	0		4.2	4.2	0	
nC11	4.8	4.3	12		4.1	4.3	-4.6	
nC12	4.1	4	2.5		3.7	4	-7.5	
nC13	4	4	0		3.6	4	-10	
1380	0.92	1	-8		1	1	0	
nC14	3.6	4.2	-14		4.8	4.2	14	
1470	1.8	1.4	28		1.4	1.4	0	
nC15	3.9	3.7	5.4		3.5	3.7	-5.4	
nC16	3.3	3.2	3.1		2.9	3.2	-9.4	
1650	1.5	1.5	0		1.5	1.5	0	
nC17	3.3	3.2	3.1		2.9	3.2	-9.4	
pristane	1.9	2.2	-14		2.2	2.2	0	
nC18	3.1	2.9	6.9		2.6	2.9	-10	
phytane	1.6	1.6	0		1.6	1.6	0	
nC19	2.7	2.6	3.8		2.8	2.6	7.7	
nC20	2.5	2.7	-7.4		2.6	2.7	-3.7	
nC21	2.3	2.4	-4.2		2.4	2.4	0	
nC22	2.1	2.2	-4.5		2.1	2.2	-4.5	
nC23	2	2	0		2	2	0	
nC24	1.8	2	-10		1.8	2	-10	
nC25	1.7	1.7	0		1.7	1.7	0	
nC26	1.4	1.5	-6.7		1.4	1.5	-6.7	
nC27	1.1	1.2	-8.3		1.1	1.2	-8.3	
nC28	0.81	0.88	-8		0.82	0.88	-6.8	
nC29	0.67	0.81	-17		0.74	0.81	-8.6	
nC30	0.56	0.65	-14		0.55	0.65	-15	
nC31	0.68	0.58	17		0.55	0.58	-5.2	
nC32	0.33	0.44	-25		0.44	0.44	0	
nC33	0.3	0.4	-25		0.34	0.4	-15	
nC34	0.29	0.35	-17		0.27	0.35	-23	
nC35	0.29	0.35	-17		0.31	0.35	-11	
nC36	0.22	0.23	-4.3		0.21	0.23	-8.7	
nC37	0.16 J	0.23	-30		0.2	0.23	-13	
nC38	0.16 J	0.22	-27		0.2	0.22	-9.1	
nC39	0.12 J	0.18	-33		0.15 J	0.18	-17	
nC40	0.13 J	0.19	-32		0.14 J	0.19	-26	
Total Resolved	230	220	4.5		190	220	-14	
TPHC	620	660	-6.1		590	660	-11	
OTP	109				94			
5AA	110				94			
D50T	102				99			

**Arthur D. Little, Inc.**

Environmental Monitoring and Analysis

**Minerals Management Service - Shelikof Strait and Outermost Cook Inlet**

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BM26				BM26			
SDG	SDGS006				SDGS006			
File	10179807.D				10209820.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.05 mg				5.05 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	10/17/1998				10/20/1998			
Min Reporting Limit	0.2				0.2			
Units	ug/mg	T	%D	Q	ug/mg	T	%D	Q
<b>SHC</b>								
nC9	4.8	4.8	0		5.2	4.8	8.3	
nC10	3.9	4.2	-7.1		4.1	4.2	-2.4	
nC11	4.1	4.3	-4.6		4.1	4.3	-4.6	
nC12	4	4	0		3.9	4	-2.5	
nC13	3.7	4	-7.5		3.7	4	-7.5	
1380	1.2	1	20		1.2	1	20	
nC14	4.3	4.2	2.4		4.3	4.2	2.4	
1470	1.3	1.4	-7.1		1.4	1.4	0	
nC15	3.6	3.7	-2.7		3.5	3.7	-5.4	
nC16	3.3	3.2	3.1		3.2	3.2	0	
1650	1.4	1.5	-6.7		1.7	1.5	13	
nC17	3.1	3.2	-3.1		3	3.2	-6.2	
pristane	2.2	2.2	0		2.2	2.2	0	
nC18	2.7	2.9	-6.9		2.7	2.9	-6.9	
phytane	1.4	1.6	-12		1.3	1.6	-19	
nC19	2.5	2.6	-3.8		2.4	2.6	-7.7	
nC20	2.3	2.7	-15		2.2	2.7	-18	
nC21	2.4	2.4	0		2.3	2.4	-4.2	
nC22	2.2	2.2	0		2.2	2.2	0	
nC23	2.1	2	5		2.1	2	5	
nC24	1.8	2	-10		1.8	2	-10	
nC25	1.7	1.7	0		1.7	1.7	0	
nC26	1.4	1.5	-6.7		1.4	1.5	-6.7	
nC27	1.1	1.2	-8.3		1.1	1.2	-8.3	
nC28	0.87	0.88	-1.1		0.81	0.88	-8	
nC29	0.76	0.81	-6.2		0.72	0.81	-11	
nC30	0.63	0.65	-3.1		0.69	0.65	6.2	
nC31	0.55	0.58	-5.2		0.54	0.58	-6.9	
nC32	0.4	0.44	-9.1		0.37	0.44	-16	
nC33	0.35	0.4	-12		0.32	0.4	-20	
nC34	0.36	0.35	2.8		0.34	0.35	-2.8	
nC35	0.4	0.35	14		0.41	0.35	17	
nC36	0.25	0.23	8.7		0.24	0.23	4.3	
nC37	0.26	0.23	13		0.21	0.23	-8.7	
nC38	0.24	0.22	9.1		0.22	0.22	0	
nC39	0.19 J	0.18	5.6		0.17 J	0.18	-5.6	
nC40	0.18 J	0.19	-5.3		0.17 J	0.19	-10	
Total Resolved	200	220	-9.1		210	220	-4.5	
TPHC	600	660	-9.1		610	660	-7.6	
OTP	110				110			
5AA	108				109			
D50T	108				107			

**Arthur D. Little, Inc.**

Environmental Monitoring and Analysis

**Minerals Management Service - Shelikof Strait and Outermost Cook Inlet**

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BM26				BM26			
SDG	SDGW001				SDGO001			
File	10229828.D				11099826.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.05 mg				5.05 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	10/23/1998				11/10/1998			
Min Reporting Limit	0.2				0.2			
Units	ug/mg	T	%D	Q	ug/mg	T	%D	Q
<b>SHC</b>								
nC9	5.2	4.8	8.3		4.9	4.8	2.1	
nC10	4.1	4.2	-2.4		4.2	4.2	0	
nC11	4.2	4.3	-2.3		4.3	4.3	0	
nC12	4	4	0		4.1	4	2.5	
nC13	3.7	4	-7.5		3.7	4	-7.5	
1380	1.2	1	20		1.2	1	20	
nC14	4.4	4.2	4.8		4.4	4.2	4.8	
1470	1.4	1.4	0		1.4	1.4	0	
nC15	3.5	3.7	-5.4		3.6	3.7	-2.7	
nC16	3.4	3.2	6.2		3.4	3.2	6.2	
1650	1.6	1.5	6.7		1.7	1.5	13	
nC17	3.2	3.2	0		3.3	3.2	3.1	
pristane	2.2	2.2	0		2.2	2.2	0	
nC18	2.7	2.9	-6.9		2.8	2.9	-3.4	
phytane	1.3	1.6	-19		1.5	1.6	-6.2	
nC19	2.5	2.6	-3.8		2.5	2.6	-3.8	
nC20	2.2	2.7	-18		2.2	2.7	-18	
nC21	2.3	2.4	-4.2		2.4	2.4	0	
nC22	2.2	2.2	0		2.1	2.2	-4.5	
nC23	2.1	2	5		2.2	2	10	
nC24	1.9	2	-5		1.8	2	-10	
nC25	1.8	1.7	5.9		1.7	1.7	0	
nC26	1.5	1.5	0		1.4	1.5	-6.7	
nC27	1.1	1.2	-8.3		1.1	1.2	-8.3	
nC28	0.86	0.88	-2.3		0.87	0.88	-1.1	
nC29	0.85	0.81	4.9		0.83	0.81	2.5	
nC30	0.69	0.65	6.2		0.65	0.65	0	
nC31	0.57	0.58	-1.7		0.63	0.58	8.6	
nC32	0.42	0.44	-4.5		0.4	0.44	-9.1	
nC33	0.34	0.4	-15		0.37	0.4	-7.5	
nC34	0.33	0.35	-5.7		0.35	0.35	0	
nC35	0.4	0.35	14		0.39	0.35	11	
nC36	0.24	0.23	4.3		0.25	0.23	8.7	
nC37	0.22	0.23	-4.3		0.24	0.23	4.3	
nC38	0.22	0.22	0		0.23	0.22	4.5	
nC39	0.18 J	0.18	0		0.19 J	0.18	5.6	
nC40	0.17 J	0.19	-10		0.17 J	0.19	-10	
Total Resolved	210	220	-4.5		NA			
TPHC	610	660	-7.6		NA			
OTP	105				112			
5AA	105				111			
D50T	106				109			

**Arthur D. Little, Inc.**

Environmental Monitoring and Analysis

**Minerals Management Service - Shelikof Strait and Outermost Cook Inlet**

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID		North Slope Crude		
Lab ID		BM26		
SDG		SDGO001		
File		11069826.D		
Sample Type		NSC		
Matrix		Oil		
Sample Size		5.05 mg		
Weight Basis		OIL		
Associated Blank		NA		
Field Date		NA		
Extract Date		NA		
Analysis Date		11/7/1998		
Min Reporting Limit		0.2		
Units		ug/mg	T %D	Q
SHC				
nC9		5.2	4.8	8.3
nC10		4.1	4.2	-2.4
nC11		4.3	4.3	0
nC12		4.1	4	2.5
nC13		3.7	4	-7.5
1380		1.2	1	20
nC14		4.4	4.2	4.8
1470		1.4	1.4	0
nC15		3.7	3.7	0
nC16		3.4	3.2	6.2
1650		1.8	1.5	20
nC17		3.2	3.2	0
pristane		2.2	2.2	0
nC18		2.7	2.9	-6.9
phytane		1.4	1.6	-12
nC19		2.5	2.6	-3.8
nC20		2.2	2.7	-18
nC21		2.4	2.4	0
nC22		2.2	2.2	0
nC23		2	2	0
nC24		1.8	2	-10
nC25		1.7	1.7	0
nC26		1.4	1.5	-6.7
nC27		1.1	1.2	-8.3
nC28		0.84	0.88	-4.5
nC29		0.73	0.81	-9.9
nC30		0.64	0.65	-1.5
nC31		0.55	0.58	-5.2
nC32		0.4	0.44	-9.1
nC33		0.36	0.4	-10
nC34		0.32	0.35	-8.6
nC35		0.43	0.35	23
nC36		0.22	0.23	-4.3
nC37		0.23	0.23	0
nC38		0.22	0.22	0
nC39		0.17 J	0.18	-5.6
nC40		0.19 J	0.19	0
Total Resolved		NA		
TPHC		NA		
OTP		113		
5AA		111		
D50T		109		