



**AN/EN Inc**

Analytical & Environmental Chemistry

05/11/96

A/E4174

DALE McANALLY  
PETROTEK  
925 COMMERCIAL AVE  
SAN JOSE, CA 95112

This is the **CERTIFICATE OF ANALYSIS** for the following samples as received.

Client Project ID: **ALASKA GASOLINE**  
Date Received by Lab: 05/21/96  
Total Number of Samples: 1  
Sample Matrix: **WATER**

Volatile Organics are analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. Method 5030 (Purge and Trap) is used for the sample preparation/introduction. Method 8010 (Halogenated Volatile Organics-GC/ELCD) or Method 8240 (Volatile Organics-GC/MS) is used for the analysis.

BTEX is analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. Method 5030 (Purge and Trap) is used for the sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis.

Total Volatile Petroleum Hydrocarbons (Gasoline, Stoddard) are analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual, Last Revision October 1989. Method 5030 (Purge and Trap) is used for the sample preparation/introduction.

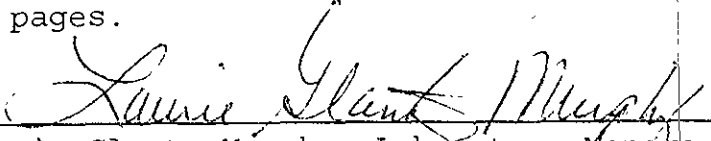
Total Extractable Petroleum Hydrocarbons (Diesel, Oil, Kerosene, Stoddard, etc.) are analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual, Last Revision October 1989. EPA Method 3550-sonication (soil) or EPA Method 3510-separatory funnel liquid-liquid (water) is used for sample extraction/preparation.

Organochlorine Pesticides are analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. EPA Method 3550 (soil) or EPA Method 3510 (water) is used for sample extraction/preparation. Method 8080 (Organochlorine Pesticides - GC-ECD/ECD) is used for the analysis.

AN/EN, Inc. is accredited by the California Department of Health Services; Certificate Number 1183 (original issue May 7, 1990). The DHS- Environmental Laboratory Accreditation Program can be reached at (510) 540-2800.

Complete report consists of 5 pages.

Reviewed and Approved:

  
Laurie Glantz-Murphy Laboratory Manager



## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Client Project / I.D.: **ALASKA GASOLINE**

Laboratory I.D.: 4174-01W  
Batch I.D.: 0522-19.D  
Date Sampled: 05/20/96  
Date Received: 05/21/96  
Matrix: **Water**

Sample I.D.: **TANK PIT WATER**  
Date Analyzed: 05/08/96  
Dilution: 25  
Analyst: *Ym*

Concentration of sample expressed as ug/L (ppb).

Analyte	Conc.	PQL
Methyl-tert-Butyl Ether	66. *	25.
Benzene	100.	13.
Toluene	60.	13.
Ethylbenzene	ND	13.
Xylenes-Total	560.	13.
TPH-Gasoline	2,800.	1,250.

PQL = Practical Quantitation Limit.  
ND = Not Detected at or above the PQL.

\* Has not been confirmed using GC/MS.

Surrogates	Recovery	Limits
a,a,a-TFT(FID)	92%	64-129
4-BFB(FID)	95%	55-151
4-BFB(PID)	100%	68-137

Volatiles Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste, (SW846), 3rd Ed., July 1992 Method 5030 (Purge & Trap) is used for sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis  
Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989 Method 5030 is used for sample preparation/introduction



## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Laboratory I.D.: **INSTRUMENT BLANK**

Batch I.D.: 0522-01.D

Date Acquired: 05/08/96

Concentration of blank expressed as ug/L (ppb).

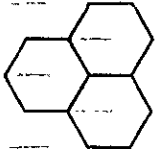
Analyte	Conc.	PQL
Methyl-tert-Butyl Ether	ND	1.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
Xylenes-Total	ND	0.5
TPH-Gasoline	ND	50.

PQL = Practical Quantitation Limit.

ND = None Detected at or above the PQL.

Surrogates	Recovery	Limits
a,a,a-TFT(FID)	104%	73-126
4-BFB(FID)	106%	67-146
4-BFB(PID)	101%	82-119

Volatiles Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste (SW846), 3rd Ed., July 1992 Method 5030 (Purge & Tr is used for the sample preparation/introduction Method 8020 (Aromatic Volatile Organics) is used for the analysis.  
Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989 Method 5030 is used for sample preparation/introduction



## LABORATORY CONTROL SAMPLES

Method: VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Date Acquired: 05/08/96

Expressed as mass (ng).

Analyte	Amount Added	Amount Found	LCS Rec	%Rec Limits
Methyl-tert-butyl Ether	40	40.	99%	82-113
Benzene	20.	19.	96%	84-113
Toluene	20.	21.	103%	90-110
Ethylbenzene	20.	19.	97%	89-112
m,p-Xylenes	20.	20.	100%	88-113
o-Xylene	20.	20.	101%	88-114
TPH-Gasoline	1,250.	1,268.	101%	77-130

Surrogates	LSC-8020M	Batch ID:	0522-06	
a,a,a-TFT-FID			100%	73-126
4-BFB-FID			102%	67-146
4-BFB-PID			101%	82-119
Surrogates	LSC-GASOLINE	Batch ID:	0522-07	
a,a,a-TFT-FID			90%	73-126
4-BFB-FID			121%	67-146
4-BFB-PID			105%	82-119

\* = Values outside of QC limits.

LCS Recovery: 0 out of 7 outside limits.

# CHAIN OF CUSTODY RECORD

A/E 4174

5005

CHAIN OF CUSTODY RECORD

JOB NO.	PROJECT NAME <i>ALASKA GASOLINE</i>	NO. OF CONTAINERS	ANALYSIS				SEALED?	
LAB. NO.	SAMPLER (Signature) <i>FRAN NADIKEM PCN</i>		TPH-G	TPH-D	BTEX			
DATE <i>5/20/96</i>	SAMPLE LOCATION/INFORMATION							
DTE <i>10.</i>		3	X	X	REMARKS			
	<i>TANK PIT (WATER)</i>							



**PETROTEK**  
P.O. Box 612617  
San Jose, California 95101

RELINQUISHED BY <i>Bob Price</i>	(Signature)	DATE/TIME <i>5-21-96 15:00</i>	RECEIVED BY <i>Philly Murphy</i>	(Signature)
RELINQUISHED BY	(Signature)	DATE/TIME	RECEIVED BY	(Signature)
RELINQUISHED BY	(Signature)	DATE/TIME	RECEIVED FOR LAB. BY	(Signature)

LAB TO NOTE - Y/N →

REMARKS



AN/EN Inc

Analytical & Environmental Chemistry

05/20/96

A/E4146

DALE McANALLY  
PETROTEK  
925 COMMERCIAL AVE  
SAN JOSE, CA 95112

This is the **CERTIFICATE OF ANALYSIS** for the following samples as received.

Client Project ID: **ALASKA GASOLINE**  
Date Received by Lab: 05/10/96  
Total Number of Samples: 8  
Sample Matrix: **SOIL(7) & WATER(1)**

Volatile Organics are analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. Method 5030 (Purge and Trap) is used for the sample preparation/introduction. Method 8010 (Halogenated Volatile Organics-GC/ELCD) or Method 8240 (Volatile Organics-GC/MS) is used for the analysis.

BTEX is analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. Method 5030 (Purge and Trap) is used for the sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis.

Total Volatile Petroleum Hydrocarbons (Gasoline, Stoddard) are analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual, Last Revision October 1989. Method 5030 (Purge and Trap) is used for the sample preparation/introduction.

Total Extractable Petroleum Hydrocarbons (Diesel, Oil, Kerosene, Stoddard, etc.) are analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual, Last Revision October 1989. EPA Method 3550-sonication (soil) or EPA Method 3510-separatory funnel liquid-liquid (water) is used for sample extraction/preparation.

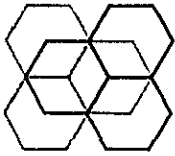
Organochlorine Pesticides are analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. EPA Method 3550 (soil) or EPA Method 3510 (water) is used for sample extraction/preparation. Method 8080 (Organochlorine Pesticides GC-ECD/ECD) is used for the analysis.

AN/EN, Inc. is accredited by the California Department of Health Services; Certificate Number 1183 (original issue May 7, 1990). The DHS- Environmental Laboratory Accreditation Program can be reached at (510) 540-2800.

Complete report consists of 11 pages.

Reviewed and Approved:

  
Laurie Glantz-Murphy, Laboratory Manager



### VOLATILE HALOGENATED ORGANICS BY GC/ELCD

EPA Method: 8010  
 Laboratory Number: 4146-08  
 Date Sampled: 05/09/96  
 Date Received: 05/10/96  
 Matrix: Water

Sample I.D.: W.O. Pit  
 Project: Alaska Gas  
 Dilution: 1  
 Date Analyzed: 05/15/96  
 Analyst: *dm*

Concentration of sample expressed as ug/L (ppb).

CAS#	Analyte	Conc.	Q	PQL
74-87-3	Chloromethane	0.8		0.5
75-01-4	Vinyl chloride	ND		0.5
74-83-9	Bromomethane	ND		0.5
75-00-3	Chloroethane	ND		0.5
75-69-4	Trichlorofluoromethane	ND		0.5
75-35-4	1,1-Dichloroethene	ND		0.5
76-13-1	Trichlorotrifluoroethane	ND		0.5
75-09-2	Methylene chloride	ND		0.5
156-60-5	trans-1,2-Dichloroethene	ND		0.5
75-35-3	1,1-Dichloroethane	ND		0.5
156-69-4	cis-1,2-Dichloroethene	ND		0.5
67-66-3	Chloroform	ND		0.5
71-55-6	1,1,1-Trichloroethane	ND		0.5
56-23-5	Carbon tetrachloride	ND		0.5
107-06-2	1,2-Dichloroethane	ND		0.5
79-01-6	Trichloroethene	ND		0.5
78-87-5	1,2-Dichloropropane	ND		0.5
75-27-4	Bromodichloromethane	ND		0.5
10061-01-5	cis-1,3-Dichloropropene	ND		0.5
10061-02-6	trans-1,3-dichloropropene	ND		0.5
79-00-5	1,1,2-Trichloroethane	ND		0.5
127-18-4	Tetrachloroethene	ND		0.5
124-48-1	Chlorodibromomethane	ND		0.5
108-90-7	Chlorobenzene	ND		0.5
106-93-4	1,2-Dibromoethane (EDB)	ND		0.5
75-25-2	Bromoform	ND		0.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.5
541-73-1	1,3-Dichlorobenzene	ND		0.5
106-46-7	1,4-Dichlorobenzene	ND		0.5
95-50-1	1,2-Dichlorobenzene	ND		0.5

Surrogates	Recovery	Limits
3-Chloro-1-propene	101%	80-120%
4-Chlorotoluene	99%	80-120%

PQL = Practical Quantitation Limit  
 ND = None Detected at or above the PQL



### VOLATILE HALOGENATED ORGANICS BY GC/ELCD

EPA Method: **8010**  
 Laboratory Number: **BLK0515A**  
 Date Sampled: **N/A**  
 Date Received: **N/A**  
 Matrix: **Water**

Sample I.D.: **Method Blank**  
 Project: **Alaska Gas**  
 Dilution: **1**  
 Date Analyzed: **05/15/96**  
 Analyst: *drj*

Concentration of sample expressed as ug/L (ppb).

CAS#	Analyte	Conc.	Q	PQL
74-87-3	Chloromethane	ND		0.5
75-01-4	Vinyl chloride	ND		0.5
74-83-9	Bromomethane	ND		0.5
75-00-3	Chloroethane	ND		0.5
75-69-4	Trichlorofluoromethane	ND		0.5
75-35-4	1,1-Dichloroethene	ND		0.5
76-13-1	Trichlorotrifluoroethane	ND		0.5
75-09-2	Methylene chloride	ND		0.5
156-60-5	trans-1,2-Dichloroethene	ND		0.5
75-35-3	1,1-Dichloroethane	ND		0.5
156-69-4	cis-1,2-Dichloroethene	ND		0.5
67-66-3	Chloroform	ND		0.5
71-55-6	1,1,1-Trichloroethane	ND		0.5
56-23-5	Carbon tetrachloride	ND		0.5
107-06-2	1,2-Dichloroethane	ND		0.5
79-01-6	Trichloroethene	ND		0.5
78-87-5	1,2-Dichloropropane	ND		0.5
75-27-4	Bromodichloromethane	ND		0.5
10061-01-5	cis-1,3-Dichloropropene	ND		0.5
10061-02-6	trans-1,3-dichloropropene	ND		0.5
79-00-5	1,1,2-Trichloroethane	ND		0.5
127-18-4	Tetrachloroethene	ND		0.5
124-48-1	Chlorodibromomethane	ND		0.5
108-90-7	Chlorobenzene	ND		0.5
106-93-4	1,2-Dibromoethane (EDB)	ND		0.5
75-25-2	Bromoform	ND		0.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.5
541-73-1	1,3-Dichlorobenzene	ND		0.5
106-46-7	1,4-Dichlorobenzene	ND		0.5
95-50-1	1,2-Dichlorobenzene	ND		0.5

Surrogates	Recovery	Limits
3-Chloro-1-propene	100%	80-120%
4-Chlorotoluene	97%	80-120%

PQL = Practical Quantitation Limit  
 ND = None Detected at or above the PQL





## LABORATORY CONTROL SAMPLE

EPA Method: 8010  
Laboratory Number: LCS0515A  
Matrix: Water

Date Analyzed: 05/15/96  
Analyst: *dy*

Concentration expressed as ug/L (ppb).

COMPOUND	Spike Added	LCS Conc	LCS Rec	%Rec Limits
1,1-Dichloroethene	10	9.6	96%	75-125
1,2-Dichloroethane	10	9.7	97%	75-125
Trichloroethene	10	9.5	95%	75-125
Tetrachloroethene	10	10.6	106%	75-125
Chlorobenzene	10	9.2	92%	75-125
<u>Surrogates</u>				
3-Chloro-1-propene			96%	80-120
4-Chlorotoluene			97%	80-120

\* = Values outside of QC limits.

Spike Recovery: 0 out of 5 outside limits.

QC-LAB CONTROL SAMPLE



## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Client Project / I.D.: **ALASKA GASOLINE**

Matrix: **Soil**  
Date Received: **05/10/96**  
Analyst: *AM*

Sample I.D.:	Dispenser #1	Dispenser #2	Dispenser #3	Dispenser #5	Dispenser #6	Trench #7	Trench #8	PQL ppm
Methyl-tert-Butyl Ether	<40	<20	<8	<16	ND	<8	<5	.10
Benzene	63	<10	<4	<8	ND	<4	<2	.05
Toluene	370	20	<4	28	ND	5.7	5.1	.05
Ethylbenzene	120	9.7	<4	12	ND	<4	<2	.05
Xylenes-Total	680	280	20	200	ND	140	20	.05
TPH-Gasoline	6800	3700	1500	2600	ND	2100	1400	5.0

Surrogate Recovery								Limits
a,a,a-TFT(FID)	92%	89%	97%	89%	97%	95%	87%	64-129
4-BFB(FID)	98%	93%	93%	94%	101%	97%	95%	55-151
4-BFB(PID)	104%	105%	104%	101%	107%	110%	101%	68-137

Laboratory I.D.:	4146-01	4146-02	4146-03	4146-04	4146-05	4146-06	4146-07
Batch I.D.:	0514-06	0514-07	0514-08	0514-09	0513-22	0514-10	0513-28
Date Sampled	05/09/96	05/09/96	05/09/96	05/09/96	05/09/96	05/09/96	05/09/96
Date Analyzed	05/14/96	05/14/96	05/14/96	05/14/96	05/14/96	05/14/96	05/14/96

Concentration of samples expressed as ug/g (ppm).

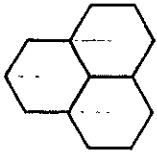
PQL = Practical Quantitation Limit.

ND = Not Detected at or above the PQL

< = Increased PQL due to sample dilution

Volatiles Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste, (SW846), 3rd Ed., July 1992. Method 5030 (Purge & Trap) is used for sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis. Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989. Method 5030 is used for sample preparation/introduction.

SAMPLE RESULTS



## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Laboratory I.D.: **INSTRUMENT BLANK**

Batch I.D.: 0513-01.D

Date Acquired: 05/13/96

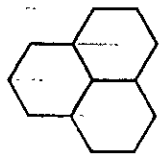
Concentration of blank expressed as ug/L (ppb).

Analyte	Conc.	PQL
Methyl-tert-Butyl Ether	ND	1.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
Xylenes-Total	ND	0.5
TPH-Gasoline	ND	50.

PQL = Practical Quantitation Limit.  
ND = None Detected at or above the PQL.

Surrogates	Recovery	Limits
a, a, a-TFT(FID)	105%	73-126
4-BFB(FID)	110%	67-146
4-BFB(PID)	104%	82-119

Volatile Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste, (SW846), 3rd Ed., July 1992. Method 5030 (Purge & Tr) is used for the sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis.  
Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989. Method 5030 is used for sample preparation/introduction.



## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Laboratory I.D.: **INSTRUMENT BLANK**

Batch I.D.: 0514-01.D

Date Acquired: 05/14/96

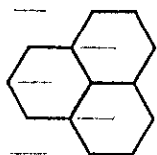
Concentration of blank expressed as ug/L (ppb).

Analyte	Conc.	PQL
Methyl-tert-Butyl Ether	ND	1.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
Xylenes-Total	ND	0.5
TPH-Gasoline	ND	50.

PQL = Practical Quantitation Limit.  
ND = None Detected at or above the PQL.

Surrogates	Recovery	Limits
a,a,a-TFT(FID)	100%	73-126
4-BFB(FID)	107%	67-146
4-BFB(PID)	106%	82-119

Volatiles Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste, (SW846), 3rd Ed., July 1992. Method 5030 (Purge & Tr) is used for the sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis.  
Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUTF) Manual, Last Revision October 1989. Method 5030 is used for sample preparation/introduction.



## LABORATORY CONTROL SAMPLES

Method: **VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID**

Date Aquired: 05/13/96

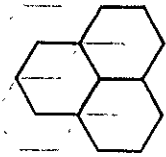
Expressed as mass (ng).

Analyte	Amount Added	Amount Found	LCS Rec	%Rec Limits
Methyl-tert-butyl Ether	40	42.	105%	82-113
Benzene	20.	20.	102%	84-113
Toluene	20.	21.	105%	90-110
Ethylbenzene	20.	21.	103%	89-112
m,p-Xylenes	20.	20.	102%	88-113
o-Xylene	20.	21.	105%	88-114
TPH-Gasoline	1,250.	1,360.	109%	77-130

Surrogates	LSC-8020M	Batch ID:	0513-04	
a,a,a-TFT-FID			100%	73-126
4-BFB-FID			104%	67-146
4-BFB-PID			105%	82-119
Surrogates	LSC-GASOLINE	Batch ID:	0513-05	
a,a,a-TFT-FID			92%	73-126
4-BFB-FID			125%	67-146
4-BFB-PID			108%	82-119

\* = Values outside of QC limits.

LCS Recovery: 0 out of 7 outside limits.



## LABORATORY CONTROL SAMPLES

Method: **VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID**

Date Acquired: 05/14/96

Expressed as mass (ng).

Analyte	Amount Added	Amount Found	LCS Rec	%Rec Limits
Methyl-tert-butyl Ether	40	38.	94%	82-113
Benzene	20.	19.	97%	84-113
Toluene	20.	20.	100%	90-110
Ethylbenzene	20.	20.	101%	89-112
m,p-Xylenes	20.	20.	101%	88-113
o-Xylene	20.	21.	104%	88-114
TPH-Gasoline	1,250.	1,360.	109%	77-130

Surrogates	LSC-8020M	Batch ID:	0514-04	
a,a,a-TFT-FID			96%	73-126
4-BFB-FID			104%	67-146
4-BFB-PID			107%	82-119
Surrogates	LSC-GASOLINE	Batch ID:	0514-05	
a,a,a-TFT-FID			91%	73-126
4-BFB-FID			125%	67-146
4-BFB-PID			107%	82-119

\* = Values outside of QC limits.

LCS Recovery: 0 out of 7 outside limits.



## VOLATILE AROMATICS - MATRIX SPIKE REPORT - SOIL

Client Project/I.D.: ALASKA GASOLINE

Laboratory I.D.: 4146-05S MS/MSD

Batch I.D.: 0513-26.D

Concentration of sample and spikes expressed as ug/g (ppm).

ANALYTE	Sample Conc.	Spike Added MS	Spike Added MSD	Spiked	Spiked	%Rec. MS	%Rec. MDS	RPD	%Rec. Limits	RPD Limits
				Sample Conc. MS	Sample Conc. MDS					
Benzene	0.00	0.37	0.38	0.35	0.37	95%	98%	-3%	61-129	16
Toluene	0.00	0.37	0.38	0.37	0.39	100%	102%	-3%	61-123	18
Ethylbenzene	0.01	0.37	0.38	0.37	0.39	95%	98%	-2%	63-120	16
m,p-Xylenes	0.01	0.37	0.38	0.38	0.39	99%	100%	-1%	60-121	17
o-Xylene	0.01	0.37	0.38	0.38	0.40	99%	101%	-2%	73-121	11
Surrogates										
a,a,a-TFT(FID)	97%			92%	91%				64-129	
4-BFB(FID)	101%			100%	99%				55-151	
4-BFB(PID)	107%			110%	109%				68-137	

\* = Values outside of QC limits.

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits.

Methanol extraction.

# CHAIN OF CUSTODY RECORD

A/E 4146

JOB NO.		PROJECT NAME		NO. OF CONTAINERS	ANALYSIS					SEALING?	REMARKS
LAB. NO.		SAMPLER (Signature)			TPH-G	TPH-D	BTEX	8270	8010		
DATE		SAMPLE LOCATION/INFORMATION									
DTE	NO.										
5-9-96	#1	Dispenser #1	-01	1	✓	✓				Some Odor	
5-9-96	#2	Dispenser #2	-02	1	✓	✓				Some Odor	
5-9-96	#3	Dispenser #3	-03	1	✓	✓				No Odor	
5-9-96	#5	Dispenser #5	-04	1	✓	✓				Some Odor	
5-9-96	#6	Dispenser #6	-05	1	✓	✓				No Odor	
5-9-96	#7	Trench #7	-06	1	✓	✓				Some Odor	
5-9-96	#8	Trench #8	-01	1	✓	✓				Some Odor	
5-9-96	9	waste oil pit	1 liter	1	✓	✓	✓	✓	✓		
"	10	" dup	1 liter	1	✓	✓	✓	✓	✓	Only 1 sample for 8270. BTEX-GAS & Diesel was previously run on this sample. See A/E 4131	
"	11	"	0.6 40ml vial	1	✓	✓	✓	✓	✓		
"	12	"	↓	1	✓	✓	✓	✓	✓		
"	13	"	↓	1	✓	✓	✓	✓	✓		
"				1	✓	✓	✓	✓	✓		

RELINQUISHED BY <i>[Signature]</i>	(Signature)	DATE/TIME 5-10-96 8:30	RECEIVED BY <i>[Signature]</i>	(Signature)	LAB TO NOTE - Y/N →	REMARKS
RELINQUISHED BY <i>[Signature]</i>	(Signature)	DATE/TIME 5/10/96 8:30	RECEIVED BY ---	(Signature)		Include to do 8270 only Bill & report to AW/EN, Inc PO# 4146 2 copies of report please 5/10/96 <i>[Signature]</i>
RELINQUISHED BY ---	(Signature)	DATE/TIME ---	RECEIVED FOR LAB. BY <i>[Signature]</i>	(Signature)		



**PETROTEK**  
P.O. Box 612317  
San Jose, California 95161

CHAIN OF CUSTODY RECORD





# Inchcape Testing Services

## Environmental Laboratories

1961 Concourse Drive  
Suite E  
San Jose, CA 95131  
Tel: 408-432-8192  
Fax: 408-432-8198

MS. LAURIE MURPHY  
AN/EN INC.  
455 RESERVATION ROAD, SUITE G  
MARINA, CA 93933

Workorder # : 9605100  
Date Received : 05/10/96  
Project ID : ALASKA GAS  
Purchase Order: 4146

The following samples were received at Inchcape for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9605100- 1	9,10

This report is organized in sections according to the specific Inchcape laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Inchcape cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Inchcape is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call your project manager as soon as possible. Thank you for using Inchcape Testing Services.

Project Manager

5/24/96  
Date

This report consists of 19 pages.



## GC/MS REPORT DESCRIPTION

### Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and within each method, organized sequentially in order of increasing Inchcape Testing Services ID Number.

### Tentatively Identified Compounds (TICs)

TIC forms contain tabulated results for non-target compounds detected in GC/MS analyses. TICs must be requested at the time samples are submitted to Inchcape Testing Services. TIC forms immediately follow the OADS form for each sample. If TICs are requested but not found, then TIC forms will not be included with the report.

### Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "\*" and the total number of surrogates outside the limits will be listed in the column labeled "Total Out."

### Matrix Spike Recovery, Laboratory Control Sample Forms

These forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes, laboratory control samples and their duplicates. This information is a statement of accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "\*".

### Qualifiers

Inchcape Testing Services uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed but not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an estimated value
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution
- A - Indicates that the tentatively identified compound is a suspected aldol condensation product. This is common in EPA Method 8270 analyses.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

### REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report form. However, the report cover letter and report summary pages do display up to twenty (20) characters of your project and sample IDs
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

REPORT SUMMARY  
INCHCAPE, INC. (408)432-8192

MS. LAURIE MURPHY  
AN/EN INC.  
455 RESERVATION ROAD, SUITE G  
MARINA, CA 93933

Workorder # : 9605100  
Date Received : 05/10/96  
Project ID : ALASKA GAS  
Purchase Order: 4146  
Department : GCMS  
Sub-Department: GCMS

SAMPLE INFORMATION:

INCHCAPE SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9605100- 1	9,10	WATER	05/09/96	8270

REPORT SUMMARY  
INCHCAPE, INC. (408)432-8192

MS. LAURIE MURPHY  
AN/EN INC.  
455 RESERVATION ROAD, SUITE G  
MARINA, CA 93933

Workorder # : 9605100  
Date Received : 05/10/96  
Project ID : ALASKA GAS  
Purchase Order: 4146  
Department : GCMS  
Sub-Department: GCMS

QA/QC SUMMARY :

- An internal standard area is outside of the QC limits for the EPA Method 8270B analysis of sample 9,10 RX. The sample was reanalyzed with similar results. Both analyses are reported.
- A surrogate recovery is outside of the QC limits for the EPA Method 8270B analysis of sample 9,10. The sample was reextracted outside of holding time and reanalyzed with similar results. Both analyses are reported.

*Murphy* 5/24/96  
Department Supervisor Date

*Sam Loring* 5/24/96  
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : 9,10  
 Matrix : WATER  
 Date Sampled : 05/09/96  
 Date Extracted : 05/13/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/17/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : 9605100-01  
 Lab File ID : MPY10001

% Moisture : \_\_\_\_\_  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	Phenol	10	ND	U
111-44-4	bis(-2-Chloroethyl) Ether	10	ND	U
95-57-8	2-Chlorophenol	10	ND	U
541-73-1	1,3-Dichlorobenzene	10	ND	U
106-46-7	1,4-Dichlorobenzene	10	ND	U
95-50-1	1,2-Dichlorobenzene	10	ND	U
95-48-7	2-Methylphenol	10	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	ND	U
106-44-5	4-Methylphenol	10	ND	U
621-64-7	N-Nitroso-di-n-propylamine	10	ND	U
67-72-1	Hexachloroethane	10	ND	U
98-95-3	Nitrobenzene	10	ND	U
78-59-1	Isophorone	10	ND	U
88-75-5	2-Nitrophenol	10	ND	U
105-67-9	2,4-Dimethylphenol	10	ND	U
111-91-1	bis(2-Chloroethoxy)methane	10	ND	U
120-83-2	2,4-Dichlorophenol	10	ND	U
120-82-1	1,2,4-Trichlorobenzene	10	ND	U
91-20-3	Naphthalene	10	ND	U
106-47-8	4-Chloroaniline	10	ND	U
87-68-3	Hexachlorobutadiene	10	ND	U
59-50-7	4-Chloro-3-Methylphenol	10	ND	U
91-57-6	2-Methylnaphthalene	10	ND	U
77-47-4	Hexachlorocyclopentadiene	10	ND	U
88-06-2	2,4,6-Trichlorophenol	10	ND	U
95-95-4	2,4,5-Trichlorophenol	50	ND	U
91-58-7	2-Chloronaphthalene	10	ND	U
88-74-4	2-Nitroaniline	50	ND	U
131-11-3	Dimethylphthalate	10	ND	U
208-96-8	Acenaphthylene	10	ND	U
606-20-2	2,6-Dinitrotoluene	10	ND	U
99-09-2	3-Nitroaniline	50	ND	U
83-32-9	Acenaphthene	10	ND	U
51-28-5	2,4-Dinitrophenol	50	ND	U
100-02-7	4-Nitrophenol	50	ND	U
132-64-9	Dibenzofuran	10	ND	U
121-14-2	2,4-Dinitrotoluene	10	ND	U
84-66-2	Diethylphthalate	10	ND	U
7005-72-3	4-Chlorophenyl-phenylether	10	ND	U
86-73-7	Fluorene	10	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : 9,10  
 Matrix : WATER  
 Date Sampled : 05/09/96  
 Date Extracted : 05/13/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/17/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : 9605100-01  
 Lab File ID : MPY10001  
 % Moisture : \_\_\_\_\_  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
100-01-6	4-Nitroaniline	50	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	50	ND	U
86-30-6	N-nitrosodiphenylamine (1)	10	ND	U
101-55-3	4-Bromophenyl-phenylether	10	ND	U
118-74-1	Hexachlorobenzene	10	ND	U
87-86-5	Pentachlorophenol	10	ND	U
85-01-8	Phenanthrene	10	ND	U
120-12-7	Anthracene	10	ND	U
84-74-2	Di-n-butylphthalate	10	ND	U
206-44-0	Fluoranthene	10	ND	U
129-00-0	Pyrene	10	ND	U
85-68-7	Butylbenzylphthalate	10	ND	U
91-94-1	3,3'-Dichlorobenzidine	20	ND	U
56-55-3	Benzo(a)anthracene	10	ND	U
218-01-9	Chrysene	10	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	20	ND	U
117-84-0	Di-n-octylphthalate	10	ND	U
205-99-2	Benzo(b)fluoranthene	10	ND	U
207-08-9	Benzo(k)fluoranthene	10	ND	U
50-32-8	Benzo(a)pyrene	10	ND	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	ND	U
53-70-3	Dibenz(a,h)anthracene	10	ND	U
191-24-2	Benzo(g,h,i)perylene	10	ND	U
100-51-6	Benzyl Alcohol	10	ND	U
65-85-0	Benzoic Acid	50	ND	U
62-75-9	N-Nitrosodimethylamine	10	ND	U
103-33-3	Azobenzene	10	ND	U
92-87-5	Benzydine	50	ND	U
62-53-3	Aniline	10	ND	U

(1) - Cannot be separated from Diphenylamine

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : 9,10RX  
 Matrix : WATER  
 Date Sampled : 05/09/96  
 Date Extracted : 05/20/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/23/96  
 Instrument ID : msd3.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : 9605100-01  
 Lab File ID : MXY10001  
 % Moisture : \_\_\_\_\_  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	Phenol	10	ND	U
111-44-4	bis(-2-Chloroethyl) Ether	10	ND	U
95-57-8	2-Chlorophenol	10	ND	U
541-73-1	1,3-Dichlorobenzene	10	ND	U
106-46-7	1,4-Dichlorobenzene	10	ND	U
95-50-1	1,2-Dichlorobenzene	10	ND	U
95-48-7	2-Methylphenol	10	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	ND	U
106-44-5	4-Methylphenol	10	ND	U
621-64-7	N-Nitroso-di-n-propylamine	10	ND	U
67-72-1	Hexachloroethane	10	ND	U
98-95-3	Nitrobenzene	10	ND	U
78-59-1	Isophorone	10	ND	U
88-75-5	2-Nitrophenol	10	ND	U
105-67-9	2,4-Dimethylphenol	10	ND	U
111-91-1	bis(2-Chloroethoxy)methane	10	ND	U
120-83-2	2,4-Dichlorophenol	10	ND	U
120-82-1	1,2,4-Trichlorobenzene	10	ND	U
91-20-3	Naphthalene	10	ND	U
106-47-8	4-Chloroaniline	10	ND	U
87-68-3	Hexachlorobutadiene	10	ND	U
59-50-7	4-Chloro-3-Methylphenol	10	ND	U
91-57-6	2-Methylnaphthalene	10	ND	U
77-47-4	Hexachlorocyclopentadiene	10	ND	U
88-06-2	2,4,6-Trichlorophenol	10	ND	U
95-95-4	2,4,5-Trichlorophenol	50	ND	U
91-58-7	2-Chloronaphthalene	10	ND	U
88-74-4	2-Nitroaniline	50	ND	U
131-11-3	Dimethylphthalate	10	ND	U
208-96-8	Acenaphthylene	10	ND	U
606-20-2	2,6-Dinitrotoluene	10	ND	U
99-09-2	3-Nitroaniline	50	ND	U
83-32-9	Acenaphthene	10	ND	U
51-28-5	2,4-Dinitrophenol	50	ND	U
100-02-7	4-Nitrophenol	50	ND	U
132-64-9	Dibenzofuran	10	ND	U
121-14-2	2,4-Dinitrotoluene	10	ND	U
84-66-2	Diethylphthalate	10	ND	U
7005-72-3	4-Chlorophenyl-phenylether	10	ND	U
86-73-7	Fluorene	10	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : 9,10RX  
 Matrix : WATER  
 Date Sampled : 05/09/96  
 Date Extracted : 05/20/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/23/96  
 Instrument ID : msd3.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : 9605100-01  
 Lab File ID : MXY10001  
 % Moisture : \_\_\_\_\_  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
100-01-6	4-Nitroaniline	50	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	50	ND	U
86-30-6	N-nitrosodiphenylamine (1)	10	ND	U
101-55-3	4-Bromophenyl-phenylether	10	ND	U
118-74-1	Hexachlorobenzene	10	ND	U
87-86-5	Pentachlorophenol	10	ND	U
85-01-8	Phenanthrene	10	ND	U
120-12-7	Anthracene	10	ND	U
84-74-2	Di-n-butylphthalate	10	ND	U
206-44-0	Fluoranthene	10	ND	U
129-00-0	Pyrene	10	ND	U
85-68-7	Butylbenzylphthalate	10	ND	U
91-94-1	3,3'-Dichlorobenzidine	20	ND	U
56-55-3	Benzo(a)anthracene	10	ND	U
218-01-9	Chrysene	10	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	20	ND	U
117-84-0	Di-n-octylphthalate	10	ND	U
205-99-2	Benzo(b)fluoranthene	10	ND	U
207-08-9	Benzo(k)fluoranthene	10	ND	U
50-32-8	Benzo(a)pyrene	10	ND	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	ND	U
53-70-3	Dibenz(a,h)anthracene	10	ND	U
191-24-2	Benzo(g,h,i)perylene	10	ND	U
100-51-6	Benzyl Alcohol	10	ND	U
65-85-0	Benzoic Acid	50	ND	U
62-75-9	N-Nitrosodimethylamine	10	ND	U
103-33-3	Azobenzene	10	ND	U
92-87-5	Benzidine	10	ND	U
4165-61-1	Aniline	10	ND	U

(1) - Cannot be separated from Diphenylamine



ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
(408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : 9,10RXRE  
 Matrix : WATER  
 Date Sampled : 05/09/96  
 Date Extracted : 05/20/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/23/96  
 Instrument ID : msd3.i  
 Volume of Final Extract: 1 ml

Anametrix ID : 9605110-01  
 Lab File ID : MYY10001

% Moisture : \_\_\_\_\_  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	Phenol	10	ND	U
111-44-4	bis(-2-Chloroethyl) Ether	10	ND	U
95-57-8	2-Chlorophenol	10	ND	U
541-73-1	1,3-Dichlorobenzene	10	ND	U
106-46-7	1,4-Dichlorobenzene	10	ND	U
95-50-1	1,2-Dichlorobenzene	10	ND	U
95-48-7	2-Methylphenol	10	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	ND	U
106-44-5	4-Methylphenol	10	ND	U
621-64-7	N-Nitroso-di-n-propylamine	10	ND	U
67-72-1	Hexachloroethane	10	ND	U
98-95-3	Nitrobenzene	10	ND	U
78-59-1	Isophorone	10	ND	U
88-75-5	2-Nitrophenol	10	ND	U
105-67-9	2,4-Dimethylphenol	10	ND	U
111-91-1	bis(2-Chloroethoxy)methane	10	ND	U
120-83-2	2,4-Dichlorophenol	10	ND	U
120-82-1	1,2,4-Trichlorobenzene	10	ND	U
91-20-3	Naphthalene	10	ND	U
106-47-8	4-Chloroaniline	10	ND	U
87-68-3	Hexachlorobutadiene	10	ND	U
59-50-7	4-Chloro-3-Methylphenol	10	ND	U
91-57-6	2-Methylnaphthalene	10	ND	U
77-47-4	Hexachlorocyclopentadiene	10	ND	U
88-06-2	2,4,6-Trichlorophenol	10	ND	U
95-95-4	2,4,5-Trichlorophenol	50	ND	U
91-58-7	2-Chloronaphthalene	10	ND	U
88-74-4	2-Nitroaniline	50	ND	U
131-11-3	Dimethylphthalate	10	ND	U
208-96-8	Acenaphthylene	10	ND	U
606-20-2	2,6-Dinitrotoluene	10	ND	U
99-09-2	3-Nitroaniline	50	ND	U
83-32-9	Acenaphthene	10	ND	U
51-28-5	2,4-Dinitrophenol	50	ND	U
100-02-7	4-Nitrophenol	50	ND	U
132-64-9	Dibenzofuran	10	ND	U
121-14-2	2,4-Dinitrotoluene	10	ND	U
84-66-2	Diethylphthalate	10	ND	U
7005-72-3	4-Chlorophenyl-phenylether	10	ND	U
86-73-7	Fluorene	10	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : 9,10RXRE  
 Matrix : WATER  
 Date Sampled : 05/09/96  
 Date Extracted : 05/20/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/23/96  
 Instrument ID : msd3.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : 9605110-01  
 Lab File ID : MYY10001  
 % Moisture : \_\_\_\_\_  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
100-01-6	4-Nitroaniline	50	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	50	ND	U
86-30-6	N-nitrosodiphenylamine (1)	10	ND	U
101-55-3	4-Bromophenyl-phenylether	10	ND	U
118-74-1	Hexachlorobenzene	10	ND	U
87-86-5	Pentachlorophenol	10	ND	U
85-01-8	Phenanthrene	10	ND	U
120-12-7	Anthracene	10	ND	U
84-74-2	Di-n-butylphthalate	10	ND	U
206-44-0	Fluoranthene	10	ND	U
129-00-0	Pyrene	10	ND	U
85-68-7	Butylbenzylphthalate	10	ND	U
91-94-1	3,3'-Dichlorobenzidine	20	ND	U
56-55-3	Benzo(a)anthracene	10	ND	U
218-01-9	Chrysene	10	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	20	ND	U
117-84-0	Di-n-octylphthalate	10	ND	U
205-99-2	Benzo(b)fluoranthene	10	ND	U
207-08-9	Benzo(k)fluoranthene	10	ND	U
50-32-8	Benzo(a)pyrene	10	ND	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	ND	U
53-70-3	Dibenz(a,h)anthracene	10	ND	U
191-24-2	Benzo(g,h,i)perylene	10	ND	U
100-51-6	Benzyl Alcohol	10	ND	U
65-85-0	Benzoic Acid	50	ND	U
62-75-9	N-Nitrosodimethylamine	10	ND	U
103-33-3	Azobenzene	10	ND	U
92-87-5	Benzidine	10	ND	U
4165-61-1	Aniline	10	ND	U

(1) - Cannot be separated from Diphenylamine

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408)432-8192

Project ID : ALASKA GAS  
 Sample ID : SBLKKS  
 Matrix : WATER  
 Date Sampled :  
 Date Extracted : 05/13/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/17/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : BY1311B1  
 Lab File ID : BY1311B1  
 % Moisture :  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	Phenol	10	ND	U
111-44-4	bis(-2-Chloroethyl) Ether	10	ND	U
95-57-8	2-Chlorophenol	10	ND	U
541-73-1	1,3-Dichlorobenzene	10	ND	U
106-46-7	1,4-Dichlorobenzene	10	ND	U
95-50-1	1,2-Dichlorobenzene	10	ND	U
95-48-7	2-Methylphenol	10	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	ND	U
106-44-5	4-Methylphenol	10	ND	U
621-64-7	N-Nitroso-di-n-propylamine	10	ND	U
67-72-1	Hexachloroethane	10	ND	U
98-95-3	Nitrobenzene	10	ND	U
78-59-1	Isophorone	10	ND	U
88-75-5	2-Nitrophenol	10	ND	U
105-67-9	2,4-Dimethylphenol	10	ND	U
111-91-1	bis(2-Chloroethoxy)methane	10	ND	U
120-83-2	2,4-Dichlorophenol	10	ND	U
120-82-1	1,2,4-Trichlorobenzene	10	ND	U
91-20-3	Naphthalene	10	ND	U
106-47-8	4-Chloroaniline	10	ND	U
87-68-3	Hexachlorobutadiene	10	ND	U
59-50-7	4-Chloro-3-Methylphenol	10	ND	U
91-57-6	2-Methylnaphthalene	10	ND	U
77-47-4	Hexachlorocyclopentadiene	10	ND	U
88-06-2	2,4,6-Trichlorophenol	10	ND	U
95-95-4	2,4,5-Trichlorophenol	50	ND	U
91-58-7	2-Chloronaphthalene	10	ND	U
88-74-4	2-Nitroaniline	50	ND	U
131-11-3	Dimethylphthalate	10	ND	U
208-96-8	Acenaphthylene	10	ND	U
606-20-2	2,6-Dinitrotoluene	10	ND	U
99-09-2	3-Nitroaniline	50	ND	U
83-32-9	Acenaphthene	10	ND	U
51-28-5	2,4-Dinitrophenol	50	ND	U
100-02-7	4-Nitrophenol	50	ND	U
132-64-9	Dibenzofuran	10	ND	U
121-14-2	2,4-Dinitrotoluene	10	ND	U
84-66-2	Diethylphthalate	10	ND	U
7005-72-3	4-Chlorophenyl-phenylether	10	ND	U
86-73-7	Fluorene	10	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
(408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : SBLKKS  
 Matrix : WATER  
 Date Sampled :  
 Date Extracted : 05/13/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/17/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : BY1311B1  
 Lab File ID : BY1311B1

% Moisture :  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
100-01-6	4-Nitroaniline	50	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	50	ND	U
86-30-6	N-nitrosodiphenylamine (1)	10	ND	U
101-55-3	4-Bromophenyl-phenylether	10	ND	U
118-74-1	Hexachlorobenzene	10	ND	U
87-86-5	Pentachlorophenol	10	ND	U
85-01-8	Phenanthrene	10	ND	U
120-12-7	Anthracene	10	ND	U
84-74-2	Di-n-butylphthalate	10	ND	U
206-44-0	Fluoranthene	10	ND	U
129-00-0	Pyrene	10	ND	U
85-68-7	Butylbenzylphthalate	10	ND	U
91-94-1	3,3'-Dichlorobenzidine	20	ND	U
56-55-3	Benzo(a)anthracene	10	ND	U
218-01-9	Chrysene	10	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	20	ND	U
117-84-0	Di-n-octylphthalate	10	ND	U
205-99-2	Benzo(b)fluoranthene	10	ND	U
207-08-9	Benzo(k)fluoranthene	10	ND	U
50-32-8	Benzo(a)pyrene	10	ND	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	ND	U
53-70-3	Dibenz(a,h)anthracene	10	ND	U
191-24-2	Benzo(g,h,i)perylene	10	ND	U
100-51-6	Benzyl Alcohol	10	ND	U
65-85-0	Benzoic Acid	50	ND	U
62-75-9	N-Nitrosodimethylamine	10	ND	U
103-33-3	Azobenzene	10	ND	U
92-87-5	Benmidine	50	ND	U
62-53-3	Aniline	10	ND	U

(1) - Cannot be separated from Diphenylamine

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : SBLKK2  
 Matrix : WATER  
 Date Sampled :  
 Date Extracted : 05/20/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/23/96  
 Instrument ID : msd3.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : BY2011B1  
 Lab File ID : BY2011B1  
 % Moisture :  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	Phenol	10	ND	U
111-44-4	bis(-2-Chloroethyl) Ether	10	ND	U
95-57-8	2-Chlorophenol	10	ND	U
541-73-1	1,3-Dichlorobenzene	10	ND	U
106-46-7	1,4-Dichlorobenzene	10	ND	U
95-50-1	1,2-Dichlorobenzene	10	ND	U
95-48-7	2-Methylphenol	10	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	ND	U
106-44-5	4-Methylphenol	10	ND	U
621-64-7	N-Nitroso-di-n-propylamine	10	ND	U
67-72-1	Hexachloroethane	10	ND	U
98-95-3	Nitrobenzene	10	ND	U
78-59-1	Isophorone	10	ND	U
88-75-5	2-Nitrophenol	10	ND	U
105-67-9	2,4-Dimethylphenol	10	ND	U
111-91-1	bis(2-Chloroethoxy)methane	10	ND	U
120-83-2	2,4-Dichlorophenol	10	ND	U
120-82-1	1,2,4-Trichlorobenzene	10	ND	U
91-20-3	Naphthalene	10	ND	U
106-47-8	4-Chloroaniline	10	ND	U
87-68-3	Hexachlorobutadiene	10	ND	U
59-50-7	4-Chloro-3-Methylphenol	10	ND	U
91-57-6	2-Methylnaphthalene	10	ND	U
77-47-4	Hexachlorocyclopentadiene	10	ND	U
88-06-2	2,4,6-Trichlorophenol	10	ND	U
95-95-4	2,4,5-Trichlorophenol	50	ND	U
91-58-7	2-Chloronaphthalene	10	ND	U
88-74-4	2-Nitroaniline	50	ND	U
131-11-3	Dimethylphthalate	10	ND	U
208-96-8	Acenaphthylene	10	ND	U
606-20-2	2,6-Dinitrotoluene	10	ND	U
99-09-2	3-Nitroaniline	50	ND	U
83-32-9	Acenaphthene	10	ND	U
51-28-5	2,4-Dinitrophenol	50	ND	U
100-02-7	4-Nitrophenol	50	ND	U
132-64-9	Dibenzofuran	10	ND	U
121-14-2	2,4-Dinitrotoluene	10	ND	U
84-66-2	Diethylphthalate	10	ND	U
7005-72-3	4-Chlorophenyl-phenylether	10	ND	U
86-73-7	Fluorene	10	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : SBLKK2  
 Matrix : WATER  
 Date Sampled :  
 Date Extracted : 05/20/96  
 Amount Extracted : 1000 mL  
 Date Analyzed : 05/23/96  
 Instrument ID : msd3.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : BY2011B1  
 Lab File ID : BY2011B1

% Moisture : \_\_\_\_\_  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
100-01-6	4-Nitroaniline	50	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	50	ND	U
86-30-6	N-nitrosodiphenylamine (1)	10	ND	U
101-55-3	4-Bromophenyl-phenylether	10	ND	U
118-74-1	Hexachlorobenzene	10	ND	U
87-86-5	Pentachlorophenol	10	ND	U
85-01-8	Phenanthrene	10	ND	U
120-12-7	Anthracene	10	ND	U
84-74-2	Di-n-butylphthalate	10	ND	U
206-44-0	Fluoranthene	10	ND	U
129-00-0	Pyrene	10	ND	U
85-68-7	Butylbenzylphthalate	10	ND	U
91-94-1	3,3'-Dichlorobenzidine	20	ND	U
56-55-3	Benzo(a)anthracene	10	ND	U
218-01-9	Chrysene	10	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	20	ND	U
117-84-0	Di-n-octylphthalate	10	ND	U
205-99-2	Benzo(b)fluoranthene	10	ND	U
207-08-9	Benzo(k)fluoranthene	10	ND	U
50-32-8	Benzo(a)pyrene	10	ND	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	ND	U
53-70-3	Dibenz(a,h)anthracene	10	ND	U
191-24-2	Benzo(g,h,i)perylene	10	ND	U
100-51-6	Benzyl Alcohol	10	ND	U
65-85-0	Benzoic Acid	50	ND	U
62-75-9	N-Nitrosodimethylamine	10	ND	U
103-33-3	Azobenzene	10	ND	U
92-87-5	Benzidine	10	ND	U
4165-61-1	Aniline	10	ND	U

(1) - Cannot be separated from Diphenylamine

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Matrix : WATER

Anamatrix ID : 9605100

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 #	S8 #	TOT OUT
01	SBLKKS	70	81	63	76	70	93			0
02	SLCSJ1	72	77	61	73	70	87			0
03	SLCSD2Q	75	77	63	75	71	93			0
04	9,10	72	84	20*	79	72	81			1
05	SBLKK2	86	82	77	78	74	81			0
06	SLCSKB	86	83	77	79	78	83			0
07	SLCSD3A	84	82	75	76	73	82			0
08	9,10RX	83	80	30*	76	70	77			1
09	9,10RXRE	82	82	33	77	70	76			0
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

QC LIMITS

- S1 (NBZ) = Nitrobenzene-d5 (35-114)
- S2 (FBP) = 2-Fluorobiphenyl (43-116)
- S3 (TPH) = Terphenyl-d14 (33-141)
- S4 (PHL) = Phenol-d5 (10- 94)
- S5 (2FP) = 2-Fluorophenol (21-100)
- S6 (TBP) = 2,4,6-Tribromophenol (10-123)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits  
 D Surrogate diluted out

LAB CONTROL SAMPLE FORM -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : SBLKKS  
 Matrix : WATER  
 Date Sampled :  
 Date Extracted : 05/13/96  
 Prep. Batch ID : 1dy13x21  
 Date Analyzed : 05/17/96  
 Instrument ID : msd4.i

Lab File ID : MY1311B1/NY1311B1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Phenol	75	0.0	52	69	22- 96
2-Chlorophenol	75	0.0	58	77	21- 96
1,4-Dichlorobenzene	50	0.0	35	70	17- 88
N-Nitroso-di-n-prop. (1)	50	0.0	32	64	19- 98
1,2,4-Trichlorobenzene	50	0.0	37	74	18- 92
4-Chloro-3-Methylphenol	75	0.0	48	64	21-103
Acenaphthene	50	0.0	39	78	24-132
4-Nitrophenol	75	0.0	70	93	22-132
2,4-Dinitrotoluene	50	0.0	36	72	30-114
Pentachlorophenol	75	0.0	58	77	16-141
Pyrene	50	0.0	34	68	30-133

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	% RPD #	QC LIMITS RPD REC.
Phenol	75	55	73	6	30 22- 96
2-Chlorophenol	75	58	77	0	30 21- 96
1,4-Dichlorobenzene	50	37	74	6	30 17- 88
N-Nitroso-di-n-prop. (1)	50	34	68	6	30 19- 98
1,2,4-Trichlorobenzene	50	39	78	5	30 18- 92
4-Chloro-3-Methylphenol	75	50	67	4	30 21-103
Acenaphthene	50	40	80	2	30 24-132
4-Nitrophenol	75	64	85	9	30 22-132
2,4-Dinitrotoluene	50	40	80	10	30 30-114
Pentachlorophenol	75	67	89	14	30 16-141
Pyrene	50	38	76	11	30 30-133

(1) N-Nitroso-di-n-propylamine  
 # Column to be used to flag recovery and RPD values with an asterisk  
 \* Values outside of QC limits

RPD: 0 out of 11 outside limits  
 Spike Recovery: 0 out of 22 outside limits

COMMENTS:



LAB CONTROL SAMPLE FORM -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GAS  
 Sample ID : SBLKK2  
 Matrix : WATER  
 Date Sampled :  
 Date Extracted : 05/20/96  
 Prep. Batch ID : 1sy20x21  
 Date Analyzed : 05/23/96  
 Instrument ID : msd3.i

Lab File ID : MY2011B1/NY2011B1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Phenol	150	0.0	59	39	22- 96
2-Chlorophenol	150	0.0	58	39	21- 96
1,4-Dichlorobenzene	100	0.0	40	40	17- 88
N-Nitroso-di-n-prop. (1)	100	0.0	38	38	19- 98
1,2,4-Trichlorobenzene	100	0.0	44	44	18- 92
4-Chloro-3-Methylphenol	150	0.0	66	44	21-103
Acenaphthene	100	0.0	44	44	24-132
4-Nitrophenol	150	0.0	78	52	22-122
2,4-Dinitrotoluene	100	0.0	48	48	30-114
Pentachlorophenol	150	0.0	72	48	16-141
Pyrene	100	0.0	42	42	30-133

COMPOUND	SPIKE ADDED (ug/L)	LCS D CONCENTRATION (ug/L)	LCS D % REC #	% RPD #	QC LIMITS RPD REC.
Phenol	150	57	38	2	30 22- 96
2-Chlorophenol	150	56	37	5	30 21- 96
1,4-Dichlorobenzene	100	38	38	5	30 17- 88
N-Nitroso-di-n-prop. (1)	100	37	37	3	30 19- 98
1,2,4-Trichlorobenzene	100	43	43	2	30 18- 92
4-Chloro-3-Methylphenol	150	66	44	0	30 21-103
Acenaphthene	100	43	43	2	30 24-132
4-Nitrophenol	150	79	53	2	30 22-122
2,4-Dinitrotoluene	100	47	47	2	30 30-114
Pentachlorophenol	150	70	47	2	30 16-141
Pyrene	100	42	42	0	30 30-133

(1) N-Nitroso-di-n-propylamine  
 # Column to be used to flag recovery and RPD values with an asterisk  
 \* Values outside of QC limits

RPD: 0 out of 11 outside limits  
 Spike Recovery: 0 out of 22 outside limits

COMMENTS:

10311

9005100

10/01

# CHAIN OF CUSTODY RECORD

AE4146

JOB NO.		PROJECT NAME		NO. OF CONTAINERS	ANALYSIS					SEALED?	REMARKS
LAB. NO.		SAMPLER (Signature)			TPH-G	TPH-D	BTEX	8270	8070		
DATE	DTE NO.	SAMPLE LOCATION/INFORMATION									
5-9-96	#1	Dispenser #1		1	✓	✓				Some Odor	
5-9-96	#2	Dispenser #2		1	✓	✓				Some Odor	
5-9-96	#3	Dispenser #3		1	✓	✓				No Odor	
5-9-96	#5	Dispenser #5		1	✓	✓				Some Odor	
5-9-96	#6	Dispenser #6		1	✓	✓				No Odor	
5-9-96	#7	Trench #7		1	✓	✓				Some Odor	
5-9-96	#8	Trench #8		1	✓	✓				Some Odor	
5-9-96	9	waste oil pit	1 liter	1	✓	✓	✓	✓			
"	10	" dup	1 liter	1	✓	✓	✓	✓		Only 1 sample for 8270	
"	11	"	40ml UOHA	1	✓	✓	✓	✓			
"	12	"	↓	1	✓	✓	✓	✓			
"	13	"	↓	1	✓	✓	✓	✓			

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	LAB TO NOTE - Y/N → REMARKS
<i>[Signature]</i>	5-10-96 8:20	<i>[Signature]</i>	
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	
<i>[Signature]</i>	5/10/96 8:30		Increase to do 8270 only Bill + report to AW/EN, Inc PO # 4146 2 copies of report please 5/10/96 <i>[Signature]</i>
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED FOR LAB. BY (Signature)	
		<i>[Signature]</i> 5/10/96 0330	



**PETROTEK**  
P.O. Box 612317  
San Jose, California 95161

CHAIN OF CUSTODY RECORD



**SAMPLE RECEIVING CHECKLIST**

Workorder Number: 9605100

Client Project ID: ALASKA GAS

**Cooler**

Shipping documentation present? If YES, enter Carrier and Airbill #:	YES	NO	<u>N/A</u>
Custody Seal on the outside of cooler? Condition: Intact      Broken	YES	NO	<u>N/A</u>
Temperature of sample(s) within range? List temperatures of cooler(s): <u>3°</u> Note: If all samples taken within previous 4 hr, circle N/A and place in sample storage area as soon as possible.	<u>YES</u>	NO	N/A

**Samples**

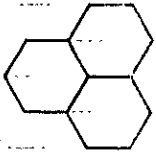
Chain of custody seal present for each container? Condition: Intact      Broken	YES	NO	<u>N/A</u>
Samples arrived within holding time?	<u>YES</u>	NO	N/A
Samples in proper containers for methods requested? Condition of containers: Intact <u>/</u> Broken _____ If NO, were samples transferred to proper container(s)?	<u>YES</u>	NO	
Were VOA containers received with zero headspace? If NO, was it noted on the chain of custody?	YES	NO	<u>N/A</u>
Were container labels complete? (ID, date, time, preservative)	<u>YES</u>	NO	N/A
Were samples properly preserved? If NO, was the preservative added at time of receipt?	YES	NO	<u>N/A</u>
pH check of samples required at time of receipt? If YES, pH checked and recorded by:	YES	<u>NO</u>	
Sufficient amount of sample received for methods requested? If NO, has the client or PM been notified?	<u>YES</u>	NO	
Field blanks received with sample batch?	YES	NO	<u>N/A</u>
Trip blanks received with sample batch?	YES	NO	<u>N/A</u>

**Chain of Custody**

Chain of custody form received with samples?	<u>YES</u>	NO
Has it been filled out completely and in ink?	<u>YES</u>	NO
Sample IDs on chain of custody form agree with labels?	<u>YES</u>	NO
Number of containers on chain agree with number received?	<u>YES</u>	NO
Analysis methods specified?	<u>YES</u>	NO
Sampling date and time indicated?	YES	<u>NO</u>
Proper signatures of sampler, courier and custodian in appropriate spaces? With time and date?	<u>YES</u>	NO
Turnaround time? Standard <u>/</u> Rush		

Any NO responses and/or any BROKEN that was checked must be detailed in a Corrective Action Form.

Sample Custodian: HH Date: 9/10/96 Project Manager: W Date: 8-13-96



**AN/EN Inc**

Analytical & Environmental Chemistry

05/20/96

A/E4131

DALE McANALLY  
PETROTEK  
925 COMMERCIAL AVE  
SAN JOSE, CA 95112

This is the **CERTIFICATE OF ANALYSIS** for the following samples as received.

Client Project ID: **ALASKA GASOLINE**  
Date Received by Lab: 05/07/96  
Total Number of Samples: 9  
Sample Matrix: **SOIL(5), SOIL COMPOSIT(3), & WATER(1)**

Volatile Organics are analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. Method 5030 (Purge and Trap) is used for the sample preparation/introduction. Method 8010 (Halogenated Volatile Organics-GC/ELCD) or Method 8240 (Volatile Organics-GC/MS) is used for the analysis.

BTEX is analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. Method 5030 (Purge and Trap) is used for the sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis.

Total Volatile Petroleum Hydrocarbons (Gasoline, Stoddard) are analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual, Last Revision October 1989. Method 5030 (Purge and Trap) is used for the sample preparation/introduction.


Total Extractable Petroleum Hydrocarbons (Diesel, Oil, Kerosene, Stoddard, etc.) are analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual, Last Revision October 1989. EPA Method 3550-sonication (soil) or EPA Method 3510-separatory funnel liquid-liquid (water) is used for sample extraction/preparation.

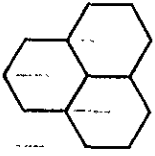
Organochlorine Pesticides are analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. EPA Method 3550 (soil) or EPA Method 3510 (water) is used for sample extraction/preparation. Method 8080 (Organochlorine Pesticides - GC-ECD/ECD) is used for the analysis.

AN/EN, Inc. is accredited by the California Department of Health Services; Certificate Number 1183 (original issue May 7, 1990). The DHS- Environmental Laboratory Accreditation Program can be reached at (510) 540-2800.

Complete report consists of 16 pages.

Reviewed and Approved:

  
Laurie Glantz-Murphy, Laboratory Manager



**AN / EN Inc**

Analytical & Environmental Chemistry

**TPH-EXTRACTABLE (DIESEL & MOTOR OIL RANGES) BY GC/FID**

Client Project/I.D.: **ALASKA GASOLINE**  
Date Sampled: 05/02/96 - 05/03/96  
Date Received: 05/06/96  
Matrix: **Soil**  
Analyst: *pm*

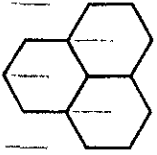
Concentration in sample expressed as ug/g (ppm).

Sample ID	Diesel	Oil	Lab I.D.	Date Extracted	Date Analyzed	PQL (ppm)
WASTE OIL NORTH END	ND	1400	4131-05	05/07/96	05/08/96	200
WASTE OIL COMPOSITE	ND	3800	4131-08	05/07/96	05/08/96	1000
Method Blank	ND	ND	4131-MB	05/07/96	05/07/96	10

PQL = Practical Quantitation Limit.  
ND = None Detected at or above the PQL.

Diesel - Extractable hydrocarbons in the boiling range of Diesel(C12-C24).  
Motor Oil - Extractable hydrocarbons in the boiling range of Motor Oil(C24-C40)

Total Extractable Petroleum Hydrocarbons (as Diesel) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989 Method 3550 is used for sample preparation



**TPH-EXTRACTABLE (DIESEL & MOTOR OIL RANGES) BY GC/FID**

Client Project/I.D.: **ALASKA GASOLINE**

Date Sampled: 05/02/96

Date Received: 05/06/96

Date Extracted: 05/07/96

Matrix: **Water**

Analyst:

Concentration in sample expressed as ug/L (ppb).

Sample ID	Diesel	Oil	Lab I.D.	Date Analyzed	PQL
WASTE OIL PIT WATER	ND	35000	4131-01	05/08/96	5000
Method Blank	ND	ND	4131-MB	05/08/96	50

PQL = Practical Quantitation Limit.

ND = None Detected at or above the PQL.

Diesel - Extractable hydrocarbons in the boiling range of Diesel(C12-C24).

Motor Oil - Extractable hydrocarbons in the boiling range of Motor Oil(C24-C40)

Total Extractable Petroleum Hydrocarbons (as Diesel) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual. Last Revision October 1989 Method 3550 is used for sample preparation



**TPH-EXTRACTABLE - LABORATORY CONTROL SAMPLE - SOIL**

Batch I.D.: 0506-13

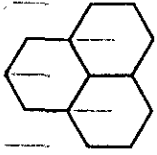
Date Extracted: 05/07/96

Date Analyzed: 05/07/96

Concentration of sample and spikes expressed as ug/g (ppm).

ANALYTE	Spike Added	LCS Conc	LCS %Rec	%Rec Limits
Diesel	50	48	96%	57-116

RPD: 0 out of 1 outside limits  
Spike Recovery: 0 out of 2 outside limits.



**TPH-EXTRACTABLE - LABORATORY CONTROL SAMPLE/DUPLICATE - WATER**

Batch I.D. WLCS: 0508-08

Batch I.D. WLCS/D: 0508-09

Date Extracted: 05/07/96

Date Analyzed: 05/08/96

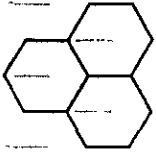
Concentration of sample and spikes expressed as ug/L (ppb).

ANALYTE	Spike Added	LCS Conc	LCSD Conc	LCS %Rec	LCSD %Rec	RPD	%Rec Limits	RPD Limits
Diesel	500	455	460	91%	92%	-1%	57-116	37

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits.





## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Client Project / I.D.: **ALASKA GASOLINE**

Matrix: **Soil**  
Date Received: **05/06/96**  
Analyst: *JM*

Sample I.D.:	PLUS UL	PLUS UL	SUPERUL	SUPERUL	W. OIL	SUPERUL	W. OIL	PLUSUL	PQL
	WEST	EAST	WEST	EAST	NORTH		COMP.		
	END	END	END	END	END	COMP.	COMP.	COMP	ppm
Methyl-tert-Butyl Ether	<5	<5	<5	<5	ND	<5	ND	<.3	0.10
Benzene	31	<2	25	2.6	ND	17	ND	<.2	0.05
Toluene	250	16	190	34	ND	120	ND	.59	0.05
Ethylbenzene	74	8.3	75	21	ND	21	ND	18	0.05
Xylenes-Total	560	190	400	250	ND	330	06	5.6	0.05
TPH-Gasoline	5000	2900	4400	3600	ND	2900	9.4	290	5.00

### Surrogate Recovery

									Limits
a,a,a-TFT(FID)	100%	92%	97%	95%	93%	86%	89%	99%	64-129
4-BFB(FID)	100%	99%	96%	93%	95%	106%	94%	95%	55-151
4-BFB(PID)	102%	102%	105%	100%	105%	111%	99%	97%	68-137
Dilution Factor	50	50	50	50	1	50	1	3	
Laboratory I.D.:	4131-01	4131-02	4131-03	4131-04	4131-05	4131-07	4131-08	4131-09	
Batch I.D.:	0507-13	0507-14	0507-15	0507-16	0507-34	0507-19	0508-09	0508-10	
Date Sampled:	05/02/96	05/02/96	05/02/96	05/02/96	05/02/96	05/03/96	05/03/96	05/03/96	
Date Analyzed:	05/07/96	05/07/96	05/07/96	05/07/96	05/08/96	05/07/96	05/08/96	05/08/96	

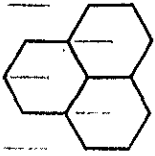
Concentration of samples expressed as ug/g (ppm).

PQL = Practical Quantitation Limit.

ND = Not Detected at or above the PQL.

< = Increased PQL due to sample dilution.

Volatiles Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste, (SW846), 3rd Ed July 1992 Method 5030 (Purge & Trap) is used for sample preparation/introduction Method 8020 (Aromatic Volatile Organics) is used for the analysis Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989 Method 5030 is used for sample preparation/introduction



**VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID**

Client Project / I.D.: **ALASKA GASOLINE**

Laboratory I.D.: 4131-06W  
Batch I.D.: 0507-22.D  
Date Sampled: 05/02/96  
Date Received: 05/06/96  
Matrix: **Water**

Sample I.D.: **WASTE OIL  
PIT WATER**  
Date Analyzed: 05/07/96  
Dilution: 1  
Analyst: *JM*

Concentration of sample expressed as ug/L (ppb).

Analyte	Conc.	PQL
Methyl-tert-Butyl Ether	ND	1.
Benzene	ND	.5
Toluene	ND	.5
Ethylbenzene	ND	.5
Xylenes-Total	1.6	.5
TPH-Gasoline	1,300. *	50.

PQL = Practical Quantitation Limit.  
ND = Not Detected at or above the PQL.

\* Not a typical Gasoline pattern; possibly very aged Gasoline or Stoddard.

Surrogates	Recovery	Limits
a,a,a-TFT(FID)	97%	64-129
4-BFB(FID)	84%	55-151
4-BFB(PID)	93%	68-137

Volatile Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste, (SW846), 3rd Ed., July 1992. Method 5030 (Purge & Trap) is used for sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis. Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989. Method 5030 is used for sample preparation/introduction.



## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Laboratory I.D.: **INSTRUMENT BLANK**

Batch I.D.: 0507-01.D

Date Acquired: 05/07/96

Concentration of blank expressed as ug/L (ppb).

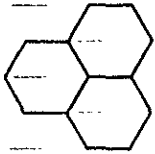
Analyte	Conc.	PQL
Methyl-tert-Butyl Ether	ND	1.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
Xylenes-Total	ND	0.5
TPH-Gasoline	ND	50.

PQL = Practical Quantitation Limit.

ND = None Detected at or above the PQL.

Surrogates	Recovery	Limits
a,a,a-TFT(FID)	104%	73-126
4-BFB(FID)	101%	67-146
4-BFB(PID)	101%	82-119

Volatile Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste,(SW846), 3rd Ed , July 1992. Method 5030 (Purge & Tr is used for the sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis.  
Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989. Method 5030 is used for sample preparation/introduction



## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Laboratory I.D.: **INSTRUMENT BLANK**

Batch I.D.: 0508-01.D

Date Acquired: 05/08/96

Concentration of blank expressed as ug/L (ppb).

Analyte	Conc.	PQL
Methyl-tert-Butyl Ether	ND	1.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
Xylenes-Total	ND	0.5
TPH-Gasoline	ND	50.

PQL = Practical Quantitation Limit.  
ND = None Detected at or above the PQL.

Surrogates	Recovery	Limits
a,a,a-TFT(FID)	103%	73-126
4-BFB(FID)	106%	67-146
4-BFB(PID)	101%	82-119

Volatile Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste, (SW846), 3rd Ed., July 1992. Method 5030 (Purge & Tr) is used for the sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis.  
Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989. Method 5030 is used for sample preparation/introduction



## LABORATORY CONTROL SAMPLES

Method: VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

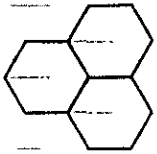
Date Acquired: 05/07/96

Expressed as mass (ng).

Analyte	Amount Added	Amount Found	LCS Rec	%Rec Limits
Methyl-tert-butyl Ether	40	40.	99%	82-113
Benzene	20.	20.	101%	84-113
Toluene	20.	20.	102%	90-110
Ethylbenzene	20.	20.	101%	89-112
m,p-Xylenes	20.	20.	100%	88-113
o-Xylene	20.	20.	102%	88-114
TPH-Gasoline	1,250.	1,359.	109%	77-130

Surrogates	LSC-8020M	Batch ID:	0507-04	
a,a,a-TFT-FID			100%	73-126
4-BFB-FID			102%	67-146
4-BFB-PID			103%	82-119
Surrogates	LSC-GASOLINE	Batch ID:	0507-05	
a,a,a-TFT-FID			96%	73-126
4-BFB-FID			124%	67-146
4-BFB-PID			102%	82-119

\* = Values outside of QC limits.  
LCS Recovery: 0 out of 7 outside limits.



## LABORATORY CONTROL SAMPLES

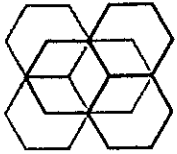
Method: VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Date Acquired: 05/08/96

Expressed as mass (ng).

Analyte	Amount Added	Amount Found	LCS Rec	%Rec Limits
Methyl-tert-butyl Ether	40	42.	105%	82-113
Benzene	20.	21.	103%	84-113
Toluene	20.	21.	103%	90-110
Ethylbenzene	20.	21.	103%	89-112
m,p-Xylenes	20.	21.	105%	88-113
o-Xylene	20.	21.	107%	88-114
TPH-Gasoline	1,250.	1,314.	105%	77-130
Surrogates	LSC-8020M	Batch ID:	0508-04	
a,a,a-TFT-FID			97%	73-126
4-BFB-FID			102%	67-146
4-BFB-PID			107%	82-119
Surrogates	LSC-GASOLINE	Batch ID:	0508-05	
a,a,a-TFT-FID			92%	73-126
4-BFB-FID			121%	67-146
4-BFB-PID			105%	82-119

\* = Values outside of QC limits.  
LCS Recovery: 0 out of 7 outside limits.



### VOLATILE HALOGENATED ORGANICS BY GC/ELCD

EPA Method:	8010	Sample I.D.:	Waste Oil North End
Laboratory Number:	4131-05	Project:	Alaska Gas
Date Sampled:	05/02/96	Dilution:	50
Date Received:	05/06/96	Date Analyzed:	05/15/96
Matrix:	Soil	Analyst:	JW

Concentration of sample expressed as ug/Kg (ppb).

CAS#	Analyte	Conc.	Q	PQL
74-87-3	Chloromethane	ND		50
75-01-4	Vinyl chloride	ND		50
74-83-9	Bromomethane	ND		50
75-00-3	Chloroethane	ND		50
75-69-4	Trichlorofluoromethane	ND		50
75-35-4	1,1-Dichloroethene	ND		50
76-13-1	Trichlorotrifluoroethane	ND		50
75-09-2	Methylene chloride	ND		50
156-60-5	trans-1,2-Dichloroethene	ND		50
75-35-3	1,1-Dichloroethane	ND		50
156-69-4	cis-1,2-Dichloroethene	ND		50
67-66-3	Chloroform	ND		50
71-55-6	1,1,1-Trichloroethane	ND		50
56-23-5	Carbon tetrachloride	ND		50
107-06-2	1,2-Dichloroethane	ND		50
79-01-6	Trichloroethene	ND		50
78-87-5	1,2-Dichloropropane	ND		50
75-27-4	Bromodichloromethane	ND		50
10061-01-5	cis-1,3-Dichloropropene	ND		50
10061-02-6	trans-1,3-dichloropropene	ND		50
79-00-5	1,1,2-Trichloroethane	ND		50
127-18-4	Tetrachloroethene	ND		50
124-48-1	Chlorodibromomethane	ND		50
108-90-7	Chlorobenzene	ND		50
106-93-4	1,2-Dibromoethane (EDB)	ND		50
75-25-2	Bromoform	ND		50
79-34-5	1,1,2,2-Tetrachloroethane	ND		50
541-73-1	1,3-Dichlorobenzene	ND		50
106-46-7	1,4-Dichlorobenzene	ND		50
95-50-1	1,2-Dichlorobenzene	ND		50

Surrogates	Recovery	Limits
3-Chloro-1-propene	93%	70-135%
4-Chlorotoluene	101%	70-135%

PQL = Practical Quantitation Limit  
 ND = None Detected at or above the PQL

NOTE: Sample was diluted due to matrix interference.



### VOLATILE HALOGENATED ORGANICS BY GC/ELCD

EPA Method: **8010**  
 Laboratory Number: **BLK0515B**  
 Date Sampled: **N/A**  
 Date Received: **N/A**  
 Matrix: **Soil**

Sample I.D.: **Method Blank**  
 Project: **Alaska Gas**  
 Dilution: **50**  
 Date Analyzed: **05/15/96**  
 Analyst: *my*

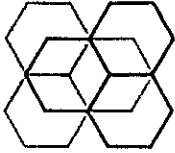
Concentration of sample expressed as ug/Kg (ppb).

CAS#	Analyte	Conc.	Q	PQL
74-87-3	Chloromethane	ND		50
75-01-4	Vinyl chloride	ND		50
74-83-9	Bromomethane	ND		50
75-00-3	Chloroethane	ND		50
75-69-4	Trichlorofluoromethane	ND		50
75-35-4	1,1-Dichloroethene	ND		50
76-13-1	Trichlorotrifluoroethane	ND		50
75-09-2	Methylene chloride	ND		50
156-60-5	trans-1,2-Dichloroethene	ND		50
75-35-3	1,1-Dichloroethane	ND		50
156-69-4	cis-1,2-Dichloroethene	ND		50
67-66-3	Chloroform	ND		50
71-55-6	1,1,1-Trichloroethane	ND		50
56-23-5	Carbon tetrachloride	ND		50
107-06-2	1,2-Dichloroethane	ND		50
79-01-6	Trichloroethene	ND		50
78-87-5	1,2-Dichloropropane	ND		50
75-27-4	Bromodichloromethane	ND		50
10061-01-5	cis-1,3-Dichloropropene	ND		50
10061-02-6	trans-1,3-dichloropropene	ND		50
79-00-5	1,1,2-Trichloroethane	ND		50
127-18-4	Tetrachloroethene	ND		50
124-48-1	Chlorodibromomethane	ND		50
108-90-7	Chlorobenzene	ND		50
106-93-4	1,2-Dibromoethane (EDB)	ND		50
75-25-2	Bromoform	ND		50
79-34-5	1,1,2,2-Tetrachloroethane	ND		50
541-73-1	1,3-Dichlorobenzene	ND		50
106-46-7	1,4-Dichlorobenzene	ND		50
95-50-1	1,2-Dichlorobenzene	ND		50

Surrogates	Recovery	Limits
3-Chloro-1-propene	91%	70-135%
4-Chlorotoluene	101%	70-135%

PQL = Practical Quantitation Limit  
 ND = None Detected at or above the PQL





LABORATORY CONTROL SAMPLE

EPA Method: 8010  
Laboratory Number: LCS0515A  
Matrix: Water

Date Analyzed: 05/15/96  
Analyst: *RS*

Concentration expressed as ug/L (ppb).

COMPOUND	Spike Added	LCS Conc	LCS Rec	%Rec Limits
1,1-Dichloroethene	10	9.6	96%	75-125
1,2-Dichloroethane	10	9.7	97%	75-125
Trichloroethene	10	9.5	95%	75-125
Tetrachloroethene	10	10.6	106%	75-125
Chlorobenzene	10	9.2	92%	75-125
<u>Surrogates</u>				
3-Chloro-1-propene			96%	80-120
4-Chlorotoluene			97%	80-120

\* = Values outside of QC limits.

Spike Recovery: 0 out of 5 outside limits.

QC-LAB CONTROL SAMPLE

# CHAIN OF CUSTODY RECORD

A/E 4131 (1/2)

5100

CHAIN OF CUSTODY RECORD

JOB NO.		PROJECT NAME		NO. OF CONTAINERS	ANALYSIS					REMARKS
LAB. NO.		SAMPLER (Signature)			TPH-G	TPH-D	BTEX	MTBE	Lead	
DATE		SAMPLE LOCATION/INFORMATION								
DTE	NO.									
PUL	1	Plus ul west end		S 1	X	X	X	X	-01	
PUL	2	Plus ul east end		S 1	X	X	X	X	-02	
SUL	1	Super ul west end		S 1	X	X	X	X	-03	
SUL	2	Super ul east end		S 1	X	X	X	X	-04	
w/oil	1	waste oil North end		S 1	X	X	X	X	-05	
w/oil	2	waste oil water samples waste oil pit		W 3	X	X	X	X	-06	
<p>15 = insuf. sample</p> <p>Not sufficient water sample for all requested Analyses. 5/7/96 DM Fred will resample. No water left - brought soil (4131)</p> <p>Sub-Sampled for lead on 5-7-96 1200 by J. Heiser</p>										
RELINQUISHED BY		(Signature)		DATE/TIME		RECEIVED BY		(Signature)		
RELINQUISHED BY		(Signature)		DATE/TIME		RECEIVED BY		(Signature)		
RELINQUISHED BY		(Signature)		DATE/TIME		RECEIVED FOR LAB. BY		(Signature)		



**PETROTEK**  
P.O. Box 612317  
San Jose, California 95161

ANALYSIS  
 TPH-G  
 TPH-D  
 BTEX  
 MTBE  
 Lead  
 Chlor. in site & hydroc  
 carbons (8270)  
 Semivolatiles  
 8270  
 Volatile  
 Metals (Cd, Cr, Pb, Ni, Zn)

LAB TO NOTE - Y/N → REMARKS  
 Incheape to do Metals on (5 left) on (A) and Lead on (B). 8270 on (C) PO # 4131 2 copies of report please

# CHAIN OF CUSTODY RECORD

A/E 4131 (2/2)

0100

JOB NO.		PROJECT NAME		NO. OF CONTAINERS	ANALYSIS							SEALED?	REMARKS
LAB. NO.		SAMPLER (Signature)			TPH-G	TPH-D	BTEX	SS 2087/EF	Oil/Grease	MOTOR OIL	Range organics		
DATE	NO.	SAMPLE LOCATION/INFORMATION											
5-3-96	1	Super unleaded Northside		1	X	X						Composite	
"	2	Super unleaded Eastside		1	X	X					"		
"	3	Super unleaded westside		1	X	X					"		
"	4	Super unleaded southside		1	X	X					"		
5-3-96	1	Waste oil northside		1	X	X	X	X				OTC	
"	2	Waste oil Eastside		1	X	X	X	X					"
"	3	Waste oil westside		1	X	X	X	X					"
"	4	Waste oil southside		1	X	X	X	X					"
5-3-96	1	Plus unleaded northside		1	X	X						OTC	
"	2	Plus unleaded Eastside		1	X	X							"
"	3	Plus unleaded westside		1	X	X							"
"	4	Plus unleaded southside		1	X	X							"

RELINQUISHED BY (Signature) *[Signature]*

RELINQUISHED BY (Signature) \_\_\_\_\_

RELINQUISHED BY (Signature) \_\_\_\_\_

DATE/TIME 5/6/96

DATE/TIME \_\_\_\_\_

DATE/TIME \_\_\_\_\_

RECEIVED BY (Signature) *Diane Thesen*

RECEIVED BY (Signature) \_\_\_\_\_

RECEIVED FOR LAB. BY (Signature) \_\_\_\_\_

LAB TO NOTE - Y/N →

REMARKS



**PETROTEK**

P.O. Box 612917  
San Jose, California 95161



**AN / EN Inc**

Analytical & Environmental Chemistry

05/29/96

A/E4131

DALE McANALLY  
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925 COMMERCIAL AVE  
SAN JOSE, CA 95112

Following are the results for AN/EN lab#-A/E4131 that were subcontracted to Inchape Testing Services-Anametrix Laboratories

Client Project ID: **ALASKA GASOLINE**  
Date Received by AN/EN: 05/07/96  
Number of Samples: 9  
Sample Matrix: **SOIL(5), SOIL COMPOSIT(3), & WATER(1)**

If you have any questions or need assistance, please feel free to call me at 408/883-0123.

Sincerely,

Laurie Glantz-Murphy



# Inchcape Testing Services

## Environmental Laboratories

1961 Concourse Drive  
 Suite E  
 San Jose, CA 95131  
 Tel: 408-432-8192  
 Fax: 408-432-8198

MS. LAURIE MURPHY  
 AN/EN INC.  
 455 RESERVATION ROAD, SUITE G  
 MARINA, CA 93933

Workorder # : 9605097  
 Date Received : 05/10/96  
 Project ID : ALASKA GASOLINE  
 Purchase Order: 4131

The following samples were received at Inchcape for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9605097- 1	01
9605097- 2	02
9605097- 3	03
9605097- 4	04
9605097- 5	05
9605097- 6	06

This report is organized in sections according to the specific Inchcape laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Inchcape cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Inchcape is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call your project manager as soon as possible. Thank you for using Inchcape Testing Services.

Jane Walker  
 Project Manager

5-23-96  
 Date

This report consists of 22 pages.



## GC/MS REPORT DESCRIPTION

### **Organic Analysis Data Sheets (OADS)**

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and within each method, organized sequentially in order of increasing Inchcape Testing Services ID Number.

### **Tentatively Identified Compounds (TICs)**

TIC forms contain tabulated results for non-target compounds detected in GC/MS analyses. TICs must be requested at the time samples are submitted to Inchcape Testing Services. TIC forms immediately follow the OADS form for each sample. If TICs are requested but not found, then TIC forms will not be included with the report.

### **Surrogate Recovery Summary (SRS)**

SRS forms contain quality assurance data. An SRS form will be printed for each method. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "\*" and the total number of surrogates outside the limits will be listed in the column labeled "Total Out."

### **Matrix Spike Recovery, Laboratory Control Sample Forms**

These forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes, laboratory control samples and their duplicates. This information is a statement of accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "\*\*"

### **Qualifiers**

Inchcape Testing Services uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed but not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an estimated value
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution
- A - Indicates that the tentatively identified compound is a suspected aldol condensation product. This is common in EPA Method 8270 analyses.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

### **REPORTING CONVENTIONS**

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report form. However, the report cover letter and report summary pages do display up to twenty (20) characters of your project and sample IDs
- Amounts reported are gross values, i.e., not corrected for method blank contamination

REPORT SUMMARY  
INCHCAPE, INC. (408)432-8192

MS. LAURIE MURPHY  
AN/EN INC.  
455 RESERVATION ROAD, SUITE G  
MARINA, CA 93933

Workorder # : 9605097  
Date Received : 05/10/96  
Project ID : ALASKA GASOLINE  
Purchase Order: 4131  
Department : GCMS  
Sub-Department: GCMS

SAMPLE INFORMATION:

INCHCAPE SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9605097- 5	05	SOIL	05/02/96	8270

REPORT SUMMARY  
INCHCAPE, INC. (408)432-8192

MS. LAURIE MURPHY  
AN/EN INC.  
455 RESERVATION ROAD, SUITE G  
MARINA, CA 93933

Workorder # : 9605097  
Date Received : 05/10/96  
Project ID : ALASKA GASOLINE  
Purchase Order: 4131  
Department : GCMS  
Sub-Department: GCMS

QA/QC SUMMARY :

- All holding times have been met for the analyses reported in this section.
- Samples 05MS and 05MSD had high recoveries of spiked compounds 4-nitrophenol and 2,4-dinitrotoluene for the EPA Method 8270B analysis due to a possible matrix interference. The samples had high relative percent difference of 2,4-dinitrotoluene.
- Two internal standard areas are outside of the QC limits for the EPA Method 8270B analysis of samples 05, 05MS and 05MSD indicating a possible matrix effect.
- A surrogate recovery is outside of the QC limits for the EPA Method 8270B analysis of sample 05MSD due to a possible matrix effect. The sample was reanalyzed with similar results. Only the original analysis is reported.

*Laurie Murphy*  
Department Supervisor

5/22/96  
Date

*Sam Wang*  
Chemist

5/21/96  
Date



ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : 05  
 Matrix : SOIL  
 Date Sampled : 05/02/96  
 Date Extracted : 05/15/96  
 Amount Extracted : 30.0 g  
 Date Analyzed : 05/15/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : 9605097-05  
 Lab File ID : MPY09705  
 % Moisture : \_\_\_\_\_  
 Dilution Factor : 1.0  
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	Phenol	330	ND	U
111-44-4	bis(-2-Chloroethyl) Ether	330	ND	U
95-57-8	2-Chlorophenol	330	ND	U
541-73-1	1,3-Dichlorobenzene	330	ND	U
106-46-7	1,4-Dichlorobenzene	330	ND	U
95-50-1	1,2-Dichlorobenzene	330	ND	U
95-48-7	2-Methylphenol	330	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	ND	U
106-44-5	4-Methylphenol	330	ND	U
621-64-7	N-Nitroso-di-n-propylamine	330	ND	U
67-72-1	Hexachloroethane	330	ND	U
98-95-3	Nitrobenzene	330	ND	U
78-59-1	Isophorone	330	ND	U
88-75-5	2-Nitrophenol	330	ND	U
105-67-9	2,4-Dimethylphenol	330	ND	U
111-91-1	bis(2-Chloroethoxy)methane	330	ND	U
120-83-2	2,4-Dichlorophenol	330	ND	U
120-82-1	1,2,4-Trichlorobenzene	330	ND	U
91-20-3	Naphthalene	330	ND	U
106-47-8	4-Chloroaniline	330	ND	U
87-68-3	Hexachlorobutadiene	330	ND	U
59-50-7	4-Chloro-3-Methylphenol	330	ND	U
91-57-6	2-Methylnaphthalene	330	ND	U
77-47-4	Hexachlorocyclopentadiene	330	ND	U
88-06-2	2,4,6-Trichlorophenol	330	ND	U
95-95-4	2,4,5-Trichlorophenol	1700	ND	U
91-58-7	2-Chloronaphthalene	330	ND	U
88-74-4	2-Nitroaniline	1700	ND	U
131-11-3	Dimethylphthalate	330	ND	U
208-96-8	Acenaphthylene	330	ND	U
606-20-2	2,6-Dinitrotoluene	330	ND	U
99-09-2	3-Nitroaniline	1700	ND	U
83-32-9	Acenaphthene	330	ND	U
51-28-5	2,4-Dinitrophenol	1700	ND	U
100-02-7	4-Nitrophenol	1700	ND	U
132-64-9	Dibenzofuran	330	ND	U
121-14-2	2,4-Dinitrotoluene	330	ND	U
84-66-2	Diethylphthalate	330	ND	U
7005-72-3	4-Chlorophenyl-phenylether	330	ND	U
86-73-7	Fluorene	330	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408)432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : 05  
 Matrix : SOIL  
 Date Sampled : 05/02/96  
 Date Extracted : 05/15/96  
 Amount Extracted : 30.0 g  
 Date Analyzed : 05/15/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anametrix ID : 9605097-05  
 Lab File ID : MPY09705  
 % Moisture : \_\_\_\_\_  
 Dilution Factor : 1.0  
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
100-01-6	4-Nitroaniline	1700	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	ND	U
86-30-6	N-nitrosodiphenylamine (1)	330	ND	U
101-55-3	4-Bromophenyl-phenylether	330	ND	U
118-74-1	Hexachlorobenzene	330	ND	U
87-86-5	Pentachlorophenol	330	ND	U
85-01-8	Phenanthrene	330	ND	U
120-12-7	Anthracene	330	ND	U
84-74-2	Di-n-butylphthalate	330	ND	U
206-44-0	Fluoranthene	330	ND	U
129-00-0	Pyrene	330	ND	U
85-68-7	Butylbenzylphthalate	330	ND	U
91-94-1	3,3'-Dichlorobenzidine	660	ND	U
56-55-3	Benzo (a) anthracene	330	ND	U
218-01-9	Chrysene	330	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	660	ND	U
117-84-0	Di-n-octylphthalate	330	ND	U
205-99-2	Benzo (b) fluoranthene	330	ND	U
207-08-9	Benzo (k) fluoranthene	330	ND	U
50-32-8	Benzo (a) pyrene	330	ND	U
193-39-5	Indeno (1,2,3-cd) pyrene	330	ND	U
53-70-3	Dibenz (a,h) anthracene	330	ND	U
191-24-2	Benzo (g,h,i) perylene	330	ND	U
100-51-6	Benzyl Alcohol	330	ND	U
65-85-0	Benzoic Acid	1700	ND	U
62-75-9	N-Nitrosodimethylamine	330	ND	U
103-33-3	Azobenzene	330	ND	U
92-87-5	Benzidine	1700	ND	U
62-53-3	Aniline	330	ND	U

(1) - Cannot be separated from Diphenylamine

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408)432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : SBLKKO  
 Matrix : SOIL  
 Date Sampled :  
 Date Extracted : 05/15/96  
 Amount Extracted : 30.0 g  
 Date Analyzed : 05/15/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : BY15H1B1  
 Lab File ID : BY15H1B1  
 % Moisture :  
 Dilution Factor : 1.0  
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	Phenol	330	ND	U
111-44-4	bis(-2-Chloroethyl) Ether	330	ND	U
95-57-8	2-Chlorophenol	330	ND	U
541-73-1	1,3-Dichlorobenzene	330	ND	U
106-46-7	1,4-Dichlorobenzene	330	ND	U
95-50-1	1,2-Dichlorobenzene	330	ND	U
95-48-7	2-Methylphenol	330	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	ND	U
106-44-5	4-Methylphenol	330	ND	U
621-64-7	N-Nitroso-di-n-propylamine	330	ND	U
67-72-1	Hexachloroethane	330	ND	U
98-95-3	Nitrobenzene	330	ND	U
78-59-1	Isophorone	330	ND	U
88-75-5	2-Nitrophenol	330	ND	U
105-67-9	2,4-Dimethylphenol	330	ND	U
111-91-1	bis(2-Chloroethoxy)methane	330	ND	U
120-83-2	2,4-Dichlorophenol	330	ND	U
120-82-1	1,2,4-Trichlorobenzene	330	ND	U
91-20-3	Naphthalene	330	ND	U
106-47-8	4-Chloroaniline	330	ND	U
87-68-3	Hexachlorobutadiene	330	ND	U
59-50-7	4-Chloro-3-Methylphenol	330	ND	U
91-57-6	2-Methylnaphthalene	330	ND	U
77-47-4	Hexachlorocyclopentadiene	330	ND	U
88-06-2	2,4,6-Trichlorophenol	330	ND	U
95-95-4	2,4,5-Trichlorophenol	1700	ND	U
91-58-7	2-Chloronaphthalene	330	ND	U
88-74-4	2-Nitroaniline	1700	ND	U
131-11-3	Dimethylphthalate	330	ND	U
208-96-8	Acenaphthylene	330	ND	U
606-20-2	2,6-Dinitrotoluene	330	ND	U
99-09-2	3-Nitroaniline	1700	ND	U
83-32-9	Acenaphthene	330	ND	U
51-28-5	2,4-Dinitrophenol	1700	ND	U
100-02-7	4-Nitrophenol	1700	ND	U
132-64-9	Dibenzofuran	330	ND	U
121-14-2	2,4-Dinitrotoluene	330	ND	U
84-66-2	Diethylphthalate	330	ND	U
7005-72-3	4-Chlorophenyl-phenylether	330	ND	U
86-73-7	Fluorene	330	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408)432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : SBLKKO  
 Matrix : SOIL  
 Date Sampled :  
 Date Extracted : 05/15/96  
 Amount Extracted : 30.0 g  
 Date Analyzed : 05/15/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : BY15H1B1  
 Lab File ID : BY15H1B1  
 % Moisture :  
 Dilution Factor : 1.0  
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
100-01-6	4-Nitroaniline	1700	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	ND	U
86-30-6	N-nitrosodiphenylamine (1)	330	ND	U
101-55-3	4-Bromophenyl-phenylether	330	ND	U
118-74-1	Hexachlorobenzene	330	ND	U
87-86-5	Pentachlorophenol	330	ND	U
85-01-8	Phenanthrene	330	ND	U
120-12-7	Anthracene	330	ND	U
84-74-2	Di-n-butylphthalate	330	ND	U
206-44-0	Fluoranthene	330	ND	U
129-00-0	Pyrene	330	ND	U
85-68-7	Butylbenzylphthalate	330	ND	U
91-94-1	3,3'-Dichlorobenzidine	660	ND	U
56-55-3	Benzo(a)anthracene	330	ND	U
218-01-9	Chrysene	330	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	660	ND	U
117-84-0	Di-n-octylphthalate	330	ND	U
205-99-2	Benzo(b)fluoranthene	330	ND	U
207-08-9	Benzo(k)fluoranthene	330	ND	U
50-32-8	Benzo(a)pyrene	330	ND	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	ND	U
53-70-3	Dibenz(a,h)anthracene	330	ND	U
191-24-2	Benzo(g,h,i)perylene	330	ND	U
100-51-6	Benzyl Alcohol	330	ND	U
65-85-0	Benzoic Acid	1700	ND	U
62-75-9	N-Nitrosodimethylamine	330	ND	U
103-33-3	Azobenzene	330	ND	U
92-87-5	Benidine	1700	ND	U
62-53-3	Aniline	330	ND	U

(1) - Cannot be separated from Diphenylamine

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408)432-8192

Project ID : ALASKA GASOLINE  
 Matrix : SOIL

Anamatrix ID : 9605097  
 Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 #	S8 #	TOT OUT
01	SBLKKO	74	86	78	76	81	94			0
02	SBLKKOLCS	74	86	82	78	81	100			0
03	SBLKKOLCSD	73	84	85	81	82	100			0
04	05	63	90	127	84	80	91			0
05	05MS	51	90	130	82	75	91			0
06	05MSD	46	92	142*	81	74	90			1
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
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21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

QC LIMITS

- S1 (NBZ) = Nitrobenzene-d5 (23-120)
- S2 (FBP) = 2-Fluorobiphenyl (30-115)
- S3 (TPH) = Terphenyl-d14 (18-137)
- S4 (PHL) = Phenol-d5 (24-113)
- S5 (2FP) = 2-Fluorophenol (25-121)
- S6 (TBP) = 2,4,6-Tribromophenol (19-122)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits  
 D Surrogate diluted out

MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408)432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : 05  
 Matrix : SOIL  
 Date Sampled : 05/02/96  
 Date Extracted : 05/15/96  
 Date Analyzed : 05/15/96  
 Instrument ID : msd4.i

Anamatrix ID : 9605097-05

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	2500	0.0	1900	76	14-118
2-Chlorophenol	2500	0.0	1900	76	31-113
1,4-Dichlorobenzene	1700	0.0	1000	59	32-125
N-Nitroso-di-n-prop. (1)	1700	0.0	1100	65	32-129
1,2,4-Trichlorobenzene	1700	0.0	1300	76	29-150
4-Chloro-3-Methylphenol	2500	0.0	1900	76	32-104
Acenaphthene	1700	0.0	1500	88	29-139
4-Nitrophenol	2500	0.0	780	31*	33-114
2,4-Dinitrotoluene	1700	0.0	97	6*	34-115
Pentachlorophenol	2500	0.0	2200	88	20-126
Pyrene	1700	0.0	2200	129	28-143

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Phenol	2500	1900	76	0	30	14-118
2-Chlorophenol	2500	1900	76	0	30	31-113
1,4-Dichlorobenzene	1700	1000	59	0	30	32-125
N-Nitroso-di-n-prop. (1)	1700	1200	70	7	30	32-129
1,2,4-Trichlorobenzene	1700	1400	82	8	30	29-150
4-Chloro-3-Methylphenol	2500	1900	76	0	30	32-104
Acenaphthene	1700	1500	88	0	30	29-139
4-Nitrophenol	2500	650	26*	18	30	33-114
2,4-Dinitrotoluene	1700	67	4*	40*	30	34-115
Pentachlorophenol	2500	2200	88	0	30	20-126
Pyrene	1700	2400	141	9	30	28-143

(1) N-Nitroso-di-n-propylamine

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 1 out of 11 outside limits

Spike Recovery: 4 out of 22 outside limits

COMMENTS:

LAB CONTROL SAMPLE FORM -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408)432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : SBLKKO  
 Matrix : SOIL  
 Date Sampled :  
 Date Extracted : 05/15/96  
 Prep. Batch ID : hdy15x41  
 Date Analyzed : 05/15/96  
 Instrument ID : msd4.i

Lab File ID : MY15H1B1/NY15H1B1

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC. LIMITS REC.
Phenol	2500	0.0	1800	72	35- 97
2-Chlorophenol	2500	0.0	1900	76	37- 99
1,4-Dichlorobenzene	1700	0.0	1100	65	41- 87
N-Nitroso-di-n-prop. (1)	1700	0.0	1000	59	34-102
1,2,4-Trichlorobenzene	1700	0.0	1300	76	41- 94
4-Chloro-3-Methylphenol	2500	0.0	1900	76	38-101
Acenaphthene	1700	0.0	1400	82	40- 97
4-Nitrophenol	2500	0.0	2400	96	24-106
2,4-Dinitrotoluene	1700	0.0	1400	82	35- 98
Pentachlorophenol	2500	0.0	2600	104	25-121
Pyrene	1700	0.0	1400	82	42-112

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC #	% RPD #	QC LIMITS RPD REC.
Phenol	2500	2000	80	10	30 35- 97
2-Chlorophenol	2500	2000	80	5	30 37- 99
1,4-Dichlorobenzene	1700	1200	70	7	30 41- 87
N-Nitroso-di-n-prop. (1)	1700	1000	59	0	30 34-102
1,2,4-Trichlorobenzene	1700	1300	76	0	30 41- 94
4-Chloro-3-Methylphenol	2500	2000	80	5	30 38-101
Acenaphthene	1700	1400	82	0	30 40- 97
4-Nitrophenol	2500	2300	92	4	30 24-106
2,4-Dinitrotoluene	1700	1400	82	0	30 35- 98
Pentachlorophenol	2500	2600	104	0	30 25-121
Pyrene	1700	1400	82	0	30 42-112

(1) N-Nitroso-di-n-propylamine  
 # Column to be used to flag recovery and RPD values with an asterisk  
 \* Values outside of QC limits

RPD: 0 out of 11 outside limits  
 Spike Recovery: 0 out of 22 outside limits

COMMENTS: \_\_\_\_\_

LAB CONTROL SAMPLE FORM -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : SBLKKO  
 Matrix : SOIL  
 Date Sampled :  
 Date Extracted : 05/15/96  
 Prep. Batch ID : hdy15x41  
 Date Analyzed : 05/15/96  
 Instrument ID : msd4.i

Lab File ID : MY15H1B1/NY15H1B1

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC. LIMITS REC.
Phenol	2500	0.0	1800	72	35- 97
2-Chlorophenol	2500	0.0	1900	76	37- 99
1,4-Dichlorobenzene	1700	0.0	1100	65	41- 87
N-Nitroso-di-n-prop. (1)	1700	0.0	1000	59	34-102
1,2,4-Trichlorobenzene	1700	0.0	1300	76	41- 94
4-Chloro-3-Methylphenol	2500	0.0	1900	76	38-101
Acenaphthene	1700	0.0	1400	82	40- 97
4-Nitrophenol	2500	0.0	2400	96	24-106
2,4-Dinitrotoluene	1700	0.0	1400	82	35- 98
Pentachlorophenol	2500	0.0	2600	104	25-121
Pyrene	1700	0.0	1400	82	42-112

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC #	% RPD #	QC LIMITS RPD	REC.
Phenol	2500	2000	80	10	30	35- 97
2-Chlorophenol	2500	2000	80	5	30	37- 99
1,4-Dichlorobenzene	1700	1200	70	7	30	41- 87
N-Nitroso-di-n-prop. (1)	1700	1000	59	0	30	34-102
1,2,4-Trichlorobenzene	1700	1300	76	0	30	41- 94
4-Chloro-3-Methylphenol	2500	2000	80	5	30	38-101
Acenaphthene	1700	1400	82	0	30	40- 97
4-Nitrophenol	2500	2300	92	4	30	24-106
2,4-Dinitrotoluene	1700	1400	82	0	30	35- 98
Pentachlorophenol	2500	2600	104	0	30	25-121
Pyrene	1700	1400	82	0	30	42-112

(1) N-Nitroso-di-n-propylamine  
 # Column to be used to flag recovery and RPD values with an asterisk  
 \* Values outside of QC limits

RPD: 0 out of 11 outside limits  
 Spike Recovery: 0 out of 22 outside limits

COMMENTS:

---



# INCHCAPE TESTING SERVICES, SAN JOSE LABORATORIES

## REPORT DESCRIPTION - INORGANICS

### Analytical Data Report (ADR)

The ADR contains tabulated results for inorganic analytes. All field samples, QC samples and blanks were prepared and analyzed according to procedures in the following references:

- "Test Methods for Evaluating Solid Waste," SW-846, EPA, 3rd Edition, November 1986.
- "Methods for Chemical Analysis of Water and Wastes," EPA, 3rd Edition, 1983.
- CCR Title 22, Section 66261, Appendix II, California Waste Extraction Test.
- CCR Title 22, Section 66261, Appendix XI, Organic Lead.
- "Standard Methods for the Examination of Water and Wastewater," APHA, AWWA, WEF, 18th Edition, 1992.
- USEPA Contract Laboratory Program Statement of Work for Inorganic Analyses, ILM02.1, 1991.

### Matrix Spike Report (MSR)

The MSR summarizes percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. MSRs may not be provided with all analytical reports. ITS-SJ control limit for MSR is 75-125% with 25% for RPD limits, except for Method 6010A, which is 80-120% with 25% RPD limits.

### Laboratory Control Sample Report (LCSR)

The LCSR summarizes percent recovery information for laboratory control spikes on reagent water or soil. This information is a statement of performance for the method, i.e., the samples are properly prepared and analyzed according to the applicable methods. ITS-SJ control limit for LCSR is 80-120%.

### Method Blank Report (MBR)

The MBR summarizes quality control information for reagents used in preparing samples. The absolute value of each analyte measured in the method blank should be below the method reporting limit for that analyte.

### Post Digestion Spike Report (PDSR)

The PDSR summarizes percent recovery information for post digestion spikes. A post digestion spike is performed for a particular analyte if the matrix spike recovery is outside of established control limits. Any percent recovery for a post digestion spike outside of established limits for an analyte indicates probable matrix effects and interferences for that analyte. ITS-SJ control limit for PDSR is 75-125%.

### Qualifiers (Q)

ITS-SJ uses several data qualifiers in inorganic reports. These qualifiers give additional information on the analytes reported. The following is a list of qualifiers and their meanings:

- I - Sample was analyzed at the stated dilution due to interferences.
- U - Analyte concentration was below the method reporting limit. For matrix and post digestion spike reports, a value of "0.0" is entered for calculation of the percent recovery.
- B - Sample concentration was below the reporting limit but above the instrument detection limit. Result is entered for calculation of the percent recovery only.
- H - Spike percent recovery is not calculated due to possible interferences from relatively high concentration level of the analyte in the unspiked sample.
- L - Reporting limit was increased to compensate for background absorbances or matrix interferences.

### Comment Codes

In addition to qualifiers, the following codes are used in the comment section of all reports to give additional information about sample preparation methods:

- A - Sample was prepared for silver based on the silver digestion method developed by the Southern California Laboratory, Department of Health Services, "Acid Digestion for Sediments, Sludges, Soils and Solid Wastes. A Proposed Alternative to EPA SW846, Method 3050." Environmental Science and Technology, 1989, 23, 898-900.
- T - Spikes were prepared after extraction by the Toxicity Characteristic Leaching Procedure (TCLP).
- C - Spikes were prepared after extraction by the California Waste Extraction Test (CWET) method.
- D - Reported results are dissolved, not total, metals.

### Reporting Conventions

Analytical values reported are gross values, i.e., not corrected for method blank contamination. Solid matrices are reported on a wet weight basis, unless specifically requested otherwise.

REPORT SUMMARY  
INCHCAPE, INC. (408)432-8192

MS. LAURIE MURPHY  
AN/EN INC.  
455 RESERVATION ROAD, SUITE G  
MARINA, CA 93933

Workorder # : 9605097  
Date Received : 05/10/96  
Project ID : ALASKA GASOLINE  
Purchase Order: 4131  
Department : METALS  
Sub-Department: METALS

SAMPLE INFORMATION:

INCHCAPE SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9605097- 1	01	SOIL	05/02/96	6010
9605097- 2	02	SOIL	05/02/96	6010
9605097- 3	03	SOIL	05/02/96	6010
9605097- 4	04	SOIL	05/02/96	6010
9605097- 5	05	SOIL	05/02/96	6010
9605097- 6	06	WATER	05/02/96	6010

REPORT SUMMARY  
INCHCAPE, INC. (408)432-8192

MS. LAURIE MURPHY  
AN/EN INC.  
455 RESERVATION ROAD, SUITE G  
MARINA, CA 93933

Workorder # : 9605097  
Date Received : 05/10/96  
Project ID : ALASKA GASOLINE  
Purchase Order: 4131  
Department : METALS  
Sub-Department: METALS

QA/QC SUMMARY :

- All holding times have been met for the analyses reported in this section.

Mona Kamel for      05/20/96  
Department Supervisor      Date

[Signature]      05/20/96  
Chemist      Date

**INCHCAPE TESTING SERVICES  
SAN JOSE LABORATORIES  
(408) 432-8192  
DATA REPORT**

ITS-SJ Sample ID: **9605097-06**  
 Client Sample ID: **06**  
 Client Project Number: **ALASKA GASOLINE**  
 Matrix: **WATER**

SDG #: **N/A**  
 Date Sampled: **05/02/96**  
 Analyst: *[Signature]*  
 Supervisor: *[Signature]*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Reporting Limit	Results	Q
Cadmium	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	5.0	ND	
Chromium	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	10.0	114	
Lead	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	3.0	453	
Nickel	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	40.0	115	
Zinc	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	20.0	753	

COMMENTS:

**INCHCAPE TESTING SERVICES  
SAN JOSE LABORATORIES  
(408) 432-8192  
DATA REPORT**

ITS-SJ Sample ID: **9605097-05**  
 Client Sample ID: **05**  
 Client Project Number: **ALASKA GASOLINE**  
 Matrix: **SOIL**

SDG #: **N/A**  
 Date Sampled: **05/02/96**  
 Analyst: *[Signature]*  
 Supervisor: *[Signature]*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Reporting Limit	Results	Q
Cadmium	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	0.50	ND	
Chromium	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	1.0	20.8	
Lead	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	0.30	2.2	
Nickel	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	4.0	13.5	
Zinc	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	2.0	14.0	

COMMENTS:

**INCHCAPE TESTING SERVICES  
SAN JOSE LABORATORIES  
(408) 432-8192  
DATA REPORT**

Analyte-Method: **Lead-6010A**  
 Client Project Number: **ALASKA GASOLINE**  
 Matrix - Units: **SOIL - mg/Kg**

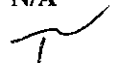
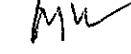
SDG #: **N/A**  
 Analyst: *[Signature]*  
 Supervisor: *[Signature]*

ITS-SJ Sample ID	Client Sample ID	Prep. Method	Instr. ID	Date Sampled	Date Prepared	Date Analyzed	D.F.	Reporting Limit	Results	Q
9605097-01	01	3050A	ICP2	05/02/96	05/13/96	05/13/96	1	0.30	1.8	
9605097-02	02	3050A	ICP2	05/02/96	05/13/96	05/13/96	1	0.30	13.3	
9605097-03	03	3050A	ICP2	05/02/96	05/13/96	05/13/96	1	0.30	1.9	
9605097-04	04	3050A	ICP2	05/02/96	05/13/96	05/13/96	1	0.30	8.9	
BY136SA	METHOD BLANK	3050A	ICP2	N/A	05/13/96	05/13/96	1	0.30	ND	

COMMENTS:

**INCHCAPE TESTING SERVICES  
SAN JOSE LABORATORIES  
(408) 432-8192  
METHOD BLANK REPORT**

ITS-SJ Sample ID: **BY136WB**  
 Client Sample ID: **N/A**  
 ITS-SJ WO #: **9605097**  
 Client Project Number: **ALASKA GASOLINE**  
 Matrix: **WATER**

SDG #: **N/A**  
 Analyst:   
 Supervisor: 

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Reporting Limit	Results	Q
Cadmium	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	5.0	ND	
Chromium	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	10.0	ND	
Lead	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	3.0	ND	
Nickel	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	40.0	ND	
Zinc	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	20.0	ND	

COMMENTS:

**INCHCAPE TESTING SERVICES  
SAN JOSE LABORATORIES  
(408) 432-8192  
METHOD BLANK REPORT**

ITS-SJ Sample ID: **BY136SA**  
 Client Sample ID: **N/A**  
 ITS-SJ WO #: **9605097**  
 Client Project Number: **ALASKA GASOLINE**  
 Matrix: **SOIL**

SDG #: **N/A**  
 Analyst: *T*  
 Supervisor: *MW*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Reporting Limit	Results	Q
Cadmium	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	0.50	ND	
Chromium	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	1.0	ND	
Lead	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	0.30	ND	
Nickel	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	4.0	ND	
Zinc	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	2.0	ND	

COMMENTS:



**INCHCAPE TESTING SERVICES  
SAN JOSE LABORATORIES  
(408) 432-8192  
LABORATORY CONTROL SAMPLE REPORT**

ITS-SJ Sample ID: **LY136WB**  
 Client Sample ID: **N/A**  
 ITS-SJ WO #: **9605097**  
 Client Project Number: **ALASKA GASOLINE**  
 Matrix: **WATER**

SDG #: **N/A**  
 Analyst: *[Signature]*  
 Supervisor: *[Signature]*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Spike Amount	LCS Results	% Recovery	Q
Cadmium	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	50.0	48.8	97.6	
Chromium	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	200	189	94.5	
Lead	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	500	470	94.0	
Nickel	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	500	473	94.6	
Zinc	3010A	6010A	ICP2	05/13/96	05/17/96	1	ug/L	500	502	100	

COMMENTS:

**INCHCAPE TESTING SERVICES  
SAN JOSE LABORATORIES  
(408) 432-8192  
LABORATORY CONTROL SAMPLE REPORT**

ITS-SJ Sample ID: **LY136SA**  
 Client Sample ID: **N/A**  
 ITS-SJ WO #: **9605097**  
 Client Project Number: **ALASKA GASOLINE**  
 Matrix: **SOIL**

SDG #: **N/A**  
 Analyst: *[Signature]*  
 Supervisor: *[Signature]*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Spike Amount	LCS Results	% Recovery	Q
Cadmium	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	5.0	5.2	104	
Chromium	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	20.0	19.8	99.0	
Lead	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	50.0	49.4	98.8	
Nickel	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	50.0	49.1	98.2	
Zinc	3050A	6010A	ICP2	05/13/96	05/13/96	1	mg/Kg	50.0	51.5	103	

COMMENTS:

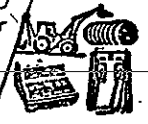
9605097

(10/1)

# CHAIN OF CUSTODY RECORD

A/E 4131 (1/2)

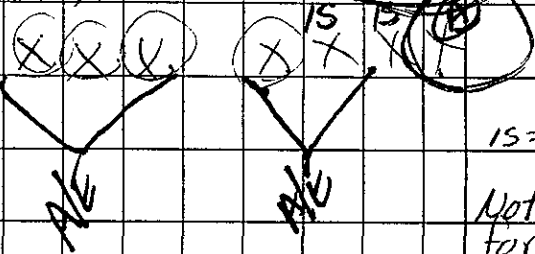
JOB NO.		PROJECT NAME		NO. OF CONTAINERS	ANALYSIS			REMARKS
LAB. NO.		SAMPLER (Signature)			TPH-G	TPH-D	BTEX	
DATE	DTE NO.	SAMPLE LOCATION/INFORMATION						
5-2-96		Alaska Gasoline						
		Plus ul west end		S 1	X	X	-01	
		Plus ul east end		S 1	X	X	-02	
		Super ul west end		S 1	X	X	-03	
		Super ul east end		S 1	X	X	-04	
		waste oil North end		S 1	X	X	-05	
		waste oil water samples waste oil pit		W 3	X	X	-06	



**PETROTEK**  
 P.O. Box 612317  
 San Jose, California 95161

Lead  
 on for in ede 1/4 dry  
 tanks (200)  
 8270 volatile Peds  
 Metals (Cd, Cr, Pb, Ni, Zn)

①  
 ②  
 ③  
 ④  
 ⑤  
 ⑥  
 CHAIN OF CUSTODY RECORD



is = insuf. sample  
 Not sufficient water sample  
 for all requested Analyses.  
 5/7/96 Ina Fred will resample  
 No water left - brought soil (4131)

Sub-Sampled for lead  
 on 5-7-96 1206 by  
 J. Heiser

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	
<i>[Signature]</i>	5-6-96	Diane Heiser	
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	
<i>[Signature]</i>	5-10-96 8:30		
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED FOR LAB. BY (Signature)	
		HL	5-10-96 0330

LAB TO NOTE - Y/N → REMARKS  
 Increase to do Metals (5 Loff) on (A) and Lead on (B). 8270 on (C)  
 PO # 4131 2 copies of report please



**SAMPLE RECEIVING CHECKLIST**

Workorder Number: 9105097

Client Project ID: ALASKA GAS

**Cooler**

Shipping documentation present? If YES, enter Carrier and Airbill #:	YES	NO	<u>N/A</u>
Custody Seal on the outside of cooler? Condition: Intact      Broken	YES	NO	<u>N/A</u>
Temperature of sample(s) within range? List temperatures of cooler(s): <u>30</u>	<u>YES</u>	NO	N/A
Note: If all samples taken within previous 4 hr, circle N/A and place in sample storage area as soon as possible.			

**Samples**

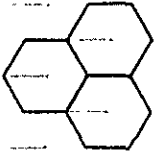
Chain of custody seal present for each container? Condition: Intact      Broken	YES	NO	<u>N/A</u>
Samples arrived within holding time?	YES	NO	N/A
Samples in proper containers for methods requested? Condition of containers: Intact <u>  </u> Broken <u>  </u> If NO, were samples transferred to proper container(s)?	<u>YES</u>	NO	
Were VOA containers received with zero headspace? If NO, was it noted on the chain of custody?	YES	NO	<u>N/A</u>
Were container labels complete? (ID, date, time, preservative)	<u>YES</u>	NO	N/A
Were samples properly preserved? If NO, was the preservative added at time of receipt?	<u>YES</u>	NO	N/A
pH check of samples required at time of receipt? If YES, pH checked and recorded by: <u>PH</u>	<u>YES</u>	NO	
Sufficient amount of sample received for methods requested? If NO, has the client or PM been notified?	YES	NO	
Field blanks received with sample batch?	YES	NO	<u>N/A</u>
Trip blanks received with sample batch?	YES	NO	<u>N/A</u>

**Chain of Custody**

Chain of custody form received with samples?	<u>YES</u>	NO
Has it been filled out completely and in ink?	YES	<u>NO</u>
Sample IDs on chain of custody form agree with labels?	<u>YES</u>	NO
Number of containers on chain agree with number received?	<u>YES</u>	NO
Analysis methods specified?	<u>YES</u>	NO
Sampling date and time indicated?	YES	<u>NO</u>
Proper signatures of sampler, courier and custodian in appropriate spaces? With time and date?	<u>YES</u>	NO
Turnaround time? Standard <u>  </u> Rush		

Any NO responses and/or any BROKEN that was checked must be detailed in a Corrective Action Form.

Sample Custodian: PH Date: 9/10/96 Project Manager: W Date: 5-13-96



**AN/EN Inc**

Analytical & Environmental Chemistry

05/20/96

A/E4134

DALE McANALLY  
PETROTEK  
925 COMMERCIAL AVE  
SAN JOSE, CA 95112

This is the **CERTIFICATE OF ANALYSIS** for the following samples as received.

Client Project ID: **ALASKA GASOLINE**  
Date Received by Lab: 05/08/96  
Total Number of Samples: 1  
Sample Matrix: **SOIL**

Volatile Organics are analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. Method 5030 (Purge and Trap) is used for the sample preparation/introduction. Method 8010 (Halogenated Volatile Organics-GC/ELCD) or Method 8240 (Volatile Organics-GC/MS) is used for the analysis.

BTEX is analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. Method 5030 (Purge and Trap) is used for the sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis.

Total Volatile Petroleum Hydrocarbons (Gasoline, Stoddard) are analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual, Last Revision October 1989. Method 5030 (Purge and Trap) is used for the sample preparation/introduction.

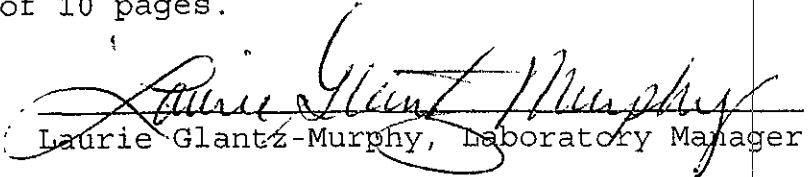
Total Extractable Petroleum Hydrocarbons (Diesel, Oil, Kerosene, Stoddard, etc.) are analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual, Last Revision October 1989. EPA Method 3550-sonication (soil) or EPA Method 3510-separatory funnel liquid-liquid (water) is used for sample extraction/preparation.

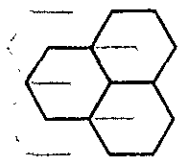
Organochlorine Pesticides are analyzed in accordance with EPA Test Methods for Evaluating Solid Waste, (SW846), Third edition, July 1992. EPA Method 3550 (soil) or EPA Method 3510 (water) is used for sample extraction/preparation. Method 8080 (Organochlorine Pesticides GC-ECD/ECD) is used for the analysis.

AN/EN, Inc. is accredited by the California Department of Health Services; Certificate Number 1183 (original issue May 7, 1990). The DHS- Environmental Laboratory Accreditation Program can be reached at (510) 540-2800.

Complete report consists of 10 pages.

Reviewed and Approved:

  
Laurie Glantz-Murphy, Laboratory Manager



**AN / EN Inc**

Analytical & Environmental Chemistry

**TPH-EXTRACTABLE (DIESEL & MOTOR OIL RANGES) BY GC/FID**

Client Project/I.D.: **ALASKA GASOLINE**

Date Sampled: 05/08/96

Date Received: 05/08/96

Matrix: **Soil**

Analyst: *Am*

Concentration in sample expressed as ug/g (ppm).

Sample ID	Diesel	Oil	Lab I.D.	Date Extracted	Date Analyzed	PQL (ppm)
WASTE OIL PIT BOTTOM	ND	3000	4134-01	05/09/96	05/09/96	1000
Method Blank	ND	ND	4134-MB	05/09/96	05/09/96	10

PQL = Practical Quantitation Limit.

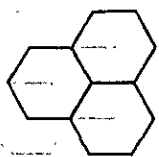
ND = None Detected at or above the PQL.

Diesel - Extractable hydrocarbons in the boiling range of Diesel(C12-C24).

Motor Oil - Extractable hydrocarbons in the boiling range of Motor Oil(C24-C40)

Total Extractable Petroleum Hydrocarbons (as Diesel) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989 Method 3550 is used for sample preparation

455 RESERVATION ROAD, SUITE G • MARINA, CA 93933 • (408) 883-0123 • FAX (408) 883-0122



**TPH-EXTRACTABLE - LABORATORY CONTROL SAMPLE - SOIL**

Batch I.D.: 0509-06

Date Extracted: 05/09/96

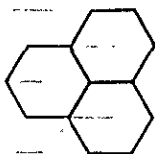
Date Analyzed: 05/09/96

Concentration of sample and spikes expressed as ug/g (ppm).

ANALYTE	Spike Added	LCS Conc	LCS %Rec	%Rec Limits
Diesel	50	52	104%	57-116

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits.



## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Client Project/I.D.: **ALASKA GASOLINE**

Laboratory I.D.: 4134-01  
Batch I.D.: 0511-10.D  
Date Sampled: 05/08/96  
Date Received: 05/08/96  
Matrix: **Soil**

Sample I.D.: **BOTTOM WASTE OIL PIT**  
Date Analyzed: 05/11/96  
Dilution: 5  
Analyst: *ym*

Concentration of sample expressed as ug/g (ppm).

Analyte	Conc.	PQL
Methyl-tert-Butyl Ether	ND	.50
Benzene	ND	.25
Toluene	ND	.25
Ethylbenzene	.30	.25
Xylenes-Total	.85	.25
TPH-Gasoline	470. P	25

PQL = Practical Quantitation Limit.

ND = None Detected at or above the PQL.

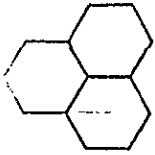
P - Not a typical gasoline pattern; possibly weathered or the volatile fraction of a higher boiling mixture.

Methanol extraction

Surrogates	Recovery	Limits
a,a,a-TFT(FID)	94%	64-129
4-BFB(FID)	97%	55-151
4-BFB(PID)	95%	68-137

Volatiles Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste.(SW846), 3rd Ed., July 1992 Method 5030 (Purge & Trap) is used for the sample preparation/introduction. Method 8020 (Aromatic Volatile Organics) is used for the analysis.  
Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989 Method 5030 is used for sample preparation/introduction





## VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

Laboratory I.D.: **INSTRUMENT BLANK**

Batch I.D.: 0511-01.D

Date Acquired: 05/10/96

Concentration of blank expressed as ug/L (ppb).

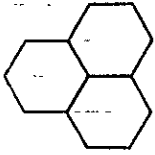
Analyte	Conc.	PQL
Methyl-tert-Butyl Ether	ND	1.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
Xylenes-Total	ND	0.5
TPH-Gasoline	ND	50.

PQL = Practical Quantitation Limit.

ND = None Detected at or above the PQL.

Surrogates	Recovery	Limits
a,a,a-TFT(FID)	102%	73-126
4-BFB(FID)	105%	67-146
4-BFB(PID)	103%	82-119

Volatle Aromatics are analyzed in accordance with EPA Test Methods for Evaluation Solid Waste.(SW846), 3rd Ed., July 1992 Method 5030 (Purge & Tr is used for the sample preparation/introduction Method 8020 (Aromatic Volatile Organics) is used for the analysis.  
Total Volatile Petroleum Hydrocarbons (as Gasoline) is analyzed in accordance with the California State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Manual, Last Revision October 1989 Method 5030 is used for sample preparation/introduction



## LABORATORY CONTROL SAMPLES

Method: VOLATILE AROMATICS AND TPH AS GASOLINE BY GC/PID-FID

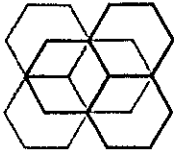
Date Acquired: 05/10/96

Expressed as mass (ng).

Analyte	Amount Added	Amount Found	LCS Rec	%Rec Limits
Methyl-tert-butyl Ether	40	42.	105%	82-113
Benzene	20.	20.	102%	84-113
Toluene	20.	20.	102%	90-110
Ethylbenzene	20.	20.	101%	89-112
m,p-Xylenes	20.	21.	103%	88-113
o-Xylene	20.	21.	104%	88-114
TPH-Gasoline	1,250.	1,346.	108%	77-130
Surrogates	LSC-8020M	Batch ID:	0511-04	
a,a,a-TFT-FID			98%	73-126
4-BFB-FID			103%	67-146
4-BFB-PID			104%	82-119
Surrogates	LSC-GASOLINE	Batch ID:	0511-05	
a,a,a-TFT-FID			91%	73-126
4-BFB-FID			122%	67-146
4-BFB-PID			103%	82-119

\* = Values outside of QC limits.

LCS Recovery: 0 out of 7 outside limits.



### VOLATILE HALOGENATED ORGANICS BY GC/ELCD

EPA Method: 8010  
 Laboratory Number: 4134-01  
 Date Sampled: 05/08/96  
 Date Received: 05/08/96  
 Matrix: Soil

Sample I.D.: Waste Oil Pit Bottom  
 Project: Alaska Gas  
 Dilution: 100  
 Date Analyzed: 05/15/96  
 Analyst: *ry*

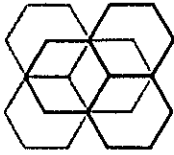
Concentration of sample expressed as ug/Kg (ppb).

CAS#	Analyte	Conc.	Q	PQL
74-87-3	Chloromethane	ND		100
75-01-4	Vinyl chloride	ND		100
74-83-9	Bromomethane	ND		100
75-00-3	Chloroethane	ND		100
75-69-4	Trichlorofluoromethane	ND		100
75-35-4	1,1-Dichloroethene	ND		100
76-13-1	Trichlorotrifluoroethane	ND		100
75-09-2	Methylene chloride	ND		100
156-60-5	trans-1,2-Dichloroethene	ND		100
75-35-3	1,1-Dichloroethane	ND		100
156-69-4	cis-1,2-Dichloroethene	ND		100
67-66-3	Chloroform	ND		100
71-55-6	1,1,1-Trichloroethane	ND		100
56-23-5	Carbon tetrachloride	ND		100
107-06-2	1,2-Dichloroethane	ND		100
79-01-6	Trichloroethene	ND		100
78-87-5	1,2-Dichloropropane	ND		100
75-27-4	Bromodichloromethane	ND		100
10061-01-5	cis-1,3-Dichloropropene	ND		100
10061-02-6	trans-1,3-dichloropropene	ND		100
79-00-5	1,1,2-Trichloroethane	ND		100
127-18-4	Tetrachloroethene	ND		100
124-48-1	Chlorodibromomethane	ND		100
108-90-7	Chlorobenzene	ND		100
106-93-4	1,2-Dibromoethane (EDB)	ND		100
75-25-2	Bromoform	ND		100
79-34-5	1,1,2,2-Tetrachloroethane	ND		100
541-73-1	1,3-Dichlorobenzene	ND		100
106-46-7	1,4-Dichlorobenzene	ND		100
95-50-1	1,2-Dichlorobenzene	ND		100

Surrogates	Recovery	Limits
3-Chloro-1-propene	94%	70-135%
4-Chlorotoluene	101%	70-135%

PQL = Practical Quantitation Limit  
 ND = None Detected at or above the PQL

NOTE: Sample was diluted due to matrix interference.



### VOLATILE HALOGENATED ORGANICS BY GC/ELCD

EPA Method: 8010  
 Laboratory Number: BLK0515B  
 Date Sampled: N/A  
 Date Received: N/A  
 Matrix: Soil

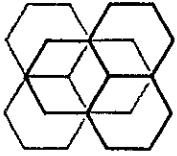
Sample I.D.: Method Blank  
 Project: Alaska Gas  
 Dilution: 50  
 Date Analyzed: 05/15/96  
 Analyst: *my*

Concentration of sample expressed as ug/Kg (ppb).

CAS#	Analyte	Conc.	Q	PQL
74-87-3	Chloromethane	ND		50
75-01-4	Vinyl chloride	ND		50
74-83-9	Bromomethane	ND		50
75-00-3	Chloroethane	ND		50
75-69-4	Trichlorofluoromethane	ND		50
75-35-4	1,1-Dichloroethene	ND		50
76-13-1	Trichlorotrifluoroethane	ND		50
75-09-2	Methylene chloride	ND		50
156-60-5	trans-1,2-Dichloroethene	ND		50
75-35-3	1,1-Dichloroethane	ND		50
156-69-4	cis-1,2-Dichloroethene	ND		50
67-66-3	Chloroform	ND		50
71-55-6	1,1,1-Trichloroethane	ND		50
56-23-5	Carbon tetrachloride	ND		50
107-06-2	1,2-Dichloroethane	ND		50
79-01-6	Trichloroethene	ND		50
78-87-5	1,2-Dichloropropane	ND		50
75-27-4	Bromodichloromethane	ND		50
10061-01-5	cis-1,3-Dichloropropene	ND		50
10061-02-6	trans-1,3-dichloropropene	ND		50
79-00-5	1,1,2-Trichloroethane	ND		50
127-18-4	Tetrachloroethene	ND		50
124-48-1	Chlorodibromomethane	ND		50
108-90-7	Chlorobenzene	ND		50
106-93-4	1,2-Dibromoethane (EDB)	ND		50
75-25-2	Bromoform	ND		50
79-34-5	1,1,2,2-Tetrachloroethane	ND		50
541-73-1	1,3-Dichlorobenzene	ND		50
106-46-7	1,4-Dichlorobenzene	ND		50
95-50-1	1,2-Dichlorobenzene	ND		50

Surrogates	Recovery	Limits
3-Chloro-1-propene	91%	70-135%
4-Chlorotoluene	101%	70-135%

PQL = Practical Quantitation Limit  
 ND = None Detected at or above the PQL



LABORATORY CONTROL SAMPLE

EPA Method: **8010**  
Laboratory Number: **LCS0515A**  
Matrix: **Water**

Date Analyzed: **05/15/96**  
Analyst: *SM*

Concentration expressed as ug/L (ppb).

COMPOUND	Spike Added	LCS Conc	LCS Rec	%Rec	Limits
1,1-Dichloroethene	10	9.6	96%		75-125
1,2-Dichloroethane	10	9.7	97%		75-125
Trichloroethene	10	9.5	95%		75-125
Tetrachloroethene	10	10.6	106%		75-125
Chlorobenzene	10	9.2	92%		75-125
<u>Surrogates</u>					
3-Chloro-1-propene			96%		80-120
4-Chlorotoluene			97%		80-120

\* = Values outside of QC limits.

Spike Recovery: 0 out of 5 outside limits.


QC-LAB CONTROL SAMPLE

# CHAIN OF CUSTODY RECORD

A/E 4134

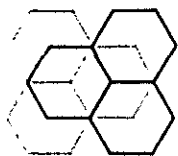
0100

CHAIN OF CUSTODY RECORD

JOB NO.	PROJECT NAME <i>Alaska Gasoline</i>	NO. OF CONTAINERS	ANALYSIS	TPH-G	TPH-D	BTEX	8270	8010	SEALED?	 <b>PETROTEK</b> P.O. Box 612317 San Jose, California 95161	
LAB. NO.	SAMPLER (Signature) <i>Anthony Mendez</i>										
DATE <i>5-8-96</i>	SAMPLE LOCATION/INFORMATION										

DTE	NO.	SAMPLE LOCATION/INFORMATION	NO. OF CONTAINERS	ANALYSIS	ANALYSIS	ANALYSIS	ANALYSIS	ANALYSIS	SEALED?	REMARKS
<i>5/8/96</i>	<i>1</i>	<i>bottom of waste oil pit</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>+</i>	<i>X</i>		<i>slight odor</i>
				<i>AN/EN</i>			<i>Inchape</i>	<i>AN/EN</i>		
										<i>Inchape to do 8270 only</i>
										<i>Bill + report to AN/EN</i>
										<i>PO #4134</i>
										<i>2 copies of report please</i>
										<i>5/9/96 YAM</i>

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	LAB TO NOTE - Y/N → REMARKS
<i>[Signature]</i>	<i>5/8/96</i>	<i>[Signature]</i>	
<i>[Signature]</i>	<i>5/8/96</i>	<i>[Signature]</i>	
<i>[Signature]</i>	<i>5/8/96 7:00pm</i>	<i>[Signature] AN/EN</i>	Relinquished by <i>[Signature]</i> 5/10/96 8:30
			Rec'd By: <i>[Signature]</i> 5/10/96 08:30



**AN / EN Inc**

*Analytical & Environmental Chemistry*

05/29/96

A/E4134

DALE McANALLY  
PETROTEK  
925 COMMERCIAL AVE  
SAN JOSE, CA 95112

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Following are the results for AN/EN lab#-A/E4134 that were subcontracted to  
Inchape Testing Services-Anamatrix Laboratories

Client Project ID: **ALASKA GASOLINE**  
Date Received by AN/EN: 05/08/96  
Number of Samples: 1  
Sample Matrix: **SOIL**

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I you have any questions or need assistance, please feel free to call me at  
408/883-0123.

Sincerely,

Laurie Glantz-Murphy



# Inchcape Testing Services

## Environmental Laboratories

1961 Concourse Drive  
 Suite E  
 San Jose, CA 95131  
 Tel: 408-432-8192  
 Fax: 408-432-8198

MS. LAURIE MURPHY  
 AN/EN INC.  
 455 RESERVATION ROAD, SUITE G  
 MARINA, CA 93933

Workorder # : 9605098  
 Date Received : 05/10/96  
 Project ID : ALASKA GASOLINE  
 Purchase Order: 4134

The following samples were received at Inchcape for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9605098- 1	1

This report is organized in sections according to the specific Inchcape laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Inchcape cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Inchcape is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call your project manager as soon as possible. Thank you for using Inchcape Testing Services.

*J. W. Winkler*

Project Manager

5-23-96

Date

This report consists of 10 pages.





## GC/MS REPORT DESCRIPTION

### Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and within each method, organized sequentially in order of increasing Inchcape Testing Services ID Number.

### Tentatively Identified Compounds (TICs)

TIC forms contain tabulated results for non-target compounds detected in GC/MS analyses. TICs must be requested at the time samples are submitted to Inchcape Testing Services. TIC forms immediately follow the OADS form for each sample. If TICs are requested but not found, then TIC forms will not be included with the report.

### Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "\*" and the total number of surrogates outside the limits will be listed in the column labeled "Total Out."

### Matrix Spike Recovery, Laboratory Control Sample Forms

These forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes, laboratory control samples and their duplicates. This information is a statement of accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "\*\*".

### Qualifiers

Inchcape Testing Services uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed but not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an estimated value.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.
- A - Indicates that the tentatively identified compound is a suspected aldol condensation product. This is common in EPA Method 8270 analyses.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

### REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report form. However, the report cover letter and report summary pages do display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

REPORT SUMMARY  
INCHCAPE, INC. (408)432-8192

MS. LAURIE MURPHY  
AN/EN INC.  
455 RESERVATION ROAD, SUITE G  
MARINA, CA 93933

Workorder # : 9605098  
Date Received : 05/10/96  
Project ID : ALASKA GASOLINE  
Purchase Order: 4134  
Department : GCMS  
Sub-Department: GCMS

SAMPLE INFORMATION:

INCHCAPE SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9605098- 1	1	SOIL	05/08/96	8270

REPORT SUMMARY  
INCHCAPE, INC. (408)432-8192

MS. LAURIE MURPHY  
AN/EN INC.  
455 RESERVATION ROAD, SUITE G  
MARINA, CA 93933

Workorder # : 9605098  
Date Received : 05/10/96  
Project ID : ALASKA GASOLINE  
Purchase Order: 4134  
Department : GCMS  
Sub-Department: GCMS

QA/QC SUMMARY :

- All holding times have been met for the analyses reported in this section.
- Sample 1 could not be analyzed at a lower dilution by EPA Method 8270B due to the high abundance of late eluting compound.
- Matrix spike and matrix spike duplicate were extracted for the EPA Method 8270B analysis but not analyzed because they could not be analyzed at a lower dilution due to the high abundance of late eluting compounds.
- Surrogates were diluted out in the EPA Method 8270B analysis of sample 1.

*Laurie Murphy* 5/23/96  
Department Supervisor Date

*Sam Craig* 5/23/96  
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : 1  
 Matrix : SOIL  
 Date Sampled : 05/08/96  
 Date Extracted : 05/13/96  
 Amount Extracted : 30.0 g  
 Date Analyzed : 05/20/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anametrix ID : 9605098-01  
 Lab File ID : MRY09801

% Moisture : \_\_\_\_\_  
 Dilution Factor : 20.0  
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	Phenol	6600	ND	U
111-44-4	bis(-2-Chloroethyl) Ether	6600	ND	U
95-57-8	2-Chlorophenol	6600	ND	U
541-73-1	1,3-Dichlorobenzene	6600	ND	U
106-46-7	1,4-Dichlorobenzene	6600	ND	U
95-50-1	1,2-Dichlorobenzene	6600	ND	U
95-48-7	2-Methylphenol	6600	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	6600	ND	U
106-44-5	4-Methylphenol	6600	ND	U
621-64-7	N-Nitroso-di-n-propylamine	6600	ND	U
67-72-1	Hexachloroethane	6600	ND	U
98-95-3	Nitrobenzene	6600	ND	U
78-59-1	Isophorone	6600	ND	U
88-75-5	2-Nitrophenol	6600	ND	U
105-67-9	2,4-Dimethylphenol	6600	ND	U
111-91-1	bis(2-Chloroethoxy)methane	6600	ND	U
120-83-2	2,4-Dichlorophenol	6600	ND	U
120-82-1	1,2,4-Trichlorobenzene	6600	ND	U
91-20-3	Naphthalene	6600	ND	U
106-47-8	4-Chloroaniline	6600	ND	U
87-68-3	Hexachlorobutadiene	6600	ND	U
59-50-7	4-Chloro-3-Methylphenol	6600	ND	U
91-57-6	2-Methylnaphthalene	6600	ND	U
77-47-4	Hexachlorocyclopentadiene	6600	ND	U
88-06-2	2,4,6-Trichlorophenol	6600	ND	U
95-95-4	2,4,5-Trichlorophenol	34000	ND	U
91-58-7	2-Chloronaphthalene	6600	ND	U
88-74-4	2-Nitroaniline	34000	ND	U
131-11-3	Dimethylphthalate	6600	ND	U
208-96-8	Acenaphthylene	6600	ND	U
606-20-2	2,6-Dinitrotoluene	6600	ND	U
99-09-2	3-Nitroaniline	34000	ND	U
83-32-9	Acenaphthene	6600	ND	U
51-28-5	2,4-Dinitrophenol	34000	ND	U
100-02-7	4-Nitrophenol	34000	ND	U
132-64-9	Dibenzofuran	6600	ND	U
121-14-2	2,4-Dinitrotoluene	6600	ND	U
84-66-2	Diethylphthalate	6600	ND	U
7005-72-3	4-Chlorophenyl-phenylether	6600	ND	U
86-73-7	Fluorene	6600	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : 1  
 Matrix : SOIL  
 Date Sampled : 05/08/96  
 Date Extracted : 05/13/96  
 Amount Extracted : 30.0 g  
 Date Analyzed : 05/20/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anametrix ID : 9605098-01  
 Lab File ID : MRY09801  
 % Moisture :  
 Dilution Factor : 20.0  
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
100-01-6	4-Nitroaniline	34000	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	34000	ND	U
86-30-6	N-nitrosodiphenylamine (1)	6600	ND	U
101-55-3	4-Bromophenyl-phenylether	6600	ND	U
118-74-1	Hexachlorobenzene	6600	ND	U
87-86-5	Pentachlorophenol	6600	ND	U
85-01-8	Phenanthrene	6600	ND	U
120-12-7	Anthracene	6600	ND	U
84-74-2	Di-n-butylphthalate	6600	ND	U
206-44-0	Fluoranthene	6600	ND	U
129-00-0	Pyrene	6600	ND	U
85-68-7	Butylbenzylphthalate	6600	ND	U
91-94-1	3,3'-Dichlorobenzidine	13000	ND	U
56-55-3	Benzo (a) anthracene	6600	ND	U
218-01-9	Chrysene	6600	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	13000	ND	U
117-84-0	Di-n-octylphthalate	6600	ND	U
205-99-2	Benzo (b) fluoranthene	6600	ND	U
207-08-9	Benzo (k) fluoranthene	6600	ND	U
50-32-8	Benzo (a) pyrene	6600	ND	U
193-39-5	Indeno (1,2,3-cd) pyrene	6600	ND	U
53-70-3	Dibenz (a,h) anthracene	6600	ND	U
191-24-2	Benzo (g,h,i) perylene	6600	ND	U
100-51-6	Benzyl Alcohol	6600	ND	U
65-85-0	Benzoic Acid	34000	ND	U
62-75-9	N-Nitrosodimethylamine	6600	ND	U
103-33-3	Azobenzene	6600	ND	U
92-87-5	Benzidine	34000	ND	U
62-53-3	Aniline	6600	ND	U

(1) - Cannot be separated from Diphenylamine

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
(408) 432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : SBLKBS  
 Matrix : SOIL  
 Date Sampled :  
 Date Extracted : 05/13/96  
 Amount Extracted : 30.0 g  
 Date Analyzed : 05/20/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : BY13H2BA  
 Lab File ID : BY13H2B1  
 % Moisture :  
 Dilution Factor : 1.0  
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	Phenol	330	ND	U
111-44-4	bis(-2-Chloroethyl) Ether	330	ND	U
95-57-8	2-Chlorophenol	330	ND	U
541-73-1	1,3-Dichlorobenzene	330	ND	U
106-46-7	1,4-Dichlorobenzene	330	ND	U
95-50-1	1,2-Dichlorobenzene	330	ND	U
95-48-7	2-Methylphenol	330	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	ND	U
106-44-5	4-Methylphenol	330	ND	U
621-64-7	N-Nitroso-di-n-propylamine	330	ND	U
67-72-1	Hexachloroethane	330	ND	U
98-95-3	Nitrobenzene	330	ND	U
78-59-1	Isophorone	330	ND	U
88-75-5	2-Nitrophenol	330	ND	U
105-67-9	2,4-Dimethylphenol	330	ND	U
111-91-1	bis(2-Chloroethoxy)methane	330	ND	U
120-83-2	2,4-Dichlorophenol	330	ND	U
120-82-1	1,2,4-Trichlorobenzene	330	ND	U
91-20-3	Naphthalene	330	ND	U
106-47-8	4-Chloroaniline	330	ND	U
87-68-3	Hexachlorobutadiene	330	ND	U
59-50-7	4-Chloro-3-Methylphenol	330	ND	U
91-57-6	2-Methylnaphthalene	330	ND	U
77-47-4	Hexachlorocyclopentadiene	330	ND	U
88-06-2	2,4,6-Trichlorophenol	330	ND	U
95-95-4	2,4,5-Trichlorophenol	1700	ND	U
91-58-7	2-Chloronaphthalene	330	ND	U
88-74-4	2-Nitroaniline	1700	ND	U
131-11-3	Dimethylphthalate	330	ND	U
208-96-8	Acenaphthylene	330	ND	U
606-20-2	2,6-Dinitrotoluene	330	ND	U
99-09-2	3-Nitroaniline	1700	ND	U
83-32-9	Acenaphthene	330	ND	U
51-28-5	2,4-Dinitrophenol	1700	ND	U
100-02-7	4-Nitrophenol	1700	ND	U
132-64-9	Dibenzofuran	330	ND	U
121-14-2	2,4-Dinitrotoluene	330	ND	U
84-66-2	Diethylphthalate	330	ND	U
7005-72-3	4-Chlorophenyl-phenylether	330	ND	U
86-73-7	Fluorene	330	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : SBLKBS  
 Matrix : SOIL  
 Date Sampled :  
 Date Extracted : 05/13/96  
 Amount Extracted : 30.0 g  
 Date Analyzed : 05/20/96  
 Instrument ID : msd4.i  
 Volume of Final Extract: 1 ml

Anamatrix ID : BY13H2BA  
 Lab File ID : BY13H2B1  
 % Moisture :  
 Dilution Factor : 1.0  
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
100-01-6	4-Nitroaniline	1700	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	ND	U
86-30-6	N-nitrosodiphenylamine (1)	330	ND	U
101-55-3	4-Bromophenyl-phenylether	330	ND	U
118-74-1	Hexachlorobenzene	330	ND	U
87-86-5	Pentachlorophenol	330	ND	U
85-01-8	Phenanthrene	330	ND	U
120-12-7	Anthracene	330	ND	U
84-74-2	Di-n-butylphthalate	330	ND	U
206-44-0	Fluoranthene	330	ND	U
129-00-0	Pyrene	330	ND	U
85-68-7	Butylbenzylphthalate	330	ND	U
91-94-1	3,3'-Dichlorobenzidine	660	ND	U
56-55-3	Benzo(a)anthracene	330	ND	U
218-01-9	Chrysene	330	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	660	ND	U
117-84-0	Di-n-octylphthalate	330	ND	U
205-99-2	Benzo(b)fluoranthene	330	ND	U
207-08-9	Benzo(k)fluoranthene	330	ND	U
50-32-8	Benzo(a)pyrene	330	ND	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	ND	U
53-70-3	Dibenz(a,h)anthracene	330	ND	U
191-24-2	Benzo(g,h,i)perylene	330	ND	U
100-51-6	Benzyl Alcohol	330	ND	U
65-85-0	Benzoic Acid	1700	ND	U
62-75-9	N-Nitrosodimethylamine	330	ND	U
103-33-3	Azobenzene	330	ND	U
92-87-5	Benzidine	1700	ND	U
62-53-3	Aniline	330	ND	U

(1) - Cannot be separated from Diphenylamine

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GASOLINE  
 Matrix : SOIL

Anamatrix ID : 9605098  
 Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 #	S8 #	TOT OUT
01	SBLKBS	87	92	82	81	81	102			0
02	1	OD	OD	OD	OD	OD	OD			0
03	SLCSDZZ	78	78	73	77	68	80			0
04	SLCSZZ	76	74	72	80	72	82			0
05										
06										
07										
08										
09										
10										
11										
12										
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22										
23										
24										
25										
26										
27										
28										
29										
30										

QC LIMITS

S1 (NBZ) = Nitrobenzene-d5 (23-120)  
 S2 (FBP) = 2-Fluorobiphenyl (30-115)  
 S3 (TPH) = Terphenyl-d14 (18-137)  
 S4 (PHL) = Phenol-d5 (24-113)  
 S5 (2FP) = 2-Fluorophenol (25-121)  
 S6 (TBP) = 2,4,6-Tribromophenol (19-122)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits  
 D Surrogate diluted out



LAB CONTROL SAMPLE FORM -- EPA METHOD 8270B  
 INCHCAPE TESTING SERVICES - ANAMETRIX LABORATORIES  
 (408) 432-8192

Project ID : ALASKA GASOLINE  
 Sample ID : SBLKbS  
 Matrix : SOIL  
 Date Sampled :  
 Date Extracted : 05/13/96  
 Prep. Batch ID : hdy13x42  
 Date Analyzed : 05/20/96  
 Instrument ID : msd4.i

Lab File ID : MY13H2B1/NY13H2B1

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC. LIMITS REC.
Phenol	2500	0.0	1800	72	35- 97
2-Chlorophenol	2500	0.0	1900	76	37- 99
1,4-Dichlorobenzene	1700	0.0	1200	70	41- 87
N-Nitroso-di-n-prop. (1)	1700	0.0	1200	70	34-102
1,2,4-Trichlorobenzene	1700	0.0	1300	76	41- 94
4-Chloro-3-Methylphenol	2500	0.0	2100	84	38-107
Acenaphthene	1700	0.0	1200	70	40- 97
4-Nitrophenol	2500	0.0	2500	100	24-106
2,4-Dinitrotoluene	1700	0.0	1400	82	35- 98
Pentachlorophenol	2500	0.0	2200	88	25-121
Pyrene	1700	0.0	1200	70	42-112

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC #	% RPD #	QC LIMITS RPD	REC.
Phenol	2500	1700	68	6	30	35- 97
2-Chlorophenol	2500	1700	68	11	30	37- 99
1,4-Dichlorobenzene	1700	1100	65	7	30	41- 87
N-Nitroso-di-n-prop. (1)	1700	1100	65	7	30	34-102
1,2,4-Trichlorobenzene	1700	1300	76	0	30	41- 94
4-Chloro-3-Methylphenol	2500	2100	84	0	30	38-107
Acenaphthene	1700	1300	76	8	30	40- 97
4-Nitrophenol	2500	2600	104	4	30	24-106
2,4-Dinitrotoluene	1700	1500	88	7	30	35- 98
Pentachlorophenol	2500	2200	88	0	30	25-121
Pyrene	1700	1300	76	8	30	42-112

(1) N-Nitroso-di-n-propylamine

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

COMMENTS:

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10729

9609098

(26)

CHAIN OF CUSTODY RECORD

A/E 4134

JOB NO.	PROJECT NAME	NO. OF CONTAINERS	ANALYSIS					SEALED?	REMARKS
LAB. NO.	SAMPLER (Signature)		TPH-G	TPH-D	BTEX	8270	8010		
DATE 5-8-96	SAMPLE LOCATION/INFORMATION		TPH-G	TPH-D	BTEX	8270	8010		
5896	bottom of waste oil pit	15L	X	X	X	+	X	slight odor	



**PETROTEK**  
P.O. Box 812317  
San Jose, California 95161

①

CHAIN OF CUSTODY RECORD

Inchape to do 8270 only  
Bill + report to AN/EN  
PO #4134  
2 copies of report please  
5/9/96 AW

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	LAB TO NOTE - Y/N	REMARKS

Relinquished by: *[Signature]*

DATE/TIME  
5/8/96  
7:00 PM

RECEIVED FOR LAB. BY (Signature)  
*[Signature]*

Relinquished by: *[Signature]*  
5/10/96  
8:30

Rec'd By: *[Signature]*  
5/10/96  
08:30