Analytical Resources, Incorporated
Analytical Chemists and Consultants

26 May 2004

RECEIVED
JUN - 1 2004
LANDAU ASSOCIATES, INC.

Stacy Pischer
Landau Associates, Inc.
130 Second Avenue South
Edmonds, WA 98020-9129

RE: Project: POA Uplands / 529009.311
ARI Job No: GO20

Dear Stacy:

Please find enclosed the original chain of custody (COC) record and the analytical results for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted three water samples and one product sample on April 21, 2004 in good condition. There were no discrepancies between the COC and the sample containers' labels.

The samples were analyzed for VOAs, SIM-vinyl chloride, SVOAs, SIM-cPAHs with LVI injection, PCBs, Resin Acids, NWTPH-G, NWTPH-HCID, NWTPH-Dx with acid/silica gel cleanups, total and dissolved metals, tannins/lignins and dioxins/furans as requested. The standards for the NWTPH-Dx analyses were acid/silica cleaned as per the method. The test for dioxins/furans was sub-contracted to Pace Analytical Services in Minneapolis, MN. The test for tanning/lignins was sub-contracted to Aquatic Research in Seattle, WA. Quality control analyses are included for your review.

As requested by the client, all samples were allowed to settle before aliquots were removed for sample extraction or preparation to avoid any settled particulates. As a result, no solvent rinses were performed for any analyses.

All samples were initially analyzed for VOAs on 5/3/04. No data were useable due to high levels of sulfur interference in the samples. All samples were re-analyzed on 5/4/04 using 5 mL purge volumes in lieu of 20 mL purge volumes. The re-analyses proceeded without incident of note. The results for the re-analyses only have been submitted.

The sulfur interference in sample **MW-101** in the SIM-vinyl chloride analysis resulted in an elevated reporting limit with a "Y" qualifier for this sample.

The percent recovery for abietic acid was low (9.68%) following the initial analysis of the LCS associated with the resin acids analyses of these samples. The percent recovery for isopimaric acid was also somewhat low at 47.6%. The analyst analyzed the spiking solution used for the analysis and the levels of isopimaric and abietic acid were lower than expected at 56% and 29%, respectively. This indicates that the cause of the lower spike recoveries for these two compounds was the level of the spike rather than the extraction. Recoveries of the other spikes were good.

The analyst who ran the PCB analyses noted that many of the samples showed interference in the analyses, resulting in elevated reporting limits with "Y" qualifiers for some Aroclors.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

low? 2% high? 161%

Sample **MW-110-Product** was biphasic. Only the product layer of the sample was used for analysis for NWTPH-HCID. The extractions supervisor noted that the surrogate was added at a very low level in error. The very low level of surrogate results in greater influence on the surrogate from hydrocarbons in the analyses. Recoveries were high in the sample and low in the laboratory control sample. The issue was discussed with the client and it was determined that no corrective action was necessary because the goal of the analysis was a "fingerprint" of the product, which was obtained. The pattern of the product eluted later than diesel, but earlier than motor oil and the earlier components of bunker C did not appear to be present. The product potentially falls into the category of a lube oil.

The dissolved arsenic analyses were digested due to interferences that were observed in the samples when analyzed without digestion. The concentrations of dissolved arsenic were still higher than the concentrations of total arsenic for the re-analyses of samples **MW-103** and **MW-111.** Since the concentrations found were close to reporting and some analytical variability would be expected, no further corrective actions were taken.

A matrix spike (MS) and sample duplicate were prepared and analyzed for phenols in conjunction with sample **MW-101**. The percent recovery for phenol was not within control limits following the initial analysis of the MS and the relative percent difference (RPD) for the duplicate was outside the control limits. The sample and its QC were re-prepared and re-analyzed. Similar results were obtained for the re-analysis. Since the percent recoveries for the corresponding SRMs were within acceptable QC limits, it was concluded that the sample matrix was the cause of the low MS recoveries and high RPD. The data reviewer noted that the sample had very high salts. No further corrective actions were taken. The results for the original analysis only have been submitted.

No further analytical complications were noted. A copy of this report and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mary Lou Fox

Mary Lou Fox
Project Manager
206/695-6211
marylou@arilabs.com

Enclosures
cc: GO20
MLF/mdh

8020

1,5-D,5-S

☒ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

Landau Associates

Chain-of-Custody Record

Date 4/20/04

Page 1 of 1

Project Name POA Uplands Project No. 529009.311

Project Location/Event Anacortes, WA

Sampler's Name Ken Reid

Project Contact Stacy Pischer

Send Results To _____

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	cPAHs	PCBs	Dioxin/furans	NWTPH-Dx	Metals (Total + Dissolved)	NWTPH-Gx	VOCs	Chloride	Sulfate	Conventionals (a)	Other Organics (b)	NWTPH-HCID	Observations/Comments
MW-101	4/20/04	1205	water	14	X	X	X	X	X	X	X	X	X	X	X		(a) Both metals: antimony, arsenic, cadmium, copper, lead, mercury, nickle, thallium
MW-103	↓	1545	↓	14	X	X	X	X	X	X	X	X	X	X	X		
MW-111	↓	1425	↓	14	X	X	X	X	X	X	X	X	X	X	X		
MW-110-Product	↓	1040	product	3												X	

(b) Other org: Resin acids, Chlorinated guaiacols, guaiacol, nitrate, nitrite ammonia, sulfate, sulfide tanning and lignins, phenol.

(d) Please let D/F samples settle prior to analysis

Special Shipment/Handling or Storage Requirements on-ice

Method of Shipment Hand delivery to LAI Edmon
Pick-up by ARI from Edmon

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name Ken Reid	Printed Name ERIC BRANSON	Printed Name	Printed Name
Company LAI	Company ART	Company	Company
Date 4/20/04 Time	Date 4/21/04 Time 1320	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 4/01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANIC COMPOUND DATA REPORTING QUALIFIERS

U	Indicates the compound was undetected at the reported concentration. (Same as ND).
J	Indicates an estimated concentration when the value is less than the calculated reporting limit.
D	Indicates the surrogate/spike(s) was not detected, due to dilution of extract.
NR	Indicates the surrogate recovery cannot be reported due to matrix interference.
E	Indicates a value above the linear range of the detector. Sample dilution required.
S	Indicates no value reported due to saturation of the detector. Sample dilution required.
NA	Indicates compound not analyzed for.
M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match (GC/MS)
B	Indicates possible/probable blank contamination. Flagged when the analyte is detected in the blank as well as the sample.
Y	Indicates raised reporting limit due to background interference or to activity on the instrument. Compound is still not detected at or above the raised level.
C	Indicates a probable hit that cannot be confirmed due to matrix interference (GC).

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID

Sample ID: LCS-050404
LAB CONTROL

Lab Sample ID: LCS-050404
LIMS ID: 04-6161
Matrix: PRODUCT
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 05/04/04
Date Analyzed: 05/08/04 20:51
Instrument/Analyst: FID/ESJ

Sample Amount: 1.00 g
Final Extract Volume: 100 mL
Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	159000	150000	106%

HCID Surrogate Recovery

o-Terphenyl	161%

Results reported in mg/kg

ANALYTICAL RESOURCES INCORPORATED

TOTAL HCID RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: GO20
Matrix: PRODUCT Project: POA Uplands
Date Received: 04/21/04 529009.311

ARI ID	Client ID	Sample Amt	Final Vol	Basis	Prep Date
04-6161-050404MB	Method Blank	1.00 g	100 mL	-	05/04/04
04-6161-050404LCS	Lab Control	1.00 g	100 mL	-	05/04/04
04-6161-GO20D	MW-110-Product	1.05 g	100 mL	W	05/04/04

Basis: D=Dry Weight W=As Received

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: GO20MB
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	04/27/04	6010B	04/29/04	7440-36-0	Antimony	0.05	0.05	U
7060A	04/27/04	7060A	04/30/04	7440-38-2	Arsenic	0.001	0.001	U
3010A	04/27/04	6010B	04/29/04	7440-43-9	Cadmium	0.002	0.002	U
3010A	04/27/04	6010B	04/29/04	7440-50-8	Copper	0.002	0.002	U
3010A	04/27/04	6010B	04/29/04	7439-92-1	Lead	0.02	0.02	U
7470A	04/27/04	7470A	04/30/04	7439-97-6	Mercury	0.0001	0.0001	U
3010A	04/27/04	6010B	04/29/04	7440-02-0	Nickel	0.01	0.01	U
3010A	04/27/04	6010B	04/29/04	7440-28-0	Thallium	0.05	0.05	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-101
MATRIX SPIKE

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	6010B	0.05 U	2.09	2.00	104%	
Arsenic	7060A	0.003	0.109	0.100	106%	
Cadmium	6010B	0.002 U	0.507	0.500	101%	
Copper	6010B	0.002 U	0.513	0.500	103%	
Lead	6010B	0.02 U	1.82	2.00	91.0%	
Mercury	7470A	0.0001 U	0.0010	0.0010	100%	
Nickel	6010B	0.01 U	0.45	0.50	90.0%	
Thallium	6010B	0.05 U	1.74	2.00	87.0%	

Reported in mg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-101
DUPLICATE

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	0.05 U	0.05 U	0.0%	+/- 0.05	L
Arsenic	7060A	0.003	0.004	28.6%	+/- 0.002	L
Cadmium	6010B	0.002 U	0.002 U	0.0%	+/- 0.002	L
Copper	6010B	0.002 U	0.002 U	0.0%	+/- 0.002	L
Lead	6010B	0.02 U	0.02 U	0.0%	+/- 0.02	L
Mercury	7470A	0.0001 U	0.0001 U	0.0%	+/- 0.0001	L
Nickel	6010B	0.01 U	0.01 U	0.0%	+/- 0.01	L
Thallium	6010B	0.05 U	0.05 U	0.0%	+/- 0.05	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LAB CONTROL

Lab Sample ID: GO20LCS
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	6010B	2.03	2.00	102%	
Arsenic	7060A	0.105	0.100	105%	
Cadmium	6010B	0.507	0.500	101%	
Copper	6010B	0.489	0.500	97.8%	
Lead	6010B	2.03	2.00	102%	
Mercury	7470A	0.0023	0.0020	115%	
Nickel	6010B	0.48	0.50	96.0%	
Thallium	6010B	2.01	2.00	100%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-101
SAMPLE

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	04/27/04	6010B	04/29/04	7440-36-0	Antimony	0.05	0.05	U
7060A	04/27/04	7060A	04/30/04	7440-38-2	Arsenic	0.002	0.003	
3010A	04/27/04	6010B	04/29/04	7440-43-9	Cadmium	0.002	0.002	U
3010A	04/27/04	6010B	04/29/04	7440-50-8	Copper	0.002	0.002	U
3010A	04/27/04	6010B	04/29/04	7439-92-1	Lead	0.02	0.02	U
7470A	04/27/04	7470A	04/30/04	7439-97-6	Mercury	0.0001	0.0001	U
3010A	04/27/04	6010B	04/29/04	7440-02-0	Nickel	0.01	0.01	U
3010A	04/27/04	6010B	04/29/04	7440-28-0	Thallium	0.05	0.05	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-103
SAMPLE

Lab Sample ID: GO20B
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	04/27/04	6010B	04/29/04	7440-36-0	Antimony	0.05	0.05	U
7060A	04/27/04	7060A	04/30/04	**7440-38-2**	**Arsenic**	0.001	**0.002**	
3010A	04/27/04	6010B	04/29/04	7440-43-9	Cadmium	0.002	0.002	U
3010A	04/27/04	6010B	04/29/04	7440-50-8	Copper	0.002	0.002	U
3010A	04/27/04	6010B	04/29/04	7439-92-1	Lead	0.02	0.02	U
7470A	04/27/04	7470A	04/30/04	7439-97-6	Mercury	0.0001	0.0001	U
3010A	04/27/04	6010B	04/29/04	7440-02-0	Nickel	0.01	0.01	U
3010A	04/27/04	6010B	04/29/04	7440-28-0	Thallium	0.05	0.05	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-111
SAMPLE

Lab Sample ID: GO20C
LIMS ID: 04-6160
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	04/27/04	6010B	04/29/04	7440-36-0	Antimony	0.05	0.05	U
7060A	04/27/04	7060A	04/30/04	**7440-38-2**	**Arsenic**	0.001	**0.003**	
3010A	04/27/04	6010B	04/29/04	7440-43-9	Cadmium	0.002	0.002	U
3010A	04/27/04	6010B	04/29/04	7440-50-8	Copper	0.002	0.002	U
3010A	04/27/04	6010B	04/29/04	7439-92-1	Lead	0.02	0.02	U
7470A	04/27/04	7470A	04/30/04	7439-97-6	Mercury	0.0001	0.0001	U
3010A	04/27/04	6010B	04/29/04	7440-02-0	Nickel	0.01	0.01	U
3010A	04/27/04	6010B	04/29/04	7440-28-0	Thallium	0.05	0.05	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: GO20MB
LIMS ID: 04-6164
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
6010B	04/27/04	6010B	04/29/04	7440-36-0	Antimony	0.05	0.05	U
7060A	05/07/04	7060A	05/11/04	7440-38-2	Arsenic	0.001	0.001	U
6010B	04/27/04	6010B	04/29/04	7440-43-9	Cadmium	0.002	0.002	U
6010B	04/27/04	6010B	04/29/04	7440-50-8	Copper	0.002	0.002	U
6010B	04/27/04	6010B	04/29/04	7439-92-1	Lead	0.02	0.02	U
7470A	04/27/04	7470A	04/30/04	7439-97-6	Mercury	0.0001	0.0001	U
6010B	04/27/04	6010B	04/29/04	7440-02-0	Nickel	0.01	0.01	U
6010B	04/27/04	6010B	04/29/04	7440-28-0	Thallium	0.05	0.05	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: MW-101
MATRIX SPIKE

Lab Sample ID: GO20F
LIMS ID: 04-6163
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	6010B	0.05 U	1.95	2.00	97.5%	
Arsenic	7060A	0.001	0.100	0.100	99.0%	
Cadmium	6010B	0.002 U	0.524	0.500	105%	
Copper	6010B	0.002 U	0.459	0.500	91.8%	
Lead	6010B	0.02 U	1.87	2.00	93.5%	
Mercury	7470A	0.0001 U	0.0010	0.0010	100%	
Nickel	6010B	0.01 U	0.47	0.50	94.0%	
Thallium	6010B	0.05 U	1.78	2.00	89.0%	

Reported in mg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: MW-101
DUPLICATE

Lab Sample ID: GO20F
LIMS ID: 04-6163
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	0.05 U	0.05 U	0.0%	+/- 0.05	L
Arsenic	7060A	0.001	0.001 U	0.0%	+/- 0.001	L
Cadmium	6010B	0.002 U	0.002 U	0.0%	+/- 0.002	L
Copper	6010B	0.002 U	0.002 U	0.0%	+/- 0.002	L
Lead	6010B	0.02 U	0.02 U	0.0%	+/- 0.02	L
Mercury	7470A	0.0001 U	0.0001 U	0.0%	+/- 0.0001	L
Nickel	6010B	0.01 U	0.01 U	0.0%	+/- 0.01	L
Thallium	6010B	0.05 U	0.05 U	0.0%	+/- 0.05	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: LAB CONTROL

Lab Sample ID: GO20LCS
LIMS ID: 04-6164
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	6010B	2.05	2.00	102%	
Arsenic	7060A	0.099	0.100	99.0%	
Cadmium	6010B	0.523	0.500	105%	
Copper	6010B	0.475	0.500	95.0%	
Lead	6010B	2.06	2.00	103%	
Mercury	7470A	0.0023	0.0020	115%	
Nickel	6010B	0.48	0.50	96.0%	
Thallium	6010B	2.04	2.00	102%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: MW-101
SAMPLE

Lab Sample ID: GO20F
LIMS ID: 04-6163
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
6010B	04/27/04	6010B	04/29/04	7440-36-0	Antimony	0.05	0.05	U
7060A	05/07/04	7060A	05/11/04	**7440-38-2**	**Arsenic**	0.001	**0.001**	
6010B	04/27/04	6010B	04/29/04	7440-43-9	Cadmium	0.002	0.002	U
6010B	04/27/04	6010B	04/29/04	7440-50-8	Copper	0.002	0.002	U
6010B	04/27/04	6010B	04/29/04	7439-92-1	Lead	0.02	0.02	U
7470A	04/27/04	7470A	04/30/04	7439-97-6	Mercury	0.0001	0.0001	U
6010B	04/27/04	6010B	04/29/04	7440-02-0	Nickel	0.01	0.01	U
6010B	04/27/04	6010B	04/29/04	7440-28-0	Thallium	0.05	0.05	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: MW-103
SAMPLE

Lab Sample ID: GO20G
LIMS ID: 04-6164
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
6010B	04/27/04	6010B	04/29/04	7440-36-0	Antimony	0.05	0.05	U
7060A	05/07/04	7060A	05/11/04	**7440-38-2**	**Arsenic**	0.001	**0.003**	
6010B	04/27/04	6010B	04/29/04	7440-43-9	Cadmium	0.002	0.002	U
6010B	04/27/04	6010B	04/29/04	7440-50-8	Copper	0.002	0.002	U
6010B	04/27/04	6010B	04/29/04	7439-92-1	Lead	0.02	0.02	U
7470A	04/27/04	7470A	04/30/04	7439-97-6	Mercury	0.0001	0.0001	U
6010B	04/27/04	6010B	04/29/04	7440-02-0	Nickel	0.01	0.01	U
6010B	04/27/04	6010B	04/29/04	7440-28-0	Thallium	0.05	0.05	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: MW-111
SAMPLE

Lab Sample ID: GO20H
LIMS ID: 04-6165
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
6010B	04/27/04	6010B	04/29/04	7440-36-0	Antimony	0.05	0.05	U
7060A	05/07/04	7060A	05/11/04	**7440-38-2**	**Arsenic**	0.001	**0.005**	
6010B	04/27/04	6010B	04/29/04	7440-43-9	Cadmium	0.002	0.002	U
6010B	04/27/04	6010B	04/29/04	7440-50-8	Copper	0.002	0.002	U
6010B	04/27/04	6010B	04/29/04	7439-92-1	Lead	0.02	0.02	U
7470A	04/27/04	7470A	04/30/04	7439-97-6	Mercury	0.0001	0.0001	U
6010B	04/27/04	6010B	04/29/04	7440-02-0	Nickel	0.01	0.01	U
6010B	04/27/04	6010B	04/29/04	7440-28-0	Thallium	0.05	0.05	U

U-Analyte undetected at given RL
RL-Reporting Limit

MS/MSD RESULTS-CONVENTIONALS
GO20-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: dlg
Reported: 05/06/04

Project: POA Uplands
Event: 529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Analyte	ID Date	Units	Sample	Spike	Spike Added	Recovery
Chloride	GO20A MW-101 05/05/04	mg/L	4,730	10,300	5,000	111.4%
N-Ammonia	GO20A MW-101 04/28/04	mg-N/L	7.25	9.79	2.50	101.6%
N-Nitrite	GO20A MW-101 04/22/04	mg-N/L	0.049	0.542	0.500	98.6%
Nitrate + Nitrite (NO3+NO2)	GO20A MW-101 04/22/04	mg-N/L	0.033	0.542	0.500	101.8%
Sulfate	GO20A MW-101 05/05/04	mg/L	528	960	500	86.4%
Sulfide	GO20B MW-103 04/28/04	mg/L	< 0.05 U	5.33	7.04	75.7%
Phenol	GO20A MW-101 04/30/04	mg/L	0.52	0.56	0.40	10.0%

METHOD BLANK RESULTS-CONVENTIONALS
GO20-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: [signature]
Reported: 05/06/04

Project: POA Uplands
Event: 529009.311
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Chloride	05/05/04	mg/L	< 1.0 U
N-Ammonia	04/28/04	mg-N/L	< 0.010 U
N-Nitrite	04/22/04	mg-N/L	< 0.010 U
Nitrate + Nitrite (NO3+NO2)	04/22/04	mg-N/L	< 0.010 U
Sulfate	05/05/04	mg/L	< 2.0 U
Sulfide	04/28/04	mg/L	< 0.05 U
Phenol	04/30/04	mg/L	< 0.03 U

REPLICATE RESULTS-CONVENTIONALS
GO20-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: ap
Reported: 05/06/04

Project: POA Uplands
Event: 529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Analyte	ID Date	Units	Sample	Replicate	RPD
Chloride	GO20A MW-101 05/05/04	mg/L	4,730	4,670	1.3%
N-Ammonia	GO20A MW-101 04/28/04	mg-N/L	7.25	7.26	0.1%
N-Nitrite	GO20A MW-101 04/22/04	mg-N/L	0.049	0.051	4.0%
Nitrate + Nitrite (NO3+NO2)	GO20A MW-101 04/22/04	mg-N/L	0.033	0.034	3.0%
Sulfate	GO20A MW-101 05/05/04	mg/L	528	529	0.2%
Sulfide	GO20B MW-103 04/28/04	mg/L	< 0.05 U	< 0.05 U	NA
Phenol	GO20A MW-101 04/30/04	mg/L	0.52	0.30	53.7%

STANDARD REFERENCE RESULTS-CONVENTIONALS
GO20-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: 04
Reported: 05/06/04

Project: POA Uplands
Event: 529009.311
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Chloride ERA #22013	05/05/04	mg/L	5.0	5.0	100.0%
N-Ammonia ERA #03043	04/28/04	mg-N/L	0.489	0.500	97.8%
N-Nitrite ERA #17042	04/22/04	mg-N/L	0.509	0.500	101.8%
Nitrate + Nitrite (NO3+NO2) ERA #10062	04/22/04	mg-N/L	0.482	0.500	96.4%
Sulfate ERA #31073	05/05/04	mg/L	24.0	25.0	96.0%
Phenol ERA 05111.2	04/30/04	mg/L	0.99	1.00	99.0%

LAB CONTROL RESULTS-CONVENTIONALS
GO20-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: 04
Reported: 05/06/04

Project: POA Uplands
Event: 529009.311
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	LCS	Spike Added	Recovery
Sulfide	04/28/04	mg/L	6.51	7.04	92.5%

SAMPLE RESULTS-CONVENTIONALS
GO20-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: AHP
Reported: 05/06/04

Project: POA Uplands
Event: 529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Client ID: MW-101
ARI ID: 04-6158 GO20A

Analyte	Date	Method	Units	RL	Sample
Chloride	05/05/04	EPA 325.2	mg/L	1,000	4,730
N-Ammonia	04/28/04	EPA 350.1M	mg-N/L	0.100	7.25
N-Nitrate	04/22/04	Calculated	mg-N/L	0.010	< 0.010 U
N-Nitrite	04/22/04	EPA 353.2	mg-N/L	0.010	0.049
Nitrate + Nitrite (NO3+NO2)	04/22/04	EPA 353.2	mg-N/L	0.010	0.033
Sulfate	05/05/04	EPA 375.2	mg/L	50.0	528
Sulfide	04/28/04	EPA 376.2	mg/L	2.50	47.5
Phenol	04/30/04	EPA 420.1	mg/L	0.03	0.52

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
GO20-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: DAP
Reported: 05/06/04

Project: POA Uplands
Event: 529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Client ID: MW-103
ARI ID: 04-6159 GO20B

Analyte	Date	Method	Units	RL	Sample
Chloride	05/05/04	EPA 325.2	mg/L	50.0	187
N-Ammonia	04/28/04	EPA 350.1M	mg-N/L	0.100	5.32
N-Nitrate	04/22/04	Calculated	mg-N/L	0.010	< 0.010 U
N-Nitrite	04/22/04	EPA 353.2	mg-N/L	0.010	< 0.010 U
Nitrate + Nitrite (NO3+NO2)	04/22/04	EPA 353.2	mg-N/L	0.010	< 0.010 U
Sulfate	05/05/04	EPA 375.2	mg/L	20.0	114
Sulfide	04/28/04	EPA 376.2	mg/L	0.05	< 0.05 U
Phenol	04/30/04	EPA 420.1	mg/L	0.16	0.96

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
GO20-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 05/06/04

Project: POA Uplands
Event: 529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Client ID: MW-111
ARI ID: 04-6160 GO20C

Analyte	Date	Method	Units	RL	Sample
Chloride	05/05/04	EPA 325.2	mg/L	100	986
N-Ammonia	04/28/04	EPA 350.1M	mg-N/L	0.100	3.19
N-Nitrate	04/22/04	Calculated	mg-N/L	0.010	< 0.010 U
N-Nitrite	04/22/04	EPA 353.2	mg-N/L	0.010	< 0.010 U
Nitrate + Nitrite (NO3+NO2)	04/22/04	EPA 353.2	mg-N/L	0.010	< 0.010 U
Sulfate	05/05/04	EPA 375.2	mg/L	20.0	318
Sulfide	04/28/04	EPA 376.2	mg/L	0.50	< 0.50 U
Phenol	04/30/04	EPA 420.1	mg/L	0.03	0.45

RL Analytical reporting limit
U Undetected at reported detection limit

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: ARI096-51 **PAGE 1**

REPORT DATE: 05/07/04

DATE SAMPLED: 04/20/04 **DATE RECEIVED:** 04/23/04

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM ANALYTICAL RESOURCES / GO20

CASE NARRATIVE

Three water samples were received by the laboratory in good condition. The samples were analyzed according to the chain-of-custody. No difficulties were encountered in the preparation or analysis of these samples. Sample data follows while QA/QC data is contained on the subsequent page.

SAMPLE DATA

SAMPLE ID	LAB ID	TANNINS/LIGNINS (mg/l)
MW-101	04-6163-GO20F	8.52
MW-103	04-6164-GO20G	6.93
MW-111	04-6165-GO20H	4.91

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**ARI096-51**	**PAGE 2**	
REPORT DATE:	**05/07/04**		
DATE SAMPLED:	**04/20/04**	**DATE RECEIVED:**	**04/23/04**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM ANALYTICAL RESOURCES / GO20

QA/QC DATA

QC PARAMETER	TANNINS/LIGNINS (mg/l)
METHOD	SM18 5550B
DATE ANALYZED	05/06/04
DETECTION LIMIT	0.010
DUPLICATE	
SAMPLE ID	BATCH
ORIGINAL	1.67
DUPLICATE	1.71
RPD	2.65%
SPIKE SAMPLE	
SAMPLE ID	BATCH
ORIGINAL	
SPIKED SAMPLE	
SPIKE ADDED	
% RECOVERY	OR
QC CHECK	
FOUND	0.935
TRUE	1.00
% RECOVERY	93.50%
BLANK	<0.010

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TO LOW RELATIVE TO SAMPLE CONCENTRATION.

SUBMITTED BY:

Steven Lazoff
Laboratory Director

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: MB-050304**
 METHOD BLANK

Lab Sample ID: MB-050304
LIMS ID: 04-6162
Matrix: WATER
Data Release Authorized:
Reported: 05/10/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT3/JA
Date Analyzed: 05/03/04 13:24

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result
74-87-3	Chloromethane	1.0	< 1.0 U
74-83-9	Bromomethane	1.0	< 1.0 U
75-00-3	Chloroethane	1.0	< 1.0 U
75-09-2	Methylene Chloride	2.0	< 2.0 U
67-64-1	Acetone	5.0	< 5.0 U
75-15-0	Carbon Disulfide	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0 U
67-66-3	Chloroform	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	1.0	< 1.0 U
78-93-3	2-Butanone	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	1.0	< 1.0 U
108-05-4	Vinyl Acetate	5.0	< 5.0 U
75-27-4	Bromodichloromethane	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0 U
79-01-6	Trichloroethene	1.0	< 1.0 U
124-48-1	Dibromochloromethane	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0 U
71-43-2	Benzene	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0 U
75-25-2	Bromoform	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0 U
591-78-6	2-Hexanone	5.0	< 5.0 U
127-18-4	Tetrachloroethene	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
108-90-7	Chlorobenzene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
100-42-5	Styrene	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0 U
1330-20-7	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
107-02-8	Acrolein	50	< 50 U
74-88-4	Methyl Iodide	1.0	< 1.0 U
74-96-4	Bromoethane	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	< 1.0 U
563-58-6	1,1-Dichloropropene	1.0	< 1.0 U
74-95-3	Dibromomethane	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: MB-050304**
 METHOD BLANK

Lab Sample ID: MB-050304 QC Report No: GO20-Landau Associates
LIMS ID: 04-6162 Project: POA Uplands
Matrix: WATER 529009.311
Date Analyzed: 05/03/04 13:24

CAS Number	Analyte	RL	Result
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
106-93-4	Ethylene Dibromide	1.0	< 1.0 U
74-97-5	Bromochloromethane	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	1.0	< 1.0 U
98-82-8	Isopropylbenzene	1.0	< 1.0 U
103-65-1	n-Propylbenzene	1.0	< 1.0 U
108-86-1	Bromobenzene	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	1.0	< 1.0 U
104-51-8	n-Butylbenzene	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0 U
91-20-3	Naphthalene	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	120%
d8-Toluene	116%
Bromofluorobenzene	116%
d4-1,2-Dichlorobenzene	121%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: MB-050404**
 METHOD BLANK

Lab Sample ID: MB-050404
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/10/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT3/JA
Date Analyzed: 05/04/04 12:29

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result
74-87-3	Chloromethane	1.0	< 1.0 U
74-83-9	Bromomethane	1.0	< 1.0 U
75-00-3	Chloroethane	1.0	< 1.0 U
75-09-2	Methylene Chloride	2.0	< 2.0 U
67-64-1	Acetone	5.0	< 5.0 U
75-15-0	Carbon Disulfide	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0 U
67-66-3	Chloroform	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	1.0	< 1.0 U
78-93-3	2-Butanone	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	1.0	< 1.0 U
108-05-4	Vinyl Acetate	5.0	< 5.0 U
75-27-4	Bromodichloromethane	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0 U
79-01-6	Trichloroethene	1.0	< 1.0 U
124-48-1	Dibromochloromethane	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0 U
71-43-2	Benzene	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0 U
75-25-2	Bromoform	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0 U
591-78-6	2-Hexanone	5.0	< 5.0 U
127-18-4	Tetrachloroethene	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
108-90-7	Chlorobenzene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
100-42-5	Styrene	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0 U
1330-20-7	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
107-02-8	Acrolein	50	< 50 U
74-88-4	Methyl Iodide	1.0	< 1.0 U
74-96-4	Bromoethane	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	< 1.0 U
563-58-6	1,1-Dichloropropene	1.0	< 1.0 U
74-95-3	Dibromomethane	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	3.0	< 3.0 U

Lab Sample ID: MB-050404 QC Report No: GO20-Landau Associates
LIMS ID: 04-6158 Project: POA Uplands
Matrix: Water 529009.311
Date Analyzed: 05/04/04 12:29

CAS Number	Analyte	RL	Result
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
106-93-4	Ethylene Dibromide	1.0	< 1.0 U
74-97-5	Bromochloromethane	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	1.0	< 1.0 U
98-82-8	Isopropylbenzene	1.0	< 1.0 U
103-65-1	n-Propylbenzene	1.0	< 1.0 U
108-86-1	Bromobenzene	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	1.0	< 1.0 U
104-51-8	n-Butylbenzene	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0 U
91-20-3	Naphthalene	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	126%
d8-Toluene	118%
Bromofluorobenzene	115%
d4-1,2-Dichlorobenzene	125%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: Trip Blank**
Page 1 of 2 **SAMPLE**

Lab Sample ID: GO20E
LIMS ID: 04-6162
Matrix: WATER
Data Release Authorized:
Reported: 05/10/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled:
Date Received: 04/21/04

Instrument/Analyst: NT3/JA
Date Analyzed: 05/03/04 19:43

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result
74-87-3	Chloromethane	1.0	< 1.0 U
74-83-9	Bromomethane	1.0	< 1.0 U
75-00-3	Chloroethane	1.0	< 1.0 U
75-09-2	Methylene Chloride	2.0	< 2.0 U
67-64-1	Acetone	5.0	< 5.0 U
75-15-0	Carbon Disulfide	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0 U
67-66-3	Chloroform	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	1.0	< 1.0 U
78-93-3	2-Butanone	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	1.0	< 1.0 U
108-05-4	Vinyl Acetate	5.0	< 5.0 U
75-27-4	Bromodichloromethane	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0 U
79-01-6	Trichloroethene	1.0	< 1.0 U
124-48-1	Dibromochloromethane	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0 U
71-43-2	Benzene	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0 U
75-25-2	Bromoform	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0 U
591-78-6	2-Hexanone	5.0	< 5.0 U
127-18-4	Tetrachloroethene	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
108-90-7	Chlorobenzene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
100-42-5	Styrene	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0 U
1330-20-7	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
107-02-8	Acrolein	50	< 50 U
74-88-4	Methyl Iodide	1.0	< 1.0 U
74-96-4	Bromoethane	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	< 1.0 U
563-58-6	1,1-Dichloropropene	1.0	< 1.0 U
74-95-3	Dibromomethane	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: Trip Blank**
Page 2 of 2 **SAMPLE**

Lab Sample ID: GO20E
LIMS ID: 04-6162
Matrix: WATER
Date Analyzed: 05/03/04 19:43

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

CAS Number	Analyte	RL	Result
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
106-93-4	Ethylene Dibromide	1.0	< 1.0 U
74-97-5	Bromochloromethane	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	1.0	< 1.0 U
98-82-8	Isopropylbenzene	1.0	< 1.0 U
103-65-1	n-Propylbenzene	1.0	< 1.0 U
108-86-1	Bromobenzene	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	1.0	< 1.0 U
104-51-8	n-Butylbenzene	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0 U
91-20-3	Naphthalene	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	124%
d8-Toluene	118%
Bromofluorobenzene	115%
d4-1,2-Dichlorobenzene	123%

ANALYTICAL RESOURCES INCORPORATED

WATER VOLATILE SYSTEM MONITORING COMPOUND SUMMARY

Matrix: Water 5 mL QC Report No: GO20

Lab ID	Client ID	DCE	TOL	BFB	DCB	TOT OUT
050404MB	Method Blank	126%	118%	115%	125%	0
GO20LCS	Lab Cntrl Sample	120%	119%	116%	118%	0
GO20LCSD	Lab Cntrl Sample Dp	119%	120%	115%	117%	0
GO20A	MW-101	128%	119%	117%	127%	0
GO20B	MW-103	127%	120%	116%	126%	0
GO20C	MW-111	128%	120%	115%	128%	0
050304MB	Method Blank	120%	116%	116%	121%	0
GO20LCS	Lab Cntrl Sample	119%	117%	116%	115%	0
GO20LCSD	Lab Cntrl Sample Dp	118%	118%	115%	115%	0
GO20E	Trip Blank	124%	118%	115%	123%	0

SW8260B	LCS/MB LIMITS	QC LIMITS
(DCE) = 1,2-Dichloroethane-d4	(74-133)	(74-142)
(TOL) = Toluene-d8	(77-131)	(84-129)
(BFB) = Bromofluorobenzene	(79-127)	(77-122)
(DCB) = 1,2-Dichlorobenzene-d4	(84-132)	(85-135)

\# Column to be used to flag recovery values

* Values outside of required QC limits

D System Monitoring Compound diluted out

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: LCS-050304**
 LCS/LCSD

Lab Sample ID: LCS-050304 QC Report No: GO20-Landau Associates
LIMS ID: 04-6162 Project: POA Uplands
Matrix: WATER 529009.311
Data Release Authorized: Date Sampled: NA
Reported: 05/10/04 Date Received: NA

Instrument/Analyst LCS: NT3/JA Sample Amount LCS: 5.00 mL
LCSD: NT3/JA LCSD: 5.00 mL
Date Analyzed LCS: 05/03/04 12:27 Purge Volume LCS: 5.0 mL
LCSD: 05/03/04 12:56 LCSD: 5.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	45.5	50.0	91.0%	42.9	50.0	85.8%	5.9%
Bromomethane	38.1	50.0	76.2%	36.8	50.0	73.6%	3.5%
Chloroethane	49.2	50.0	98.4%	45.9	50.0	91.8%	6.9%
Methylene Chloride	48.0	50.0	96.0%	45.8	50.0	91.6%	4.7%
Acetone	237	250	94.8%	222	250	88.8%	6.5%
Carbon Disulfide	45.9	50.0	91.8%	44.2	50.0	88.4%	3.8%
1,1-Dichloroethene	47.2	50.0	94.4%	45.4	50.0	90.8%	3.9%
1,1-Dichloroethane	48.6	50.0	97.2%	46.5	50.0	93.0%	4.4%
trans-1,2-Dichloroethene	48.2	50.0	96.4%	45.5	50.0	91.0%	5.8%
cis-1,2-Dichloroethene	49.1	50.0	98.2%	46.7	50.0	93.4%	5.0%
Chloroform	49.0	50.0	98.0%	46.3	50.0	92.6%	5.7%
1,2-Dichloroethane	47.7	50.0	95.4%	46.3	50.0	92.6%	3.0%
2-Butanone	246	250	98.4%	238	250	95.2%	3.3%
1,1,1-Trichloroethane	48.2	50.0	96.4%	45.6	50.0	91.2%	5.5%
Carbon Tetrachloride	48.0	50.0	96.0%	45.8	50.0	91.6%	4.7%
Vinyl Acetate	46.3	50.0	92.6%	45.6	50.0	91.2%	1.5%
Bromodichloromethane	49.2	50.0	98.4%	46.2	50.0	92.4%	6.3%
1,2-Dichloropropane	47.7	50.0	95.4%	46.1	50.0	92.2%	3.4%
cis-1,3-Dichloropropene	48.1	50.0	96.2%	46.4	50.0	92.8%	3.6%
Trichloroethene	48.5	50.0	97.0%	46.3	50.0	92.6%	4.6%
Dibromochloromethane	49.2	50.0	98.4%	46.7	50.0	93.4%	5.2%
1,1,2-Trichloroethane	49.0	50.0	98.0%	46.8	50.0	93.6%	4.6%
Benzene	48.3	50.0	96.6%	46.3	50.0	92.6%	4.2%
trans-1,3-Dichloropropene	49.0	50.0	98.0%	47.0	50.0	94.0%	4.2%
2-Chloroethylvinylether	43.2	50.0	86.4%	42.9	50.0	85.8%	0.7%
Bromoform	49.9	50.0	99.8%	48.0	50.0	96.0%	3.9%
4-Methyl-2-Pentanone (MIBK)	271	250	108%	265	250	106%	2.2%
2-Hexanone	266	250	106%	262	250	105%	1.5%
Tetrachloroethene	46.9	50.0	93.8%	44.3	50.0	88.6%	5.7%
1,1,2,2-Tetrachloroethane	48.8	50.0	97.6%	47.6	50.0	95.2%	2.5%
Toluene	49.4	50.0	98.8%	47.6	50.0	95.2%	3.7%
Chlorobenzene	47.8	50.0	95.6%	45.5	50.0	91.0%	4.9%
Ethylbenzene	50.4	50.0	101%	47.7	50.0	95.4%	5.5%
Styrene	52.1	50.0	104%	49.6	50.0	99.2%	4.9%
Trichlorofluoromethane	48.1	50.0	96.2%	45.0	50.0	90.0%	6.7%
1,1,2-Trichloro-1,2,2-trifl	50.8	50.0	102%	48.1	50.0	96.2%	5.5%
m,p-Xylene	99.8	100	99.8%	95.4	100	95.4%	4.5%
o-Xylene	49.7	50.0	99.4%	47.5	50.0	95.0%	4.5%
1,2-Dichlorobenzene	47.9	50.0	95.8%	46.1	50.0	92.2%	3.8%
1,3-Dichlorobenzene	47.9	50.0	95.8%	45.3	50.0	90.6%	5.6%
1,4-Dichlorobenzene	46.9	50.0	93.8%	44.7	50.0	89.4%	4.8%
Acrolein	209	250	83.6%	198	250	79.2%	5.4%
Methyl Iodide	39.3	50.0	78.6%	40.3	50.0	80.6%	2.5%
Bromoethane	47.0	50.0	94.0%	45.7	50.0	91.4%	2.8%
Acrylonitrile	45.4	50.0	90.8%	44.8	50.0	89.6%	1.3%
1,1-Dichloropropene	47.6	50.0	95.2%	45.4	50.0	90.8%	4.7%
Dibromomethane	48.8	50.0	97.6%	47.1	50.0	94.2%	3.5%
1,1,1,2-Tetrachloroethane	47.2	50.0	94.4%	44.8	50.0	89.6%	5.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: LCS-050304**
 LCS/LCSD

Lab Sample ID: LCS-050304 QC Report No: GO20-Landau Associates
LIMS ID: 04-6162 Project: POA Uplands
Matrix: WATER 529009.311
Date Analyzed: 05/03/04 12:27 Purge Volume: 5.0 mL
LCSD: 05/03/04 12:56 LCSD: 5.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromo-3-chloropropane	46.4	50.0	92.8%	45.2	50.0	90.4%	2.6%
1,2,3-Trichloropropane	49.8	50.0	99.6%	47.8	50.0	95.6%	4.1%
trans-1,4-Dichloro-2-butene	51.0	50.0	102%	50.1	50.0	100%	1.8%
1,3,5-Trimethylbenzene	50.9	50.0	102%	48.7	50.0	97.4%	4.4%
1,2,4-Trimethylbenzene	51.1	50.0	102%	48.7	50.0	97.4%	4.8%
Hexachlorobutadiene	45.1	50.0	90.2%	39.3	50.0	78.6%	13.7%
Ethylene Dibromide	48.4	50.0	96.8%	46.8	50.0	93.6%	3.4%
Bromochloromethane	49.7	50.0	99.4%	47.4	50.0	94.8%	4.7%
2,2-Dichloropropane	47.5	50.0	95.0%	44.5	50.0	89.0%	6.5%
1,3-Dichloropropane	49.3	50.0	98.6%	47.1	50.0	94.2%	4.6%
Isopropylbenzene	50.2	50.0	100%	47.8	50.0	95.6%	4.9%
n-Propylbenzene	51.5	50.0	103%	49.2	50.0	98.4%	4.6%
Bromobenzene	48.1	50.0	96.2%	46.1	50.0	92.2%	4.2%
2-Chlorotoluene	48.3	50.0	96.6%	46.4	50.0	92.8%	4.0%
4-Chlorotoluene	49.3	50.0	98.6%	46.8	50.0	93.6%	5.2%
tert-Butylbenzene	49.6	50.0	99.2%	47.3	50.0	94.6%	4.7%
sec-Butylbenzene	49.3	50.0	98.6%	46.8	50.0	93.6%	5.2%
4-Isopropyltoluene	49.6	50.0	99.2%	47.2	50.0	94.4%	5.0%
n-Butylbenzene	50.5	50.0	101%	47.4	50.0	94.8%	6.3%
1,2,4-Trichlorobenzene	46.4	50.0	92.8%	44.0	50.0	88.0%	5.3%
Naphthalene	49.0	50.0	98.0%	47.6	50.0	95.2%	2.9%
1,2,3-Trichlorobenzene	47.1	50.0	94.2%	44.9	50.0	89.8%	4.8%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.
LCS spike recovery is evaluated using only the nine regulated compounds noted in the ARI LQAP. The other LCS spike compound recoveries are advisory and used for analytical troubleshooting should any of the nine regulated compounds be out of control.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	119%	118%
d8-Toluene	117%	118%
Bromofluorobenzene	116%	115%
d4-1,2-Dichlorobenzene	115%	115%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: LCS-050404**
 LCS/LCSD

Lab Sample ID: LCS-050404 QC Report No: GO20-Landau Associates
LIMS ID: 04-6158 Project: POA Uplands
Matrix: Water 529009.311
Data Release Authorized: Date Sampled: NA
Reported: 05/10/04 Date Received: NA

Instrument/Analyst LCS: NT3/JA Sample Amount LCS: 5.00 mL
LCSD: NT3/JA LCSD: 5.00 mL
Date Analyzed LCS: 05/04/04 10:42 Purge Volume LCS: 5.0 mL
LCSD: 05/04/04 11:11 LCSD: 5.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	42.0	50.0	84.0%	43.8	50.0	87.6%	4.2%
Bromomethane	34.5	50.0	69.0%	37.0	50.0	74.0%	7.0%
Chloroethane	49.0	50.0	98.0%	50.4	50.0	101%	2.8%
Methylene Chloride	47.8	50.0	95.6%	49.0	50.0	98.0%	2.5%
Acetone	210	250	84.0%	215	250	86.0%	2.4%
Carbon Disulfide	43.6	50.0	87.2%	45.9	50.0	91.8%	5.1%
1,1-Dichloroethene	45.8	50.0	91.6%	48.3	50.0	96.6%	5.3%
1,1-Dichloroethane	48.0	50.0	96.0%	50.3	50.0	101%	4.7%
trans-1,2-Dichloroethene	46.6	50.0	93.2%	48.9	50.0	97.8%	4.8%
cis-1,2-Dichloroethene	48.8	50.0	97.6%	50.7	50.0	101%	3.8%
Chloroform	48.4	50.0	96.8%	50.8	50.0	102%	4.8%
1,2-Dichloroethane	47.9	50.0	95.8%	49.8	50.0	99.6%	3.9%
2-Butanone	216	250	86.4%	228	250	91.2%	5.4%
1,1,1-Trichloroethane	47.3	50.0	94.6%	49.1	50.0	98.2%	3.7%
Carbon Tetrachloride	47.8	50.0	95.6%	49.5	50.0	99.0%	3.5%
Vinyl Acetate	41.2	50.0	82.4%	44.4	50.0	88.8%	7.5%
Bromodichloromethane	48.1	50.0	96.2%	51.0	50.0	102%	5.9%
1,2-Dichloropropane	48.1	50.0	96.2%	50.4	50.0	101%	4.7%
cis-1,3-Dichloropropene	47.2	50.0	94.4%	49.3	50.0	98.6%	4.4%
Trichloroethene	48.4	50.0	96.8%	50.5	50.0	101%	4.2%
Dibromochloromethane	47.3	50.0	94.6%	49.0	50.0	98.0%	3.5%
1,1,2-Trichloroethane	48.0	50.0	96.0%	50.1	50.0	100%	4.3%
Benzene	48.0	50.0	96.0%	50.4	50.0	101%	4.9%
trans-1,3-Dichloropropene	47.7	50.0	95.4%	49.9	50.0	99.8%	4.5%
2-Chloroethylvinylether	38.3	50.0	76.6%	41.6	50.0	83.2%	8.3%
Bromoform	47.7	50.0	95.4%	49.3	50.0	98.6%	3.3%
4-Methyl-2-Pentanone (MIBK)	252	250	101%	267	250	107%	5.8%
2-Hexanone	240	250	96.0%	249	250	99.6%	3.7%
Tetrachloroethene	45.9	50.0	91.8%	46.6	50.0	93.2%	1.5%
1,1,2,2-Tetrachloroethane	47.6	50.0	95.2%	49.9	50.0	99.8%	4.7%
Toluene	49.9	50.0	99.8%	52.0	50.0	104%	4.1%
Chlorobenzene	47.1	50.0	94.2%	48.4	50.0	96.8%	2.7%
Ethylbenzene	49.9	50.0	99.8%	51.0	50.0	102%	2.2%
Styrene	51.1	50.0	102%	52.6	50.0	105%	2.9%
Trichlorofluoromethane	50.1	50.0	100%	50.2	50.0	100%	0.2%
1,1,2-Trichloro-1,2,2-trifl	49.2	50.0	98.4%	51.2	50.0	102%	4.0%
m,p-Xylene	99.6	100	99.6%	102	100	102%	2.4%
o-Xylene	49.6	50.0	99.2%	50.7	50.0	101%	2.2%
1,2-Dichlorobenzene	48.5	50.0	97.0%	49.9	50.0	99.8%	2.8%
1,3-Dichlorobenzene	48.1	50.0	96.2%	50.0	50.0	100%	3.9%
1,4-Dichlorobenzene	47.7	50.0	95.4%	48.7	50.0	97.4%	2.1%
Acrolein	184	250	73.6%	192	250	76.8%	4.3%
Methyl Iodide	36.8	50.0	73.6%	40.5	50.0	81.0%	9.6%
Bromoethane	44.4	50.0	88.8%	47.9	50.0	95.8%	7.6%
Acrylonitrile	41.1	50.0	82.2%	43.1	50.0	86.2%	4.8%
1,1-Dichloropropene	46.4	50.0	92.8%	48.8	50.0	97.6%	5.0%
Dibromomethane	47.9	50.0	95.8%	50.1	50.0	100%	4.5%
1,1,1,2-Tetrachloroethane	46.1	50.0	92.2%	47.4	50.0	94.8%	2.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: LCS-050404**
 LCS/LCSD

Lab Sample ID: LCS-050404 QC Report No: GO20-Landau Associates
LIMS ID: 04-6158 Project: POA Uplands
Matrix: Water 529009.311
Date Analyzed: 05/04/04 10:42 Purge Volume: 5.0 mL
LCSD: 05/04/04 11:11 LCSD: 5.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromo-3-chloropropane	42.4	50.0	84.8%	45.2	50.0	90.4%	6.4%
1,2,3-Trichloropropane	47.4	50.0	94.8%	48.9	50.0	97.8%	3.1%
trans-1,4-Dichloro-2-butene	48.3	50.0	96.6%	50.8	50.0	102%	5.0%
1,3,5-Trimethylbenzene	52.0	50.0	104%	53.4	50.0	107%	2.7%
1,2,4-Trimethylbenzene	52.0	50.0	104%	53.6	50.0	107%	3.0%
Hexachlorobutadiene	46.5	50.0	93.0%	45.8	50.0	91.6%	1.5%
Ethylene Dibromide	47.0	50.0	94.0%	49.5	50.0	99.0%	5.2%
Bromochloromethane	49.3	50.0	98.6%	51.8	50.0	104%	4.9%
2,2-Dichloropropane	45.7	50.0	91.4%	47.8	50.0	95.6%	4.5%
1,3-Dichloropropane	47.3	50.0	94.6%	50.0	50.0	100%	5.5%
Isopropylbenzene	50.7	50.0	101%	52.3	50.0	105%	3.1%
n-Propylbenzene	52.7	50.0	105%	53.8	50.0	108%	2.1%
Bromobenzene	48.2	50.0	96.4%	50.0	50.0	100%	3.7%
2-Chlorotoluene	49.4	50.0	98.8%	50.7	50.0	101%	2.6%
4-Chlorotoluene	49.9	50.0	99.8%	51.2	50.0	102%	2.6%
tert-Butylbenzene	50.4	50.0	101%	51.9	50.0	104%	2.9%
sec-Butylbenzene	50.5	50.0	101%	51.7	50.0	103%	2.3%
4-Isopropyltoluene	50.6	50.0	101%	51.8	50.0	104%	2.3%
n-Butylbenzene	52.1	50.0	104%	52.5	50.0	105%	0.8%
1,2,4-Trichlorobenzene	46.2	50.0	92.4%	47.8	50.0	95.6%	3.4%
Naphthalene	47.6	50.0	95.2%	49.9	50.0	99.8%	4.7%
1,2,3-Trichlorobenzene	47.6	50.0	95.2%	49.3	50.0	98.6%	3.5%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.
LCS spike recovery is evaluated using only the nine regulated compounds noted in the ARI LQAP. The other LCS spike compound recoveries are advisory and used for analytical troubleshooting should any of the nine regulated compounds be out of control.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	120%	119%
d8-Toluene	119%	120%
Bromofluorobenzene	116%	115%
d4-1,2-Dichlorobenzene	118%	117%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: MW-101**
Page 1 of 2 **SAMPLE**

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/10/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Instrument/Analyst: NT3/JA
Date Analyzed: 05/04/04 13:24

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result
74-87-3	Chloromethane	1.0	< 1.0 U
74-83-9	Bromomethane	1.0	< 1.0 U
75-00-3	Chloroethane	1.0	< 1.0 U
75-09-2	Methylene Chloride	2.0	< 2.0 U
67-64-1	Acetone	5.0	< 5.0 U
75-15-0	Carbon Disulfide	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0 U
67-66-3	Chloroform	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	1.0	< 1.0 U
78-93-3	2-Butanone	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	1.0	< 1.0 U
108-05-4	Vinyl Acetate	5.0	< 5.0 U
75-27-4	Bromodichloromethane	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0 U
79-01-6	Trichloroethene	1.0	< 1.0 U
124-48-1	Dibromochloromethane	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0 U
71-43-2	Benzene	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0 U
75-25-2	Bromoform	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0 U
591-78-6	2-Hexanone	5.0	< 5.0 U
127-18-4	Tetrachloroethene	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
108-90-7	Chlorobenzene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
100-42-5	Styrene	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0 U
1330-20-7	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
107-02-8	Acrolein	50	< 50 U
74-88-4	Methyl Iodide	1.0	< 1.0 U
74-96-4	Bromoethane	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	< 1.0 U
563-58-6	1,1-Dichloropropene	1.0	< 1.0 U
74-95-3	Dibromomethane	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: MW-101**
 SAMPLE

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Date Analyzed: 05/04/04 13:24

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

CAS Number	Analyte	RL	Result
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
106-93-4	Ethylene Dibromide	1.0	< 1.0 U
74-97-5	Bromochloromethane	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	1.0	< 1.0 U
98-82-8	Isopropylbenzene	1.0	< 1.0 U
103-65-1	n-Propylbenzene	1.0	< 1.0 U
108-86-1	Bromobenzene	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	1.0	< 1.0 U
104-51-8	n-Butylbenzene	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0 U
91-20-3	Naphthalene	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	128%
d8-Toluene	119%
Bromofluorobenzene	117%
d4-1,2-Dichlorobenzene	127%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: MW-103**
Page 1 of 2 **SAMPLE**

Lab Sample ID: GO20B
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/10/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Instrument/Analyst: NT3/JA
Date Analyzed: 05/04/04 13:51

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result
74-87-3	Chloromethane	1.0	< 1.0 U
74-83-9	Bromomethane	1.0	< 1.0 U
75-00-3	Chloroethane	1.0	< 1.0 U
75-09-2	Methylene Chloride	2.0	< 2.0 U
67-64-1	Acetone	5.0	< 5.0 U
75-15-0	Carbon Disulfide	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0 U
67-66-3	Chloroform	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	1.0	< 1.0 U
78-93-3	2-Butanone	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	1.0	< 1.0 U
108-05-4	Vinyl Acetate	5.0	< 5.0 U
75-27-4	Bromodichloromethane	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0 U
79-01-6	Trichloroethene	1.0	< 1.0 U
124-48-1	Dibromochloromethane	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0 U
71-43-2	Benzene	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0 U
75-25-2	Bromoform	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0 U
591-78-6	2-Hexanone	5.0	< 5.0 U
127-18-4	Tetrachloroethene	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
108-90-7	Chlorobenzene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
100-42-5	Styrene	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0 U
1330-20-7	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
107-02-8	Acrolein	50	< 50 U
74-88-4	Methyl Iodide	1.0	< 1.0 U
74-96-4	Bromoethane	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	< 1.0 U
563-58-6	1,1-Dichloropropene	1.0	< 1.0 U
74-95-3	Dibromomethane	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: MW-103**
 SAMPLE

Lab Sample ID: GO20B
LIMS ID: 04-6159
Matrix: Water
Date Analyzed: 05/04/04 13:51

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

CAS Number	Analyte	RL	Result
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
106-93-4	Ethylene Dibromide	1.0	< 1.0 U
74-97-5	Bromochloromethane	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	1.0	< 1.0 U
98-82-8	Isopropylbenzene	1.0	< 1.0 U
103-65-1	n-Propylbenzene	1.0	< 1.0 U
108-86-1	Bromobenzene	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	1.0	< 1.0 U
104-51-8	n-Butylbenzene	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0 U
91-20-3	Naphthalene	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	127%
d8-Toluene	120%
Bromofluorobenzene	116%
d4-1,2-Dichlorobenzene	126%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: MW-111**
Page 1 of 2 **SAMPLE**

Lab Sample ID: GO20C
LIMS ID: 04-6160
Matrix: Water
Data Release Authorized:
Reported: 05/10/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Instrument/Analyst: NT3/JA
Date Analyzed: 05/04/04 14:19

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result
74-87-3	Chloromethane	1.0	< 1.0 U
74-83-9	Bromomethane	1.0	< 1.0 U
75-00-3	Chloroethane	1.0	< 1.0 U
75-09-2	Methylene Chloride	2.0	< 2.0 U
67-64-1	Acetone	5.0	< 5.0 U
75-15-0	Carbon Disulfide	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0 U
67-66-3	Chloroform	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	1.0	< 1.0 U
78-93-3	2-Butanone	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	1.0	< 1.0 U
108-05-4	Vinyl Acetate	5.0	< 5.0 U
75-27-4	Bromodichloromethane	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0 U
79-01-6	Trichloroethene	1.0	< 1.0 U
124-48-1	Dibromochloromethane	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0 U
71-43-2	Benzene	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0 U
75-25-2	Bromoform	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0 U
591-78-6	2-Hexanone	5.0	< 5.0 U
127-18-4	Tetrachloroethene	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
108-90-7	Chlorobenzene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
100-42-5	Styrene	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0 U
1330-20-7	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
107-02-8	Acrolein	50	< 50 U
74-88-4	Methyl Iodide	1.0	< 1.0 U
74-96-4	Bromoethane	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	< 1.0 U
563-58-6	1,1-Dichloropropene	1.0	< 1.0 U
74-95-3	Dibromomethane	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method 8260B **Sample ID: MW-111**
Page 2 of 2 **SAMPLE**

Lab Sample ID: GO20C QC Report No: GO20-Landau Associates
LIMS ID: 04-6160 Project: POA Uplands
Matrix: Water 529009.311
Date Analyzed: 05/04/04 14:19

CAS Number	Analyte	RL	Result
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
106-93-4	Ethylene Dibromide	1.0	< 1.0 U
74-97-5	Bromochloromethane	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	1.0	< 1.0 U
98-82-8	Isopropylbenzene	1.0	< 1.0 U
103-65-1	n-Propylbenzene	1.0	< 1.0 U
108-86-1	Bromobenzene	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	1.0	< 1.0 U
104-51-8	n-Butylbenzene	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0 U
91-20-3	Naphthalene	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	128%
d8-Toluene	120%
Bromofluorobenzene	115%
d4-1,2-Dichlorobenzene	128%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-042904**
Page 1 of 1 **METHOD BLANK**

Lab Sample ID: MB-042904
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/06/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/JA
Date Analyzed: 04/29/04 10:46

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result
75-01-4	Vinyl Chloride	0.020	< 0.020 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	110%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Selected Ion Monitoring GC/MS **Sample ID: Trip Blank**
Page 1 of 1 **SAMPLE**

Lab Sample ID: GO20E
LIMS ID: 04-6162
Matrix: WATER
Data Release Authorized:
Reported: 05/06/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled:
Date Received: 04/21/04

Instrument/Analyst: NT5/JA
Date Analyzed: 04/29/04 14:27

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result
75-01-4	Vinyl Chloride	0.020	< 0.020 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.5%

ANALYTICAL RESOURCES INCORPORATED

SW8260-SIM SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Client ID	DCA	TOT OUT
MW-101	100%	0
MB-042904	110%	0
LCS-042904	90.2%	0
LCSD-042904	110%	0
MW-103	92.0%	0
MW-111	106%	0
Trip Blank	95.5%	0

	LCS/MB LIMITS	QC LIMITS
(DCA) = d4-1,2-Dichloroethane	(76-119)	(63-135)

Prep Method: SW5030
Log Number Range: 04-6158 to 04-6162

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-042904**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-042904 QC Report No: GO20-Landau Associates
LIMS ID: 04-6159 Project: POA Uplands
Matrix: Water 529009.311
Data Release Authorized: Date Sampled: NA
Reported: 05/06/04 Date Received: NA

Instrument/Analyst LCS: NT5/JA Sample Amount LCS: 10.0 mL
LCSD: NT5/JA LCSD: 10.0 mL
Date Analyzed LCS: 04/29/04 09:46 Purge Volume LCS: 10.0 mL
LCSD: 04/29/04 10:16 LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Vinyl Chloride	0.518	0.500	104%	0.438	0.500	87.6%	16.7%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

SIM Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	90.2%	110%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Selected Ion Monitoring GC/MS **Sample ID: MW-101**
Page 1 of 1 **SAMPLE**

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/06/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Instrument/Analyst: NT5/JA
Date Analyzed: 04/29/04 14:57

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result
75-01-4	Vinyl Chloride	0.10	< 0.10 Y

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Selected Ion Monitoring GC/MS **Sample ID: MW-103**
Page 1 of 1 **SAMPLE**

Lab Sample ID: GO20B
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/06/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Instrument/Analyst: NT5/JA
Date Analyzed: 04/29/04 15:26

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result
75-01-4	Vinyl Chloride	0.020	< 0.020 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	92.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Selected Ion Monitoring GC/MS
Page 1 of 1

Sample ID: MW-111 SAMPLE

Lab Sample ID: GO20C
LIMS ID: 04-6160
Matrix: Water
Data Release Authorized:
Reported: 05/06/04

QC Report No: GO20-Landau Associates
Project: POA Uplands 529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Instrument/Analyst: NT5/JA
Date Analyzed: 04/29/04 15:56

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result
75-01-4	Vinyl Chloride	0.020	< 0.020 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270C GC/MS

Sample ID: MB-042704
METHOD BLANK

Lab Sample ID: MB-042704
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Date Extracted: 04/27/04
Date Analyzed: 05/11/04 19:24
Instrument/Analyst: NT4/Van

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	2.0	< 2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	2.0	< 2.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	2.0	< 2.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	3.0	< 3.0 U
87-68-3	Hexachlorobutadiene	2.0	< 2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0	< 2.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	6.0	< 6.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	25	< 25 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270C GC/MS **Sample ID: MB-042704**
 METHOD BLANK

Lab Sample ID: MB-042704 QC Report No: GO20-Landau Associates
LIMS ID: 04-6158 Project: POA Uplands
Matrix: Water 529009.311
Date Analyzed: 05/11/04 19:24

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15	< 15 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-05-1	Guaiacol	2.0	< 2.0 U
2460-49-3	4,5-Dichloro-2-Methoxyphenol	5.0	< 5.0 U
2668-24-8	4,5,6-Trichloroguaiacol	5.0	< 5.0 U
57057-83-7	3,4,5-Trichloroguaiacol	7.5	< 7.5 U
2539-17-5	Tetrachloroguaiacol	7.5	< 7.5 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	88.1%	2-Fluorobiphenyl	80.5%
d14-p-Terphenyl	91.6%	d4-1,2-Dichlorobenzene	65.1%
d5-Phenol	79.2%	2-Fluorophenol	76.2%
2,4,6-Tribromophenol	82.6%	d4-2-Chlorophenol	80.4%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-042704	88.1%	80.5%	91.6%	65.1%	79.2%	76.2%	82.6%	80.4%	0
LCS-042704	87.7%	81.1%	93.3%	65.6%	79.9%	77.4%	90.3%	83.7%	0
MW-101	80.4%	75.6%	78.6%	55.8%	75.1%	68.8%	90.4%	77.1%	0
MW-103	81.6%	73.0%	82.4%	54.5%	80.0%	74.5%	86.5%	78.8%	0
MW-111	77.4%	72.8%	84.5%	53.7%	72.3%	62.4%	88.3%	73.2%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(44-107)	(38-111)
(FBP) = 2-Fluorobiphenyl	(43-99)	(30-109)
(TPH) = d14-p-Terphenyl	(44-123)	(37-113)
(DCB) = d4-1,2-Dichlorobenzene	(36-88)	(35-88)
(PHL) = d5-Phenol	(47-101)	(42-98)
(2FP) = 2-Fluorophenol	(44-102)	(40-99)
(TBP) = 2,4,6-Tribromophenol	(38-116)	(27-136)
(2CP) = d4-2-Chlorophenol	(50-102)	(47-101)

Prep Method: SW3520C
Log Number Range: 04-6158 to 04-6160

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270C GC/MS
Page 1 of 1

Sample ID: LCS-042704
LAB CONTROL

Lab Sample ID: LCS-042704
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/11/04 20:00
Instrument/Analyst: NT4/Van
GPC Cleanup: NO

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Phenol	29.5	37.5	78.7%
2-Chlorophenol	31.2	37.5	83.2%
1,4-Dichlorobenzene	15.8	25.0	63.2%
N-Nitroso-Di-N-Propylamine	17.6	25.0	70.4%
1,2,4-Trichlorobenzene	17.7	25.0	70.8%
4-Chloro-3-methylphenol	36.9	37.5	98.4%
Acenaphthene	21.4	25.0	85.6%
4-Nitrophenol	27.6	37.5	73.6%
2,4-Dinitrotoluene	22.1	25.0	88.4%
Pentachlorophenol	43.1	37.5	115%
Pyrene	23.1	25.0	92.4%
Guaiacol	33.8	37.5	90.1%
4,5-Dichloro-2-Methoxyphenol	34.4	37.5	91.7%
4,5,6-Trichloroguaiacol	35.7	37.5	95.2%
3,4,5-Trichloroguaiacol	43.4	37.5	116%
Tetrachloroguaiacol	79.6	75.0	106%

Semivolatile Surrogate Recovery

d5-Nitrobenzene	87.7%
2-Fluorobiphenyl	81.1%
d14-p-Terphenyl	93.3%
d4-1,2-Dichlorobenzene	65.6%
d5-Phenol	79.9%
2-Fluorophenol	77.4%
2,4,6-Tribromophenol	90.3%
d4-2-Chlorophenol	83.7%

Results reported in µg/L

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270C GC/MS **Sample ID: MW-101**
 SAMPLE

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/11/04 20:37
Instrument/Analyst: NT4/Van

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	2.0	< 2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	2.0	< 2.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	**4-Methylphenol**	**1.0**	**4.3**
621-64-7	N-Nitroso-Di-N-Propylamine	2.0	< 2.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	3.0	< 3.0 U
87-68-3	Hexachlorobutadiene	2.0	< 2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0	< 2.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	6.0	< 6.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	25	< 25 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270C GC/MS **Sample ID: MW-101**
 SAMPLE

Lab Sample ID: GO20A QC Report No: GO20-Landau Associates
LIMS ID: 04-6158 Project: POA Uplands
Matrix: Water 529009.311
Date Analyzed: 05/11/04 20:37

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15	< 15 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-05-1	Guaiacol	2.0	< 2.0 U
2460-49-3	4,5-Dichloro-2-Methoxyphenol	5.0	< 5.0 U
2668-24-8	4,5,6-Trichloroguaiacol	5.0	< 5.0 U
57057-83-7	3,4,5-Trichloroguaiacol	7.5	< 7.5 U
2539-17-5	Tetrachloroguaiacol	7.5	< 7.5 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	80.4%	2-Fluorobiphenyl	75.6%
d14-p-Terphenyl	78.6%	d4-1,2-Dichlorobenzene	55.8%
d5-Phenol	75.1%	2-Fluorophenol	68.8%
2,4,6-Tribromophenol	90.4%	d4-2-Chlorophenol	77.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270C GC/MS

Sample ID: MW-103
SAMPLE

Lab Sample ID: GO20B
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/11/04 21:13
Instrument/Analyst: NT4/Van

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	2.0	< 2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	2.0	< 2.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	2.0	< 2.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	3.0	< 3.0 U
87-68-3	Hexachlorobutadiene	2.0	< 2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0	< 2.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	6.0	< 6.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	25	< 25 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270C GC/MS

Sample ID: MW-103
SAMPLE

Lab Sample ID: GO20B
LIMS ID: 04-6159
Matrix: Water
Date Analyzed: 05/11/04 21:13

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15	< 15 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-05-1	Guaiacol	2.0	< 2.0 U
2460-49-3	4,5-Dichloro-2-Methoxyphenol	5.0	< 5.0 U
2668-24-8	4,5,6-Trichloroguaiacol	5.0	< 5.0 U
57057-83-7	3,4,5-Trichloroguaiacol	7.5	< 7.5 U
2539-17-5	Tetrachloroguaiacol	7.5	< 7.5 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	81.6%	2-Fluorobiphenyl	73.0%
d14-p-Terphenyl	82.4%	d4-1,2-Dichlorobenzene	54.5%
d5-Phenol	80.0%	2-Fluorophenol	74.5%
2,4,6-Tribromophenol	86.5%	d4-2-Chlorophenol	78.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270C GC/MS

Sample ID: MW-111
SAMPLE

Lab Sample ID: GO20C
LIMS ID: 04-6160
Matrix: Water
Data Release Authorized:
Reported: 05/12/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/11/04 21:49
Instrument/Analyst: NT4/Van

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	2.0	< 2.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	2.0	< 2.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	2.0	< 2.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	3.0	< 3.0 U
87-68-3	Hexachlorobutadiene	2.0	< 2.0 U
59-50-7	4-Chloro-3-methylphenol	2.0	< 2.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	6.0	< 6.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	25	< 25 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270C GC/MS

Sample ID: MW-111
SAMPLE

Lab Sample ID: GO20C
LIMS ID: 04-6160
Matrix: Water
Date Analyzed: 05/11/04 21:49

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15	< 15 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-05-1	Guaiacol	2.0	< 2.0 U
2460-49-3	4,5-Dichloro-2-Methoxyphenol	5.0	< 5.0 U
2668-24-8	4,5,6-Trichloroguaiacol	5.0	< 5.0 U
57057-83-7	3,4,5-Trichloroguaiacol	7.5	< 7.5 U
2539-17-5	Tetrachloroguaiacol	7.5	< 7.5 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	77.4%	2-Fluorobiphenyl	72.8%
d14-p-Terphenyl	84.5%	d4-1,2-Dichlorobenzene	53.7%
d5-Phenol	72.3%	2-Fluorophenol	62.4%
2,4,6-Tribromophenol	88.3%	d4-2-Chlorophenol	73.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
SW8270C SIM GC/MS

Sample ID: MB-042704
METHOD BLANK

Lab Sample ID: MB-042704
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/18/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Date Extracted: 04/27/04
Date Analyzed: 05/14/04 16:00
Instrument/Analyst: NT2/Van

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery	
d10-2-Methylnaphthalene	72.7%
d14-Dibenzo(a,h)anthracene	69.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Client ID	MNP	DBA	TOT OUT
MB-042704	72.7%	69.7%	0
LCS-042704	74.0%	87.3%	0
MW-101	60.7%	42.7%	0
MW-103	72.0%	68.3%	0
MW-111	75.3%	69.3%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(48-107)	(34-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(37-128)	(14-141)

Prep Method: SW3520C
Log Number Range: 04-6158 to 04-6160

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270C SIM GC/MS

Sample ID: LCS-042704
LAB CONTROL

Lab Sample ID: LCS-042704
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/18/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/14/04 16:30
Instrument/Analyst: NT2/Van

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Chrysene	0.257	0.300	85.7%
Benzo(k)fluoranthene	0.210	0.300	70.0%

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	74.0%
d14-Dibenzo(a,h)anthracen	87.3%

Results reported in µg/L

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
SW8270C SIM GC/MS

Sample ID: MW-101
SAMPLE

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized: MW
Reported: 05/18/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/14/04 16:52
Instrument/Analyst: NT2/Van

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery	
d10-2-Methylnaphthalene	60.7%
d14-Dibenzo(a,h)anthracene	42.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
SW8270C SIM GC/MS

Sample ID: MW-103
SAMPLE

Lab Sample ID: GO20B
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/18/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/14/04 17:14
Instrument/Analyst: NT2/Van

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery	
d10-2-Methylnaphthalene	72.0%
d14-Dibenzo(a,h)anthracene	68.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
SW8270C SIM GC/MS

Sample ID: MW-111
SAMPLE

Lab Sample ID: GO20C
LIMS ID: 04-6160
Matrix: Water
Data Release Authorized:
Reported: 05/18/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/14/04 17:37
Instrument/Analyst: NT2/Van

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery	
d10-2-Methylnaphthalene	75.3%
d14-Dibenzo(a,h)anthracene	69.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Resin Acids by GC/MS
Page 1 of 1

Sample No: Method Blank

Lab Sample ID: GO20MB
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/20/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Date extracted: 04/27/04
Date analyzed: 05/19/04
Instrument: NT1

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
127-27-5	Pimaric Acid	2.0 U
471-74-9	Sandaracopimaric Acid	2.0 U
5835-26-7	Isopimaric Acid	2.0 U
1945-53-5	Palustric Acid	2.0 U
1740-19-8	Dehydroabietic Acid	2.0 U
514-10-3	Abietic Acid	2.0 U
471-77-2	Neoabietic Acid	2.0 U
	14-Chlorodehydroabietic Acid	2.0 U
	12-Chlorodehydroabietic Acid	2.0 U
57055-39-7	Dichlorodehydroabietic Acid	2.0 U

Resin Acids Surrogate Recovery

O-Methyl Podocarpic Acid 80.2%

ANALYTICAL RESOURCES INCORPORATED

WATER RESIN ACID SURROGATE SUMMARY

Matrix: Water

QC Report No: GO20
Project: POA Uplands
529009.311

LIMS ID	Lab ID	Client ID	OMPA #	TOT OUT
04-6158MB	042704MB	Method Blank	80.2%	0
04-6158SB	042704SB	Lab Control	84.1%	0
04-6158	GO20A	MW-101	84.0%	0
04-6159	GO20B	MW-103	72.2%	0
04-6160	GO20C	MW-111	81.2%	0

	QC LIMITS
(OMPA) = o-Methyl Podocarpic Acid	(30-150)

\# Column to be used to flag recovery values

* Values outside of required QC limits

D Surrogate Compound diluted out

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Resin Acids by GC/MS

Lab Sample ID: GO20SB
LIMS ID: 04-6158
Matrix: Water

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Data Release Authorized:
Reported: 05/20/04

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE ADDED	% RECOVERY
Pimaric Acid	43.0	50.0	86.0%
Isopimaric Acid	23.8	50.0	47.6%
Dehydroabietic Acid	41.7	50.0	83.4%
Abietic Acid	24.2	250	9.68%

Spike Blank Surrogate Recovery

O-Methyl Podocarpic Acid 84.1%

Values reported in ug/L

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Resin Acids by GC/MS
Page 1 of 1

Sample No: MW-101

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/20/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date extracted: 04/27/04
Date analyzed: 05/19/04
Instrument: NT1

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
127-27-5	Pimaric Acid	2.0 U
471-74-9	Sandaracopimaric Acid	2.0 U
5835-26-7	Isopimaric Acid	2.0 U
1945-53-5	Palustric Acid	2.0 U
1740-19-8	**Dehydroabietic Acid**	**31**
514-10-3	Abietic Acid	2.0 U
471-77-2	Neoabietic Acid	2.0 U
	14-Chlorodehydroabietic Acid	2.0 U
	12-Chlorodehydroabietic Acid	2.0 U
57055-39-7	Dichlorodehydroabietic Acid	2.0 U

Resin Acids Surrogate Recovery

O-Methyl Podocarpic Acid 84.0%

ORGANICS ANALYSIS DATA SHEET
Resin Acids by GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-103

Lab Sample ID: GO20B
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/20/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date extracted: 04/27/04
Date analyzed: 05/19/04
Instrument: NT1

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
127-27-5	Pimaric Acid	2.0 U
471-74-9	Sandaracopimaric Acid	2.0 U
5835-26-7	Isopimaric Acid	2.0 U
1945-53-5	Palustric Acid	2.0 U
1740-19-8	Dehydroabietic Acid	2.0 U
514-10-3	Abietic Acid	2.0 U
471-77-2	Neoabietic Acid	2.0 U
	14-Chlorodehydroabietic Acid	2.0 U
	12-Chlorodehydroabietic Acid	2.0 U
57055-39-7	Dichlorodehydroabietic Acid	2.0 U

Resin Acids Surrogate Recovery

O-Methyl Podocarpic Acid 72.2%

ORGANICS ANALYSIS DATA SHEET
Resin Acids by GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-111

Lab Sample ID: GO20C
LIMS ID: 04-6160
Matrix: Water
Data Release Authorized:
Reported: 05/20/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date extracted: 04/27/04
Date analyzed: 05/19/04
Instrument: NT1

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1:1

CAS Number	Analyte	ug/L
127-27-5	Pimaric Acid	2.0 U
471-74-9	Sandaracopimaric Acid	2.0 U
5835-26-7	Isopimaric Acid	2.0 U
1945-53-5	Palustric Acid	2.0 U
1740-19-8	Dehydroabietic Acid	2.0 U
514-10-3	Abietic Acid	2.0 U
471-77-2	Neoabietic Acid	2.0 U
	14-Chlorodehydroabietic Acid	2.0 U
	12-Chlorodehydroabietic Acid	2.0 U
57055-39-7	Dichlorodehydroabietic Acid	2.0 U

Resin Acids Surrogate Recovery

O-Methyl Podocarpic Acid 81.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: MB-042704
METHOD BLANK

Lab Sample ID: MB-042704
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/13/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Date Extracted: 04/27/04
Date Analyzed: 05/12/04 11:28
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.015	< 0.015 U
53469-21-9	Aroclor 1242	0.015	< 0.015 U
12672-29-6	Aroclor 1248	0.015	< 0.015 U
11097-69-1	Aroclor 1254	0.015	< 0.015 U
11096-82-5	Aroclor 1260	0.015	< 0.015 U
11104-28-2	Aroclor 1221	0.015	< 0.015 U
11141-16-5	Aroclor 1232	0.015	< 0.015 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	85.8%
Tetrachlorometaxylene	65.1%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Client ID	DCBP	TCMX	TOT OUT
MB-042704	85.8%	65.1%	0
LCS-042704	80.9%	64.9%	0
MW-101	73.4%	64.1%	0
MW-103	68.2%	55.4%	0
MW-111	74.9%	62.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(42-138)	(25-134)
(TCMX) = Tetrachlorometaxylene	(40-109)	(25-118)

Prep Method: SW3510C
Log Number Range: 04-6158 to 04-6160

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: LCS-042704
LAB CONTROL

Lab Sample ID: LCS-042704
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/13/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/12/04 11:50
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

Analyte	Lab Control	Spike Added	Recovery
Aroclor 1016	0.680	1.00	68.0%
Aroclor 1260	0.755	1.00	75.5%

PCB Surrogate Recovery

Decachlorobiphenyl	80.9%
Tetrachlorometaxylene	64.9%

Results reported in µg/L

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: MW-101
SAMPLE

Lab Sample ID: GO20A
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/13/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/12/04 12:12
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 800 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.050	< 0.050 Y
53469-21-9	Aroclor 1242	0.019	< 0.019 U
12672-29-6	Aroclor 1248	0.019	< 0.019 U
11097-69-1	Aroclor 1254	0.019	< 0.019 U
11096-82-5	Aroclor 1260	0.019	< 0.019 U
11104-28-2	Aroclor 1221	0.062	< 0.062 Y
11141-16-5	Aroclor 1232	0.025	< 0.025 Y

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	73.4%
Tetrachlorometaxylene	64.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: MW-103
SAMPLE

Lab Sample ID: GO20B
LIMS ID: 04-6159
Matrix: Water
Data Release Authorized:
Reported: 05/13/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/12/04 12:35
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.015	< 0.015 U
53469-21-9	Aroclor 1242	0.015	< 0.015 U
12672-29-6	Aroclor 1248	0.015	< 0.015 U
11097-69-1	Aroclor 1254	0.015	< 0.015 U
11096-82-5	Aroclor 1260	0.025	< 0.025 Y
11104-28-2	Aroclor 1221	0.035	< 0.035 Y
11141-16-5	Aroclor 1232	0.015	< 0.015 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	68.2%
Tetrachlorometaxylene	55.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: MW-111
SAMPLE

Lab Sample ID: GO20C
LIMS ID: 04-6160
Matrix: Water
Data Release Authorized:
Reported: 05/13/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/27/04
Date Analyzed: 05/12/04 12:57
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 900 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.017	< 0.017 U
53469-21-9	Aroclor 1242	0.017	< 0.017 U
12672-29-6	Aroclor 1248	0.017	< 0.017 U
11097-69-1	Aroclor 1254	0.017	< 0.017 U
11096-82-5	Aroclor 1260	0.017	< 0.017 U
11104-28-2	Aroclor 1221	0.017	< 0.017 U
11141-16-5	Aroclor 1232	0.017	< 0.017 U

Reported in µg/L (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	74.9%
Tetrachlorometaxylene	62.8%

ANALYTICAL RESOURCES INCORPORATED

WATER TPHg SYSTEM MONITORING COMPOUND SUMMARY

Matrix: Water QC Report No: GO20

LIMS ID	Lab ID	Client ID	TFT	BB	TOT OUT
04-6158MB	043004MB	Method Blank	112%	116%	0
04-6158LC	043004LC	Lab Control	101%	108%	0
04-6158LCD	043004LCD	Lab Control Dup	102%	112%	0
04-6158	GO20A	MW-101	88.0%	105%	0
04-6159	GO20B	MW-103	99.8%	113%	0
04-6160	GO20C	MW-111	103%	113%	0
04-6162	GO20E	Trip Blank	90.0%	100%	0

	MB/LCS QC LIMITS	SAMPLE QC LIMITS
(TFT) = Trifluorotoluene	(74-126)	(31-139)
(BB) = Bromobenzene	(75-121)	(38-141)

Limits Updated - 04/26/04

\# Column to be used to flag recovery values

* Values outside of required QC limits

D System Monitoring Compound diluted out

FORM-II TPHg

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL GASOLINE RANGE HYDROCARBONS
NWTPHg Toluene to Naphthalene
Page 1 of 1
Matrix: Water

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Data Release Authorized:
Reported: 05/05/04

ARI ID	Client ID	Analysis Date	Range	Result mg/L
MB-043004	Method Blank	04/30/04	Gasoline	0.25 U
04-6158			HC ID	---
			Trifluorotoluene	112%
			Bromobenzene	116%
GO20A	MW-101	04/30/04	Gasoline	0.25 U
04-6158			HC ID	---
			Trifluorotoluene	88.0%
			Bromobenzene	105%
GO20B	MW-103	05/01/04	Gasoline	0.25 U
04-6159			HC ID	---
			Trifluorotoluene	99.8%
			Bromobenzene	113%
GO20C	MW-111	05/01/04	Gasoline	0.25 U
04-6160			HC ID	---
			Trifluorotoluene	103%
			Bromobenzene	113%
GO20E	Trip Blank	04/30/04	Gasoline	0.25 U
04-6162			HC ID	---
			Trifluorotoluene	90.0%
			Bromobenzene	100%

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHg - Toluene to Naphthalene
Page 1 of 1

Sample ID: LCS-043004
LCS/LCSD

Lab Sample ID: LCS-043004
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/05/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: PID2/PKC
LCSD: PID2/PKC
Date Analyzed LCS: 04/30/04 12:22
LCSD: 04/30/04 12:50

Sample Amount LCS: 5.0 mL
LCSD: 5.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	2.53	2.50	101%	2.53	2.50	101%	0.0%

Results reported in mg/L (ppm).
RPD calculated using sample concentrations per SW846.

Gasoline Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	101%	102%
Bromobenzene	108%	112%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 1
Matrix: Water

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Data Release Authorized:
Reported: 05/13/04

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result mg/L
MB-042604	Method Blank	04/26/04	05/12/04	1.0	Diesel	< 0.25 U
04-6158					Motor Oil	< 0.50 U
					HC ID	---
					o-Terphenyl	103%
GO20A	MW-101	04/26/04	05/12/04	1.0	Diesel	< 0.25 U
04-6158					Motor Oil	< 0.50 U
					HC ID	---
					o-Terphenyl	98.0%
GO20B	MW-103	04/26/04	05/12/04	1.0	Diesel	< 0.25 U
04-6159					Motor Oil	< 0.50 U
					HC ID	---
					o-Terphenyl	90.4%
GO20C	MW-111	04/26/04	05/12/04	1.0	Diesel	< 0.25 U
04-6160					Motor Oil	< 0.50 U
					HC ID	---
					o-Terphenyl	84.0%

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: GO20
Matrix: Water Project: POA Uplands
Date Received: 04/21/04 529009.311

ARI ID	Client ID	Client Amt	Final Vol	Prep Date
04-6158-042604MB1	Method Blank	500 mL	1.00 mL	04/26/04
04-6158-042604LCS1	Lab Control	500 mL	1.00 mL	04/26/04
04-6158-GO20A	MW-101	500 mL	1.00 mL	04/26/04
04-6159-GO20B	MW-103	500 mL	1.00 mL	04/26/04
04-6160-GO20C	MW-111	500 mL	1.00 mL	04/26/04

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Client ID	O-TER	TOT OUT
MB-042604	103%	0
LCS-042604	106%	0
MW-101	98.0%	0
MW-103	90.4%	0
MW-111	84.0%	0

	LCS/MB LIMITS	QC LIMITS
(O-TER) = o-Terphenyl	(55-110)	(32-116)

Prep Method: SW3510C
Log Number Range: 04-6158 to 04-6160

FORM-II TPHD

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-042604**
Page 1 of 1 **LAB CONTROL**

Lab Sample ID: LCS-042604
LIMS ID: 04-6158
Matrix: Water
Data Release Authorized:
Reported: 05/13/04

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311
Date Sampled: 04/20/04
Date Received: 04/21/04

Date Extracted: 04/26/04
Date Analyzed: 05/12/04 19:29
Instrument/Analyst: FID/ESJ

Sample Amount: 500 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	2.34	3.00	78.0%

TPHD Surrogate Recovery

o-Terphenyl	106%

Results reported in mg/L

ANALYTICAL RESOURCES INCORPORATED

HCID SURROGATE RECOVERY SUMMARY

Matrix: PRODUCT

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Client ID	O-TER	TOT OUT
050404MB	110%	0
050404LCS	161%*	1
MW-110-Product	2.0%*	1

	LCS/MB LIMITS	QC LIMITS
(O-TER) = o-Terphenyl	(68-122)	(45-136)

Prep Method: SW3550B
Log Number Range: 04-6161 to 04-6161

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID
Page 1 of 1
Matrix: PRODUCT

QC Report No: GO20-Landau Associates
Project: POA Uplands
529009.311

Data Release Authorized:
Reported: 05/12/04

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result mg/kg
MB-050404	Method Blank	05/04/04	05/08/04	1.0	Gas	< 2,500 U
04-6161					Diesel	< 2,500 U
					Oil	< 5,000 U
					o-Terphenyl	110%
GO20D	MW-110-Product	05/04/04	05/08/04	1.0	Gas	< 2,400 U
04-6161					**Diesel**	**200,000**
					Oil	**390,000**
					o-Terphenyl	2.0%

Gas value based on total peaks in the range from Toluene to C12.
Diesel value based on the total peaks in the range from C12 to C24.
Oil value based on the total peaks in the range from C24 to C38.

ARI096.51

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 04\21\04

ANALYTICAL RESOURCES INCORPORATED

ARI Project: GO20

Laboratory: Aquatic Research, Inc
Lab Contact: Steve Lazoff
Lab Address: 3927 Aurora Ave N.
Seattle, WA 98103
Phone: 206-632-2715
Fax: 206-632-2417

ARI Client: Landau Associates
Project ID: 529009-311
ARI PMgr: Mary Lou Fox
Phone: (206) 340-2866 Ext
Fax: (206) 695-6201

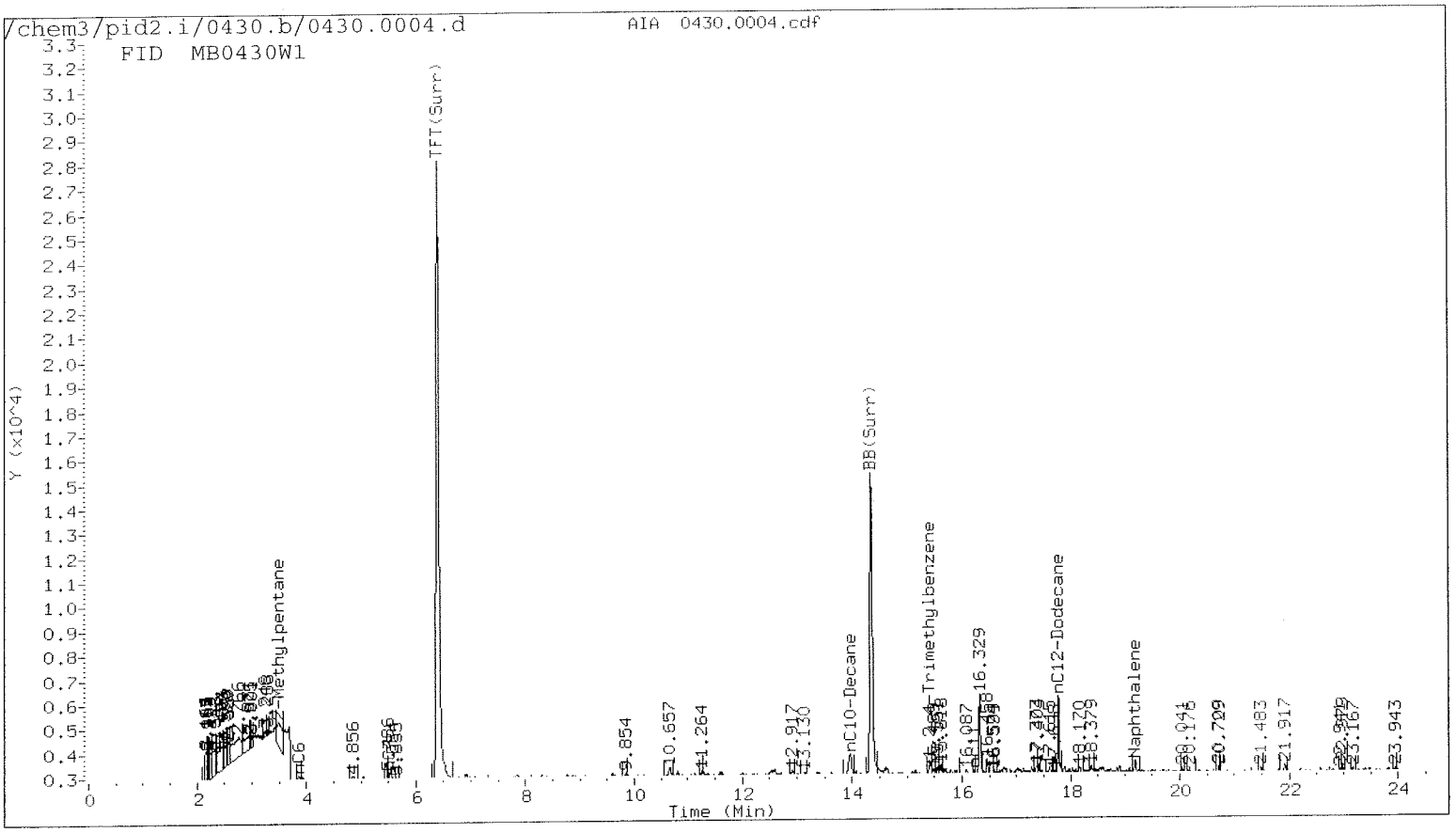
Analytical Protocol: In-house
Special Instructions:

Requested Turn Around: ~~05/05/04~~ std
Fax Results (Y/N): **YES**

Limits of Liability. *Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or sucessors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.*

ARI Sample ID	Client Sample ID/ Add'l Sample ID	Sampled	Matrix	Bottles	Analyses
04-6163-GO20F	MW-101	4/20/04	WATER	1	Tannins & Lignins
Special Instructions: NONE					
04-6164-GO20G	MW-103	4/20/04	WATER	1	Tannins & Lignins
Special Instructions: NONE					
04-6165-GO20H	MW-111	4/20/04	WATER	1	Tannins & Lignins
Special Instructions: NONE					

Carrier		Airbill		Date
UPS		832695034289 5795		4/22/04
Relinquished by	Company	Date		Time
	ARI	4/22/04		1600
Received by	Company	Date		Time
	DMC	4/23/04		1600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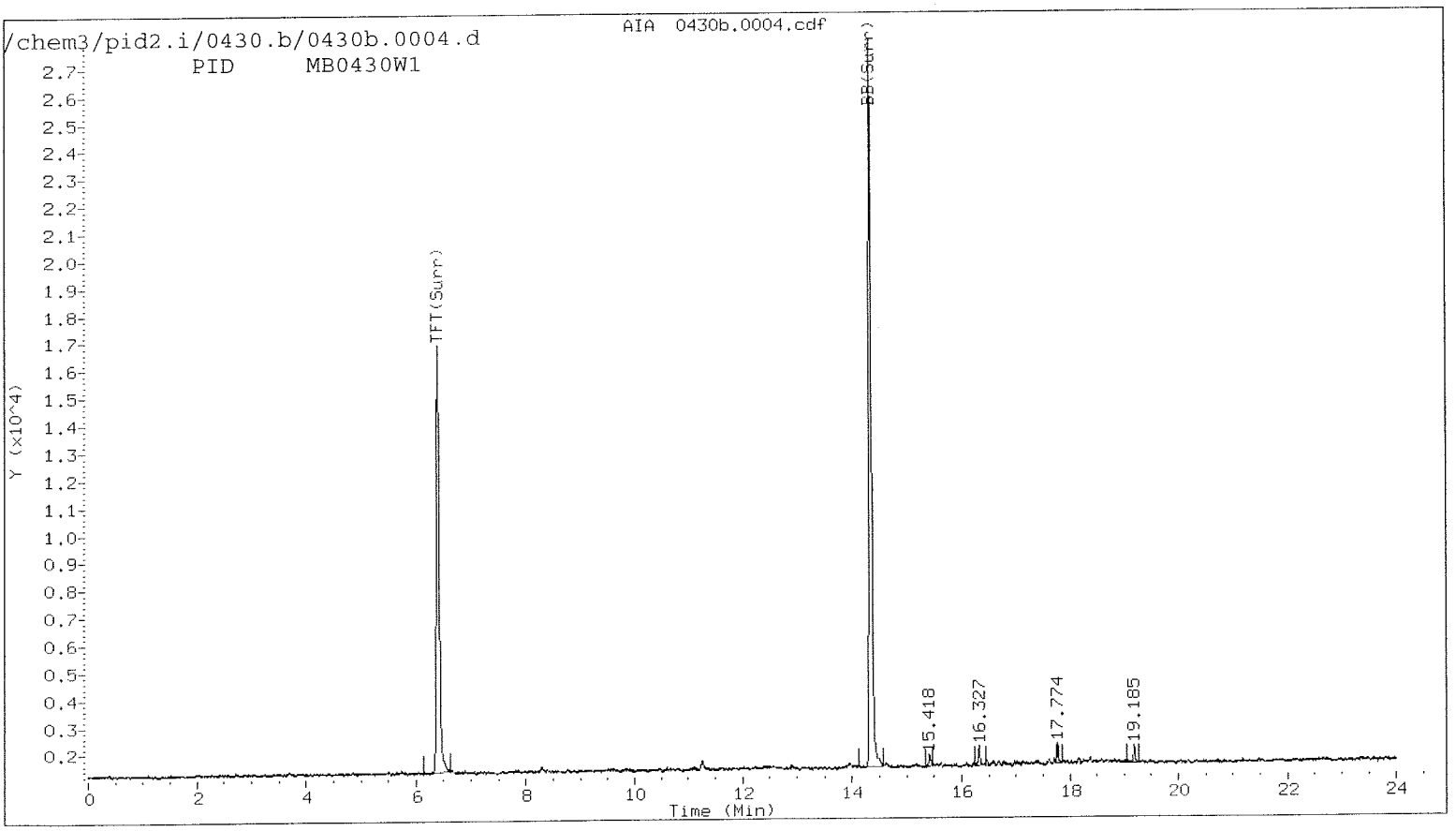
FID MB0430W1
TFT(Surr)
BB(Surr)
nC10-Decane
1,2,4-Trimethylbenzene
nC12-Dodecane
Naphthalene
2-Methylpentane
nC6
Y (x10^4)
Time (Min)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TFT(Surr)
BB(Surr)
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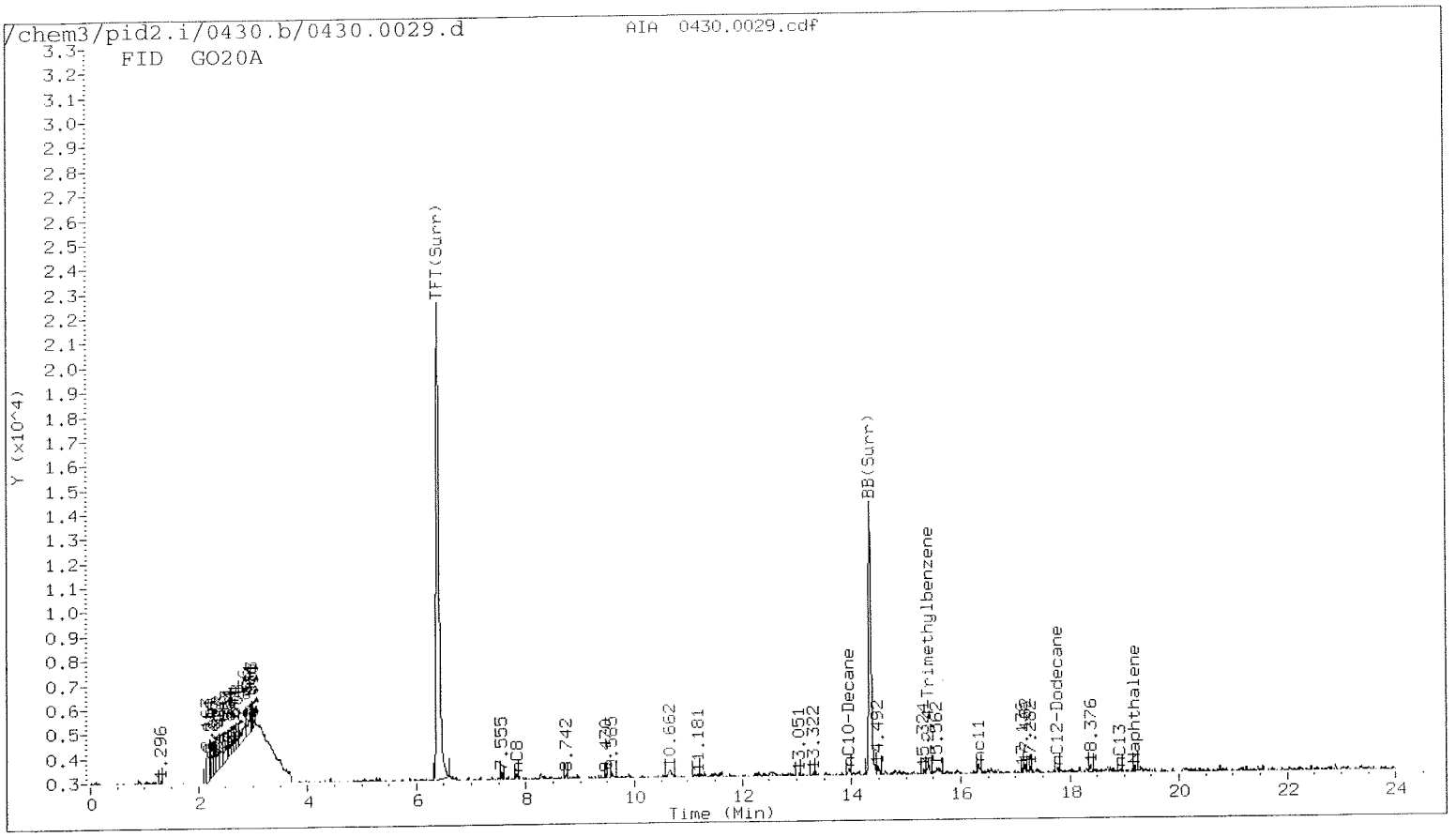
16.327
17.774
19.185
Y (x10^4)
Time (Min)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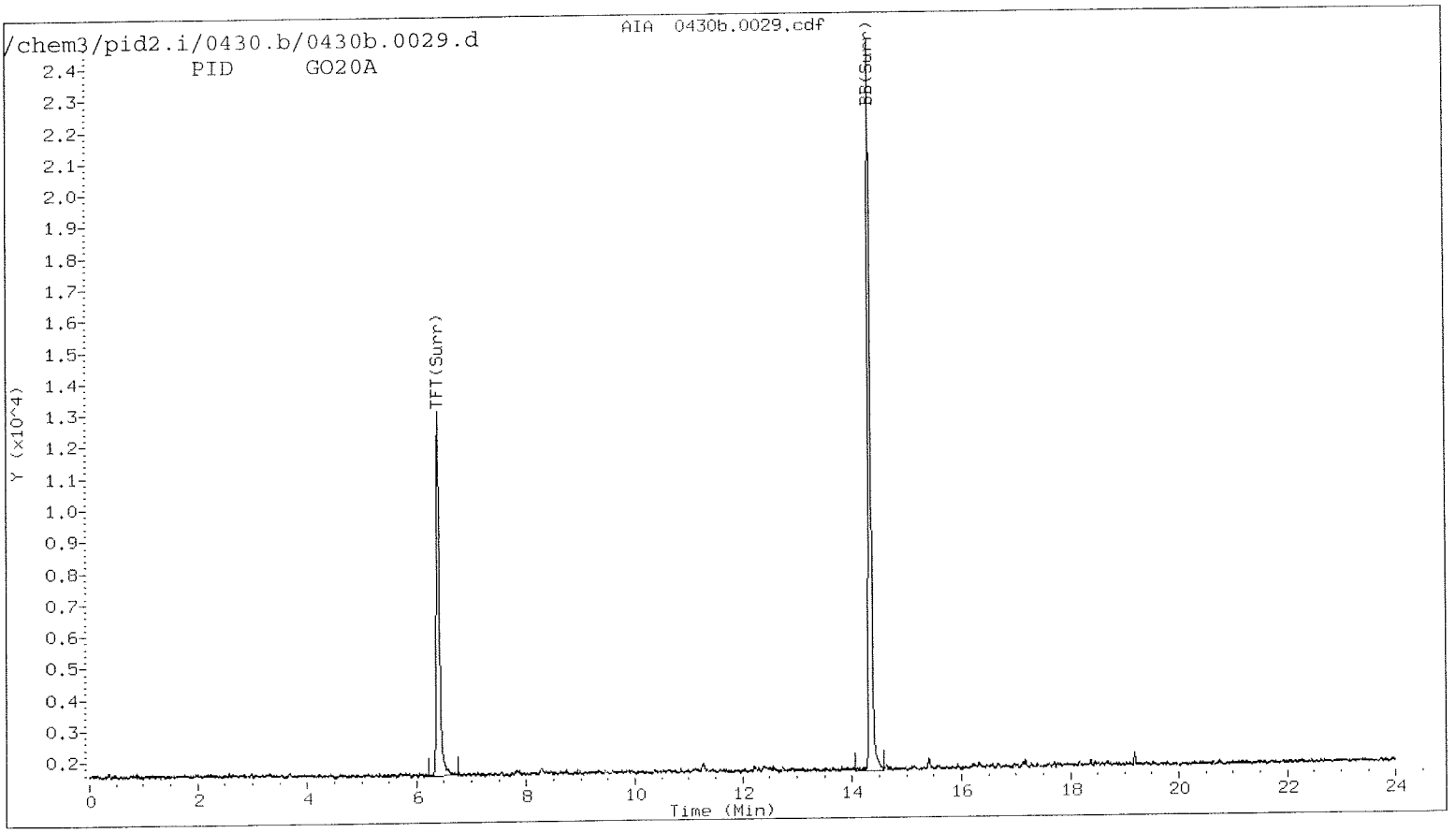
FID GO20A
TFT(Surr)
BB(Surr)
nC10-Decane
Trimethylbenzene
nC12-Dodecane
nC13
Naphthalene
nC11
nC8
4.296
7.555
8.742
10.662
11.181
13.051
13.322
14.492
15.362
8.376
Y (x10^4)
Time (Min)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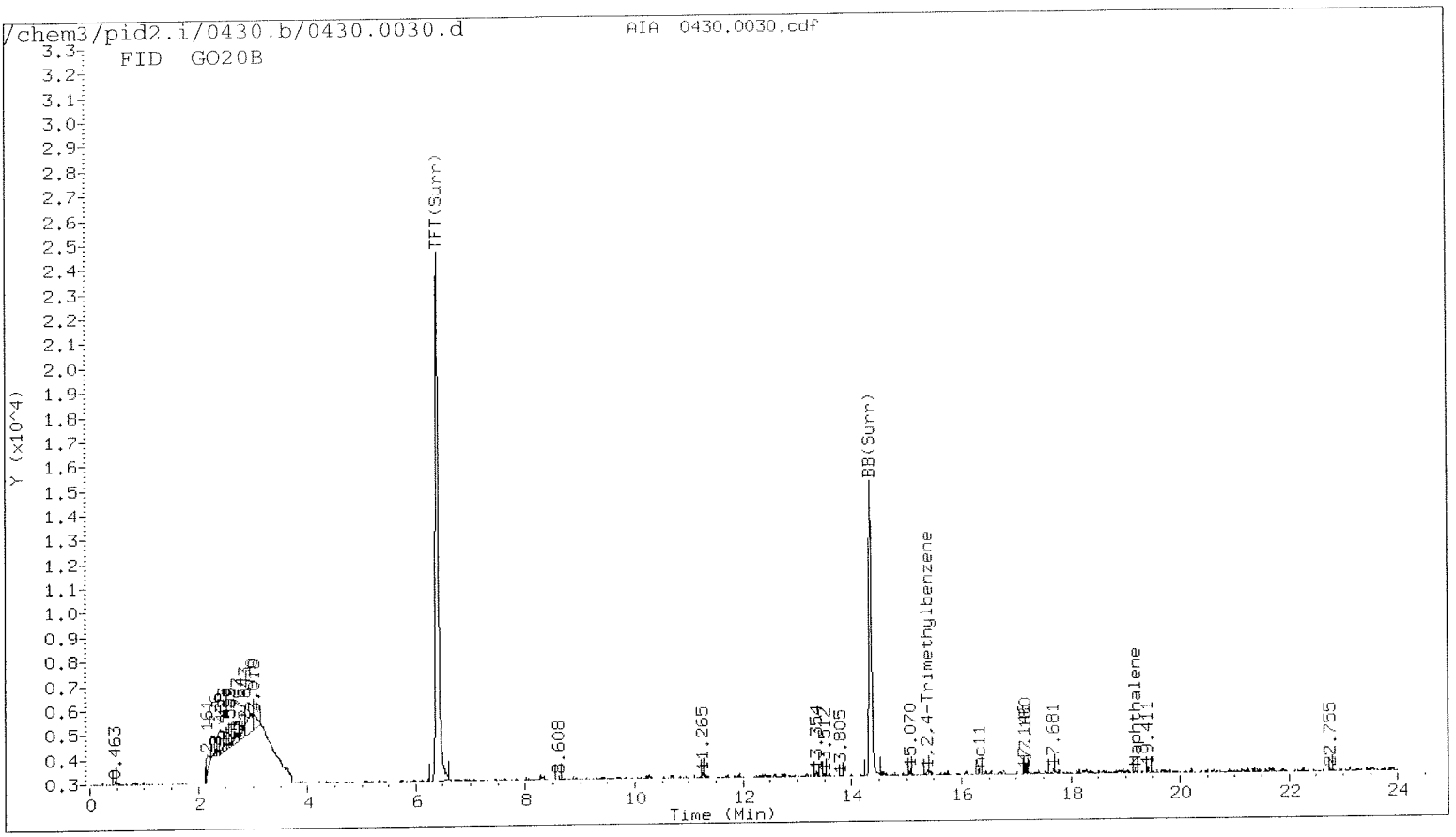
TFT(Surr)
BB(Surr)
Y (x10^4)
Time (Min)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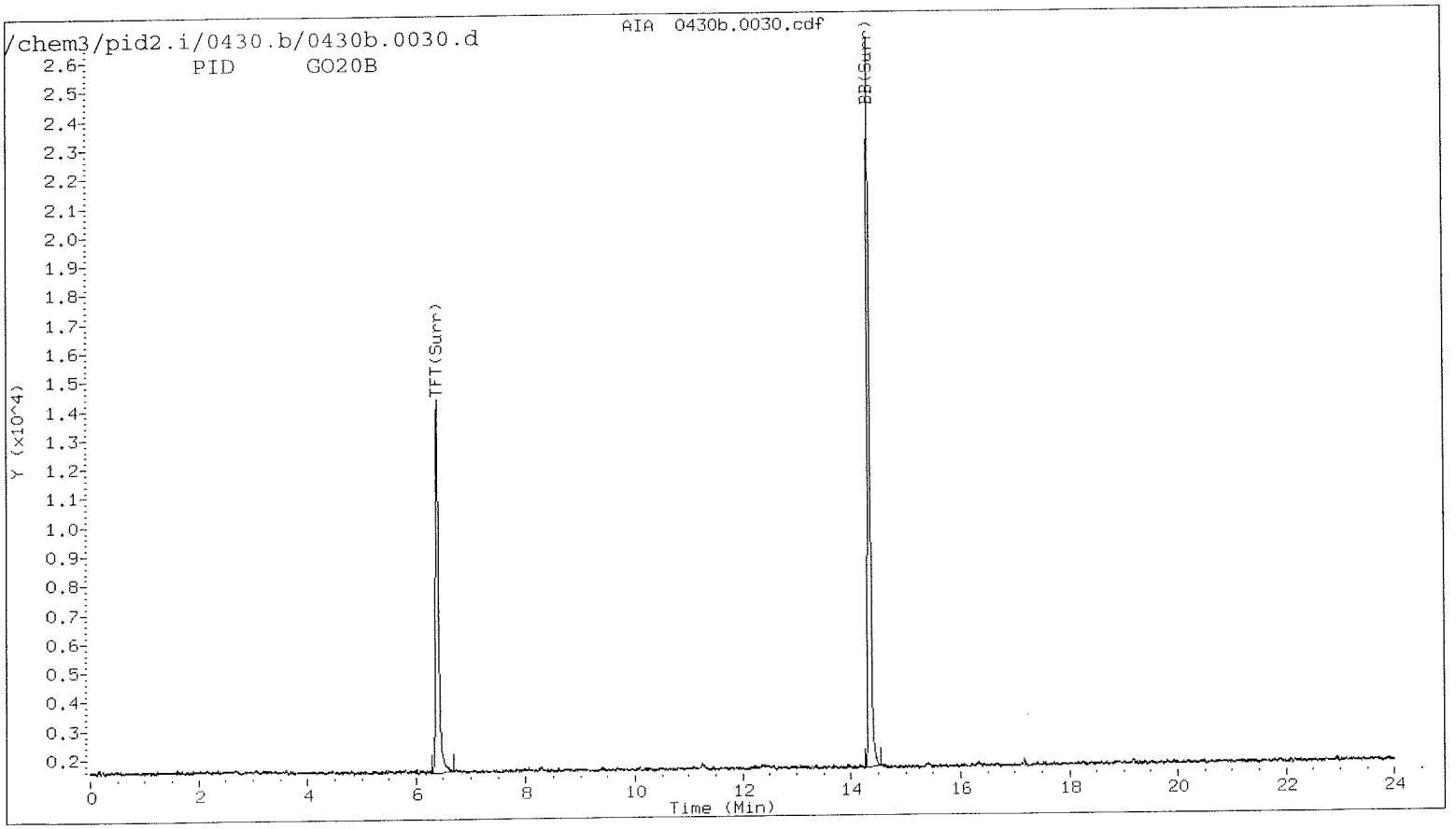
BB(Surr)
1,2,4-Trimethylbenzene
Naphthalene
Y (x10^4)
Time (Min)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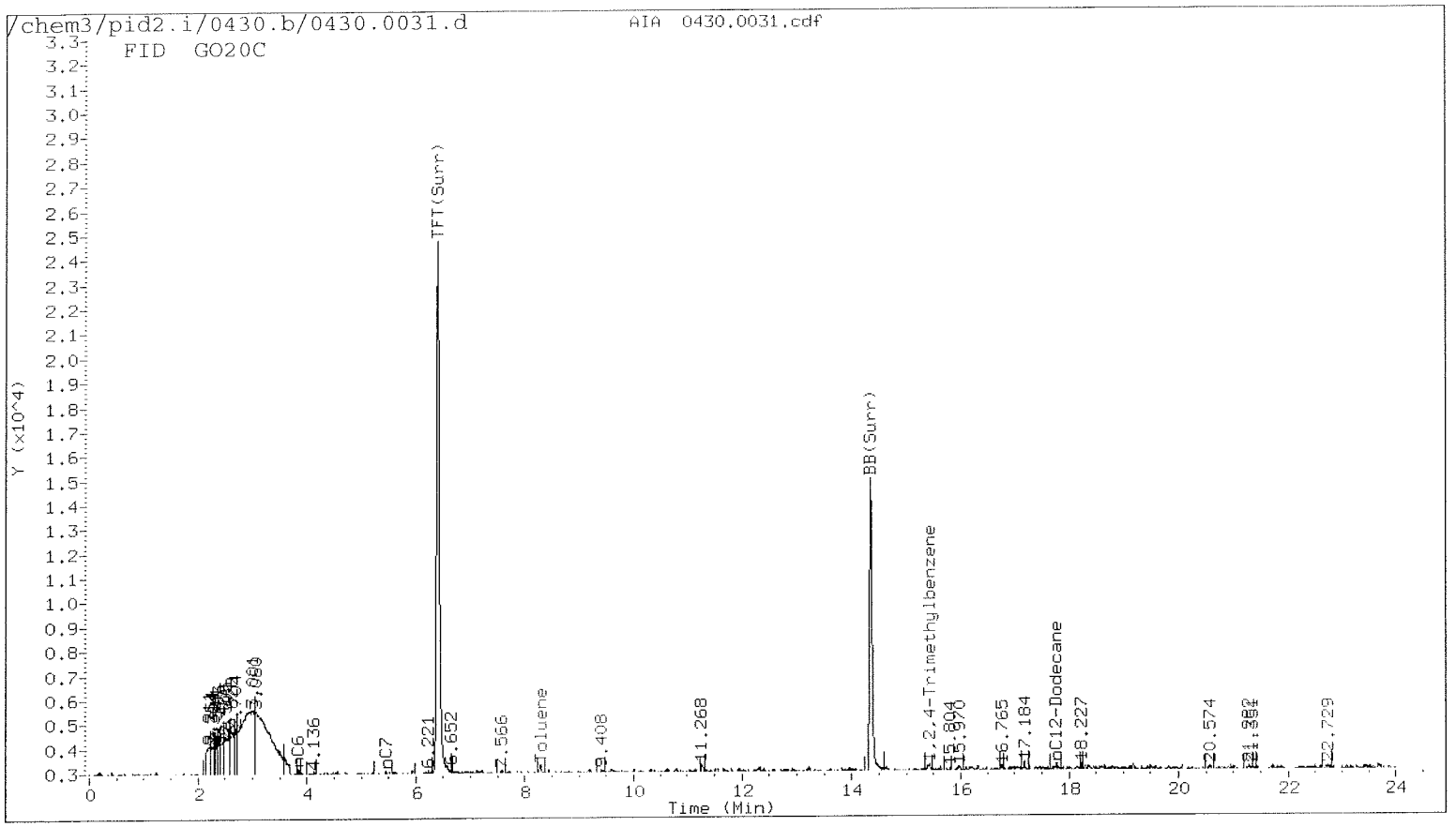
TFT(Surr)
BB(Surr)
Y (x10^4)
Time (Min)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FID GO20C
Y (x10^4)
Time (Min)
TFT(Surr)
BB(Surr)
nC6
nC7
Toluene
1,2,4-Trimethylbenzene
nC12-Dodecane
4.136
6.221
6.652
7.566
9.408
11.268
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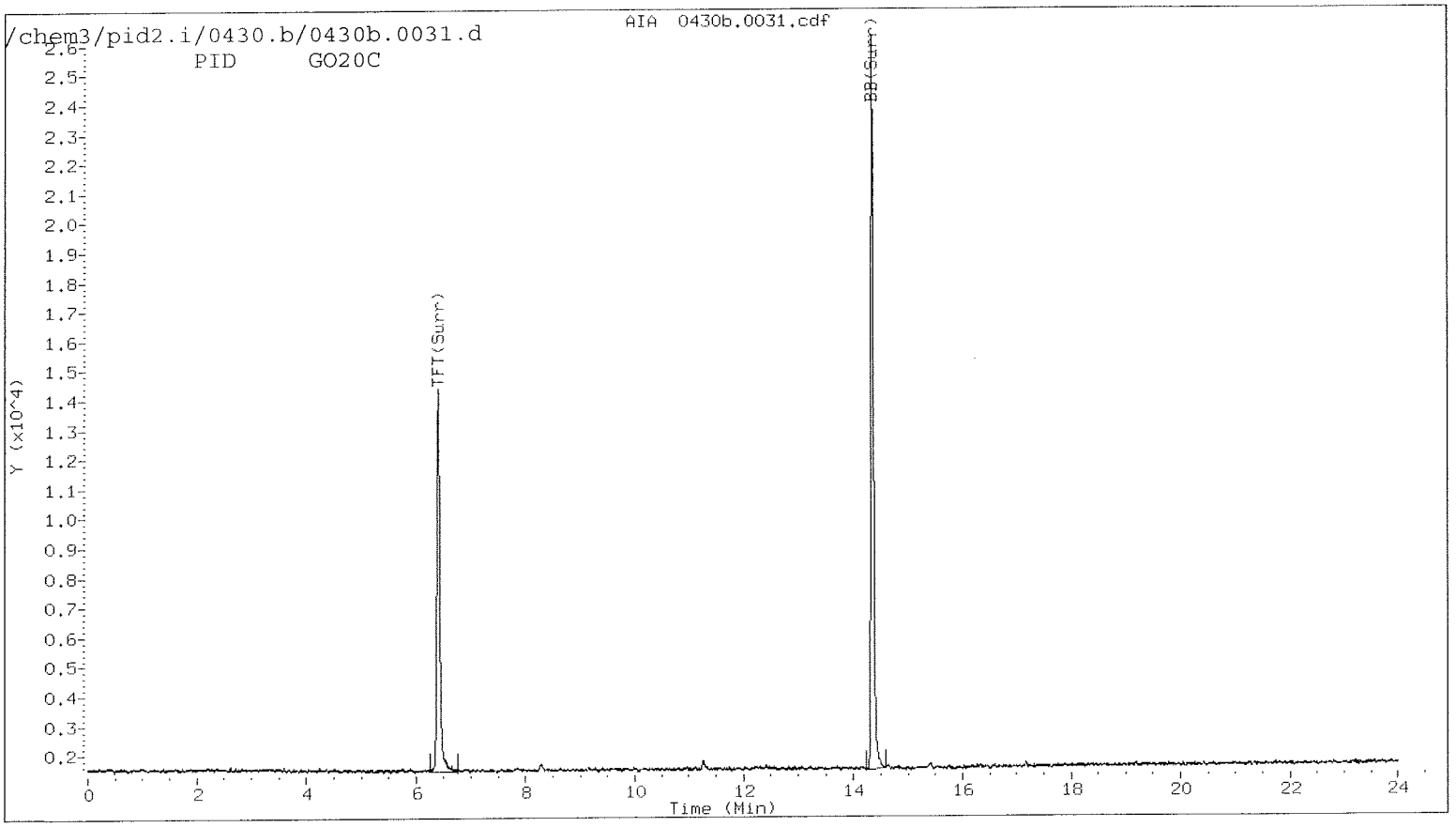
17.184
18.227
20.574
22.729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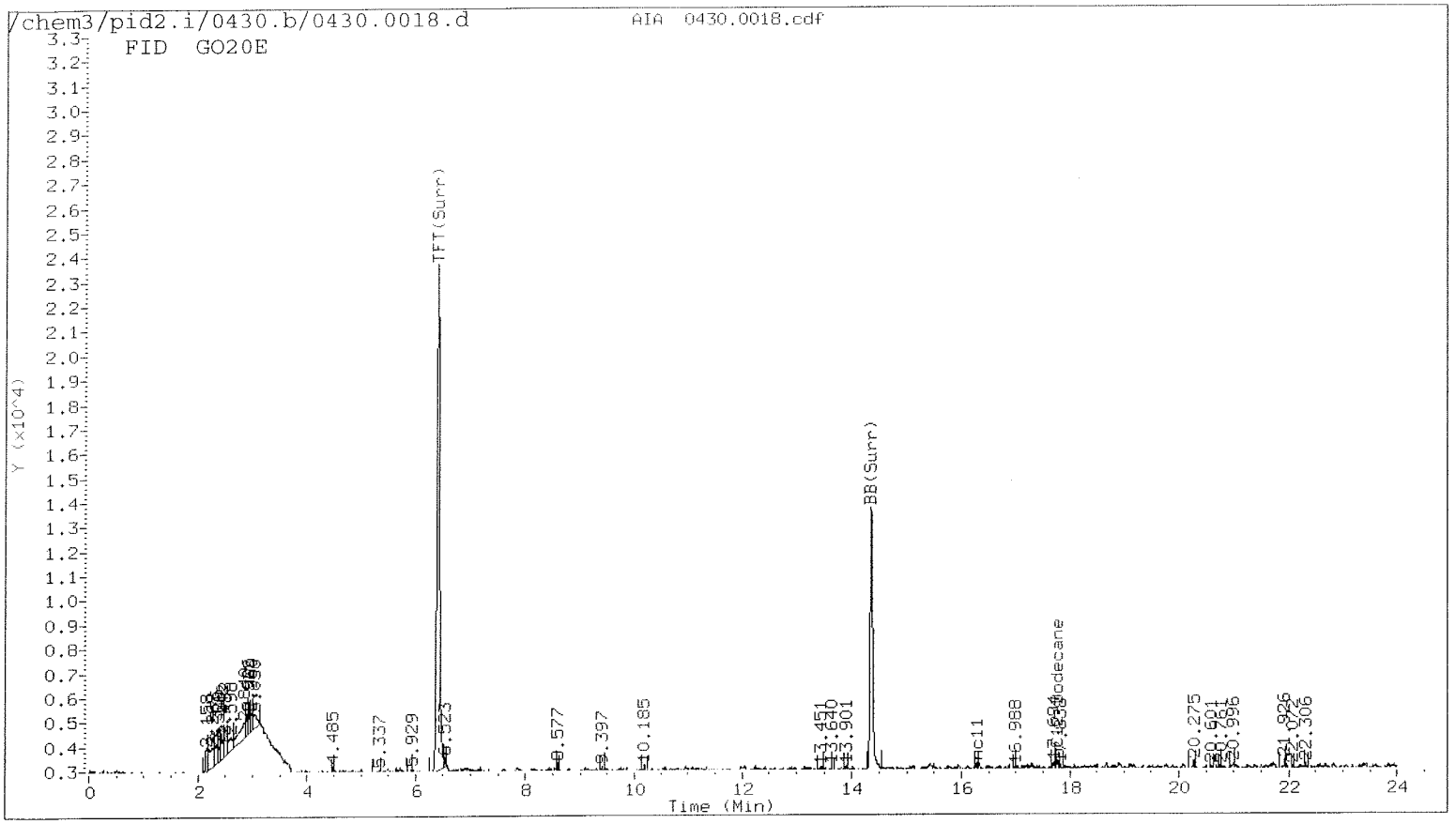
PID GO20C
Y (x10^4)
Time (Min)
TFT(Surr)
BB(Surr)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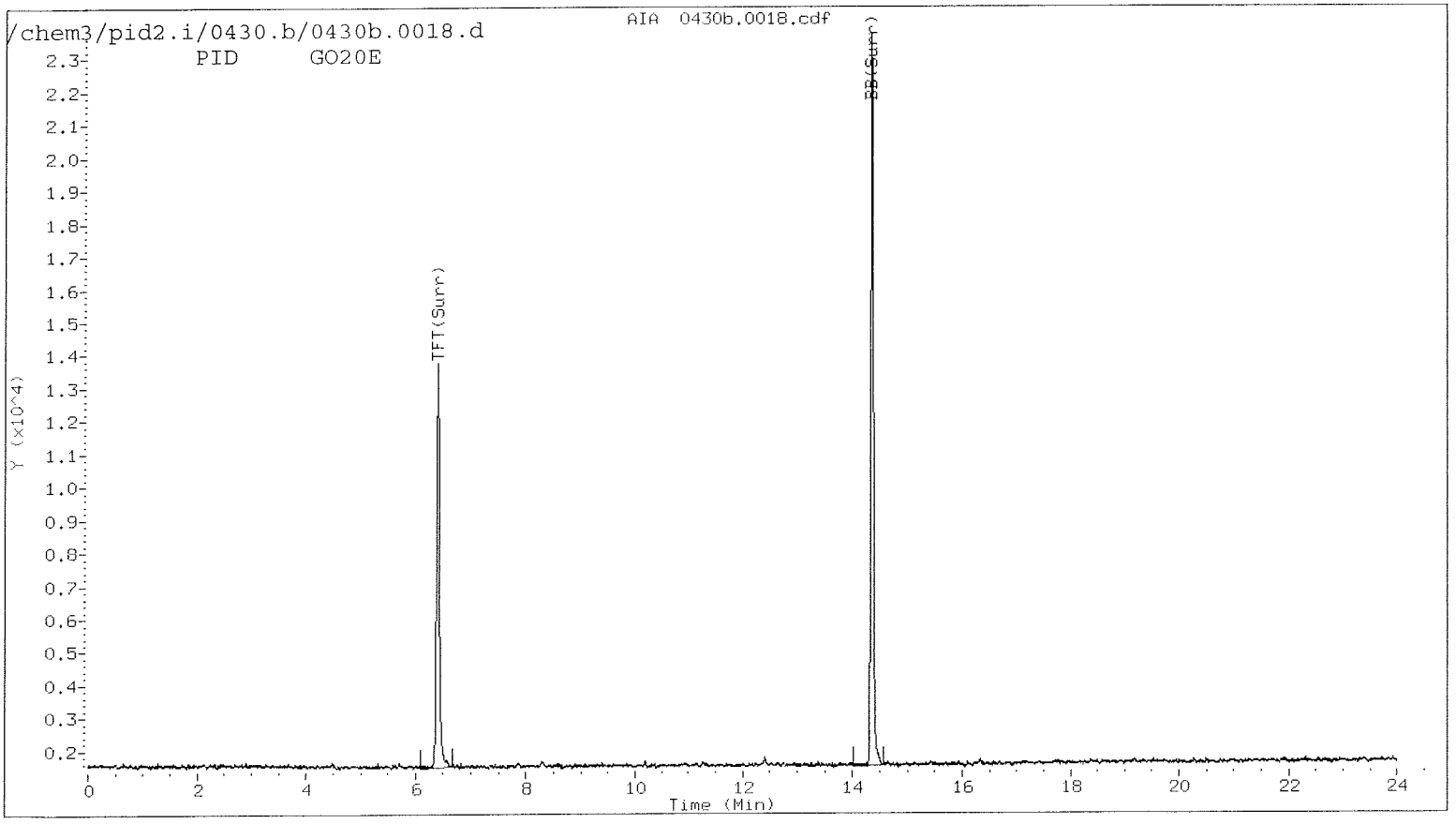
AIA 0430.0018.cdf
FID GO20E
Y (x10^4)
Time (Min)
TFT(Surr)
BB(Surr)
4.485
5.337
5.929
6.523
8.577
9.397
10.185
13.451
13.640
13.901
mc11
16.988
Hexadecane
20.275
20.501
20.761
20.996
21.926
22.306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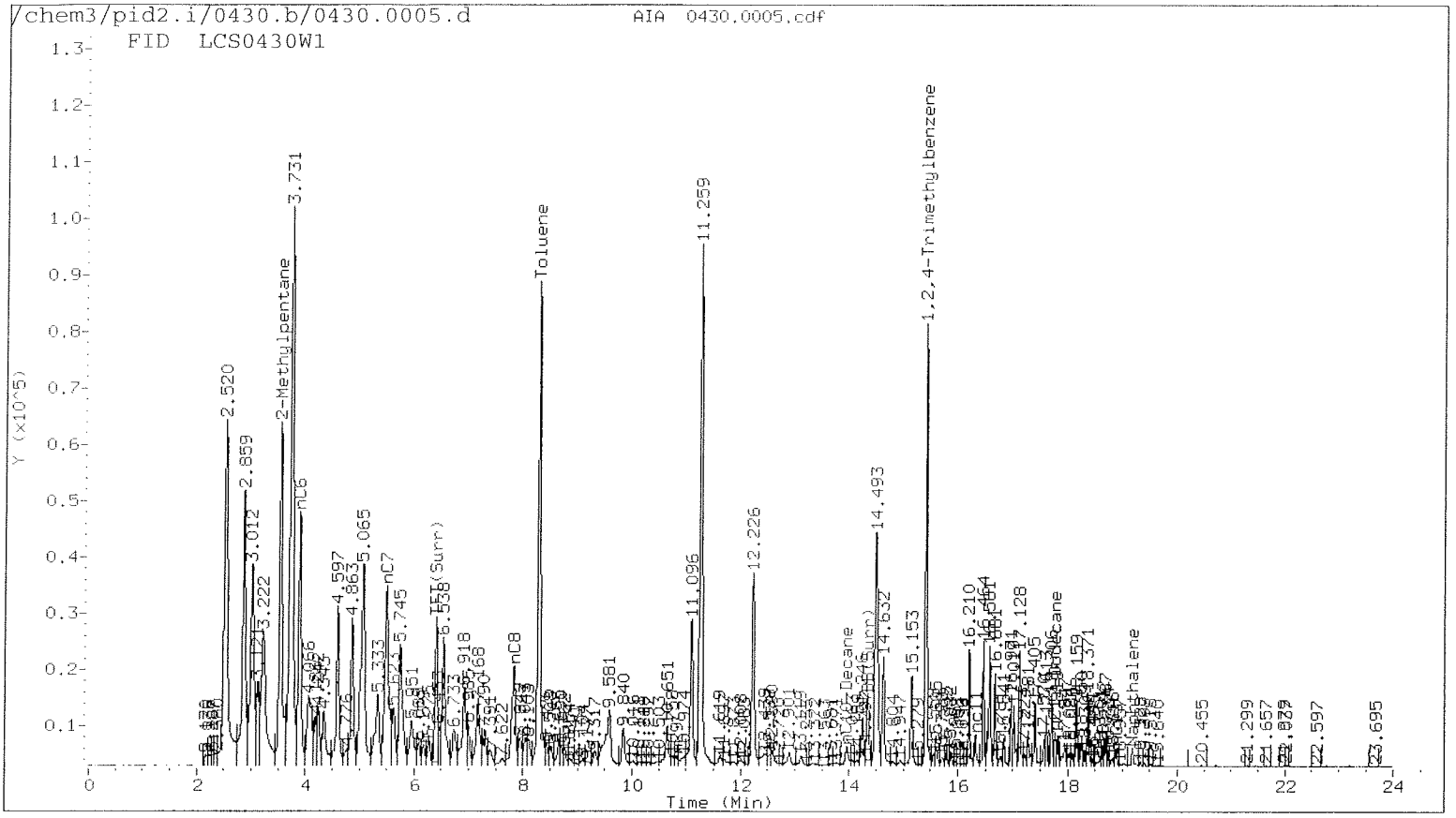
Y (x10^4)
Time (Min)
TFT(Surr)
BB(Surr)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Time (Min)
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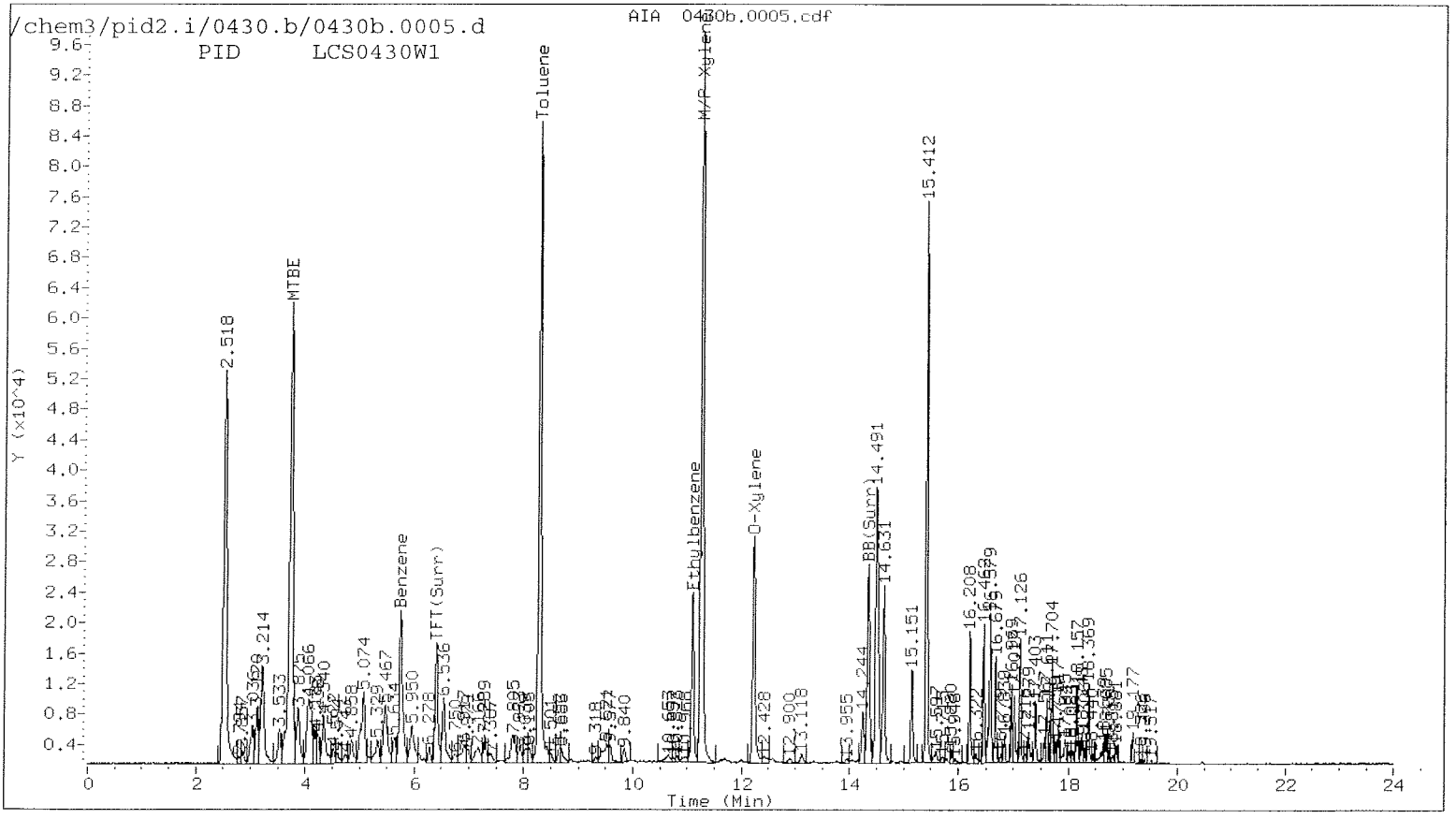
2.859
3.012
3.222
3.731
2-Methylpentane
nC6
4.597
4.863
5.065
nC7
5.745
6.538
TFT(Surr)
nC8
Toluene
9.581
9.840
11.096
11.259
12.226
14.493
14.632
15.153
1,2,4-Trimethylbenzene
Decane
16.210
Decane
Naphthalene
20.455
21.299
21.657
22.597
23.695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Y (x10^4)
Time (Min)
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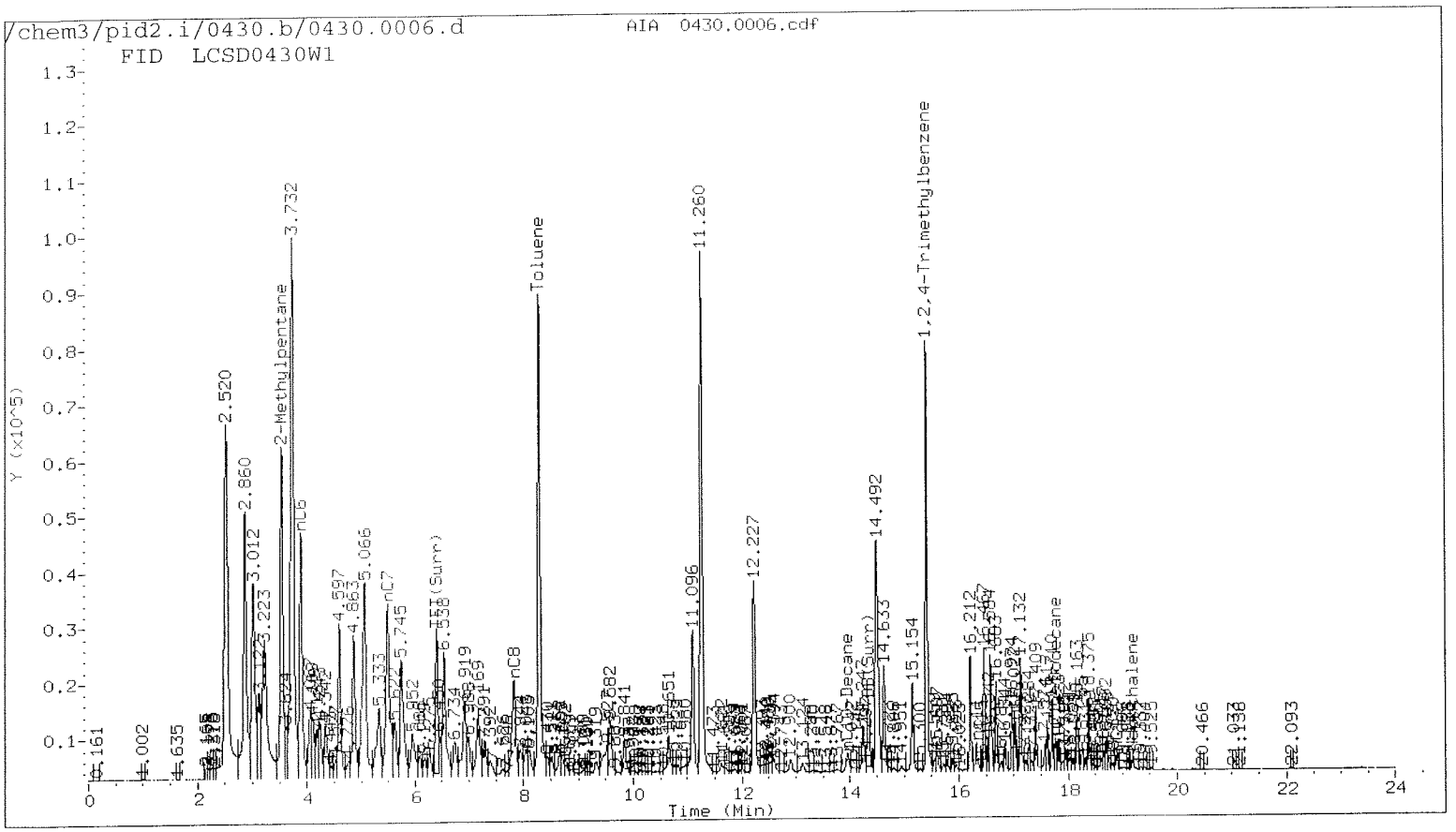
MTBE
3.214
3.533
Benzene
5.074
5.536
TFT(Surr)
Toluene
M/P Xylene
Ethylbenzene
O-Xylene
BB(Surr)
14.491
14.631
15.151
15.412
16.208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FID LCSD0430W1
Y (x10^5)
Time (Min)
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2.860
3.012
3.223
3.732
2-Methylpentane
nC6
4.597
4.863
5.066
nC7
5.745
TFT(Surr)
nC8
Toluene
11.260
11.096
12.227
14.492
14.633
15.154
1,2,4-Trimethylbenzene
Decane
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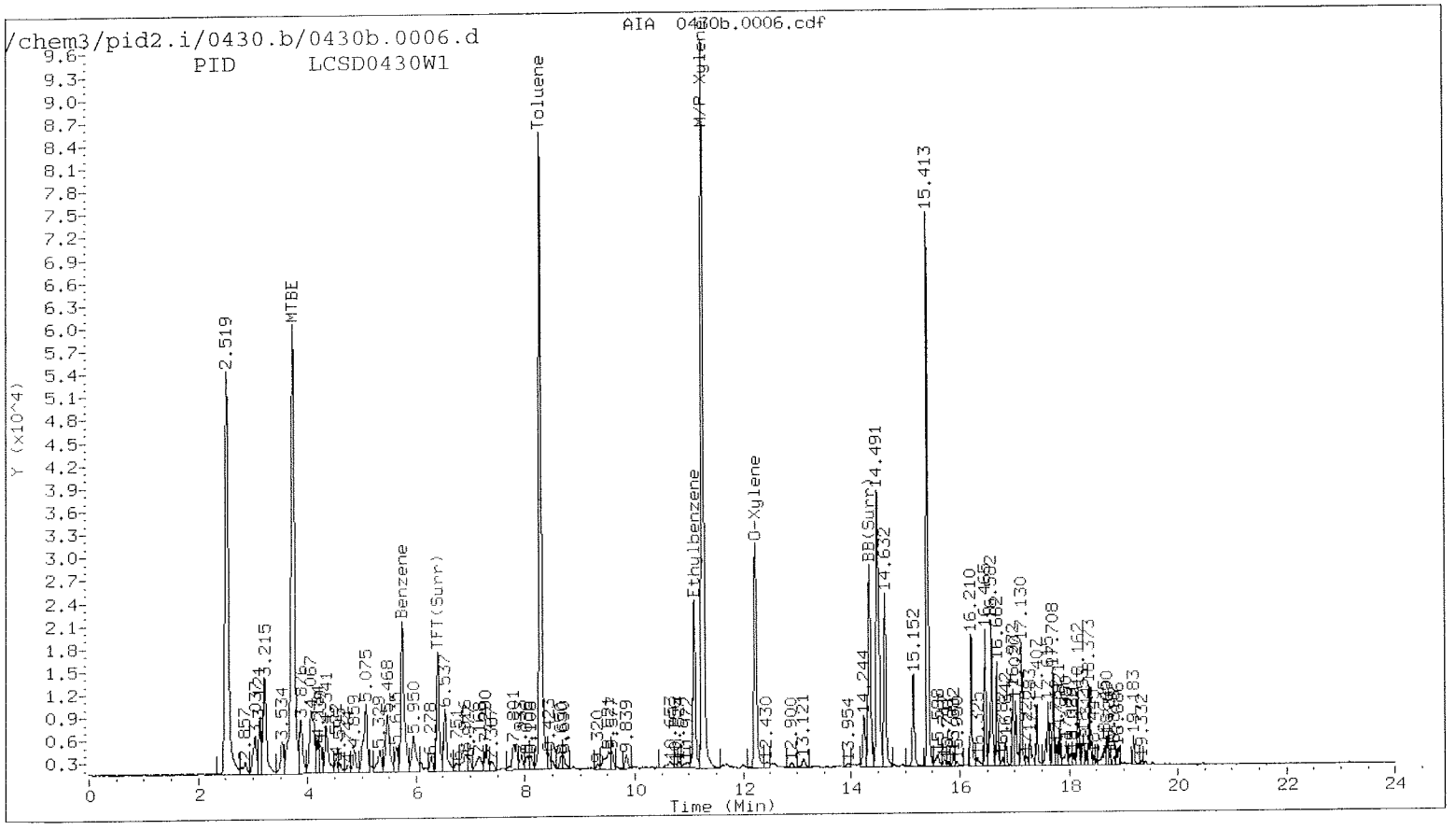
17.132
20.466
21.938
22.093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Time (Min)
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MTBE
Benzene
TFT(Surr)
Toluene
M/P Xylene
Ethylbenzene
O-Xylene
BB(Surr)
14.491
14.632
15.152
15.413
16.210

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4b.i/20040512.b/0512b014.d
Method: /chem3/fid4b.i/20040512.b/acidsiltphfid4b.m
Instrument: fid4b.i
Operator: ESJ
Report Date: 05/13/2004
Macro: 26-APR-2004
Calibration Dates: Gas:08-MAY-2004 Diesel:12-MAY-2004 M.Oil:11-MAY-2004

ARI ID: GO20MBW1
Client ID: GO20MBW1
Injection: 12-MAY-2004 19:08

Dilution Factor: 1

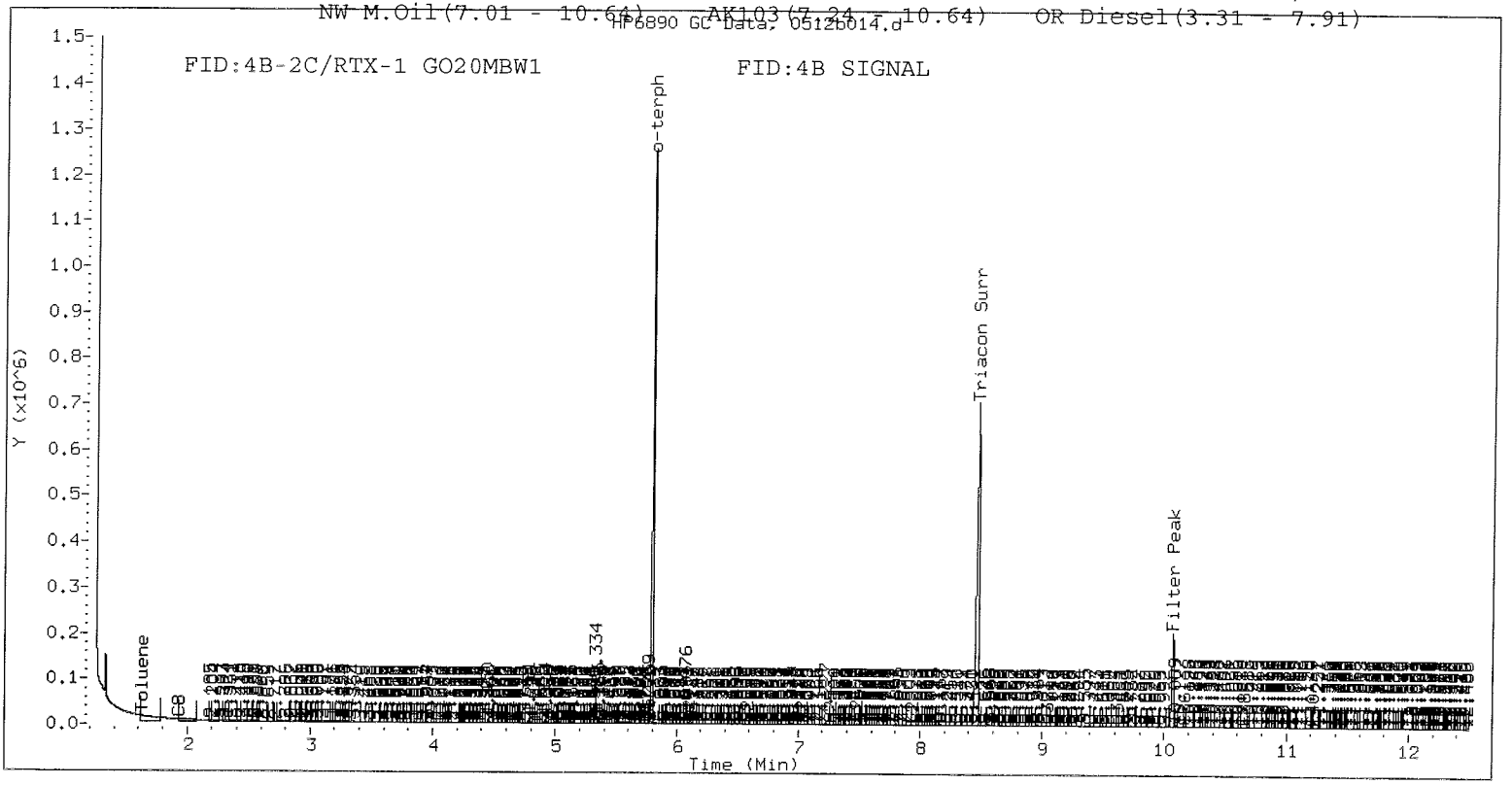
cg 5/13/04

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.625	-0.055	14867	110865	GAS (Tol-C12)	322636	37
C8	1.934	-0.003	6499	49072	DIESEL (C12-C24)	279879	18
C10	3.302	-0.004	2636	4225	M.OIL (C24-C38)	105757	10*
C12	4.055	-0.008	1133	1607			
C14	4.620	-0.012	1052	792			
C16	5.139	-0.013	2712	1508			
C18	5.637	-0.012	1977	1272			
C20	6.112	-0.003	1845	1192			
C22	6.582	0.019	1518	1727			
C24	7.036	0.023	795	965			
C25	7.264	0.028	883	751			
C26	7.484	0.026	2537	2134			
C28	7.938	0.033	1447	1433			
C32	9.048	0.033	104	111			
C34	9.618	0.038	117	144			
Filter Peak	10.070	0.421	204511	207465			
C36	10.164	0.072	392.0	555	o-Terph Surrogate Rec = 103.2%		(808586)
C38	10.657	0.015	767.0	1891	Triacon Surrogate Rec = 113.7%		(859664)
C40	11.212	0.003	701	166			
o-terph	5.796	-0.040	1251094	808586			
Triacon Surr	8.471	-0.035	705161	859664			

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.062 - 7.013) AK102(3.31 - 7.24) Jet A(3.31 - 5.65)
NW M.Oil(7.01 - 10.64) AK103(7.24 - 10.64) OR Diesel(3.31 - 7.91)



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4b.i/20040512.b/0512b017.d
Method: /chem3/fid4b.i/20040512.b/acidsiltphfid4b.m
Instrument: fid4b.i
Operator: ESJ
Report Date: 05/13/2004
Macro: 26-APR-2004
Calibration Dates: Gas:08-MAY-2004 Diesel:12-MAY-2004 M.Oil:11-MAY-2004

ARI ID: GO20A
Client ID: MW-101
Injection: 12-MAY-2004 20:11

Dilution Factor: 1

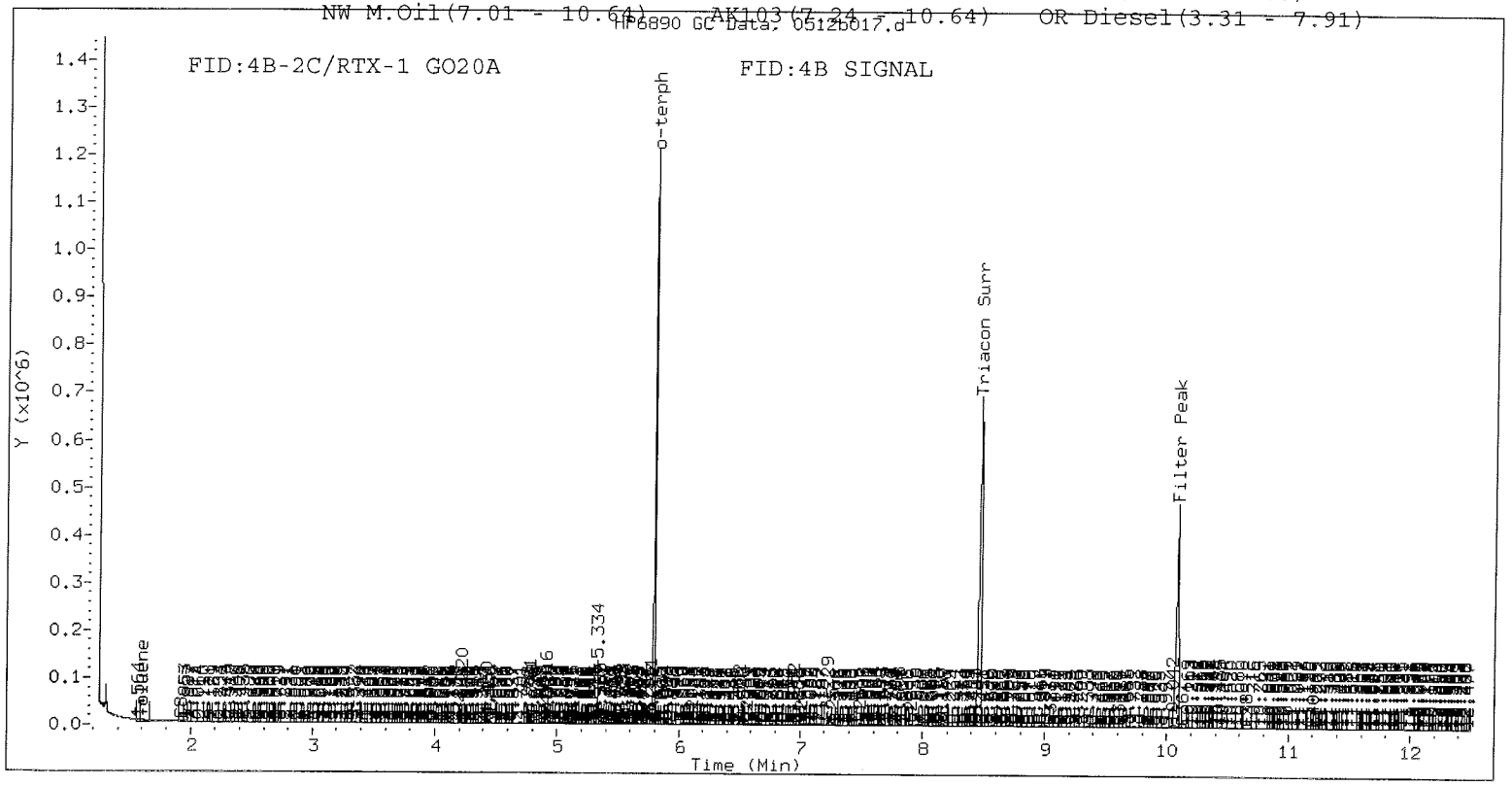
GJS 5/13/04

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.602	-0.079	7169	21717	GAS (Tol-C12)	113903	13
C8	1.921	-0.016	2321	4909	DIESEL (C12-C24)	420719	28
C10	3.302	-0.005	984	1192	M.OIL (C24-C38)	351290	34*
C12	4.055	-0.008	501	254			
C14	4.620	-0.012	959	479			
C16	5.139	-0.014	4107	2269			
C18	5.637	-0.013	5253	3136			
C20	6.122	0.007	3374	2049			
C22	6.565	0.002	4277	4679			
C24	7.016	0.002	2270	2600			
C25	7.267	0.030	6197	5334			
C26	7.488	0.029	5049	5886			
C28	7.906	0.000	2422	3230			
C32	9.050	0.035	823	1183			
C34	9.609	0.028	578	157			
Filter Peak	10.088	0.438	468008	633303			
C36	10.127	0.035	1271.0	2656	o-Terph Surrogate Rec = 98.1%		(768282)
C38	10.655	0.012	1454.0	4263	Triacon Surrogate Rec = 108.9%		(823887)
C40	11.208	-0.002	686	887			
o-terph	5.798	-0.039	1205941	768282			
Triacon Surr	8.472	-0.035	692252	823887			

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.062 - 7.013) AK102(3.31 - 7.24) Jet A(3.31 - 5.65)
NW M.Oil(7.01 - 10.64) AK103(7.24 - 10.64) OR Diesel(3.31 - 7.91)



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4b.i/20040512.b/0512b018.d
Method: /chem3/fid4b.i/20040512.b/acidsiltphfid4b.m
Instrument: fid4b.i
Operator: ESJ
Report Date: 05/13/2004
Macro: 26-APR-2004
Calibration Dates: Gas:08-MAY-2004 Diesel:12-MAY-2004 M.Oil:11-MAY-2004

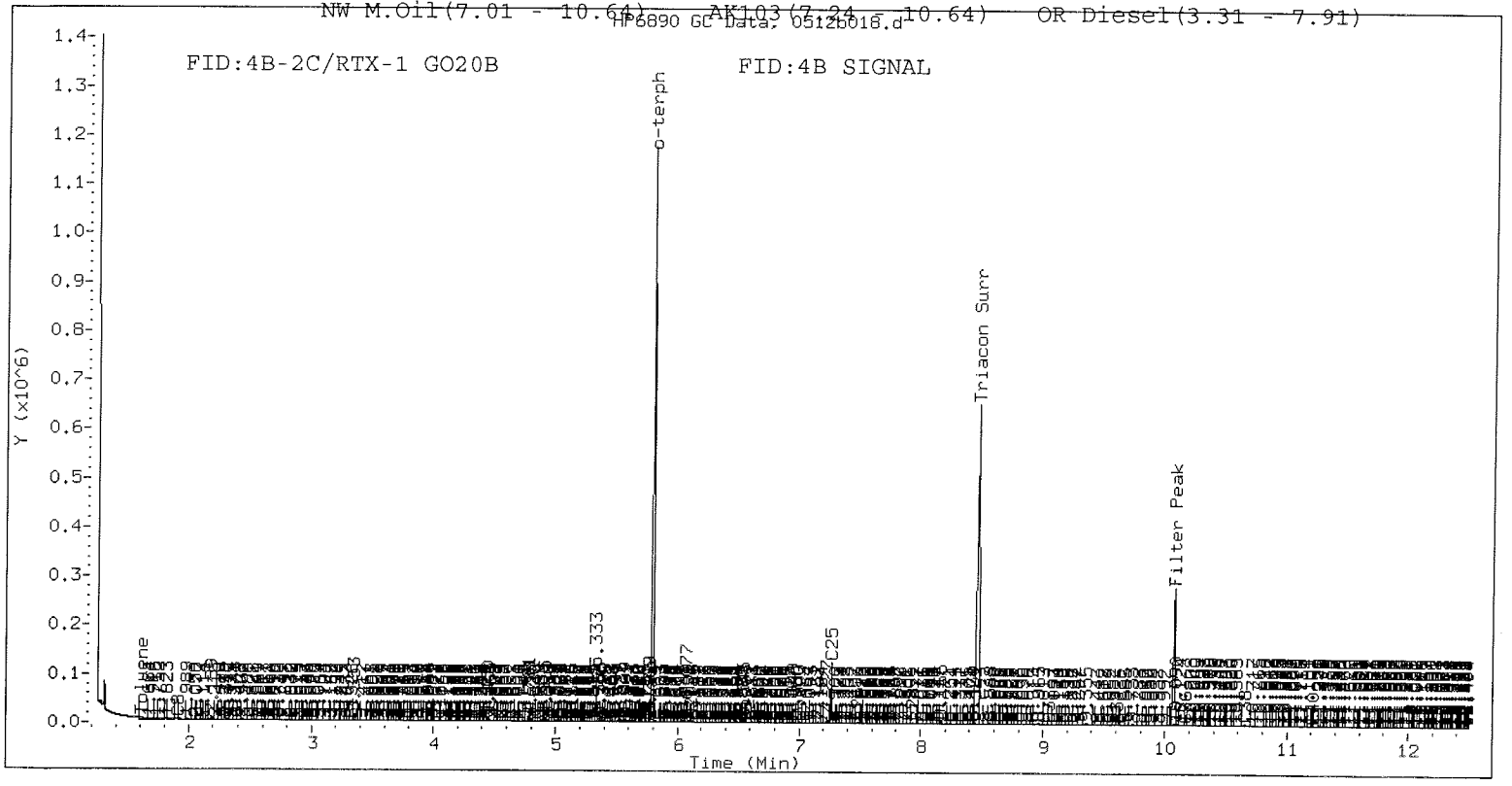
ARI ID: GO20B
Client ID: MW-103
Injection: 12-MAY-2004 20:32
Dilution Factor: 1

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.606	-0.075	6207	18518	GAS (Tol-C12)	159998	19
C8	1.918	-0.020	2279	7940	DIESEL (C12-C24)	277526	18
C10	3.301	-0.005	1017	1106	M.OIL (C24-C38)	214509	21*
C12	4.054	-0.008	459	248			
C14	4.620	-0.012	1240	645			
C16	5.139	-0.014	3505	2482			
C18	5.652	0.002	3762	2190			
C20	6.113	-0.002	2171	1447			
C22	6.583	0.019	2015	3239			
C24	7.043	0.030	1038	1359			
C25	7.267	0.030	125859	69834			
C26	7.485	0.026	2475	2429			
C28	7.939	0.033	3079	3303			
C32	9.051	0.035	219	291			
C34	9.607	0.026	148	172			
Filter Peak	10.075	0.425	278673	306758			
C36	10.166	0.073	422.0	550	o-Terph Surrogate Rec = 90.5%		(708730)
C38	10.654	0.011	2264.0	3882	Triacon Surrogate Rec = 99.1%		(749716)
C40	11.216	0.006	480	244			
o-terph	5.795	-0.042	1169736	708730			
Triacon Surr	8.471	-0.036	651480	749716			

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.062 - 7.013) AK102(3.31 - 7.24) Jet A(3.31 - 5.65)
NW M.Oil(7.01 - 10.64) AK103(7.24 - 10.64) OR Diesel(3.31 - 7.91)



Analytical Resources Inc.
TPH Quantitation Report

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Method: /chem3/fid4b.i/20040512.b/acidsiltphfid4b.m
Instrument: fid4b.i
Operator: ESJ
Report Date: 05/13/2004
Macro: 26-APR-2004
Calibration Dates: Gas:08-MAY-2004 Diesel:12-MAY-2004 M.Oil:11-MAY-2004

ARI ID: GO20C
Client ID: MW-111
Injection: 12-MAY-2004 20:53

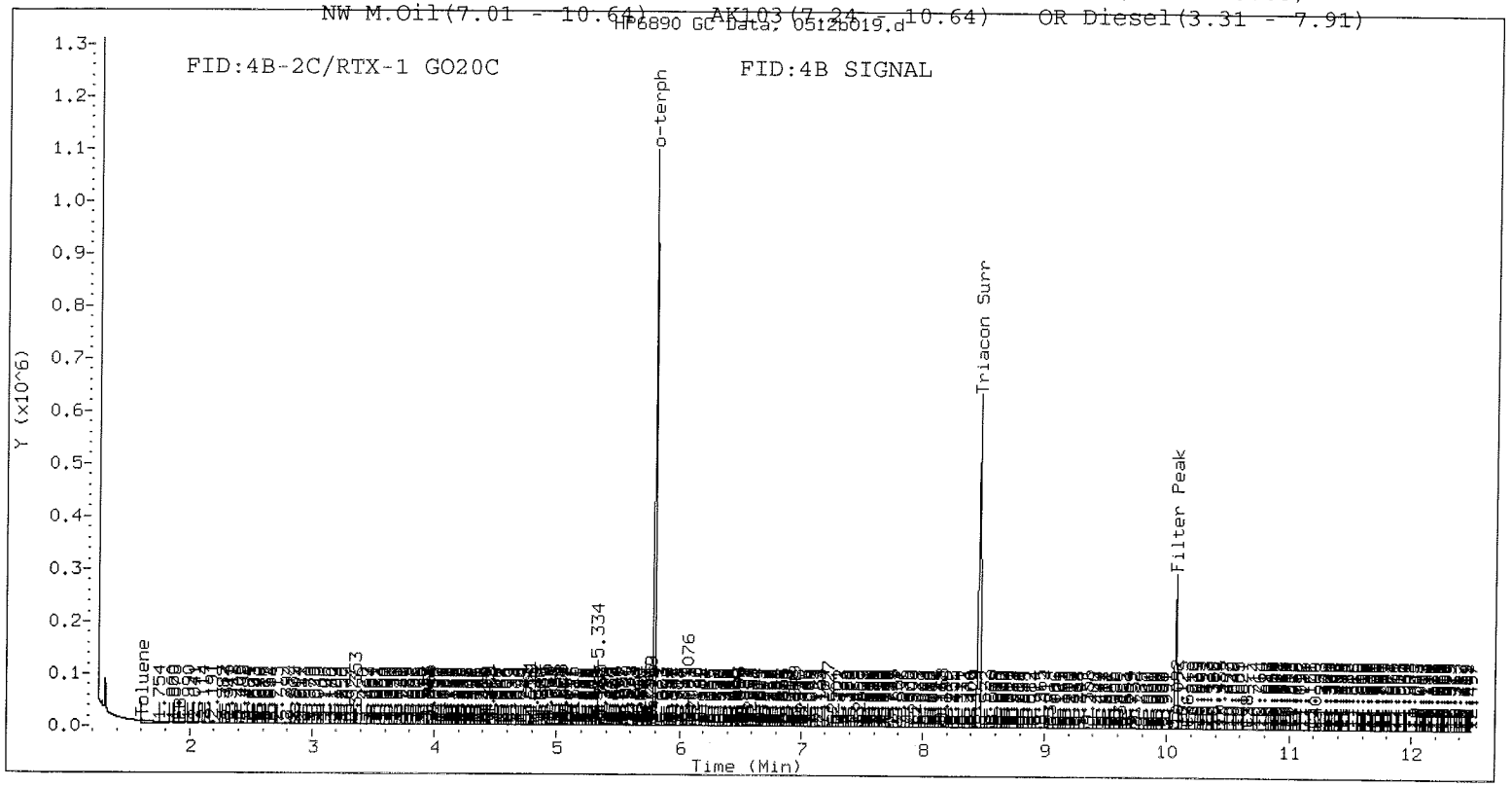
Dilution Factor: 1

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.607	-0.074	6770	41628	GAS (Tol-C12)	161262	19
C8	1.918	-0.019	2527	7538	DIESEL (C12-C24)	296122	20 LDL
C10	3.302	-0.004	1074	1391	M.OIL (C24-C38)	145353	14*
C12	4.055	-0.007	460	289			
C14	4.620	-0.012	739	347			
C16	5.139	-0.013	3182	2178			
C18	5.637	-0.012	2187	1353			
C20	6.112	-0.002	2264	1613			
C22	6.582	0.018	2396	2658			
C24	7.016	0.003	971	943			
C25	7.265	0.028	1401	1112			
C26	7.485	0.027	2886	2618			
C28	7.939	0.033	1318	1711			
C32	9.050	0.035	215	290			
C34	9.616	0.035	174	116			
Filter Peak	10.077	0.427	293924	329667			
C36	10.166	0.074	577.0	959	o-Terph Surrogate Rec = 84.0%		(658359)
C38	10.656	0.014	1428.0	3369	Triacon Surrogate Rec = 94.1%		(711688)
C40	11.213	0.003	464	738			
o-terph	5.795	-0.042	1092491	658359			
Triacon Surr	8.469	-0.037	633802	711688			

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.062 - 7.013) AK102(3.31 - 7.24) Jet A(3.31 - 5.65)
NW M.Oil(7.01 - 10.64) AK103(7.24 - 10.64) OR Diesel(3.31 - 7.91)



Analytical Resources Inc.
TPH Quantitation Report

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Method: /chem3/fid4b.i/20040512.b/acidsiltphfid4b.m Client ID: GO20LCSW1
Instrument: fid4b.i Injection: 12-MAY-2004 19:29
Operator: ESJ
Report Date: 05/13/2004 Dilution Factor: 1
Macro: 26-APR-2004
Calibration Dates: Gas:08-MAY-2004 Diesel:12-MAY-2004 M.Oil:11-MAY-2004

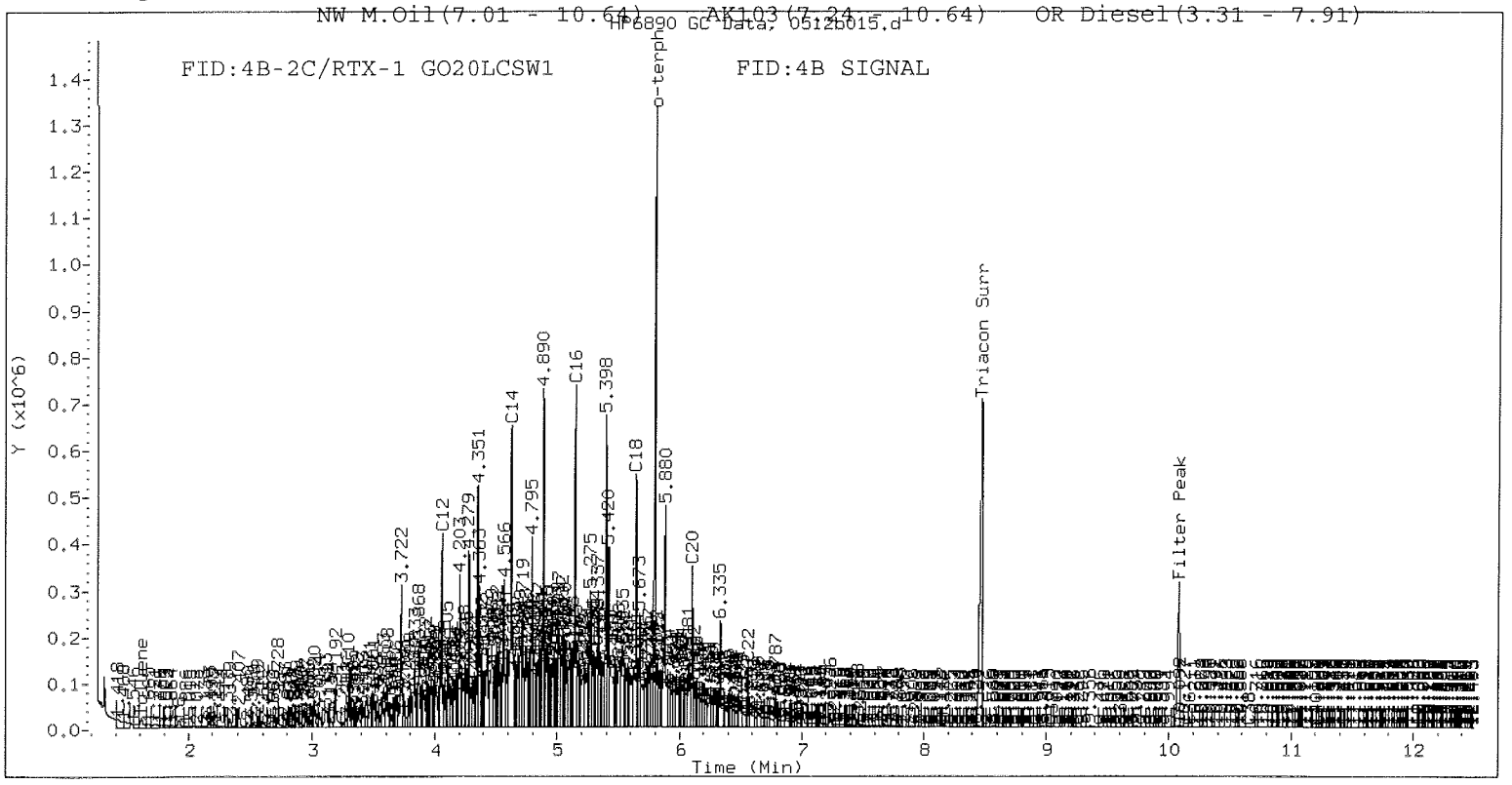
5/13/04

FID:4B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.608	-0.073	21168	42723	GAS (Tol-C12)	3616382	420
C8	1.921	-0.016	15708	32878	DIESEL (C12-C24)	17754434	1172
C10	3.302	-0.004	131289	92761	M.OIL (C24-C38)	371273	36*
C12	4.057	-0.006	417206	287693			
C14	4.626	-0.006	649600	634932			
C16	5.147	-0.006	734309	476355			
C18	5.643	-0.006	543810	424769			
C20	6.109	-0.005	348753	223547			
C22	6.561	-0.002	137681	88239			
C24	7.012	-0.001	44779	42705			
C25	7.264	0.027	6725	6340			
C26	7.484	0.026	6316	8740			
C28	7.939	0.033	3208	4553			
C32	9.054	0.039	184	210			
C34	9.609	0.029	62	56			
Filter Peak	10.078	0.428	309816	350641			
C36	10.164	0.072	202.0	256	o-Terph Surrogate Rec = 105.7%		(827937)
C38	10.657	0.014	517.0	1507	Triacon Surrogate Rec = 112.8%		(852964)
C40	11.210	0.000	239	49			
o-terph	5.800	-0.037	1235530	827937			
Triacon Surr	8.473	-0.034	703314	852964			

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.062 - 7.013) AK102(3.31 - 7.24) Jet A(3.31 - 5.65)
NW M.Oil(7.01 - 10.64) AK103(7.24 - 10.64) OR Diesel(3.31 - 7.91)



Analytical Resources Inc.
TPH Quantitation Report

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Method: /chem3/fid4a.i/20040508.b/ftphfid4a.m
Instrument: fid4a.i
Operator: ESJ
Report Date: 05/10/2004
Macro: 04-MAY-2004
Calibration Dates: Gas:20-APR-2004 Diesel:04-MAY-2004 M.Oil:04-MAY-2004
BUNKERC:07-MAR-2004

ARI ID: GO20MBS1
Client ID:
Injection: 08-MAY-2004 20:31
Dilution Factor: 1

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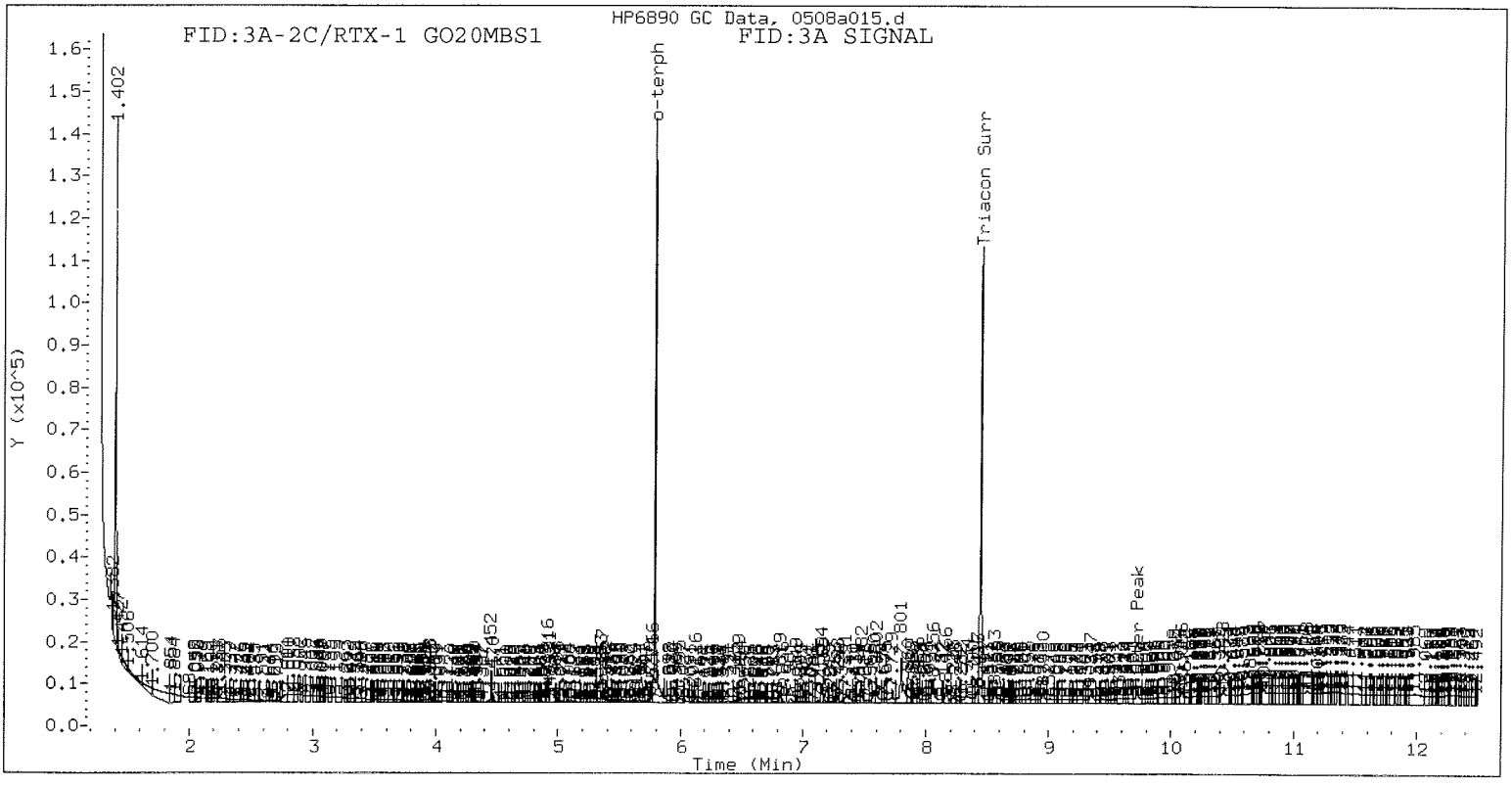
FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	118308	19
C8	2.008	0.010	1262	2906	DIESEL (C12-C24)	78089	6
C10	3.311	-0.002	1075	1951	M.OIL (C24-C38)	311733	29
C12	4.090	0.026	290	382			
C14	4.629	0.001	144	115			
C16	5.143	-0.003	324	306			
C18	5.638	-0.004	972	1001			
C20	6.111	0.003	747	760			
C22	6.557	-0.005	318	218			
C24	7.008	-0.008	352	329			
C25	7.234	-0.007	495	664			
C26	7.458	-0.006	827	1057			
C28	7.913	0.000	2123	2714			
C32	9.008	-0.015	1213	3572			
C34	9.578	-0.008	1259	3425	BUNKERC (C10-C38)	421394	2
Filter Peak	9.723	-0.001	3034	6744			
C36	10.122	-0.009	1763.0	4388	o-Terph Surrogate Rec = 11.0%		(81573)
C38	10.649	0.003	2727.0	10713	Triacon Surrogate Rec = 11.4%		(86337)
C40	11.194	0.004	2838	1299			
o-terph	5.785	-0.011	136377	81573			
Triacon Surr	8.445	-0.022	105832	86337			

Range Times: NW Diesel(4.063 - 7.016) AK102(3.31 - 7.24) Jet A(3.31 - 5.64)
NW M.Oil(7.02 - 10.65) AK103(7.24 - 10.65) OR Diesel(3.31 - 7.91)



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20040508.b/0508a017.d
Method: /chem3/fid4a.i/20040508.b/ftphfid4a.m
Instrument: fid4a.i
Operator: ESJ
Report Date: 05/10/2004
Macro: 04-MAY-2004
Calibration Dates: Gas:20-APR-2004 Diesel:04-MAY-2004 M.Oil:04-MAY-2004
BUNKERC:07-MAR-2004

ARI ID: GO20D
Client ID:
Injection: 08-MAY-2004 21:11

Dilution Factor: 1

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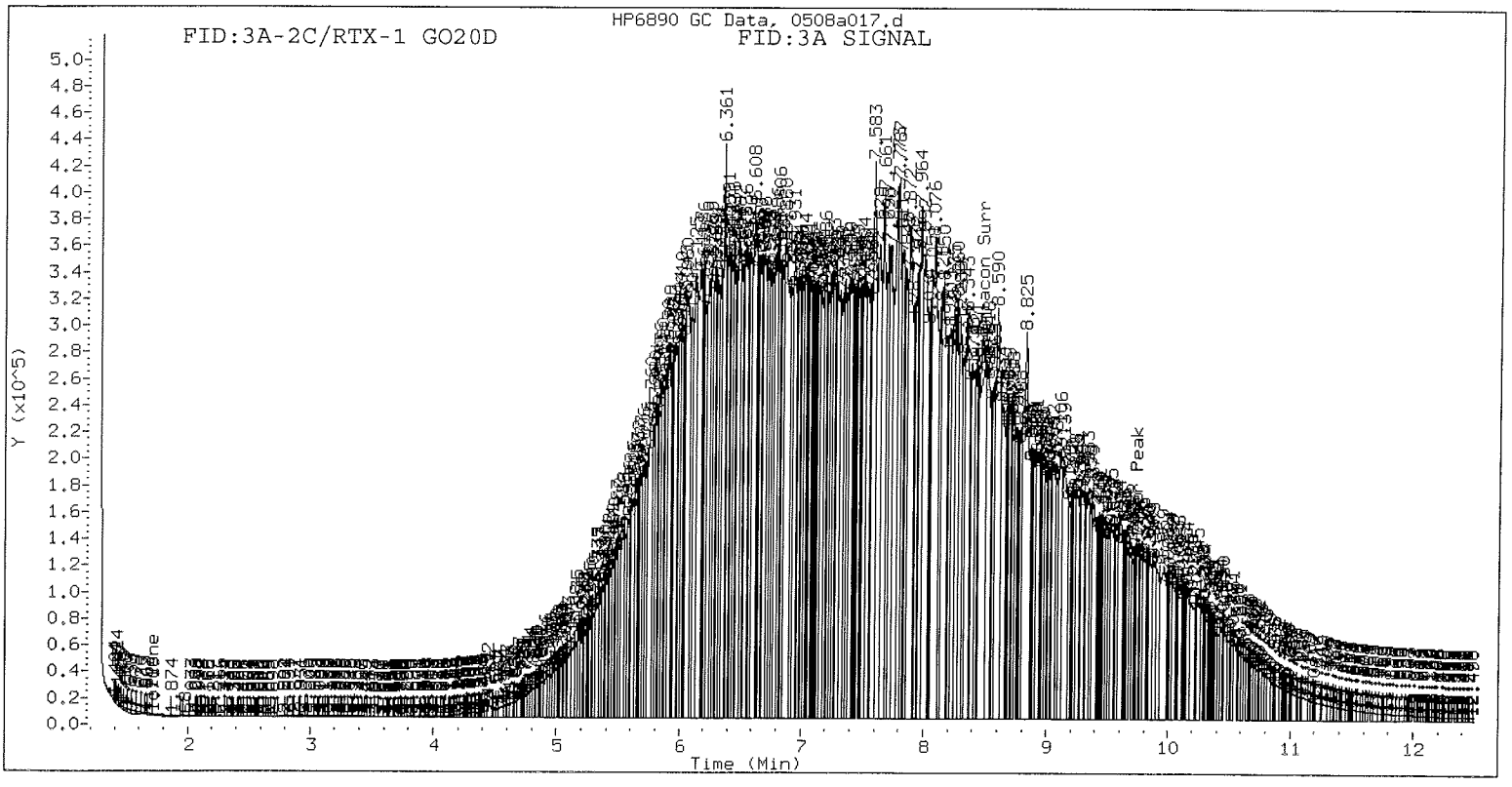
FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.714	0.028	1116	398	GAS (Tol-C12)	106011	17
C8	1.987	-0.011	1105	2602	DIESEL (C12-C24)	30058980	2140
C10	3.313	0.001	806	1317	M.OIL (C24-C38)	42969262	4059
C12	4.064	0.001	1312	1474			
C14	4.619	-0.009	11118	12178			
C16	5.139	-0.006	54632	100975			
C18	5.633	-0.009	181072	227413			
C20	6.096	-0.012	309141	393637			
C22	6.564	0.002	343794	333356			
C24	7.016	0.001	325765	129468			
C25	7.234	-0.006	324505	336681			
C26	7.469	0.005	318080	157778			
C28	7.913	0.000	303557	180662			
C32	9.018	-0.004	184936	209534			
C34	9.598	0.012	154840	356664	BUNKERC (C10-C38)	73067711	285
Filter Peak	9.727	0.003	126341	82805			
C36	10.132	0.001	89776.0	32183	o-Terph Surrogate Rec =	0.2%	(1404)
C38	10.639	-0.007	45565.0	43687	Triacon Surrogate Rec =	6.8%	(51085)
C40	11.194	0.005	14441	6579			
o-terph	5.801	0.005	4372	1404			
Triacon Surr	8.466	0.000	34364	51085			

Range Times: NW Diesel(4.063 - 7.016) AK102(3.31 - 7.24) Jet A(3.31 - 5.64)
NW M.Oil(7.02 - 10.65) AK103(7.24 - 10.65) OR Diesel(3.31 - 7.91)



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20040508.b/0508a016.d
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Instrument: fid4a.i
Operator: ESJ
Report Date: 05/10/2004
Macro: 04-MAY-2004
Calibration Dates: Gas:20-APR-2004 Diesel:04-MAY-2004 M.Oil:04-MAY-2004
BUNKERC:07-MAR-2004

ARI ID: GO20LCSS1
Client ID:
Injection: 08-MAY-2004 20:51

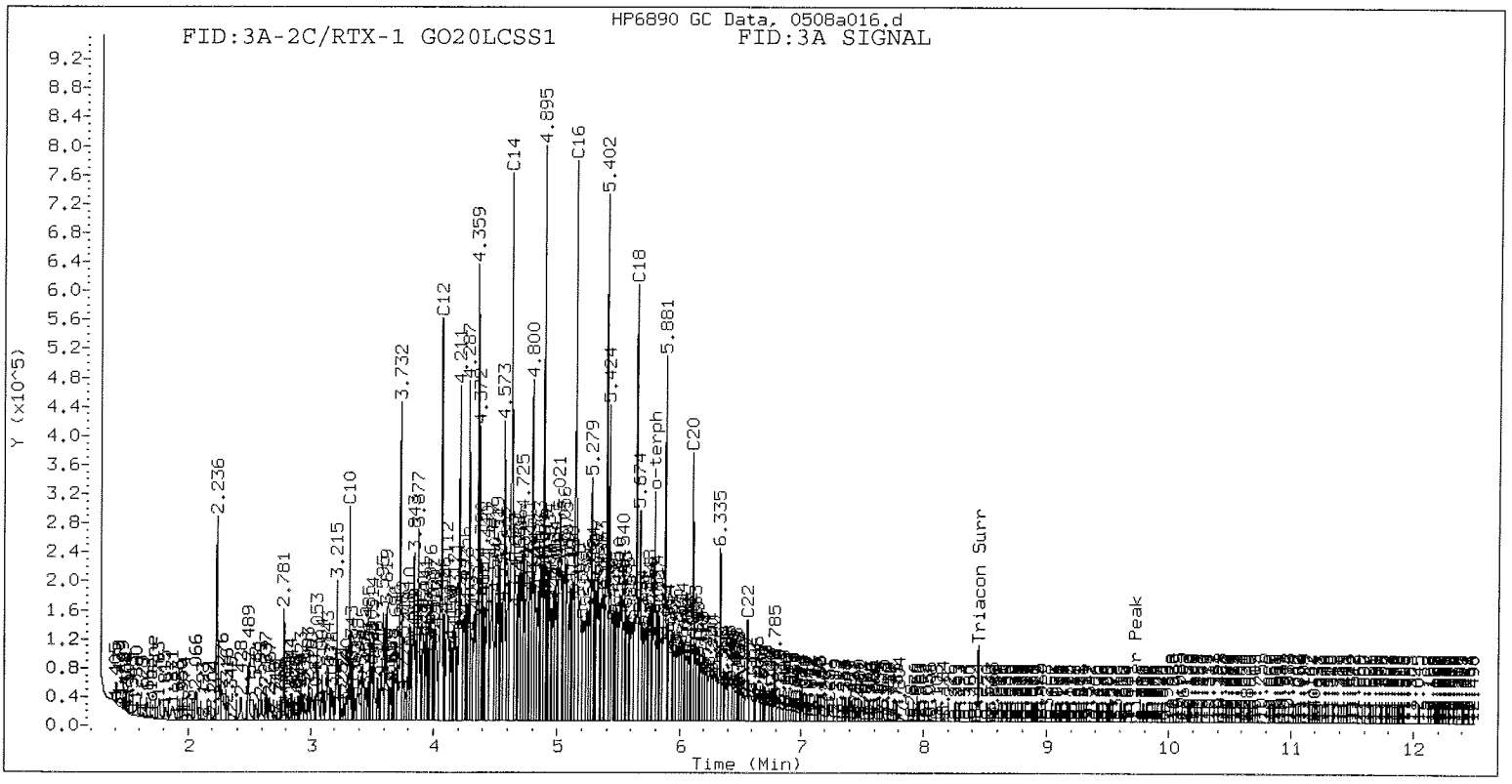
Dilution Factor: 1

SR 5/12/04

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.704	0.018	3697	4832	GAS (Tol-C12)	5923746	970
C8	2.011	0.013	8709	13924	DIESEL (C12-C24)	22276536	1586
C10	3.319	0.007	296566	158549	M.OIL (C24-C38)	389468	37
C12	4.066	0.003	556470	508132			
C14	4.633	0.005	757017	829072			
C16	5.151	0.006	774326	707837			
C18	5.645	0.004	602720	531560			
C20	6.109	0.002	370374	259811			
C22	6.560	-0.002	141383	118832			
C24	7.010	-0.006	44943	37051			
C25	7.234	-0.006	25234	36093			
C26	7.456	-0.008	14279	12348			
C28	7.904	-0.009	4465	7024			
C32	9.009	-0.014	495	526			
C34	9.573	-0.013	297	654	BUNKERC (C10-C38)	27012400	105
Filter Peak	9.724	0.000	1977	2709			
C36	10.121	-0.011	591.0	1245	o-Terph Surrogate Rec = 16.1%		(118948)
C38	10.649	0.003	1248.0	1132	Triacon Surrogate Rec = 11.3%		(85266)
C40	11.197	0.008	1201	1987			
o-terph	5.791	-0.005	209334	118948			
Triacon Surr	8.445	-0.022	104403	85266			

Range Times: NW Diesel(4.063 - 7.016) AK102(3.31 - 7.24) Jet A(3.31 - 5.64)
NW M.Oil(7.02 - 10.65) AK103(7.24 - 10.65) OR Diesel(3.31 - 7.91)



FOR FILE

Analytical Resources Inc.
TPH Quantitation Report

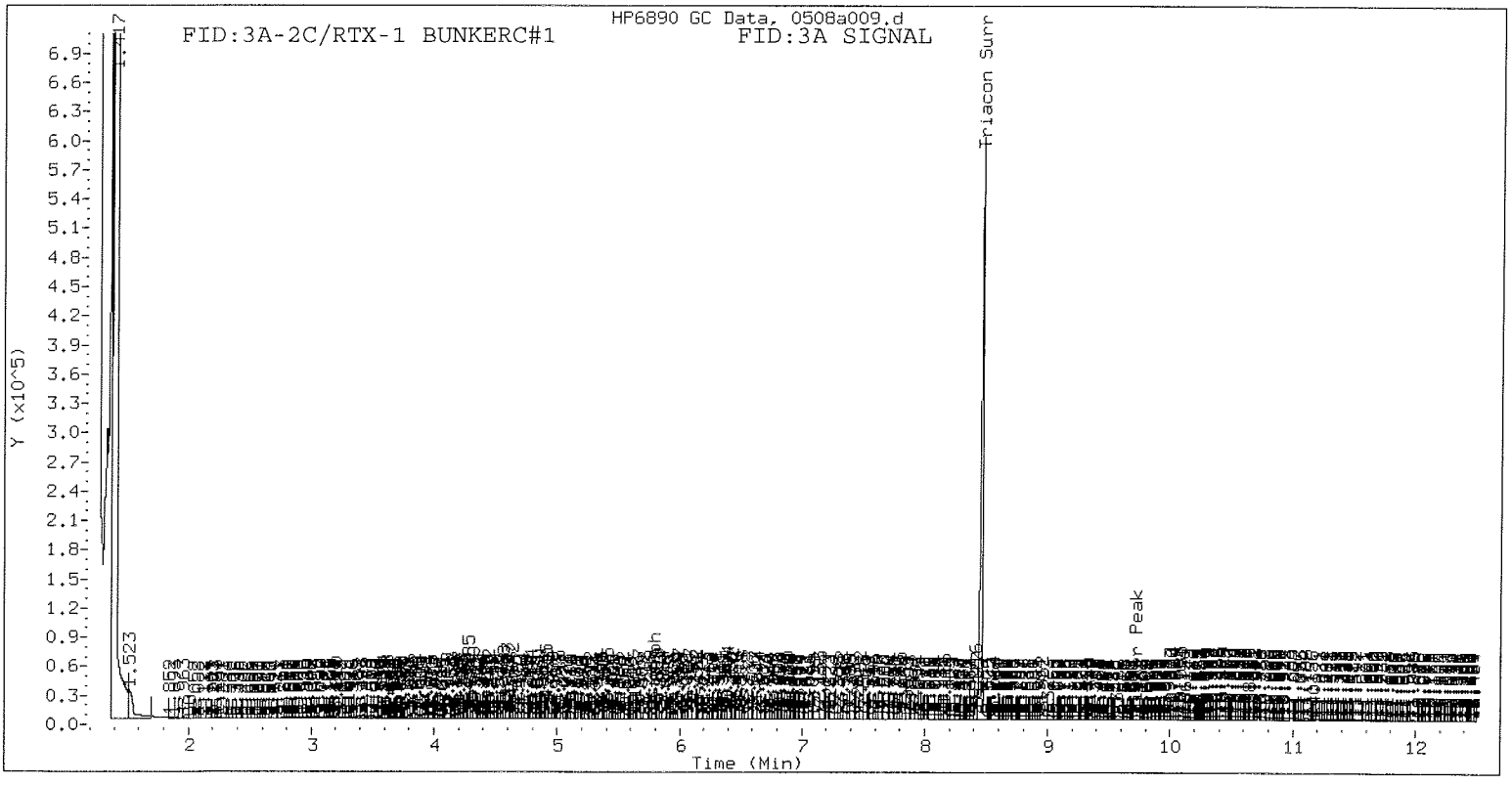
Data file: /chem3/fid4a.i/20040508.b/0508a009.d
Method: /chem3/fid4a.i/20040508.b/ftphfid4a.m
Instrument: fid4a.i
Operator: ESJ
Report Date: 05/10/2004
Macro: 04-MAY-2004
Calibration Dates: Gas:20-APR-2004 Diesel:04-MAY-2004 M.Oil:04-MAY-2004
BUNKERC:07-MAR-2004

ARI ID: BUNKERC#1
Client ID:
Injection: 08-MAY-2004 18:28
Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	267881	44
C8	2.013	0.016	1017	2153	DIESEL (C12-C24)	1423187	101
C10	3.312	0.000	3387	3854	M.OIL (C24-C38)	1127109	106
C12	4.060	-0.003	4806	3990			
C14	4.634	0.006	25694	14837			
C16	5.150	0.005	7294	7013			
C18	5.641	-0.001	8613	8530			
C20	6.128	0.020	22506	21735			
C22	6.554	-0.008	8837	14304			
C24	7.023	0.007	7768	5210			
C25	7.237	-0.003	8887	19003			
C26	7.460	-0.004	9265	13348			
C28	7.904	-0.009	7308	12783			
C32	9.010	-0.012	5553	13252			
C34	9.569	-0.017	4385	14883	BUNKERC (C10-C38)	2731032	11
Filter Peak	9.726	0.001	5649	14135			
C36	10.130	-0.001	3953.0	4376	o-Terph Surrogate Rec = 1.1%		(8283)
C38	10.649	0.003	4005.0	3405	Triacon Surrogate Rec = 91.0%		(688114)
C40	11.174	-0.015	2391	2120			
o-terph	5.786	-0.009	6467	8283			
Triacon Surr	8.467	0.001	592045	688114			

Range Times: NW Diesel(4.063 - 7.016) AK102(3.31 - 7.24) Jet A(3.31 - 5.64)
NW M.Oil(7.02 - 10.65) AK103(7.24 - 10.65) OR Diesel(3.31 - 7.91)



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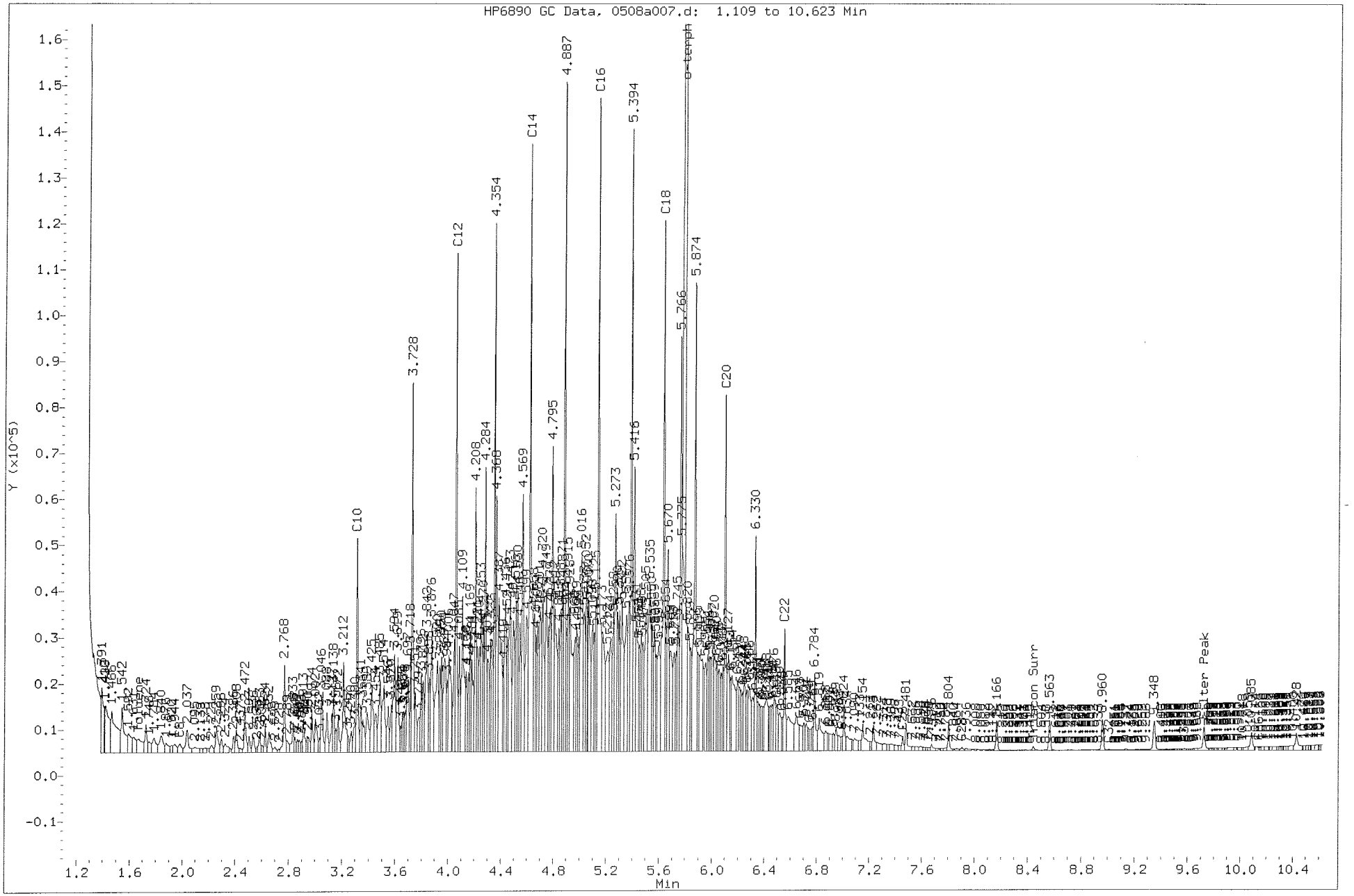
Instrument: fid4a.i
Client Sample ID:

Diesel



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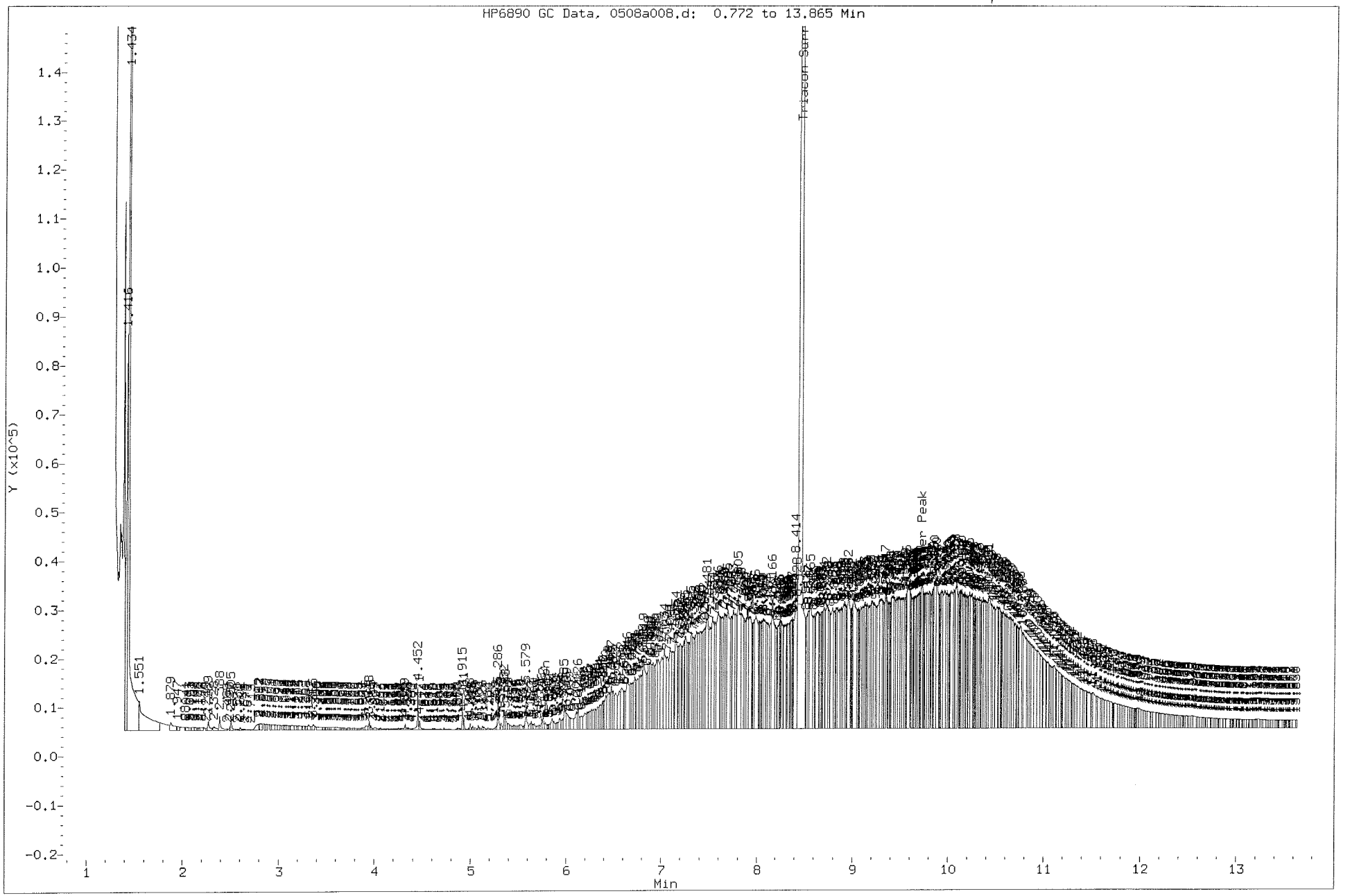
Client Sample ID:

Motor Oil



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Injection Date: 08-MAY-2004 18:28
Instrument: fid4a.i
Client Sample ID:

Bunker C

