Data File: /chem3/pid1.i/vpcc0422-1.b/0422a007.d

Date : 22-APR-2011 09:11

Client ID: LL-SB6-0-0.5-041811

Sample Info: SS71A

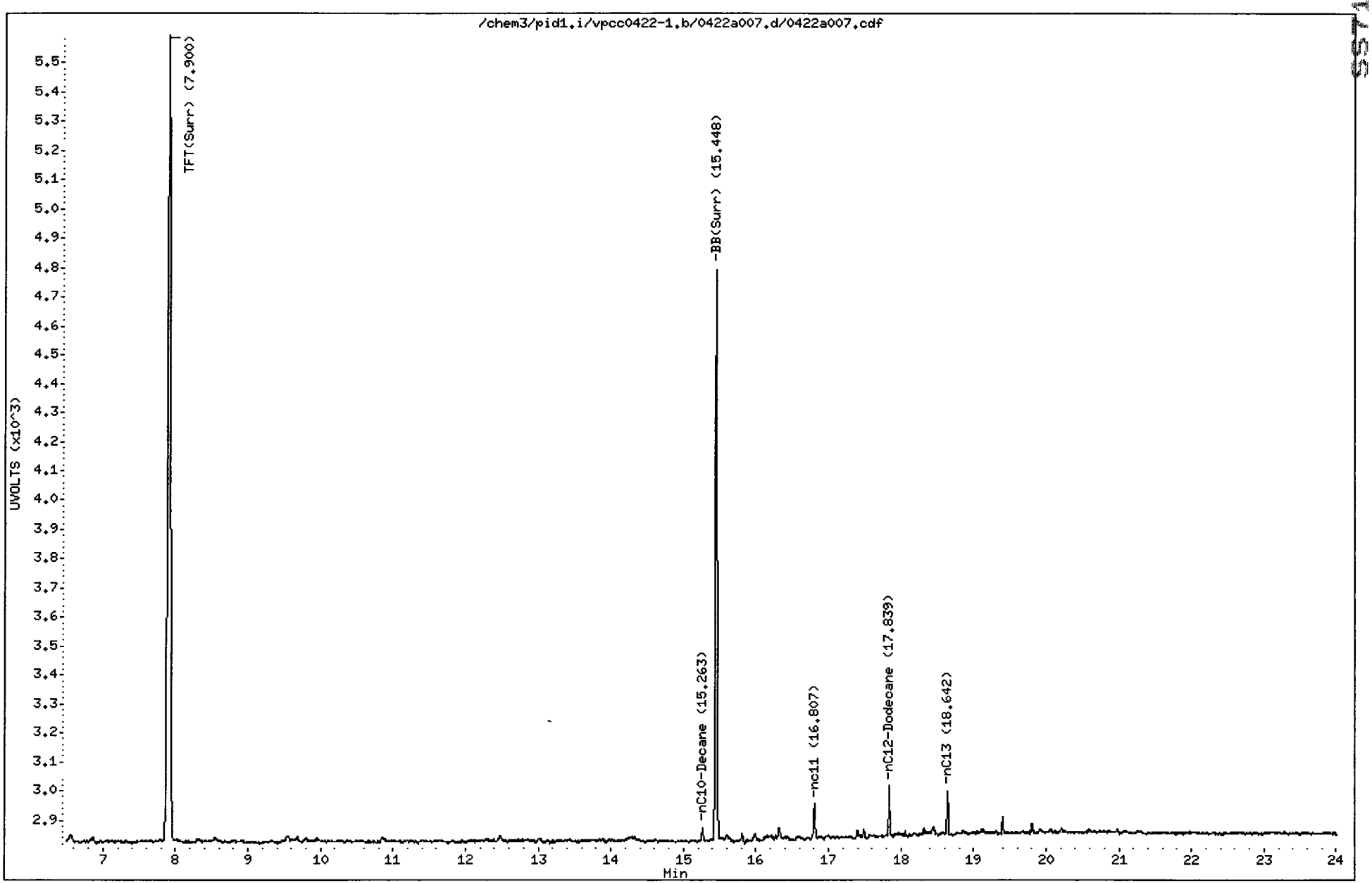
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71 : 91556



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a007.d

Date : 22-APR-2011 09:11

Client ID: LL-SB6-0-0.5-041811

Sample Info: SS71A

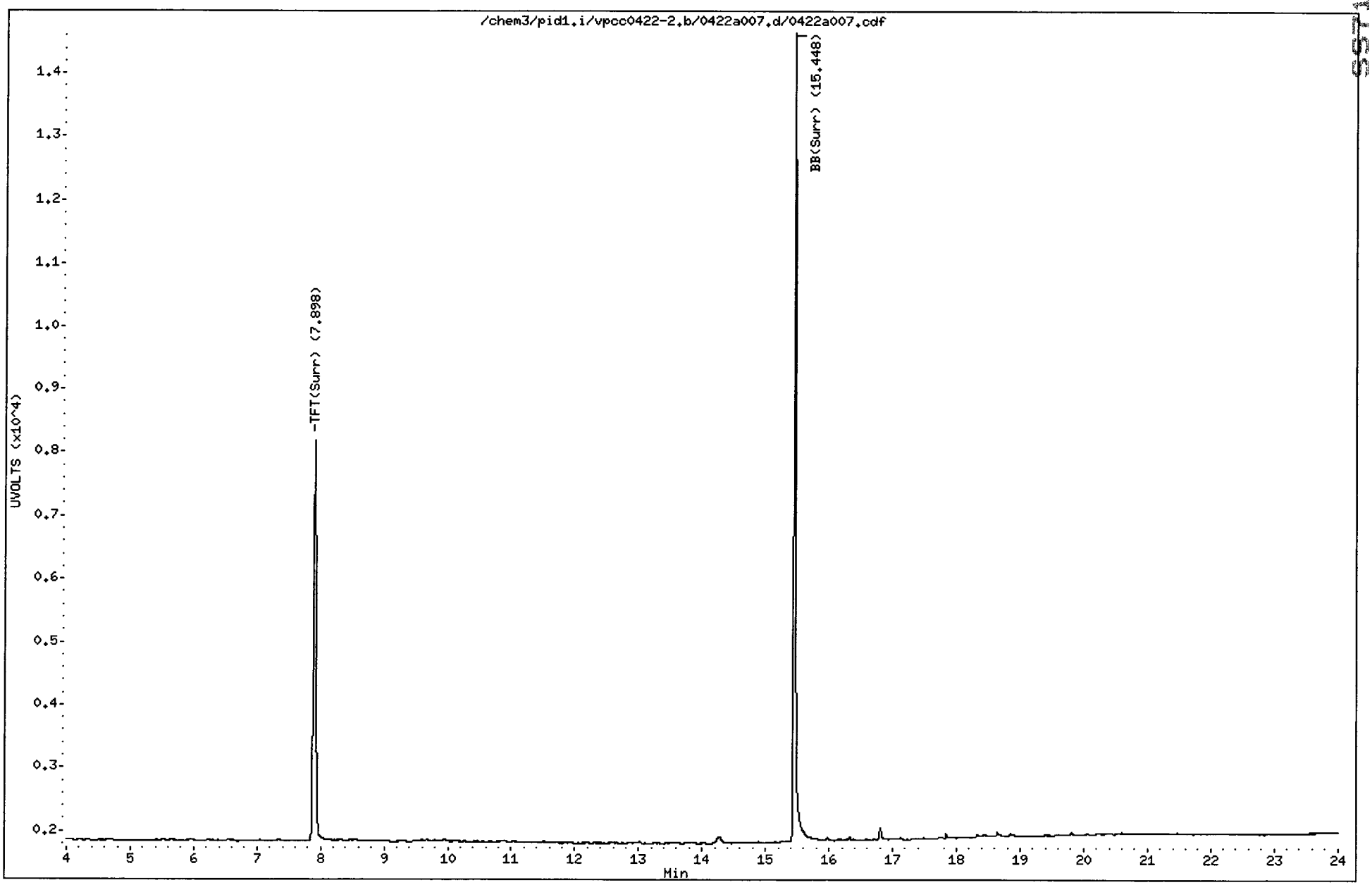
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71 . 01551



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a008.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a008.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71B
Client ID: LL-SB6-1.5-2-041811
Injection Date: 22-APR-2011 09:40
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.899	0.000	2703	36678	95.5	TFT(Surr)
15.448	0.002	1933	16224	92.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	1156	0.003
8015B 2MP-TMB	(4.15 to 16.26)	747017	0	0.000
AK101 nC6-nC10	(4.66 to 15.16)	604063	0	0.000
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	1888	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.001	6112	93.8	TFT(Surr)
15.448	0.002	12654	93.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a008.d

Page 1

Date : 22-APR-2011 09:40

Client ID: LL-SB6-1.5-2-041811

Instrument: pid1.i

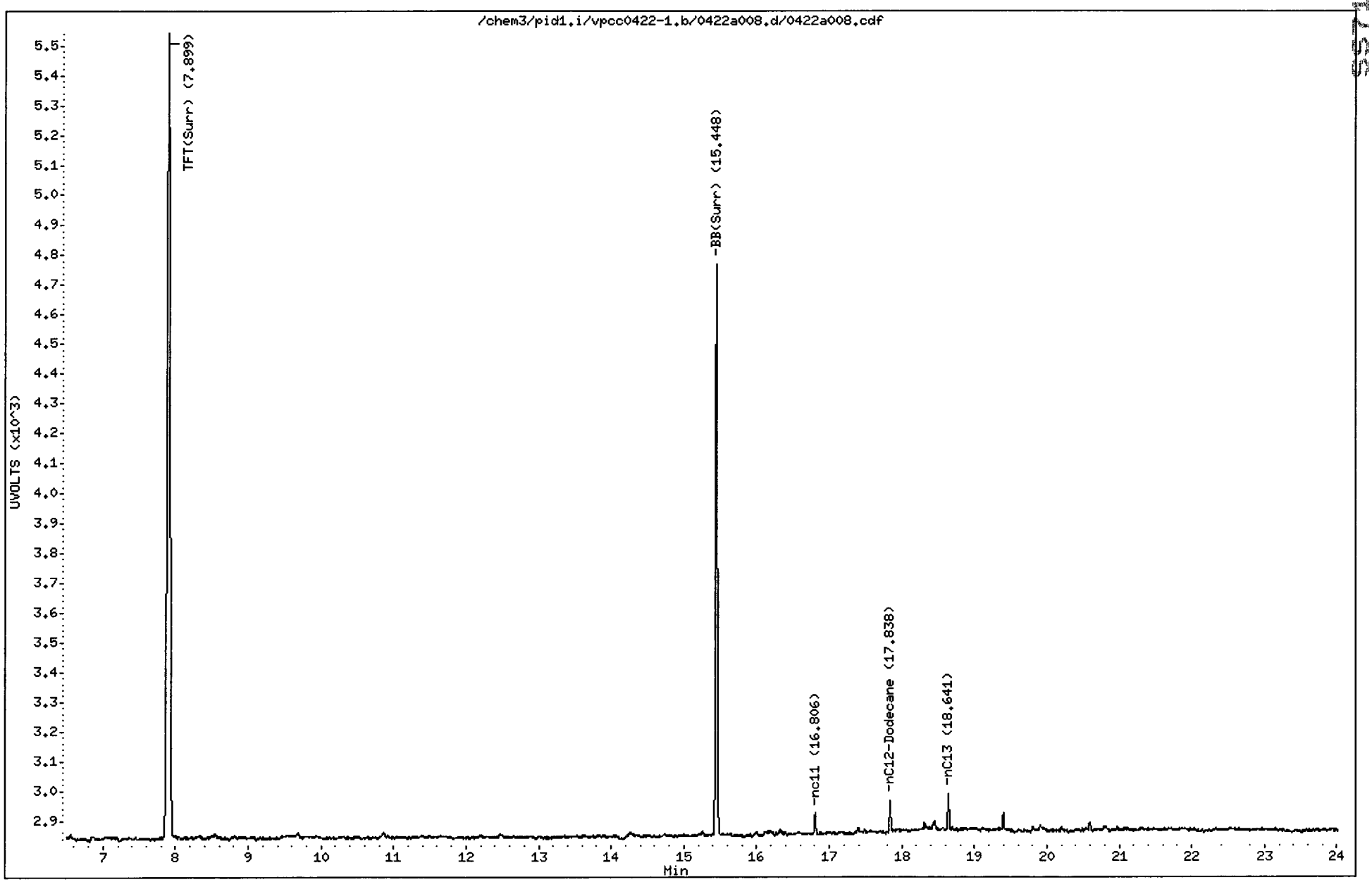
Sample Info: SS71B

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SS71 91553



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a008.d

Date : 22-APR-2011 09:40

Client ID: LL-SB6-1.5-2-041811

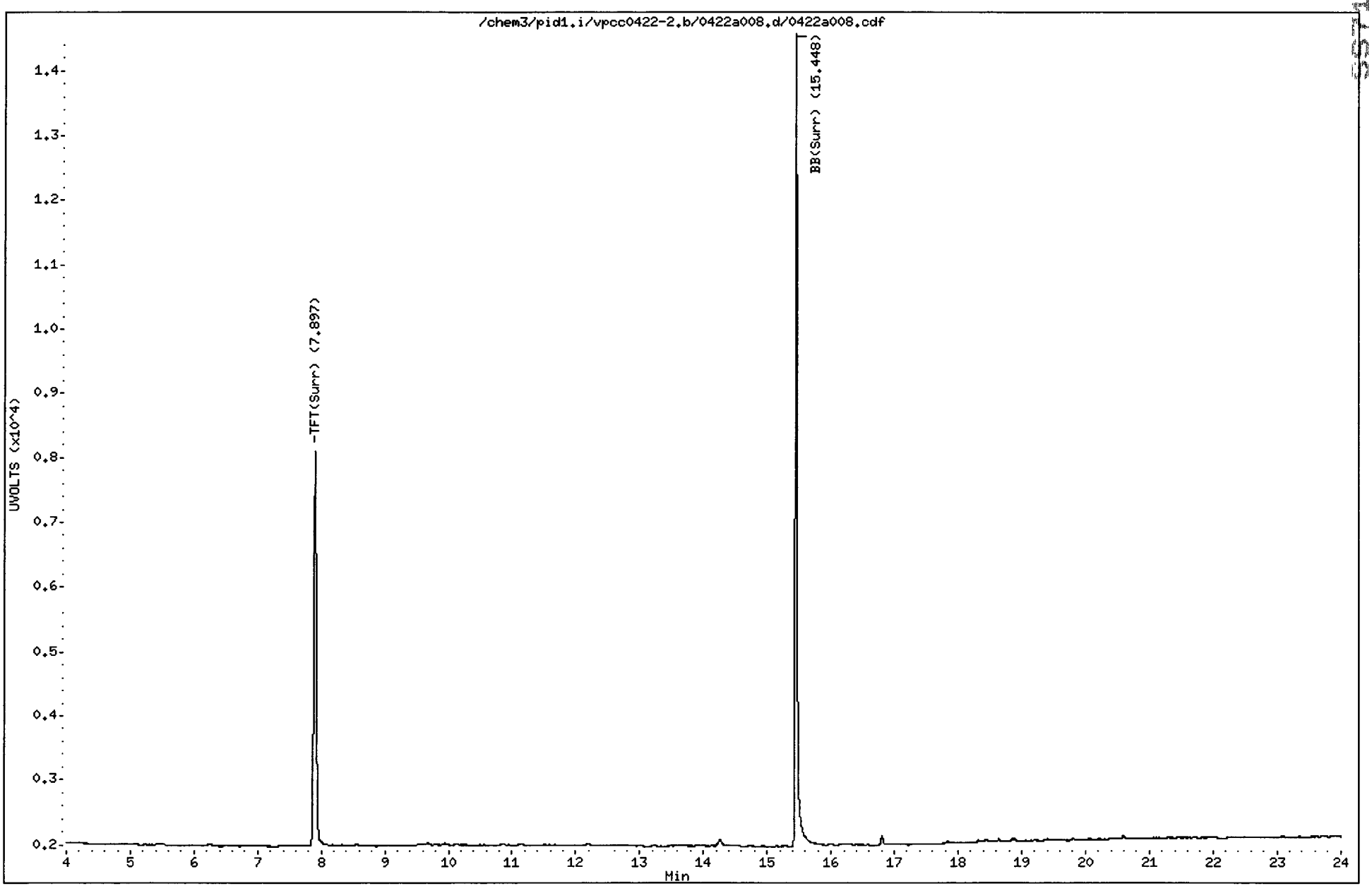
Sample Info: SS71B

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a009.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a009.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71C
Client ID: LL-SB6-2-4-041811
Injection Date: 22-APR-2011 10:10
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.899	0.000	2760	37422	97.6	TFT(Surr)
15.447	0.001	1987	16501	95.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	916	0.002
8015B 2MP-TMB	(4.15 to 16.26)	747017	1	0.000
AK101 nC6-nC10	(4.66 to 15.16)	604063	0	0.000
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	1452	0.004

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.000	6285	96.5	TFT(Surr)
15.447	0.001	12996	96.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a009.d

Date : 22-APR-2011 10:10

Client ID: LL-SB6-2-4-041811

Sample Info: SS71C

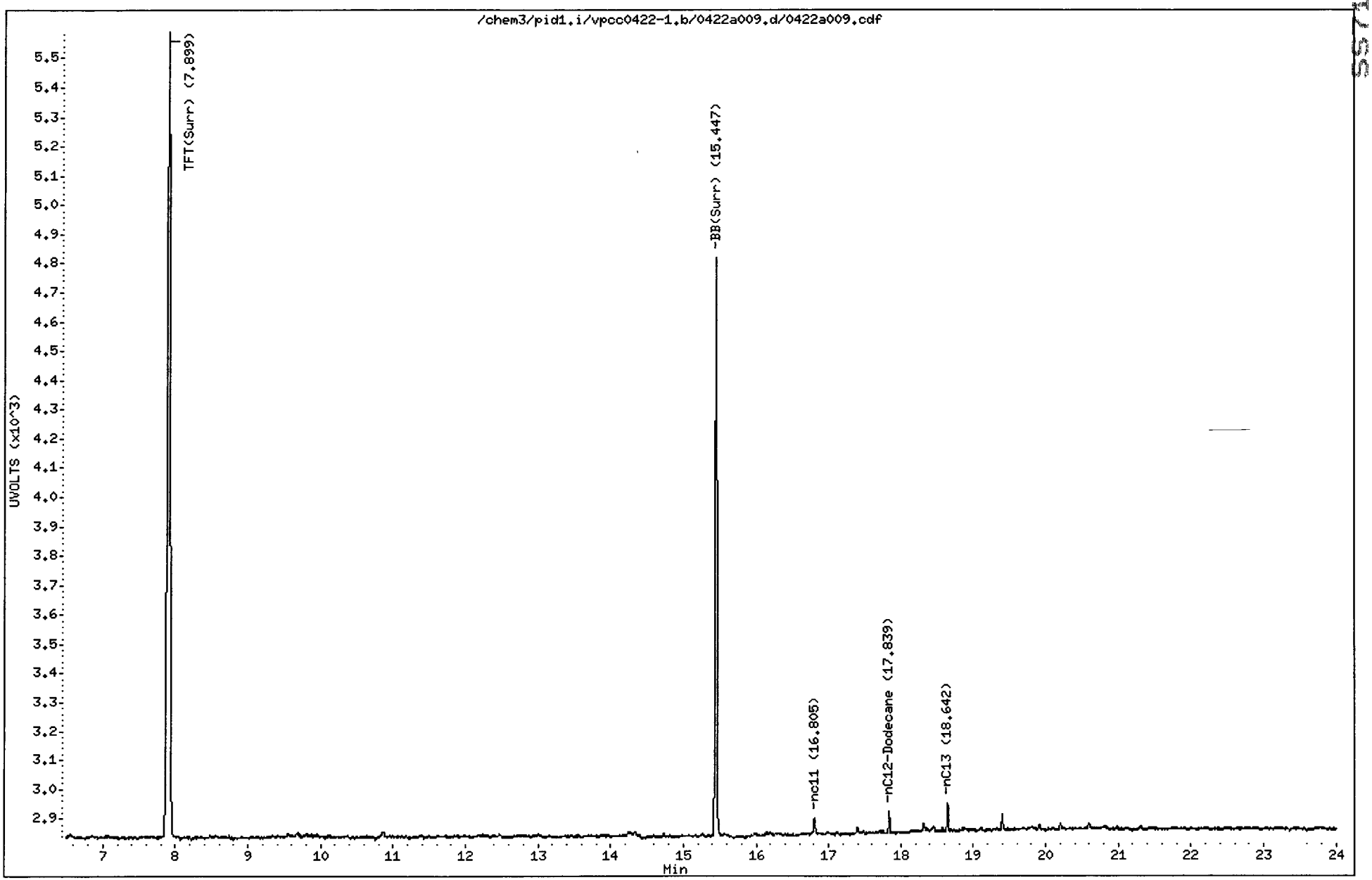
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71.01556



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a009.d

Date : 22-APR-2011 10:10

Client ID: LL-SB6-2-4-041811

Sample Info: SS71C

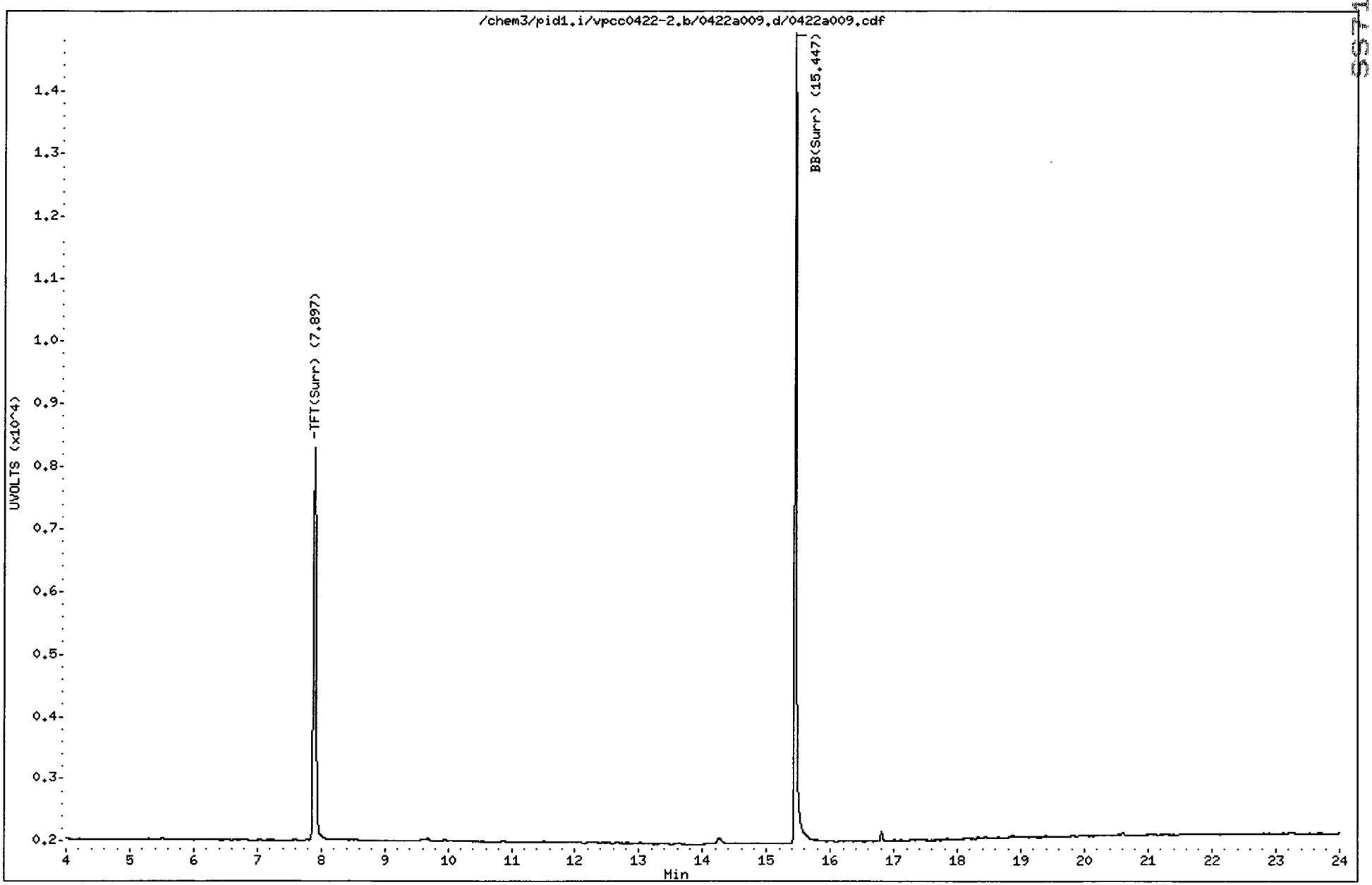
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71-041557



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a010.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a010.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71D
Client ID: LL-SB5-0-0.5-041811
Injection Date: 22-APR-2011 10:39
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.899	0.000	2781	37531	98.3	TFT(Surr)
15.446	0.000	1983	16556	95.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	6067	0.016
8015B 2MP-TMB	(4.15 to 16.26)	747017	3476	0.005
AK101 nC6-nC10	(4.66 to 15.16)	604063	3024	0.005
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	7393	0.018

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.001	6294	96.6	TFT(Surr)
15.447	0.001	13030	96.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a010.d

Page 1

Date : 22-APR-2011 10:39

Client ID: LL-SB5-0-0.5-041811

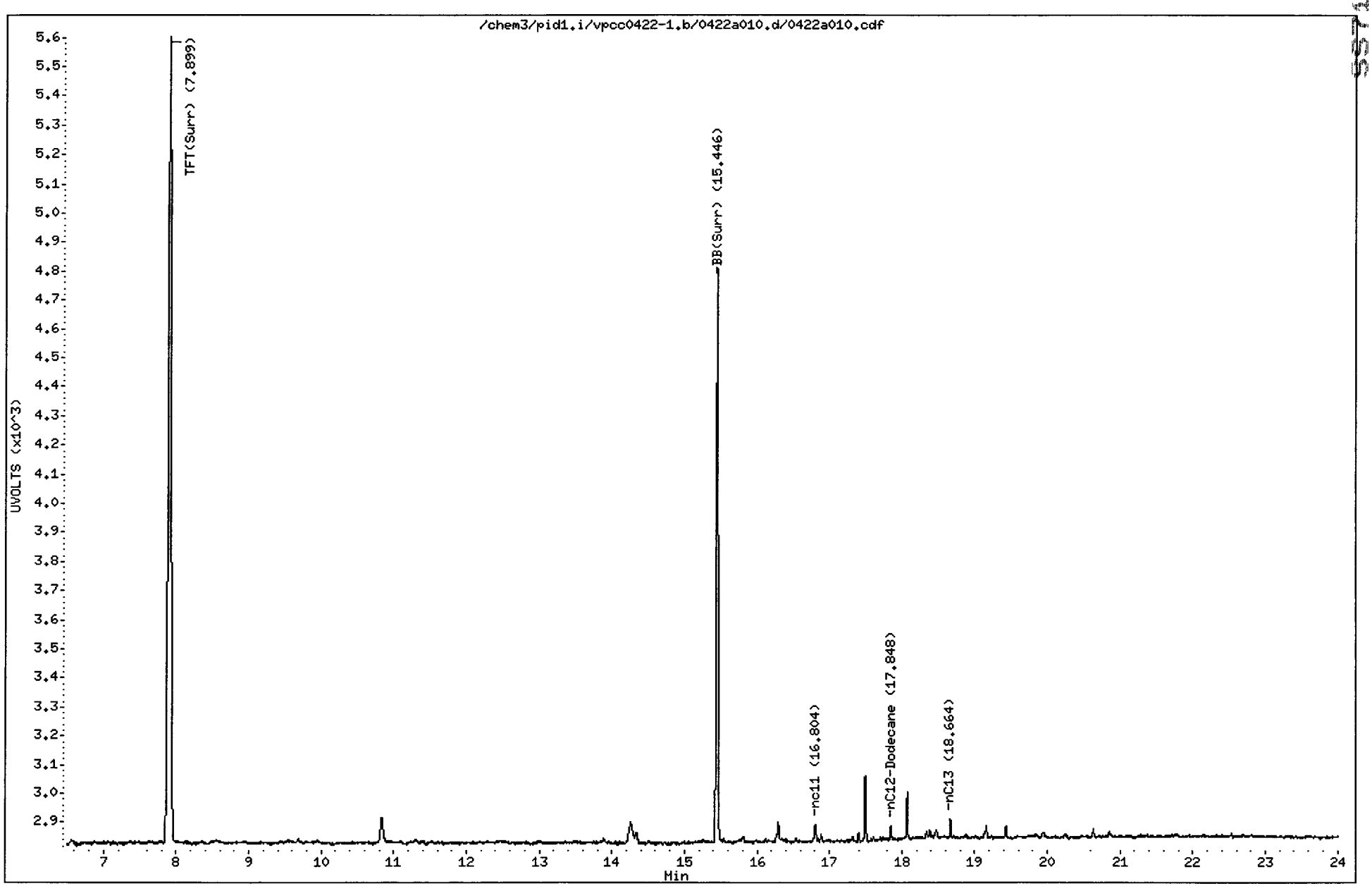
Instrument: pid1.i

Sample Info: SS71D

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18



SS71-041559

Data File: /chem3/pid1.i/vpcc0422-2.b/0422a010.d

Date : 22-APR-2011 10:39

Client ID: LL-SB5-0-0.5-041811

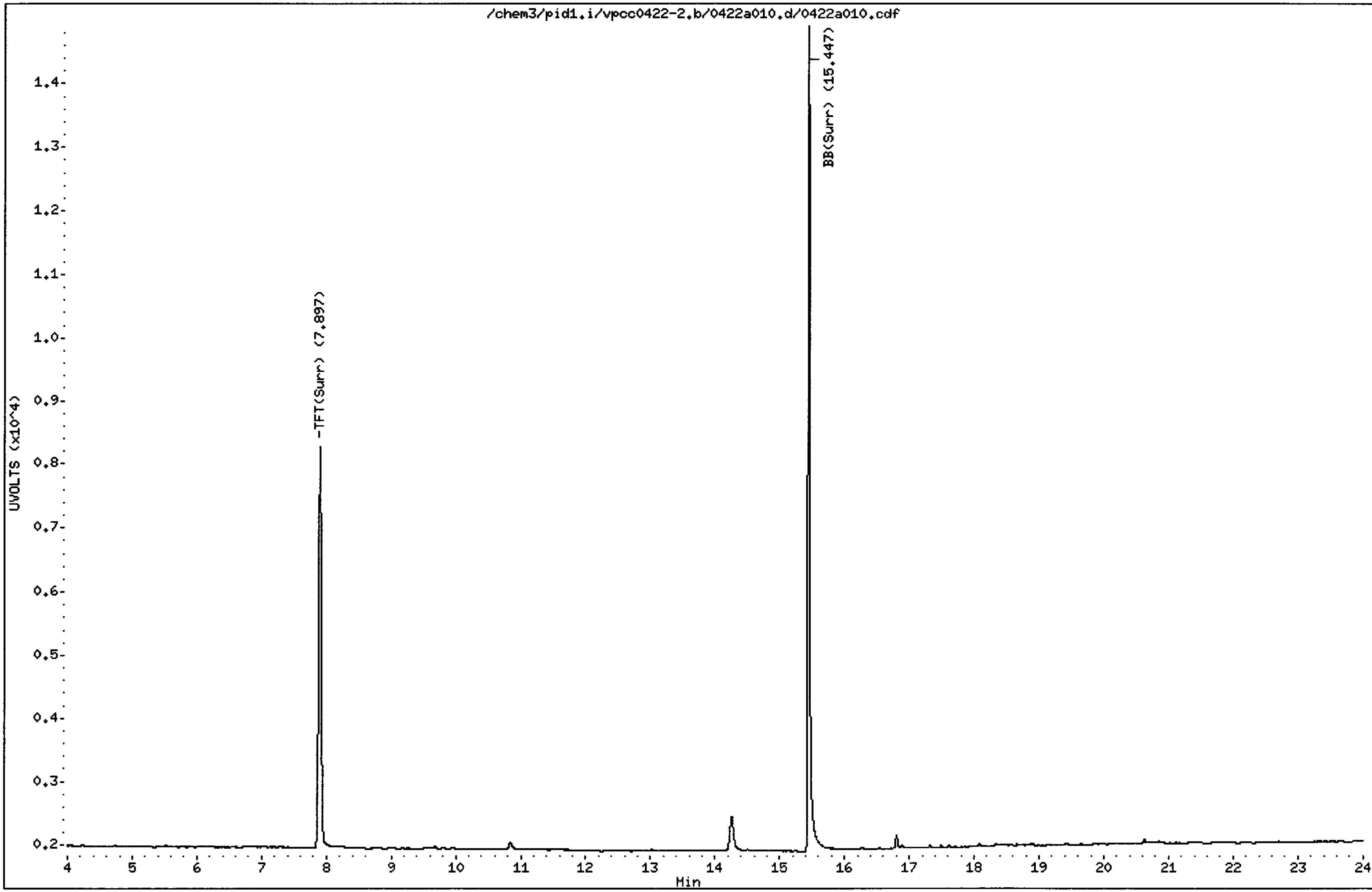
Sample Info: SS71D

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a011.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a011.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71E
Client ID: LL-SB5-1.5-2-041811
Injection Date: 22-APR-2011 11:08
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.898	-0.001	2763	37284	97.7	TFT(Surr)
15.447	0.001	2010	16788	96.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	815	0.002
8015B 2MP-TMB	(4.15 to 16.26)	747017	0	0.000
AK101 nC6-nC10	(4.66 to 15.16)	604063	0	0.000
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	1406	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	-0.001	6353	97.5	TFT(Surr)
15.447	0.001	13145	97.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a011.d

Page 1

Date : 22-APR-2011 11:08

Client ID: LL-SB5-1.5-2-041811

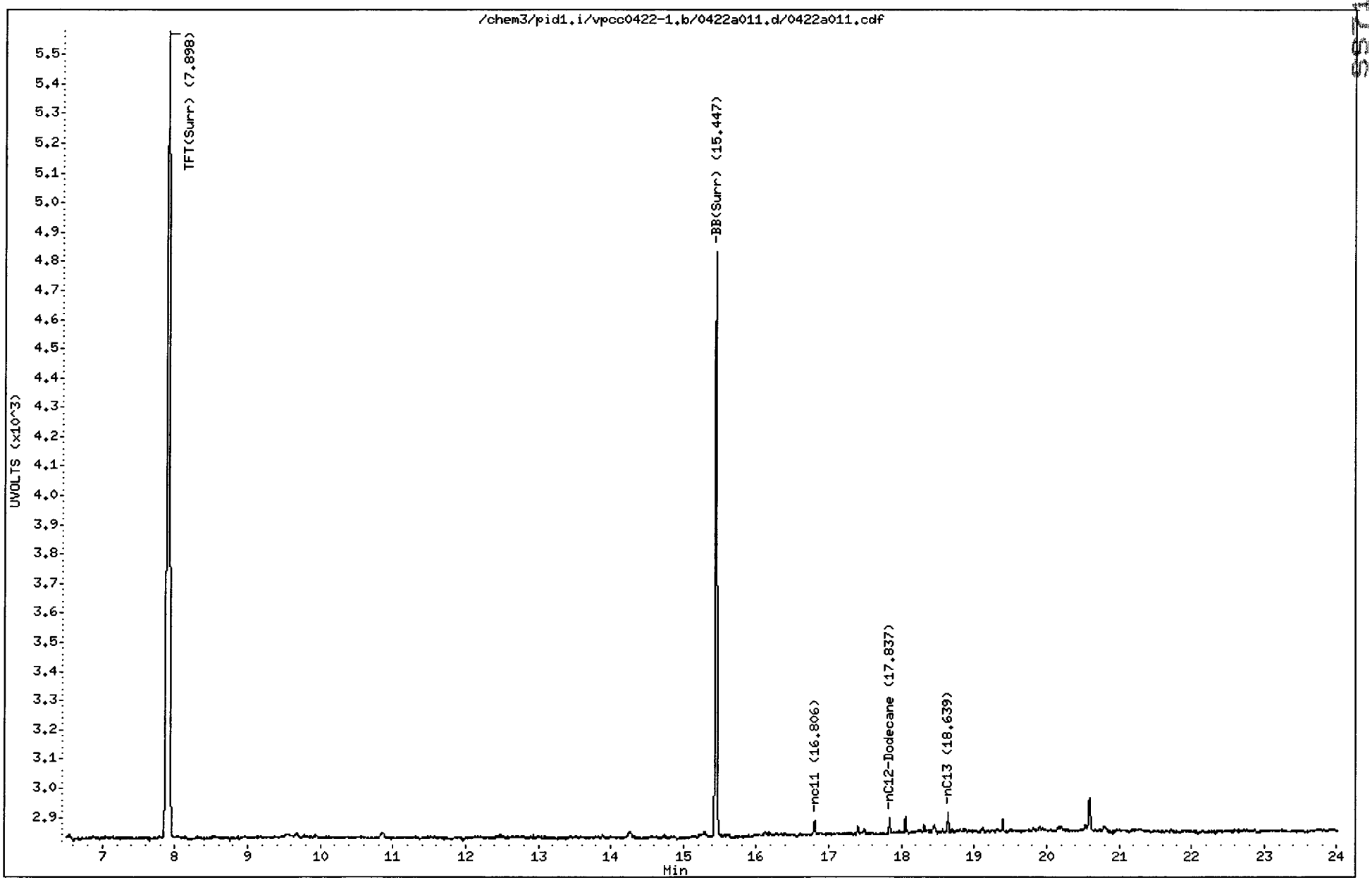
Instrument: pid1.i

Sample Info: SS71E

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a011.d

Date : 22-APR-2011 11:08

Client ID: LL-SB5-1.5-2-041811

Sample Info: SS71E

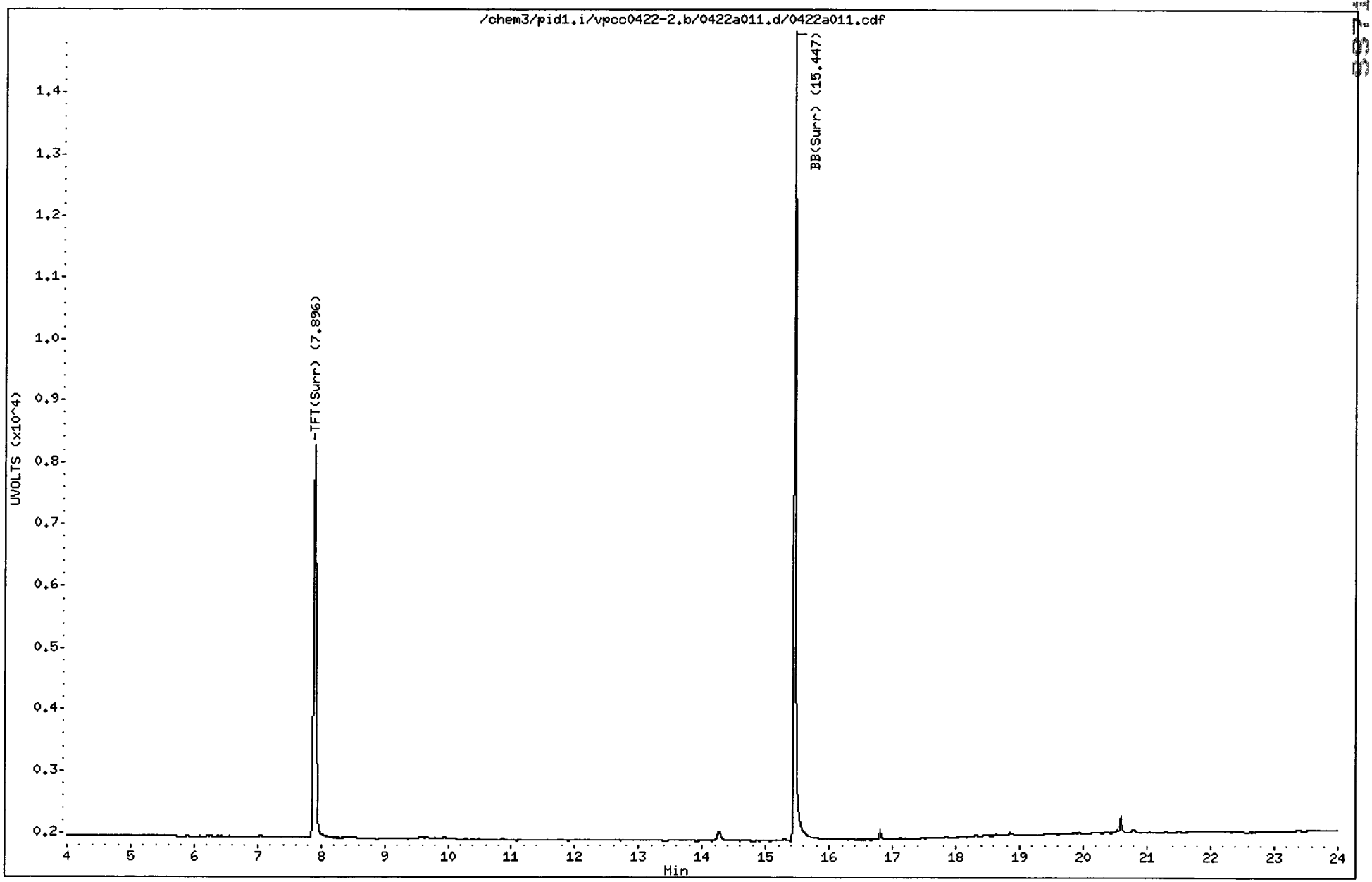
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71 91563



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a012.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a012.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71F
Client ID: LL-SB5-2-4-041811
Injection Date: 22-APR-2011 11:37
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.899	0.000	2759	37577	97.5	TFT(Surr)
15.447	0.001	2010	16915	96.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	26633	0.071
8015B 2MP-TMB	(4.15 to 16.26)	747017	22963	0.031
AK101 nC6-nC10	(4.66 to 15.16)	604063	22962	0.038
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	27686	0.069

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.001	6253	96.0	TFT(Surr)
15.448	0.002	13150	97.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a012.d

Date : 22-APR-2011 11:37

Client ID: LL-SB5-2-4-041811

Sample Info: SS71F

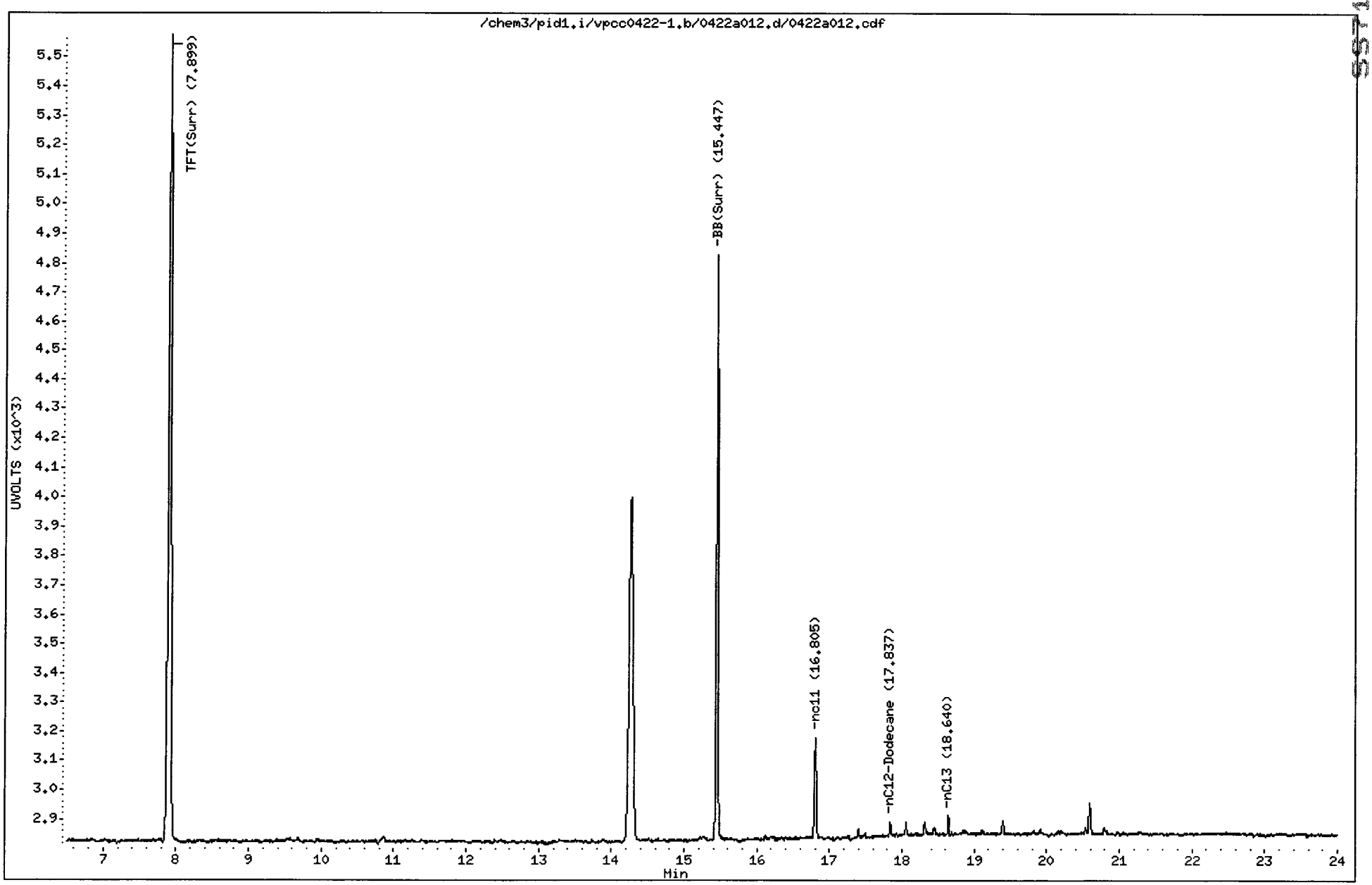
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71 91565



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a012.d

Date : 22-APR-2011 11:37

Client ID: LL-SB5-2-4-041811

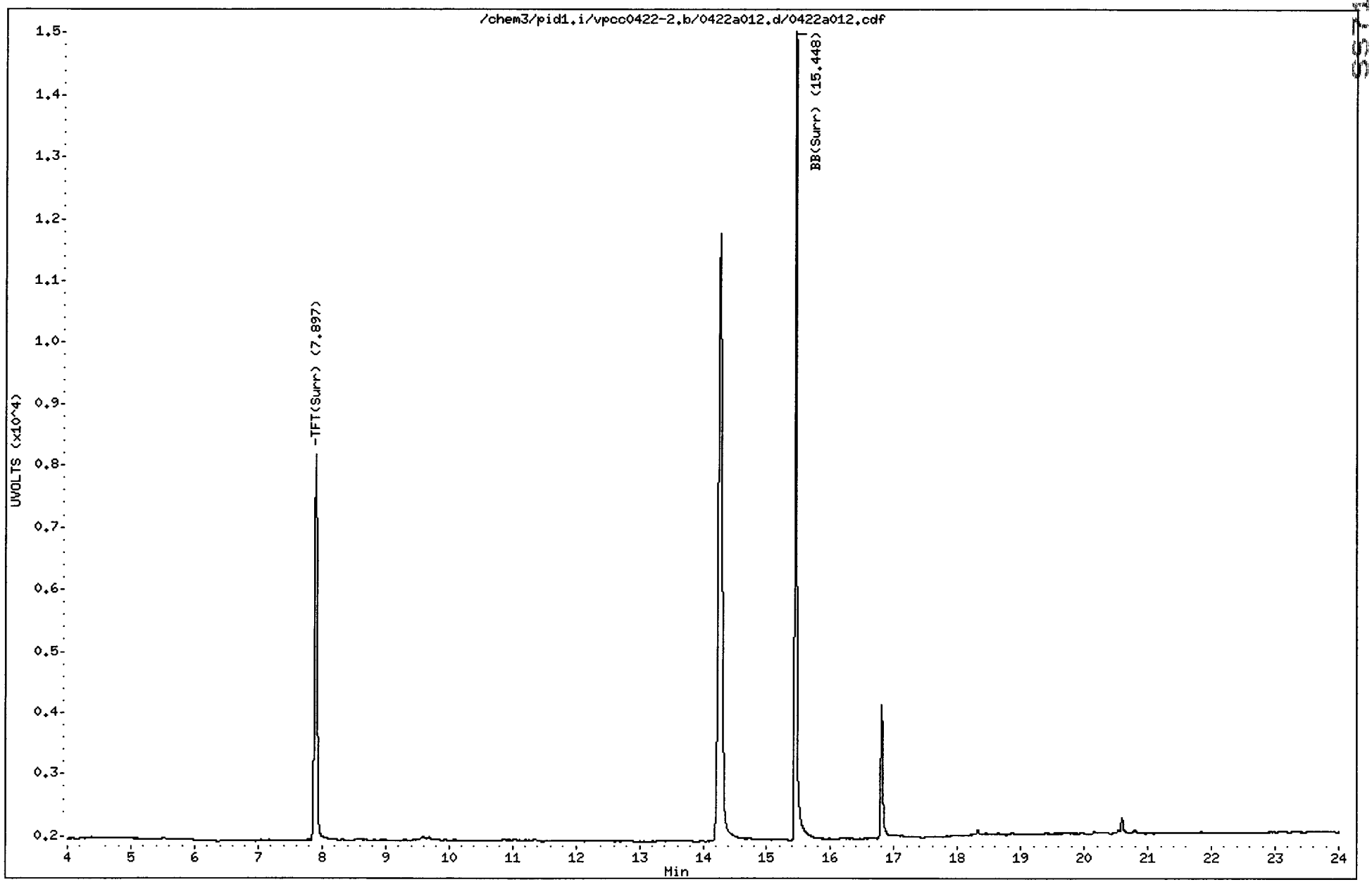
Sample Info: SS71F

Instrument: pid1.i

Operator: MH

Column phase: RTX 502-2 PID

Column diameter: 0.18



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a014.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a014.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: BCAL 2
Client ID:
Injection Date: 22-APR-2011 12:36
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.897	-0.002	2763	37563	97.7	TFT(Surr)
15.446	0.000	2015	16768	96.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	233498	0.623
8015B 2MP-TMB	(4.15 to 16.26)	747017	231121	0.309
AK101 nC6-nC10	(4.66 to 15.16)	604063	214117	0.354
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	233697	0.579

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	-0.001	6265	96.2	TFT(Surr)
15.447	0.001	13110	97.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.045	-0.006	10636	24.26	Benzene
9.942	0.000	9259	23.68	Toluene
12.846	0.000	8308	24.32	Ethylbenzene
13.008	0.001	17614	47.97	M/P-Xylene
13.966	0.001	7215	25.20	O-Xylene
4.522	-0.004	3820	22.50	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a014.d

Date : 22-APR-2011 12:36

Client ID:

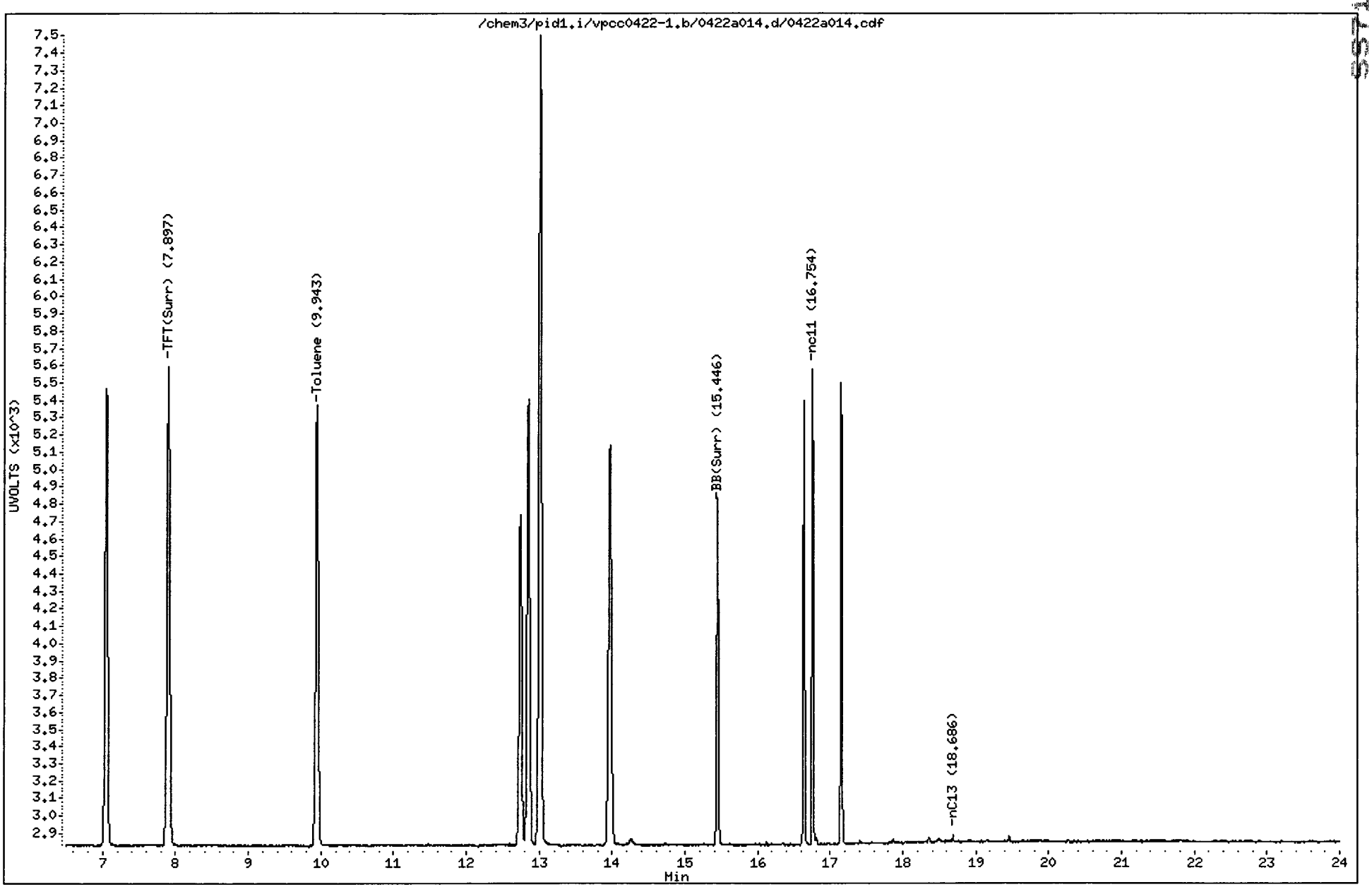
Sample Info: BCAL 2

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a014.d

Date : 22-APR-2011 12:36

Client ID:

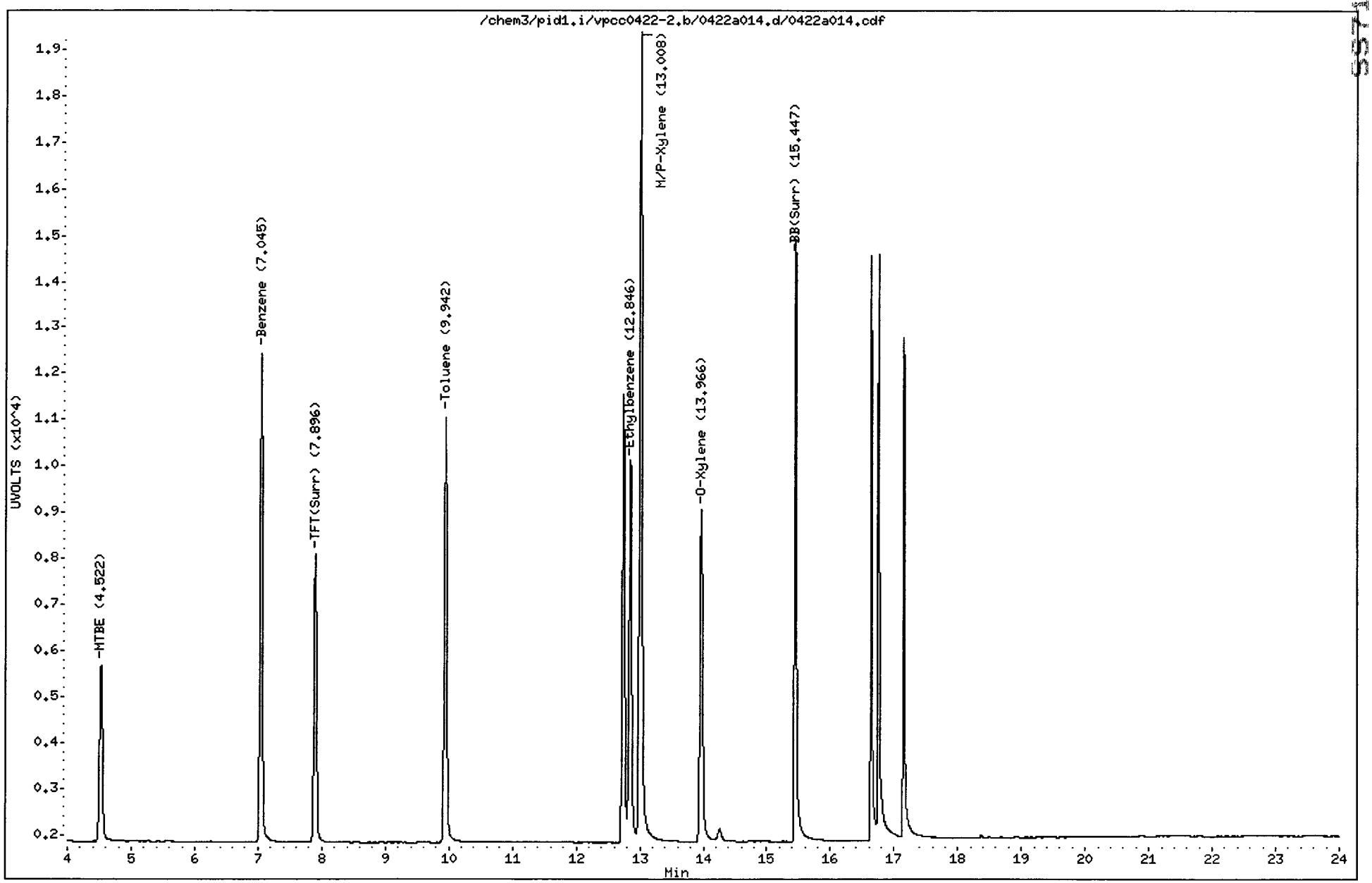
Sample Info: BCAL 2

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a015.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a015.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: GCAL 2
Client ID:
Injection Date: 22-APR-2011 13:05
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.898	-0.001	3004	52886	106.2	TFT(Surr)
15.447	0.001	2022	18571	97.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	877458	2.341 M
8015B 2MP-TMB	(4.15 to 16.26)	747017	1807990	2.420 M
AK101 nC6-nC10	(4.66 to 15.16)	604063	1458981	2.415 M
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	929976	2.305 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.001	6508	99.9	TFT(Surr)
15.448	0.002	13262	98.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.057	0.007	3330	7.60	Benzene
9.944	0.002	35478	90.73	Toluene
12.848	0.002	9015	26.39	Ethylbenzene
13.014	0.006	36054	98.18	M/P-Xylene
13.968	0.003	12878	44.97	O-Xylene
4.528	0.002	717	4.22	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a015.d

Page 1

Date : 22-APR-2011 13:05

Client ID:

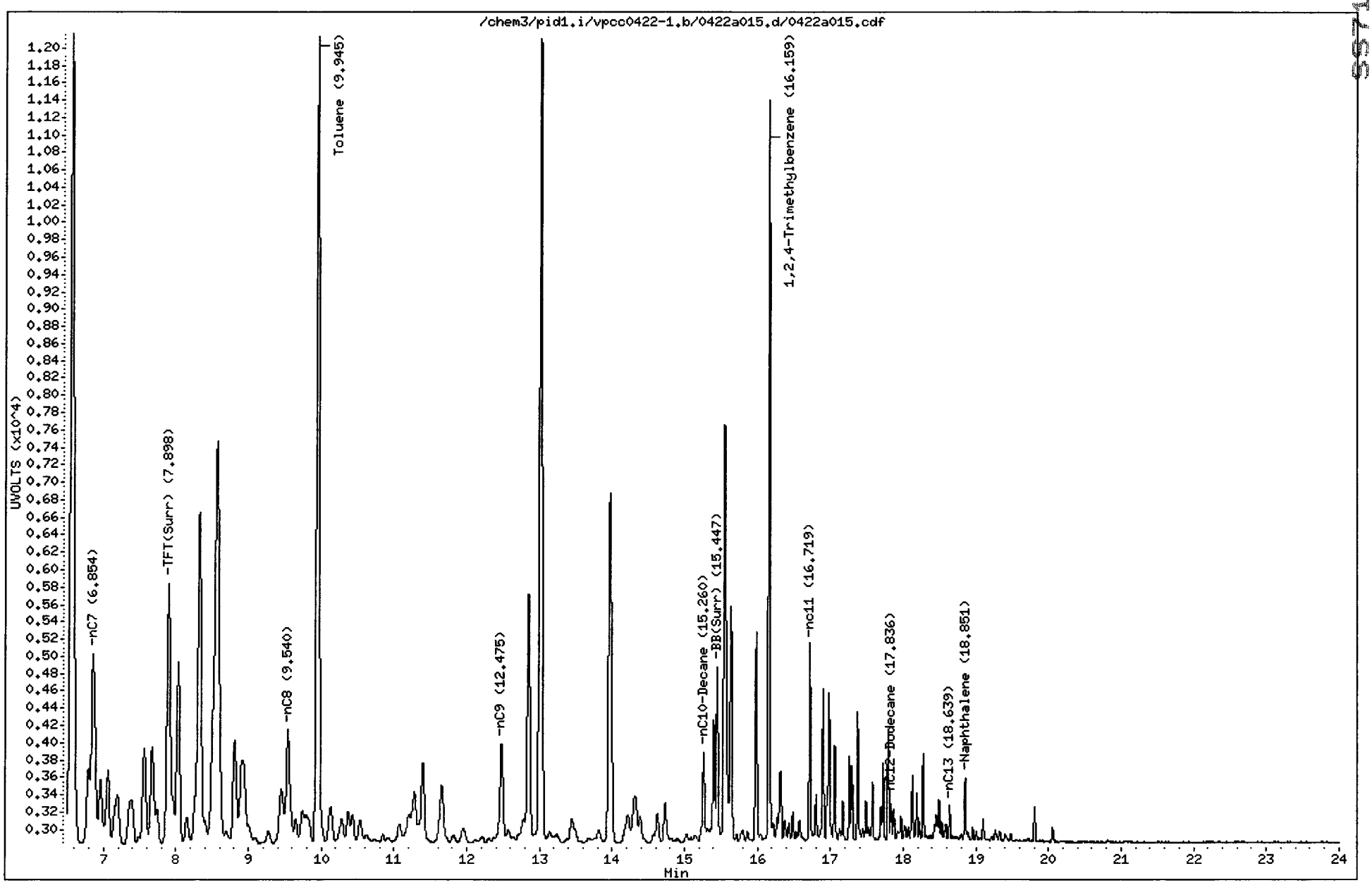
Instrument: pid1.i

Sample Info: GCAL 2

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a015.d

Date : 22-APR-2011 13:05

Client ID:

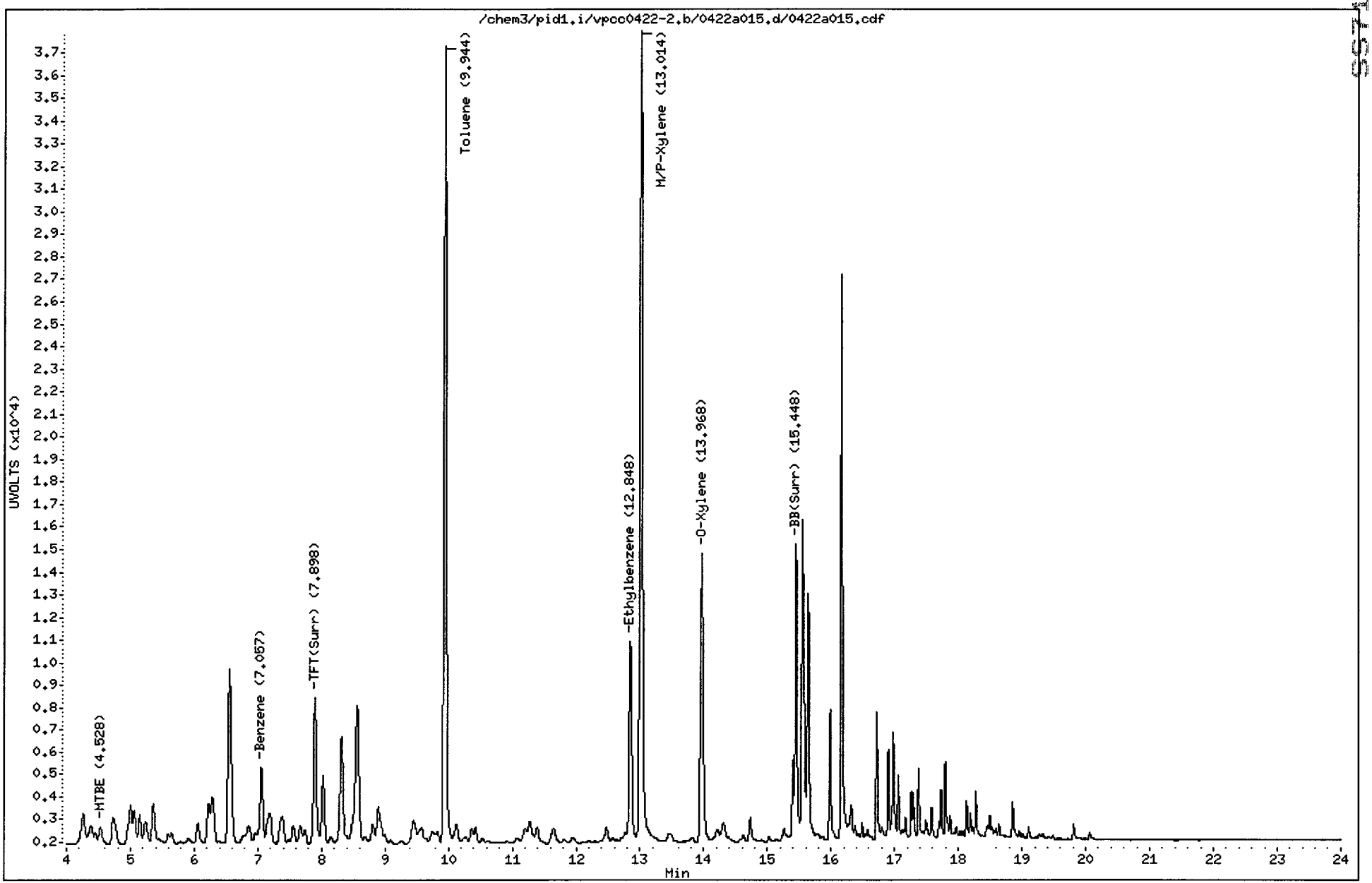
Sample Info: GCAL 2

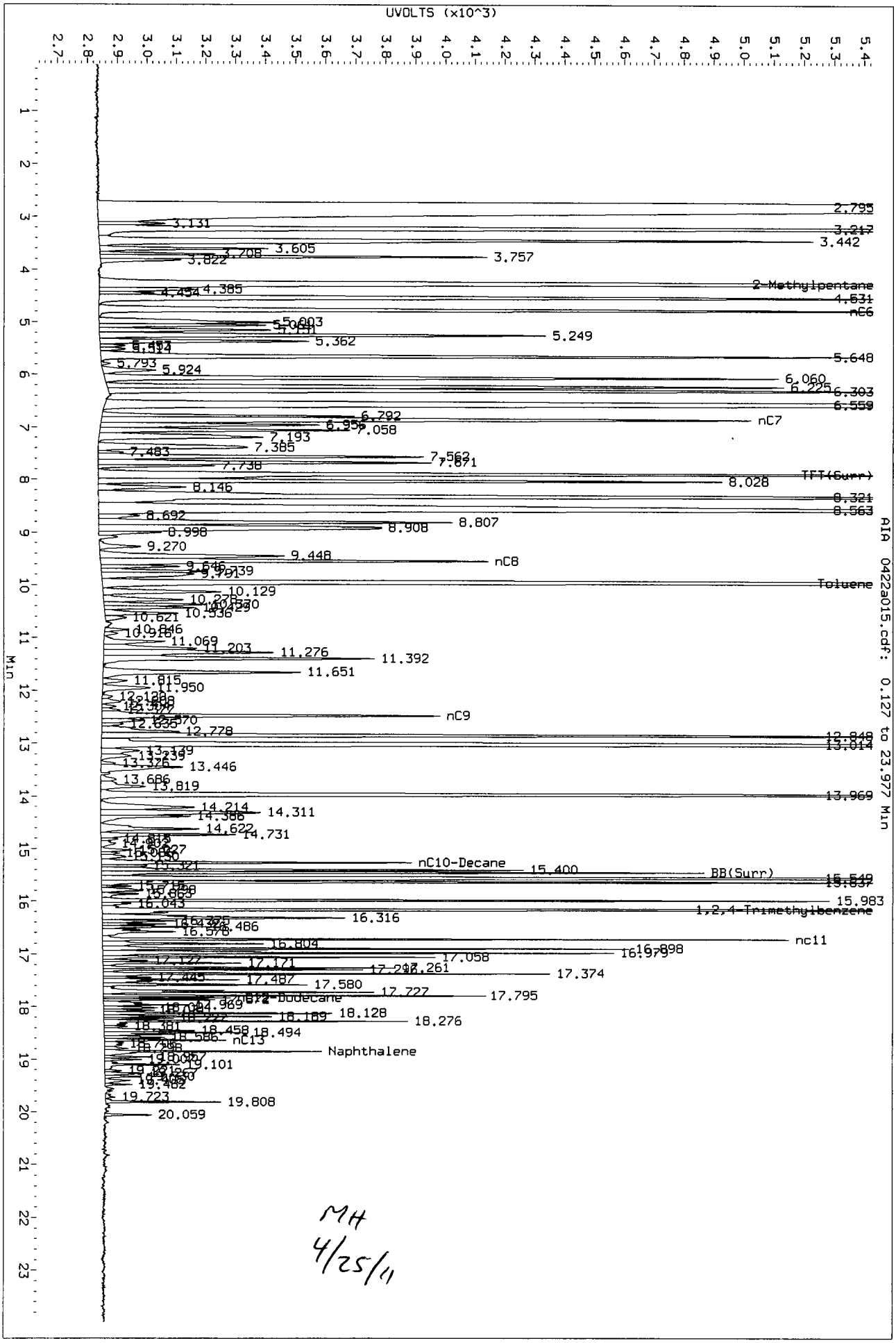
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

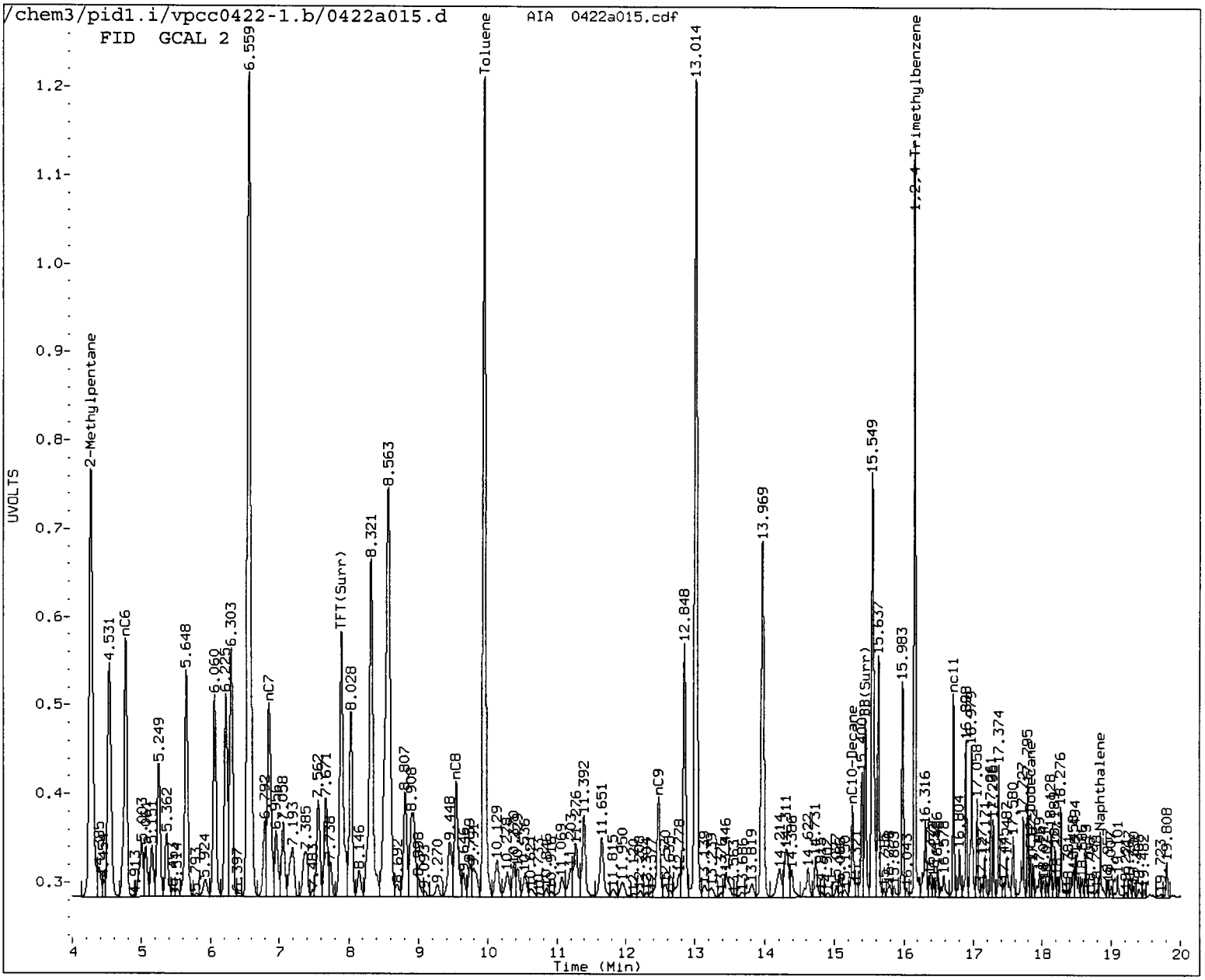
Column diameter: 0.18





Data File: /chem3/pid1.i/vpcc0422-1.b/0422a015.d/0422a015.cdf
Injection Date: 22-APR-2011 13:05
Instrument: pid1.i
Client Sample ID:

MH
4/25/11



MANUAL INTEGRATION

X 1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: MH Date: 4/25/11

MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a016.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a016.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71G
Client ID: LL-SB4-0-0.5-041911
Injection Date: 22-APR-2011 13:34
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.898	0.000	2708	36540	95.7	TFT(Surr)
15.447	0.001	1944	16534	93.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	15598	0.042
8015B 2MP-TMB	(4.15 to 16.26)	747017	16062	0.022
AK101 nC6-nC10	(4.66 to 15.16)	604063	11626	0.019
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	16847	0.042

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	6113	93.9	TFT(Surr)
15.447	0.001	12846	95.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a016.d

Page 1

Date : 22-APR-2011 13:34

Client ID: LL-SB4-0-0.5-041911

Instrument: pid1.i

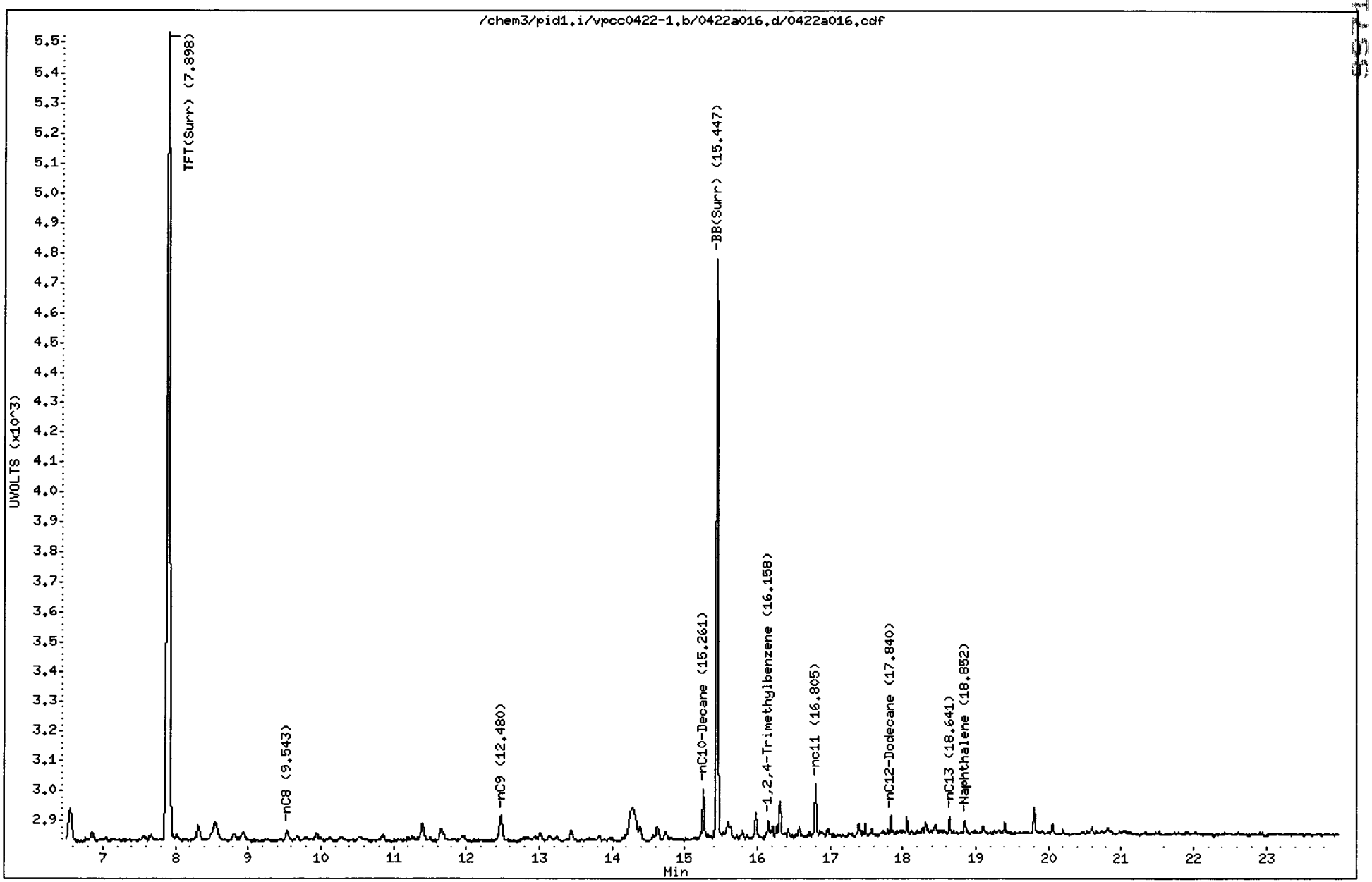
Sample Info: SS71G

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SS71 91576



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a016.d

Page 1

Date : 22-APR-2011 13:34

Client ID: LL-SB4-0-0.5-041911

Instrument: pid1.i

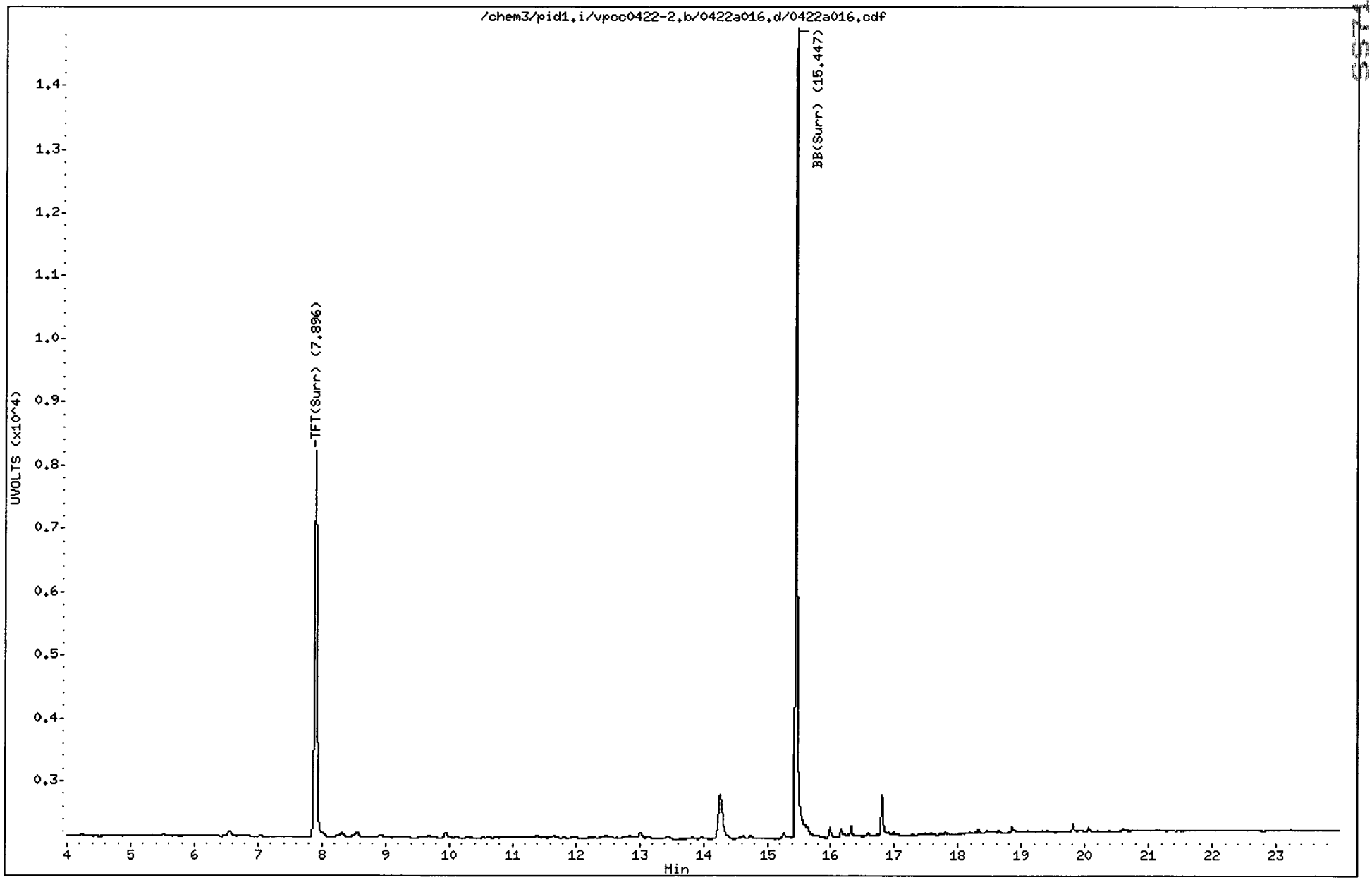
Sample Info: SS71G

Operator: MH

Column phase: RTX 502-2 PID

Column diameter: 0.18

SS71 61577



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a017.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a017.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71H
Client ID: LL-SB4-1.5-2-041911
Injection Date: 22-APR-2011 14:03
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.898	-0.001	2755	37479	97.4	TFT(Surr)
15.447	0.001	2030	16931	97.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	28892	0.077
8015B 2MP-TMB	(4.15 to 16.26)	747017	19862	0.027
AK101 nC6-nC10	(4.66 to 15.16)	604063	19861	0.033
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	30209	0.075

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	-0.001	6256	96.1	TFT(Surr)
15.447	0.001	13303	98.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a017.d

Date : 22-APR-2011 14:03

Client ID: LL-SB4-1.5-2-041911

Sample Info: SS71H

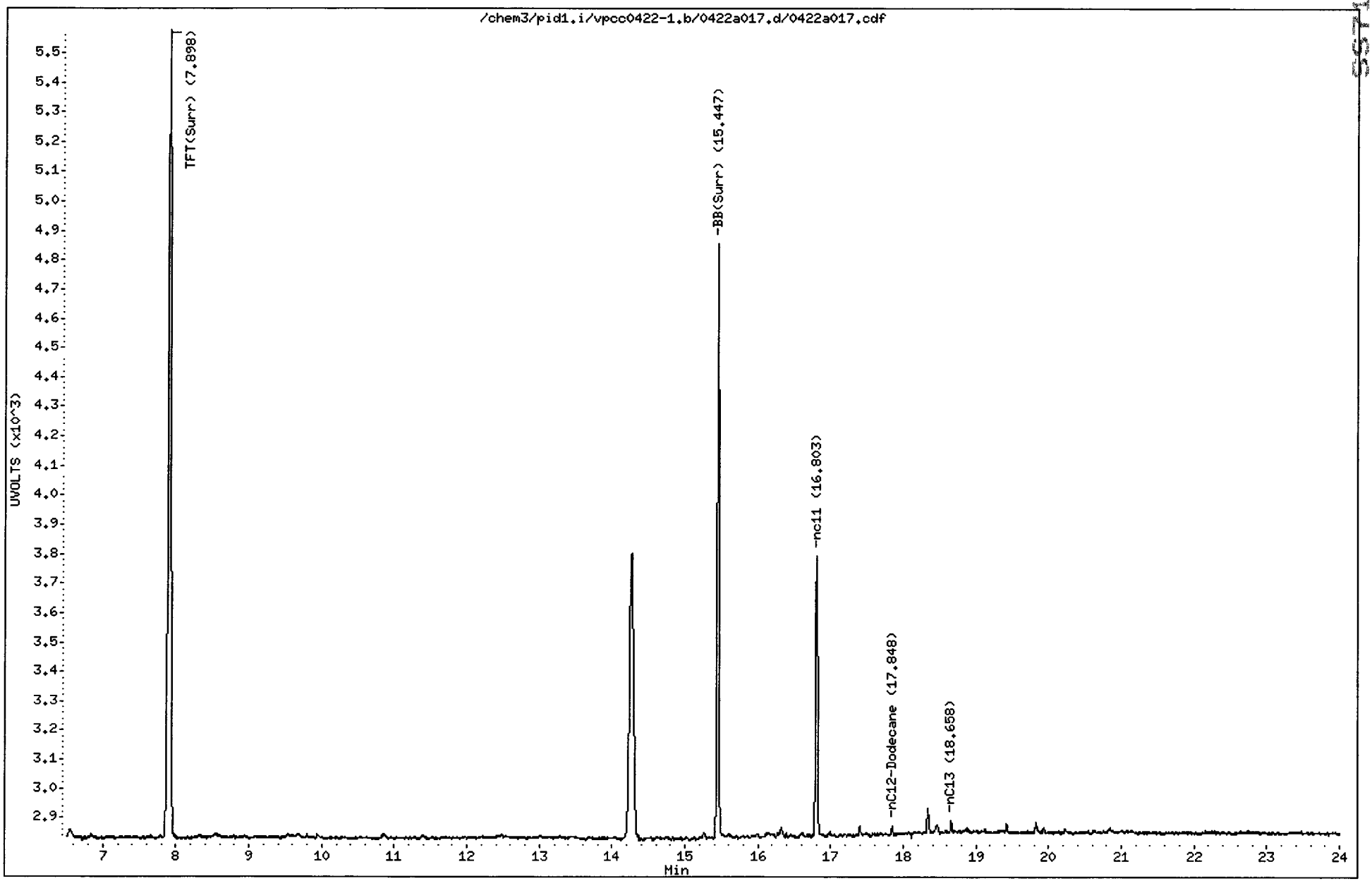
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71-041575

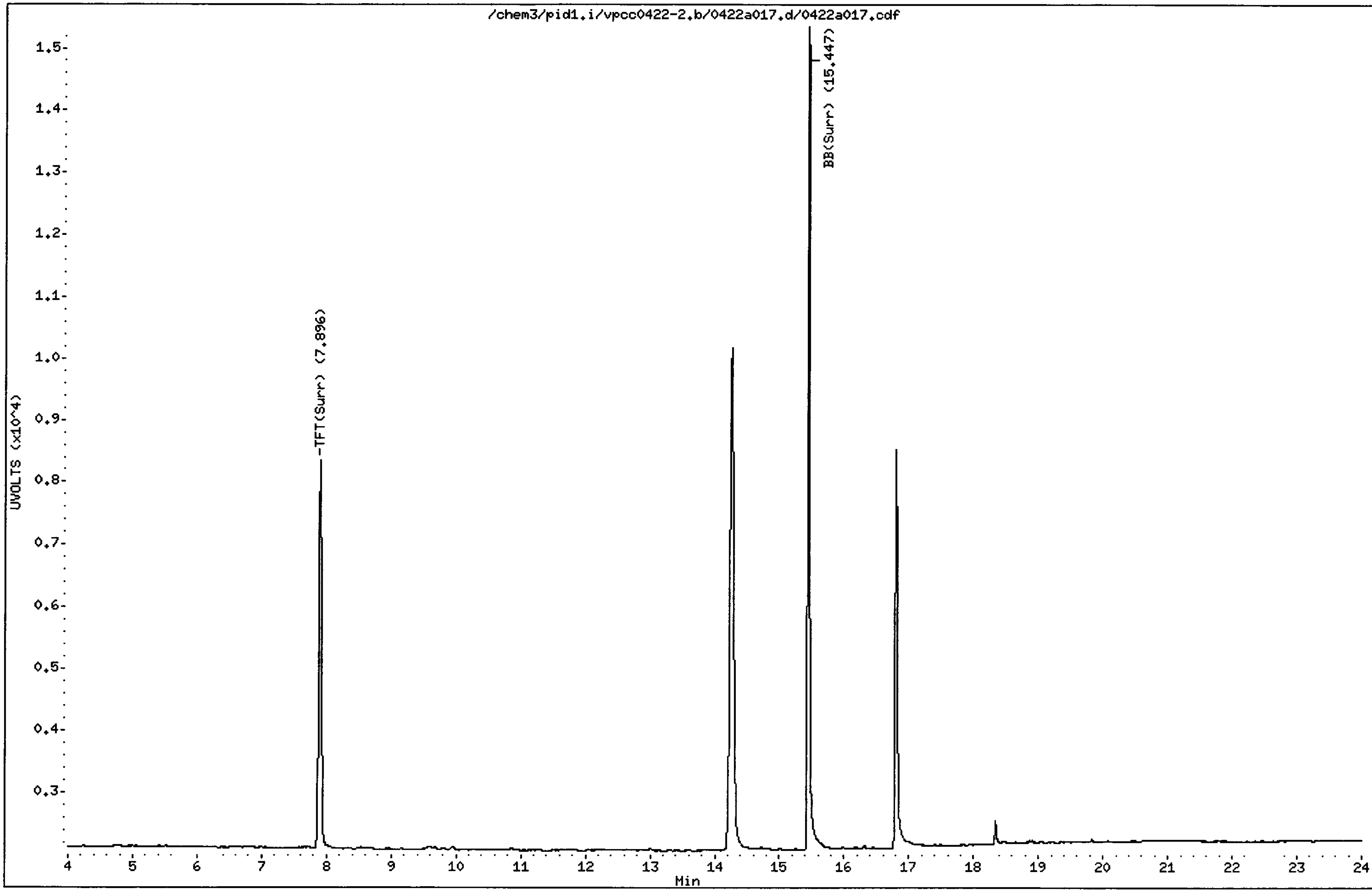


Data File: /chem3/pid1.i/vpcc0422-2.b/0422a017.d
Date : 22-APR-2011 14:03
Client ID: LL-SB4-1.5-2-041911
Sample Info: SS71H

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH
Column diameter: 0.18



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a018.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a018.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71I
Client ID: LL-SB4-2-4-041911
Injection Date: 22-APR-2011 14:32
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.900	0.002	2702	36582	95.5	TFT(Surr)
15.448	0.002	1962	16487	94.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	4420	0.012
8015B 2MP-TMB	(4.15 to 16.26)	747017	3178	0.004
AK101 nC6-nC10	(4.66 to 15.16)	604063	3177	0.005
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	5397	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.002	6100	93.7	TFT(Surr)
15.448	0.002	12779	94.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a018.d

Page 1

Date : 22-APR-2011 14:32

Client ID: LL-SB4-2-4-041911

Instrument: pid1.i

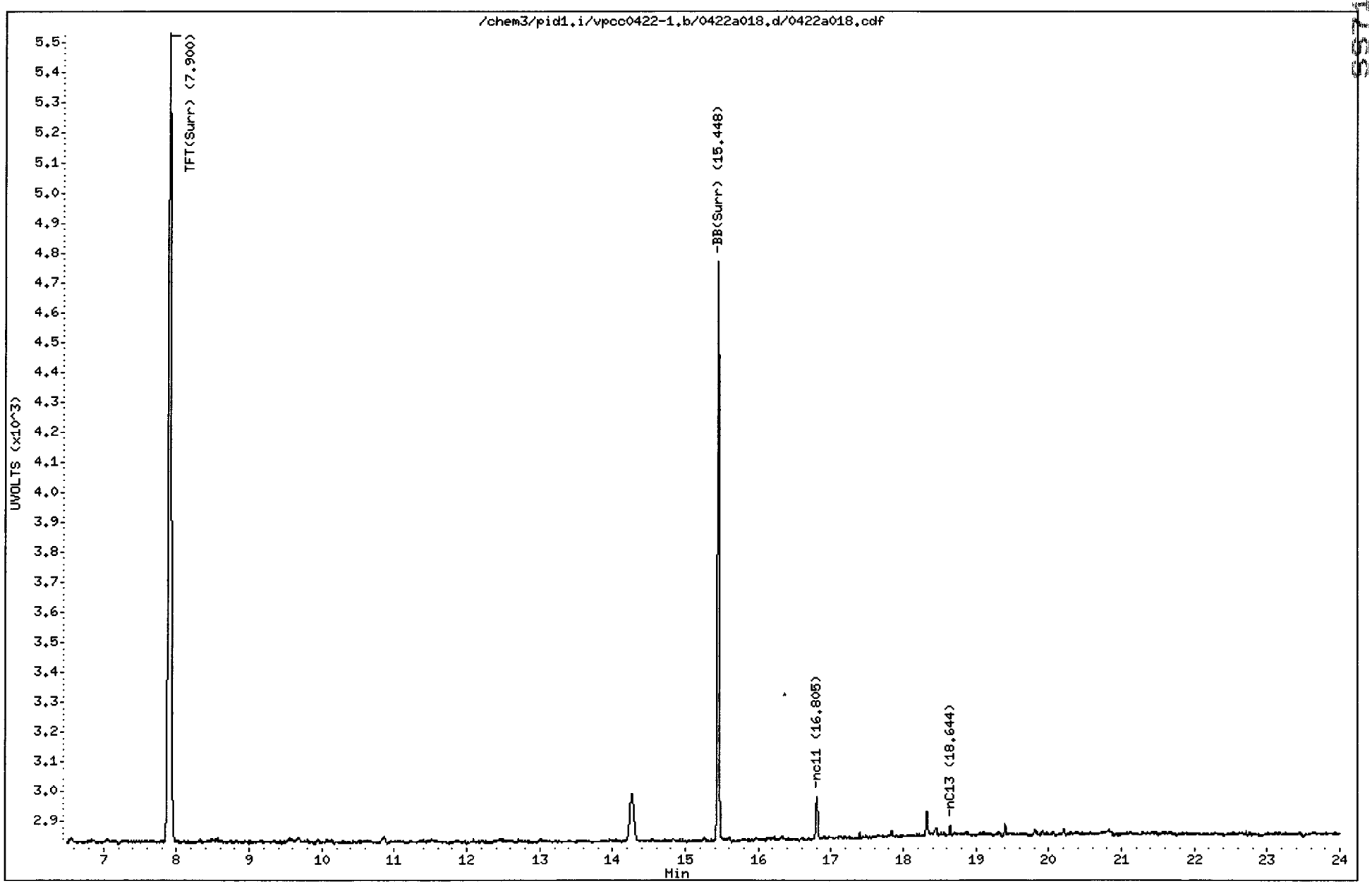
Sample Info: SS71I

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SS71 91592



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a018.d

Date : 22-APR-2011 14:32

Client ID: LL-SB4-2-4-041911

Sample Info: SS71I

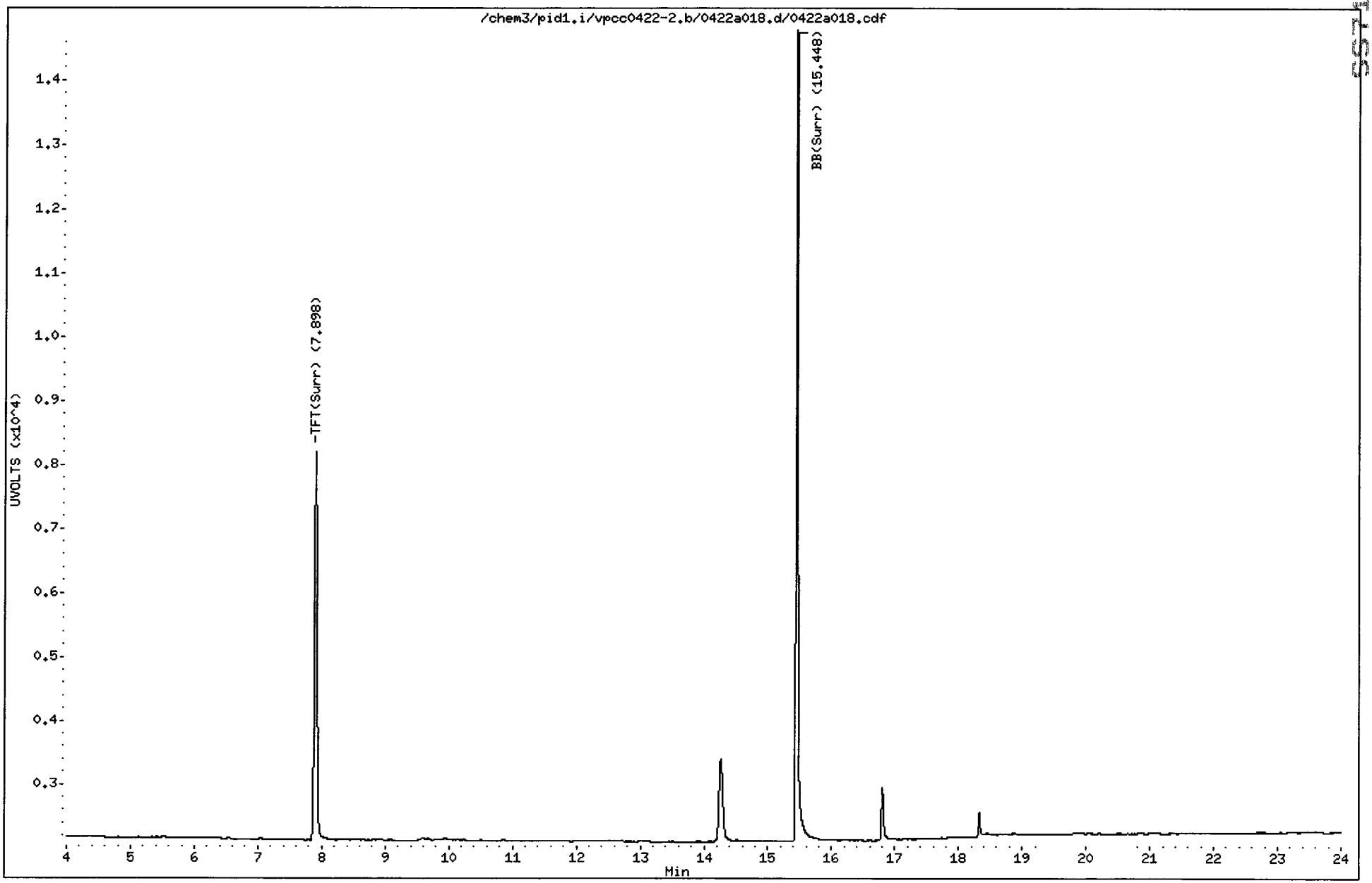
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71 61593



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a019.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a019.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71IMS
Client ID: LL-SB4-2-4-0419 MS
Injection Date: 22-APR-2011 15:02
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.900	0.001	2787	42442	98.5	TFT(Surr)
15.448	0.002	1988	17436	95.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	352952	0.942 M
8015B 2MP-TMB	(4.15 to 16.26)	747017	728568	0.975 M
AK101 nC6-nC10	(4.66 to 15.16)	604063	588555	0.974 M
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	375858	0.932 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.001	6184	95.0	TFT(Surr)
15.448	0.002	12977	96.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.055	0.004	1370	3.13	Benzene
9.943	0.001	14237	36.41	Toluene
12.847	0.001	3574	10.46	Ethylbenzene
13.011	0.004	14151	38.54	M/P-Xylene
13.967	0.002	5098	17.80	O-Xylene
4.516	-0.010	269	1.58	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a019.d

Page 1

Date : 22-APR-2011 15:02

Client ID: LL-SB4-2-4-0419 MS

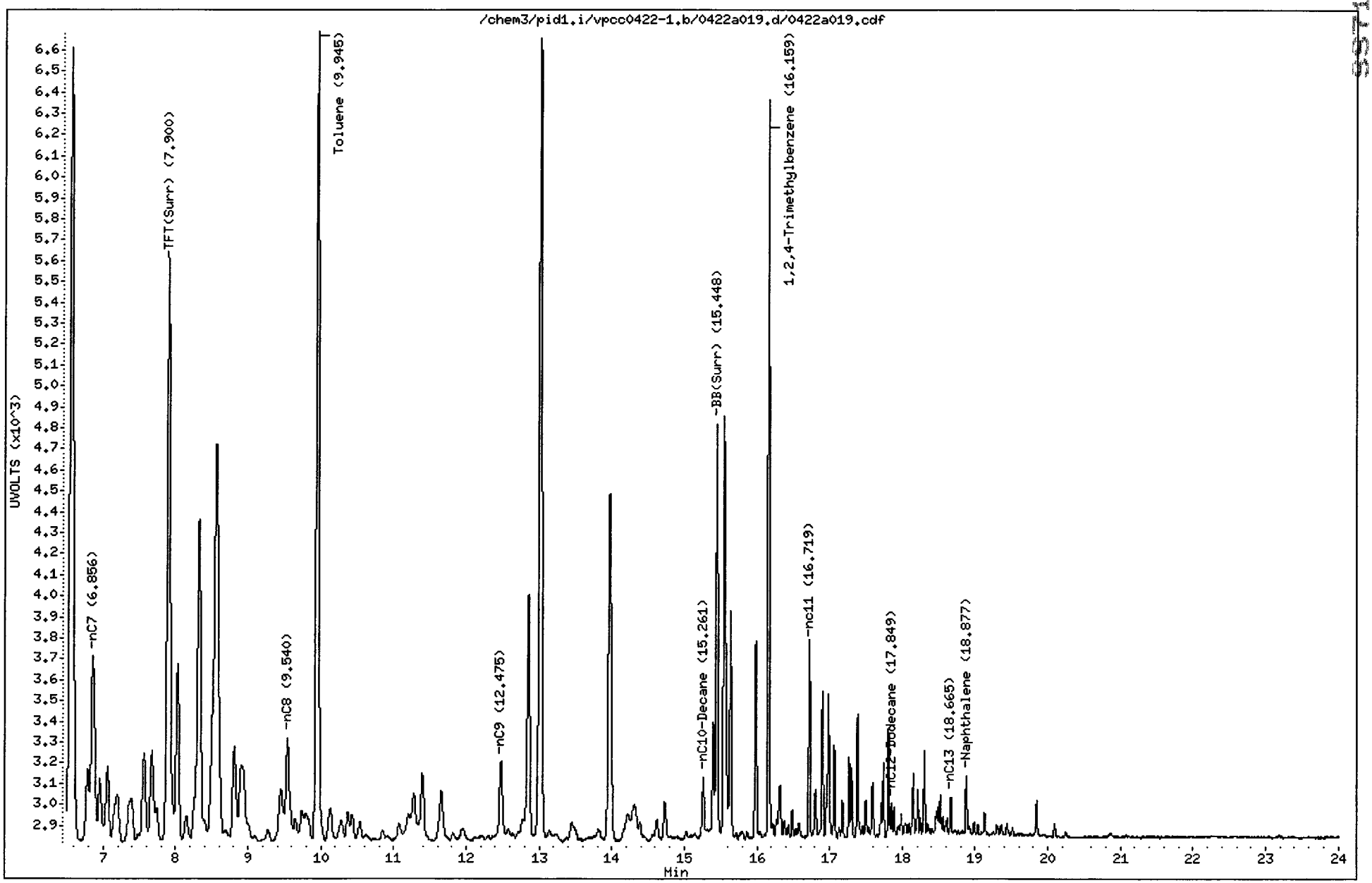
Instrument: pid1.i

Sample Info: SS71IMS

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18



SS71 : 01585

Data File: /chem3/pid1.i/vpcc0422-2.b/0422a019.d

Date : 22-APR-2011 15:02

Client ID: LL-SB4-2-4-0419 MS

Sample Info: SS71IMS

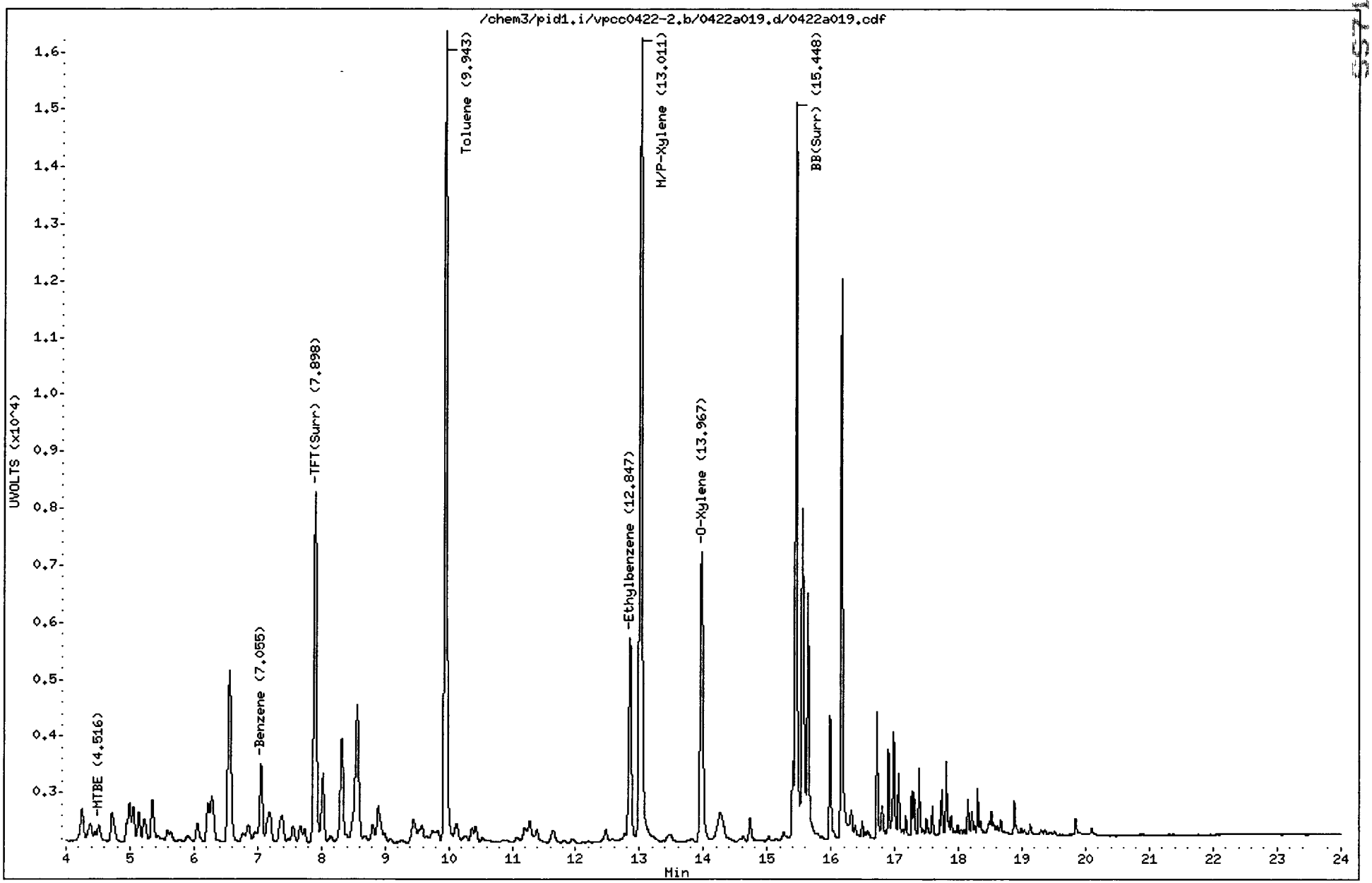
Column phase: RTX 502-2 PID

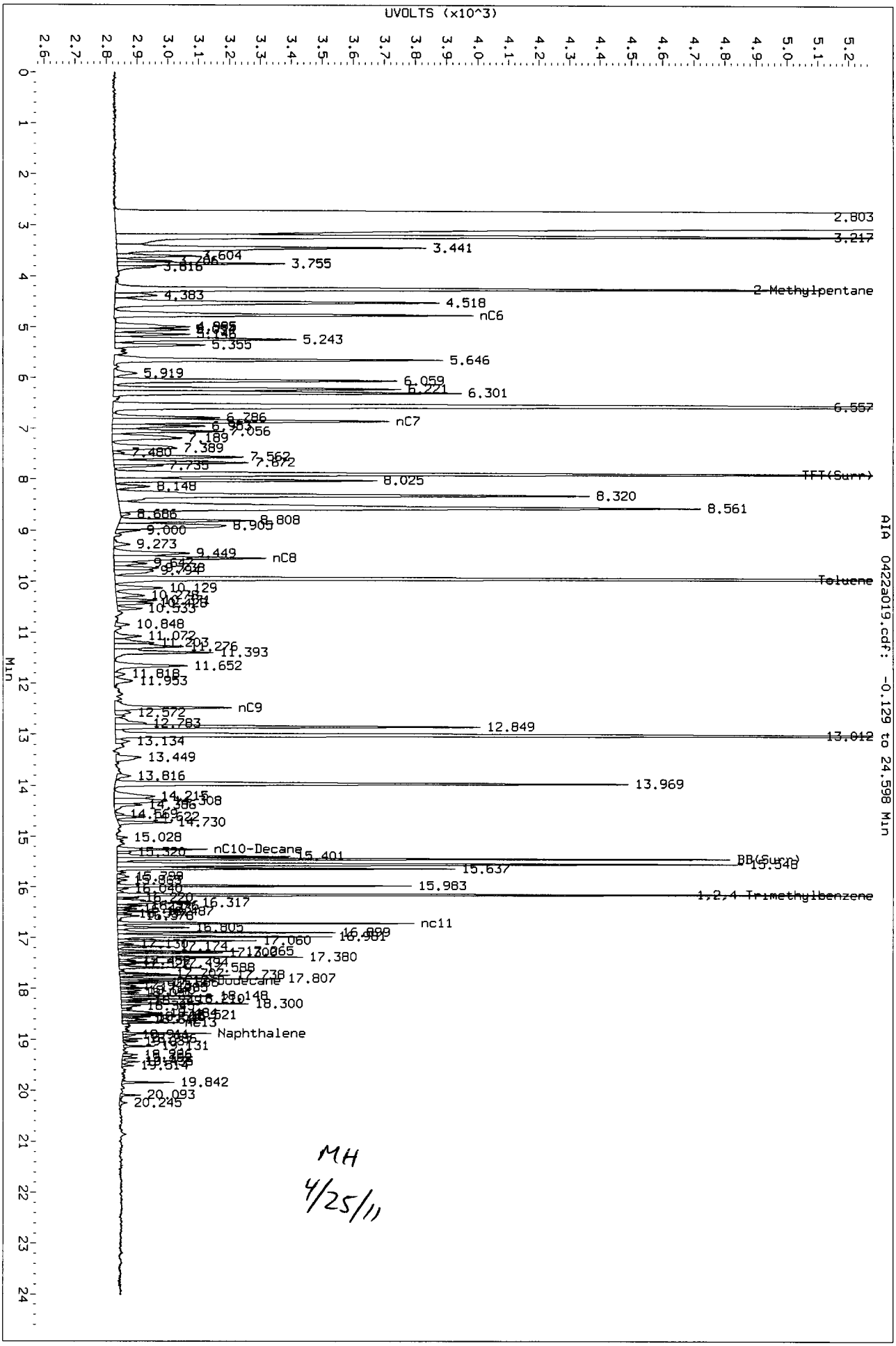
Instrument: pid1.i

Operator: MH

Column diameter: 0.18

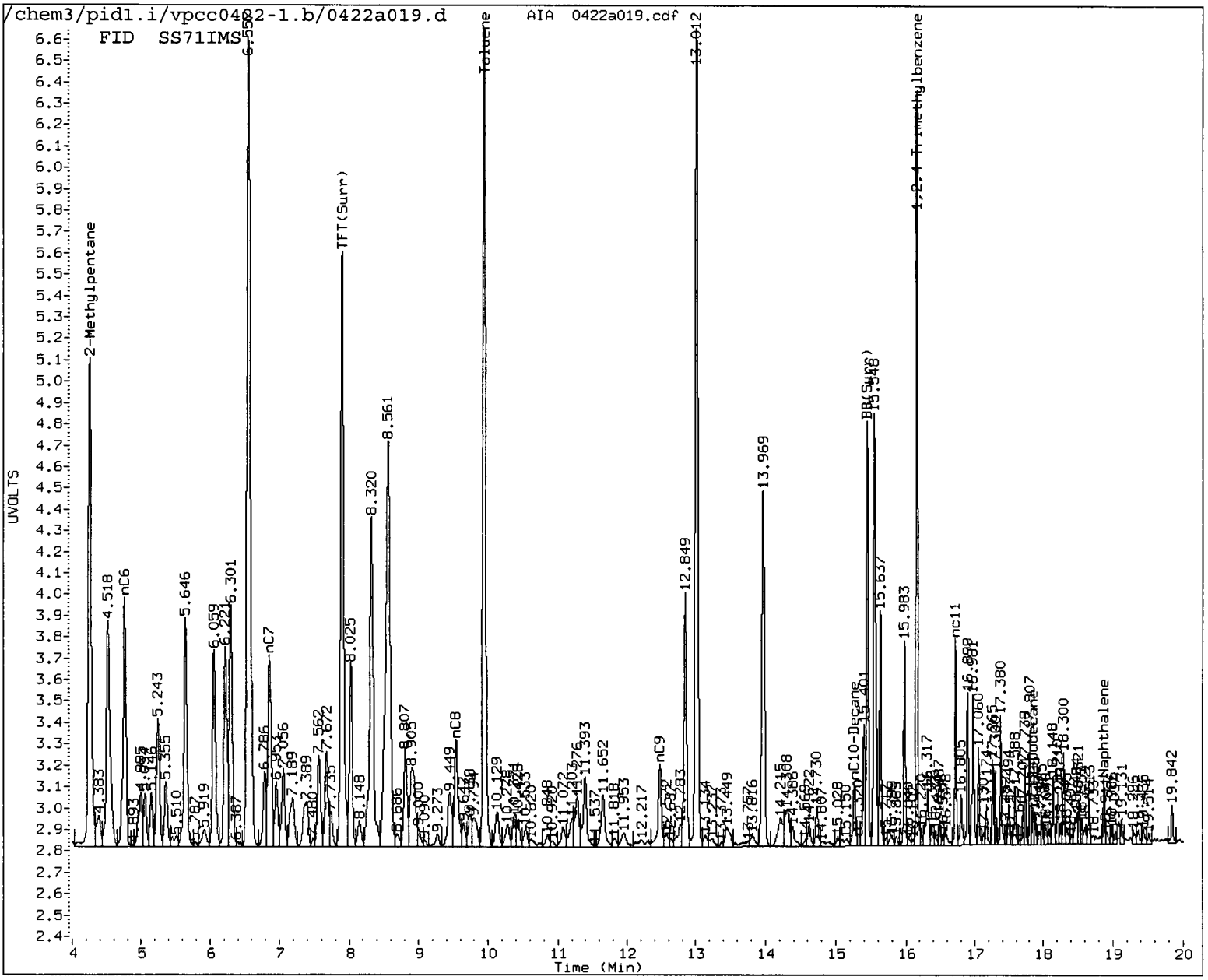
SS71 01586





Data File: /chem3/pid1.1/vpcc0422-1.b/0422a019.d/0422a019.cdf
Injection Date: 22-APR-2011 15:02
Instrument: pid1.1
Client Sample ID: LL-SB4-2-4-0419 MS

MH
4/25/11



MANUAL INTEGRATION

X 1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: MH Date: 4/25/11

MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a020.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a020.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71IMSD
Client ID: LL-SB4-2-4-0419 MSD
Injection Date: 22-APR-2011 15:31
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.900	0.001	2886	44163	102.0	TFT(Surr)
15.449	0.003	2042	17902	97.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	361982	0.966 M
8015B 2MP-TMB	(4.15 to 16.26)	747017	746328	0.999 M
AK101 nC6-nC10	(4.66 to 15.16)	604063	602786	0.998 M
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	385828	0.956 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.899	0.002	6443	98.9	TFT(Surr)
15.449	0.003	13373	99.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.055	0.005	1277	2.91	Benzene
9.944	0.002	14449	36.95	Toluene
12.849	0.002	3626	10.62	Ethylbenzene
13.013	0.005	14429	39.29	M/P-Xylene
13.969	0.004	5146	17.97	O-Xylene
4.517	-0.009	277	1.63	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a020.d

Date : 22-APR-2011 15:31

Client ID: LL-SB4-2-4-0419 MSD

Sample Info: SS71IMSD

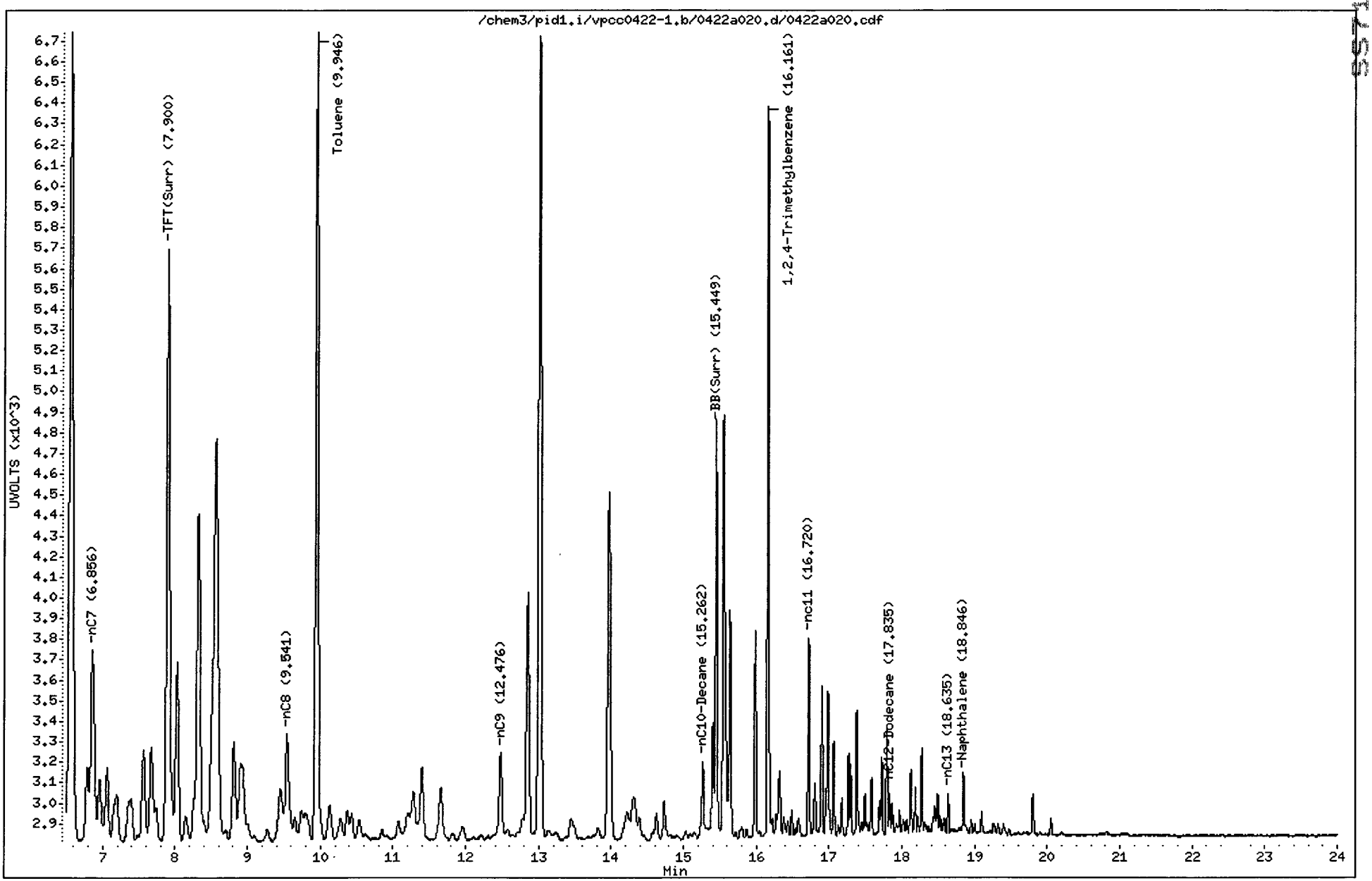
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71-01596



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a020.d

Date : 22-APR-2011 15:31

Client ID: LL-SB4-2-4-0419 MSD

Sample Info: SS71IMSD

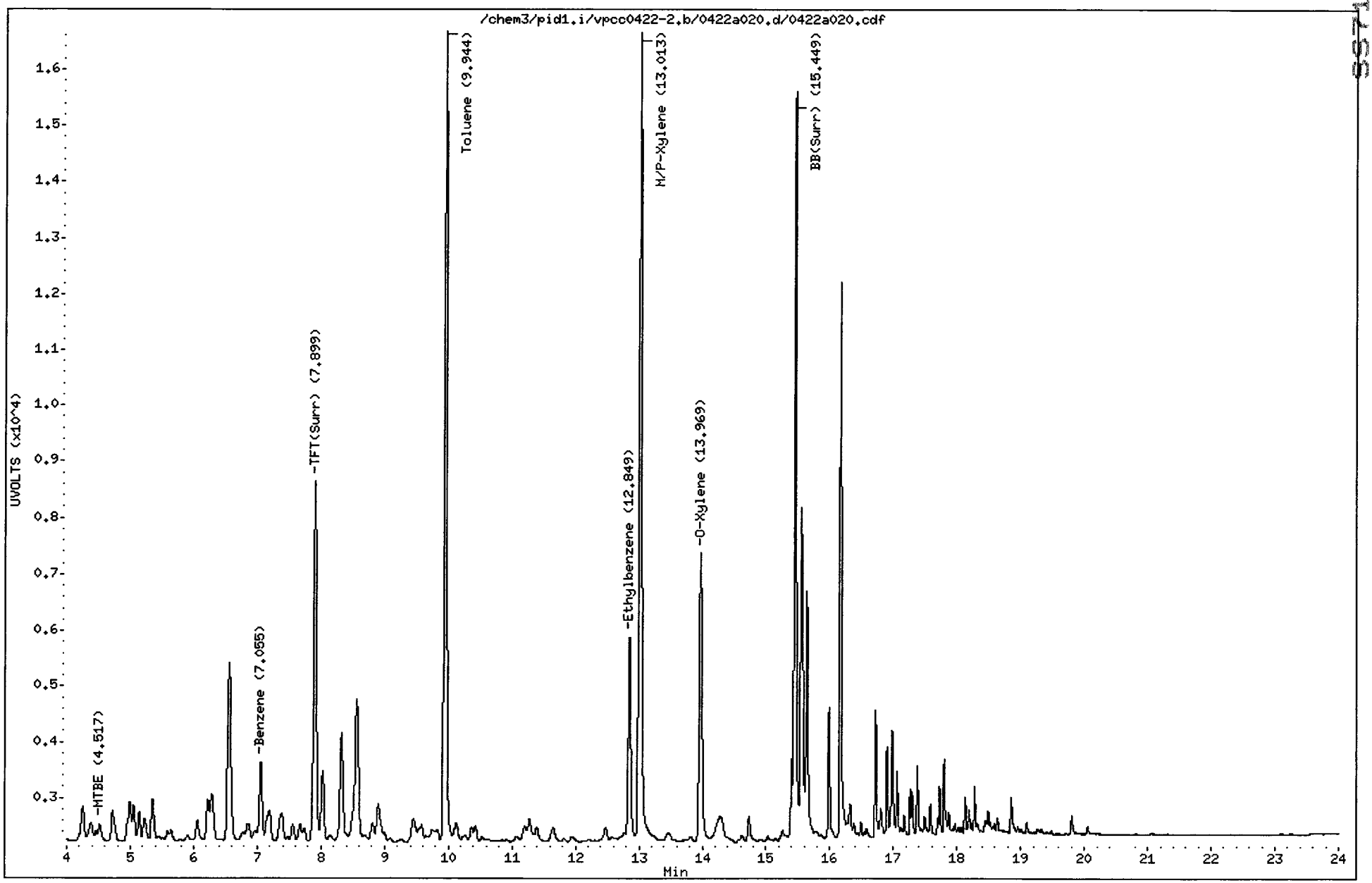
Column phase: RTX 502-2 PID

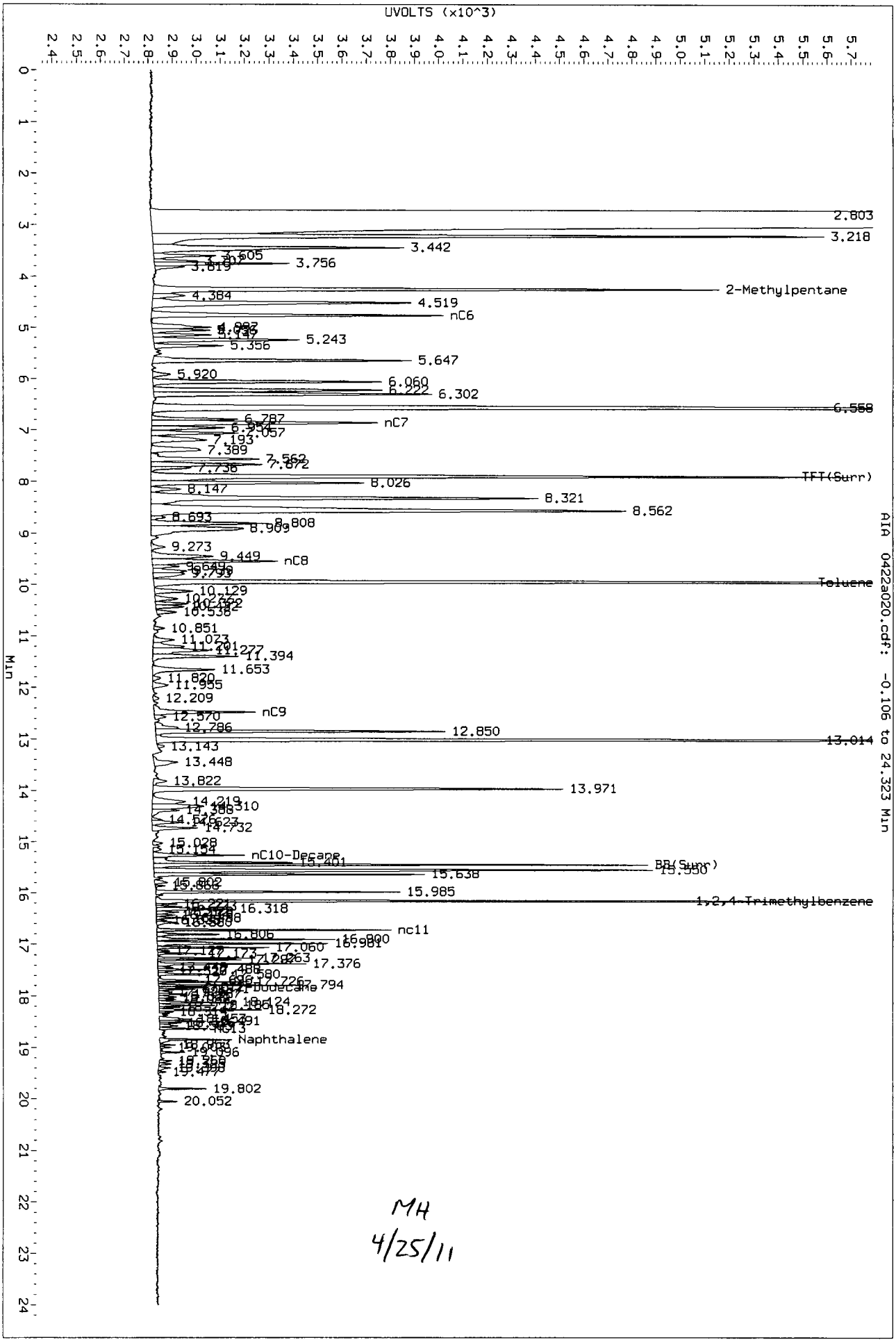
Instrument: pid1.i

Operator: MH

Column diameter: 0.18

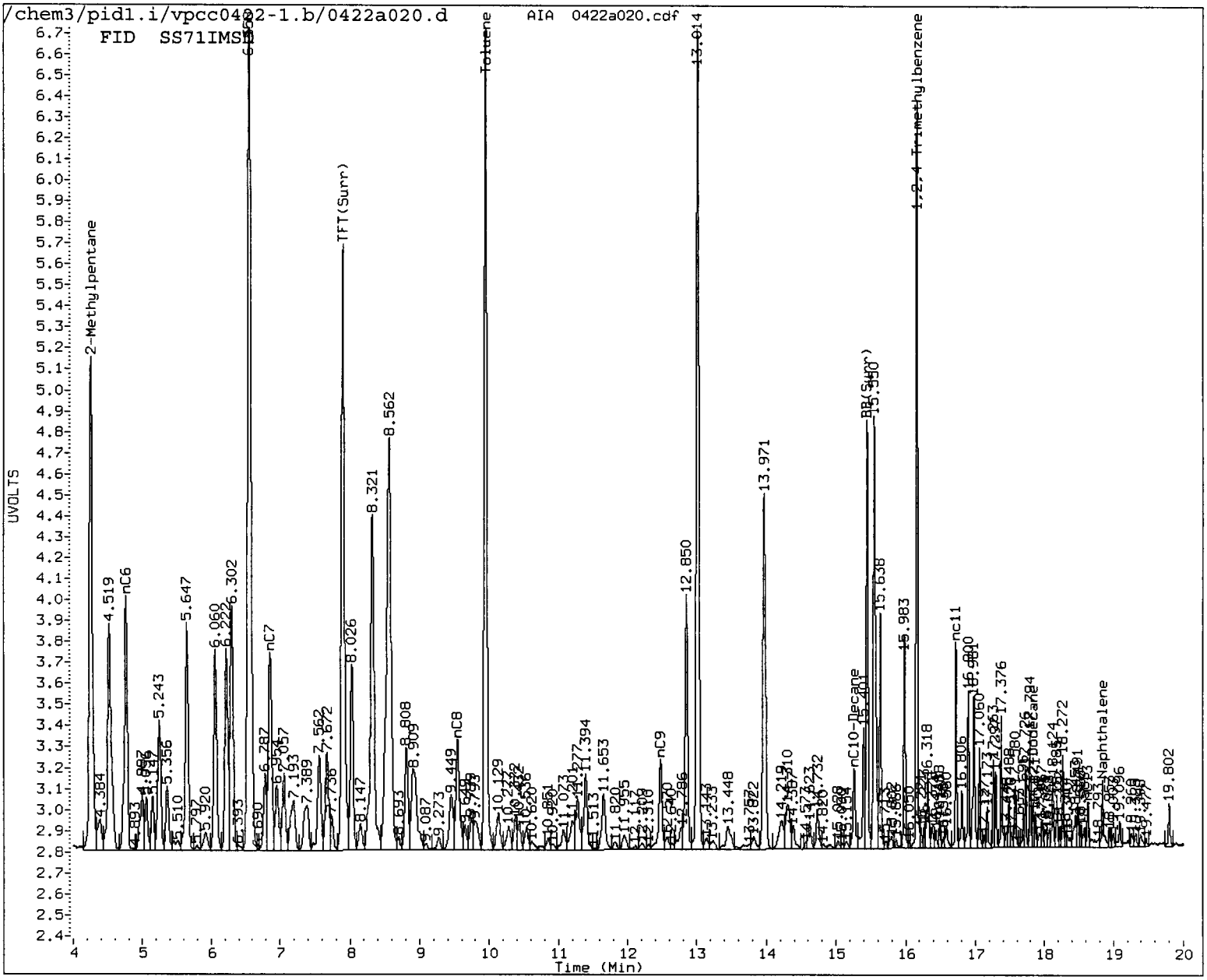
SS71 01591





Data File: /chem3/pid1.i/vpcc0422-1.b/0422a020.d/0422a020.cdf
Injection Date: 22-APR-2011 15:31
Instrument: pid1.i
Client Sample ID: LL-SB4-2-4-0419 MSD

MH
4/25/11



MANUAL INTEGRATION

X 1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: MH Date: 4/25/11

MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a021.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a021.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71J
Client ID: LL-SB3-0-0.5-041911
Injection Date: 22-APR-2011 16:00
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.900	0.002	2700	36401	95.4	TFT(Surr)
15.449	0.002	1993	16621	95.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	5037	0.013
8015B 2MP-TMB	(4.15 to 16.26)	747017	3929	0.005
AK101 nC6-nC10	(4.66 to 15.16)	604063	2493	0.004
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	5637	0.014

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.002	6073	93.3	TFT(Surr)
15.448	0.002	12892	95.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a021.d

Date : 22-APR-2011 16:00

Client ID: LL-SB3-0-0.5-041911

Sample Info: SS71J

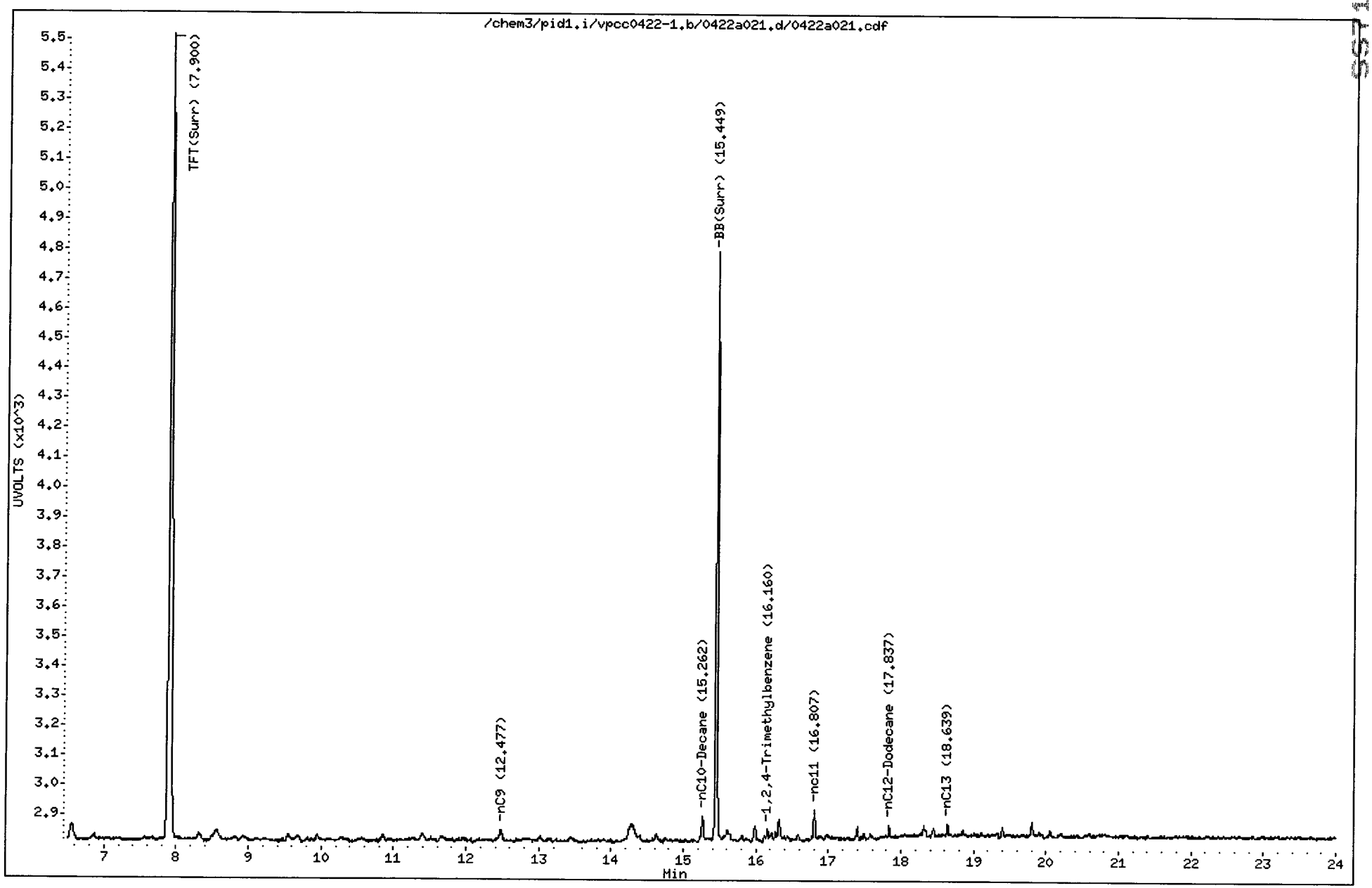
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71 61595



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a021.d

Date : 22-APR-2011 16:00

Client ID: LL-SB3-0-0.5-041911

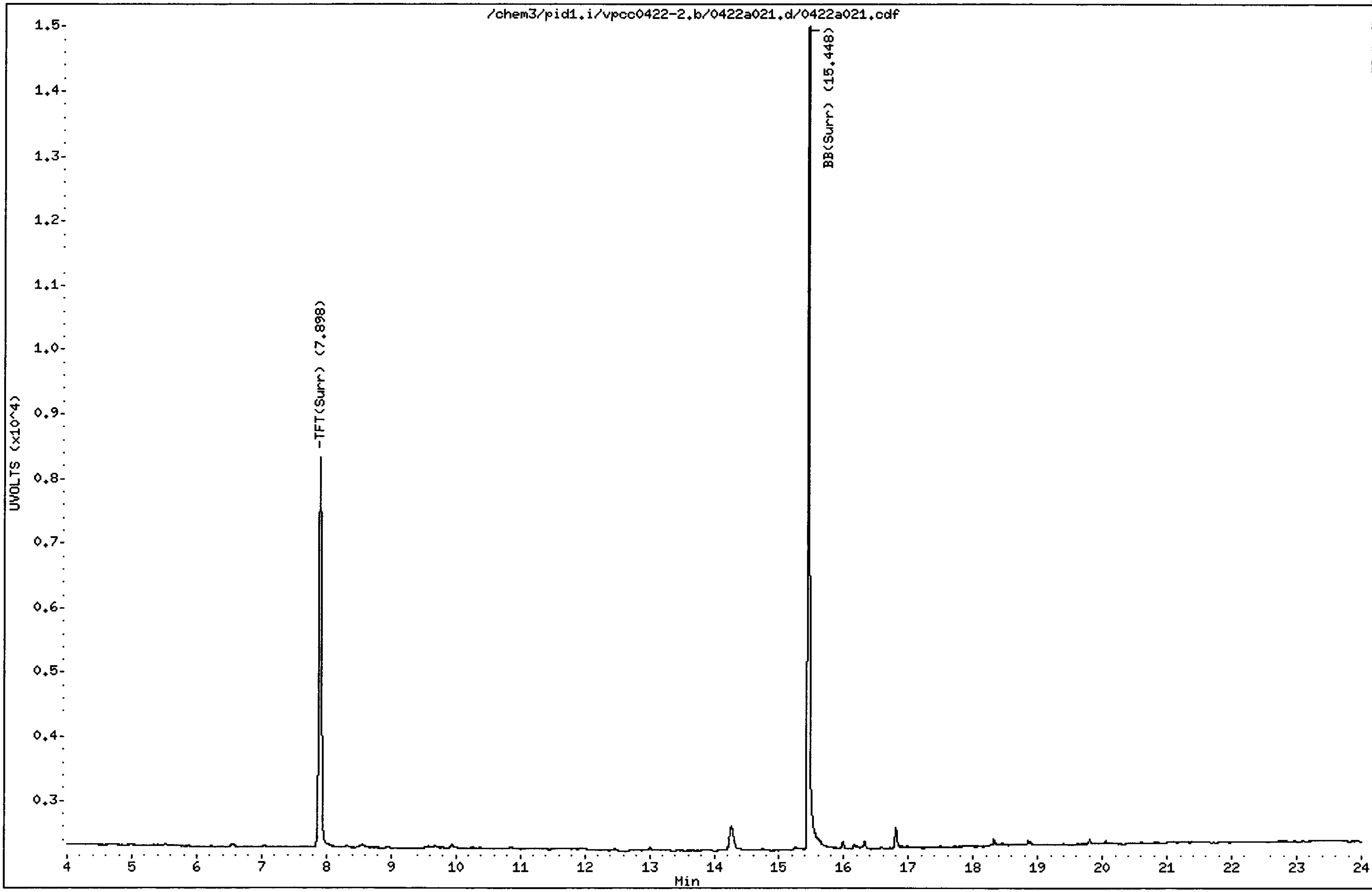
Sample Info: SS71J

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a022.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a022.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71K
Client ID: LL-SB3-1.5-2-041911
Injection Date: 22-APR-2011 16:29
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.899	0.001	2686	36412	94.9	TFT(Surr)
15.449	0.002	2038	16676	97.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	2573	0.007
8015B 2MP-TMB	(4.15 to 16.26)	747017	1392	0.002
AK101 nC6-nC10	(4.66 to 15.16)	604063	1391	0.002
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	3076	0.008

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.001	6094	93.6	TFT(Surr)
15.448	0.002	13189	97.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a022.d

Page 1

Date : 22-APR-2011 16:29

Client ID: LL-SB3-1.5-2-041911

Instrument: pid1.i

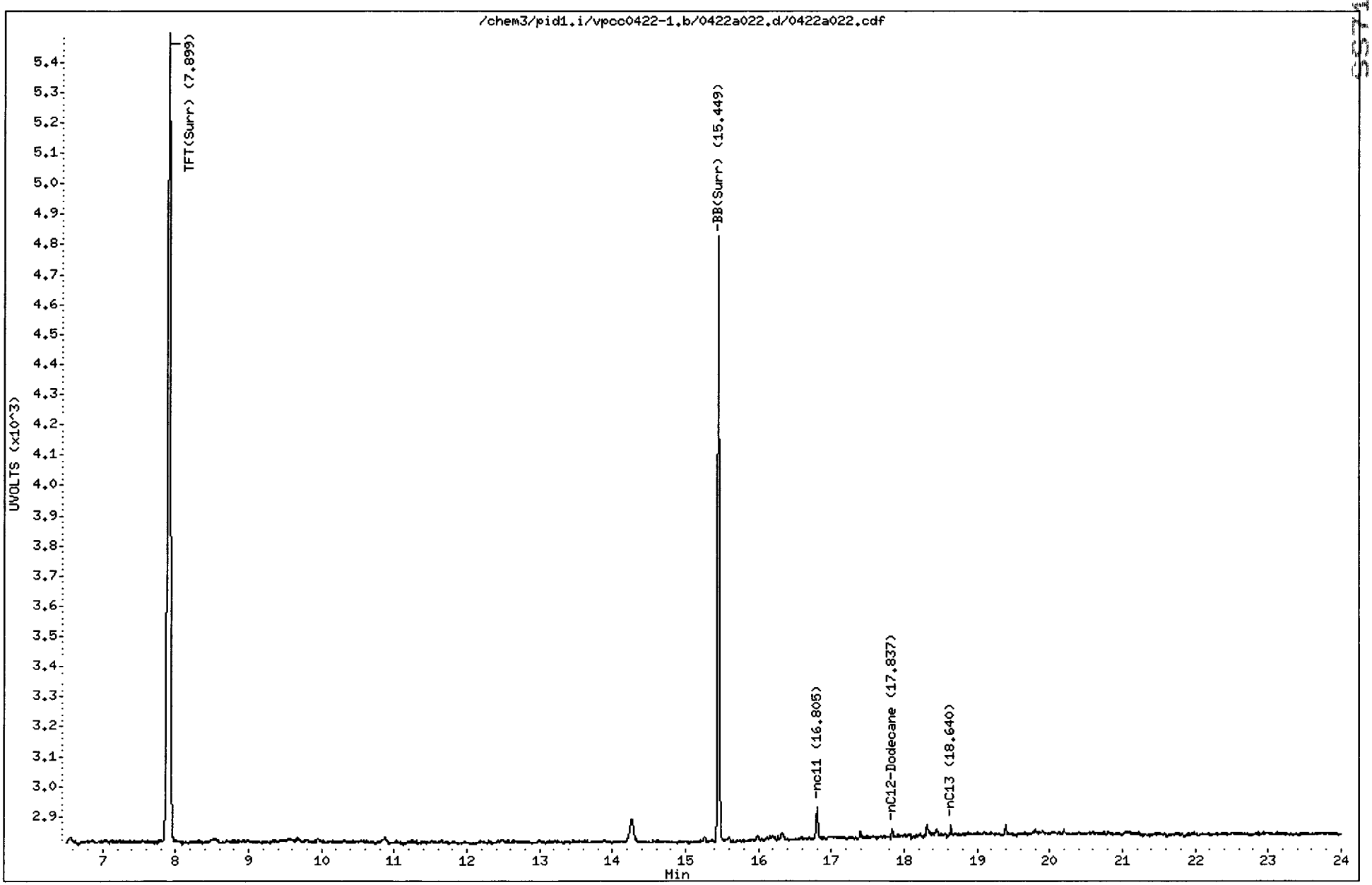
Sample Info: SS71K

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SS71 041598

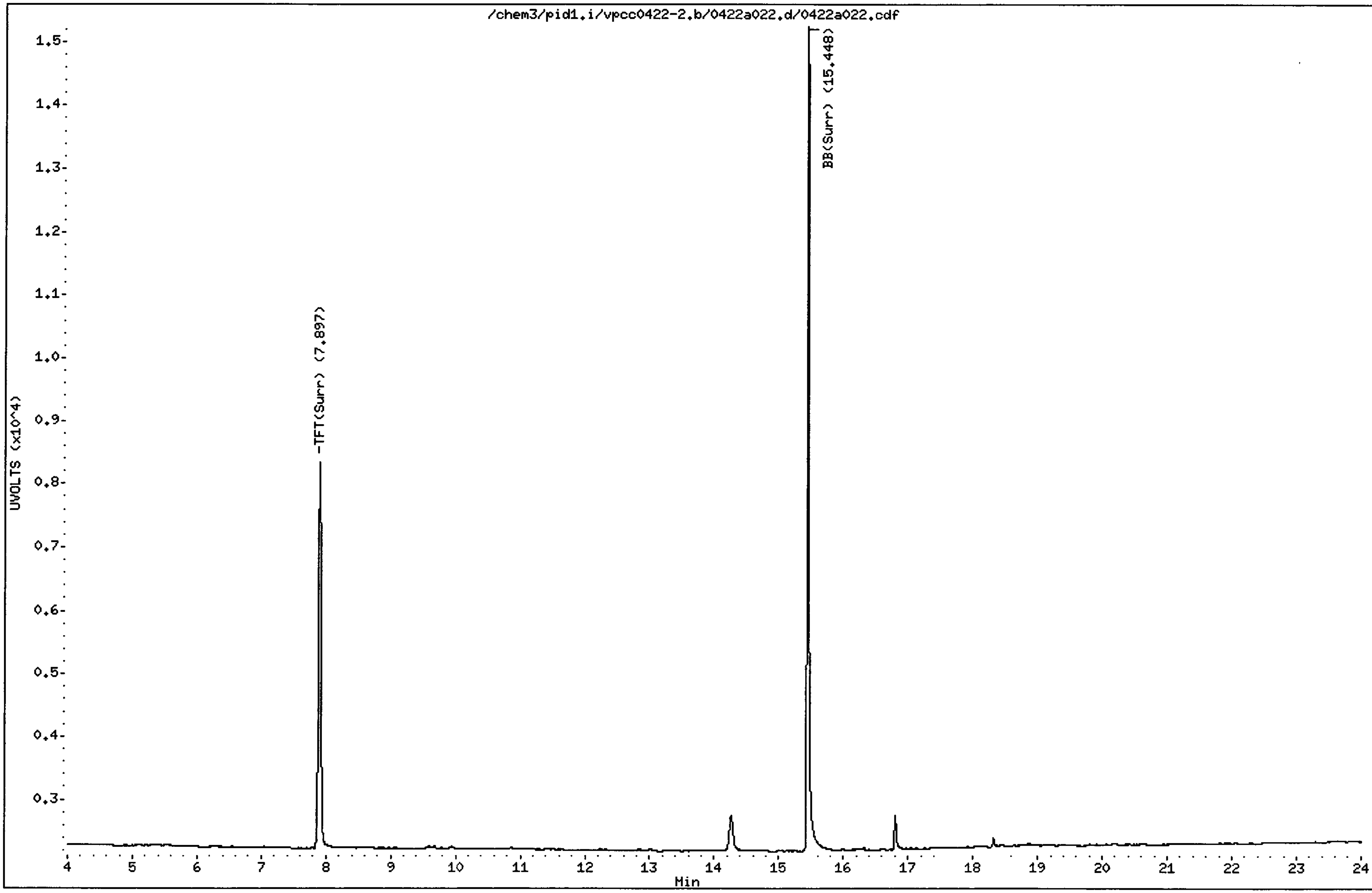


Data File: /chem3/pid1.i/vpcc0422-2.b/0422a022.d
Date : 22-APR-2011 16:29
Client ID: LL-SB3-1.5-2-041911
Sample Info: SS71K

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH
Column diameter: 0.18



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a023.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a023.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71L
Client ID: LL-SB3-2-4-041911
Injection Date: 22-APR-2011 16:58
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.900	0.001	2622	35372	92.7	TFT(Surr)
15.450	0.004	1989	16464	95.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	3667	0.010
8015B 2MP-TMB	(4.15 to 16.26)	747017	2330	0.003
AK101 nC6-nC10	(4.66 to 15.16)	604063	2330	0.004
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	4158	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.002	5891	90.5	TFT(Surr)
15.449	0.003	12840	95.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a023.d

Page 1

Date : 22-APR-2011 16:58

Client ID: LL-SB3-2-4-041911

Instrument: pid1.i

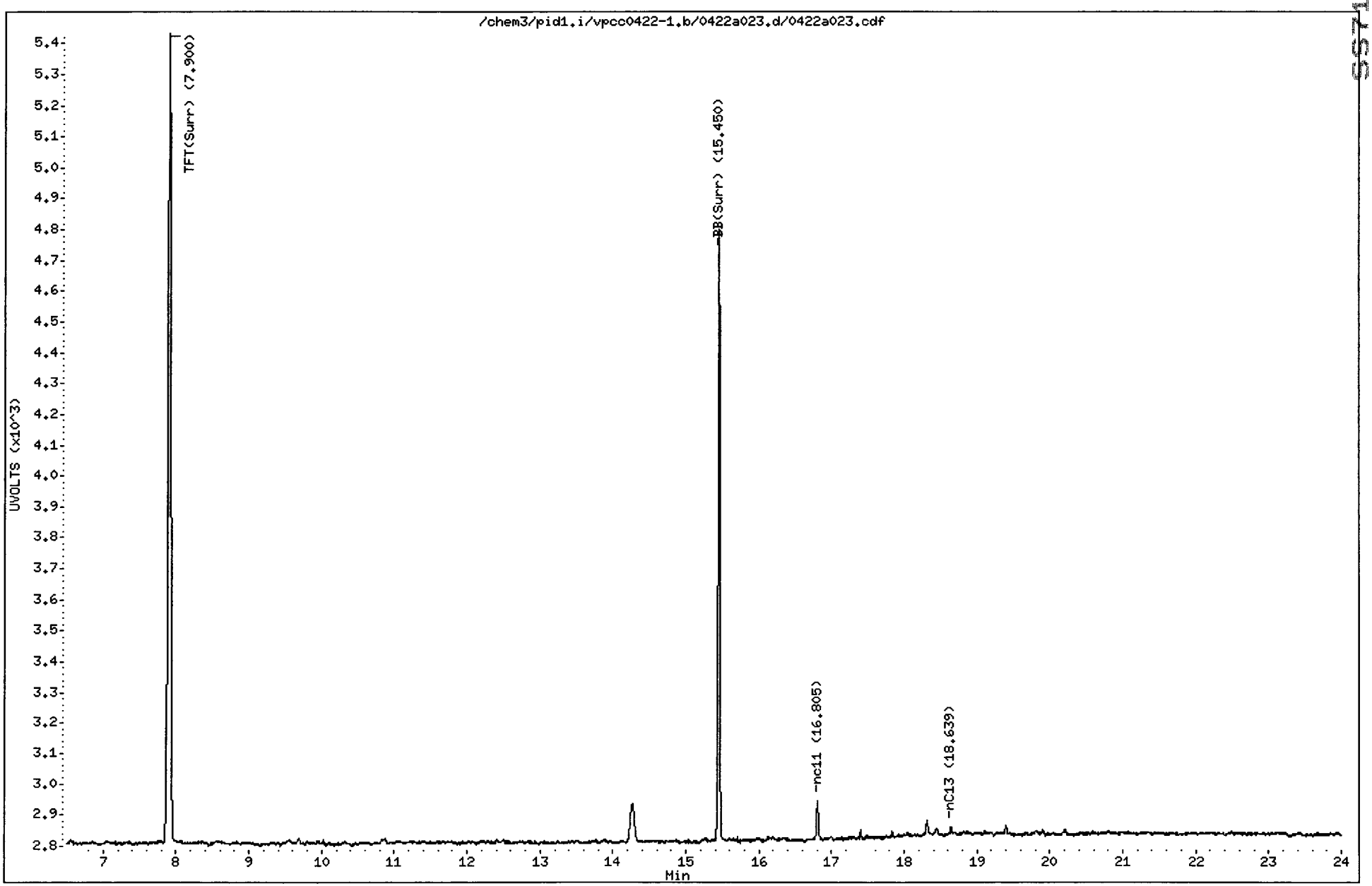
Sample Info: SS71L

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SS71 01661



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a023.d

Page 1

Date : 22-APR-2011 16:58

Client ID: LL-SB3-2-4-041911

Instrument: pid1.i

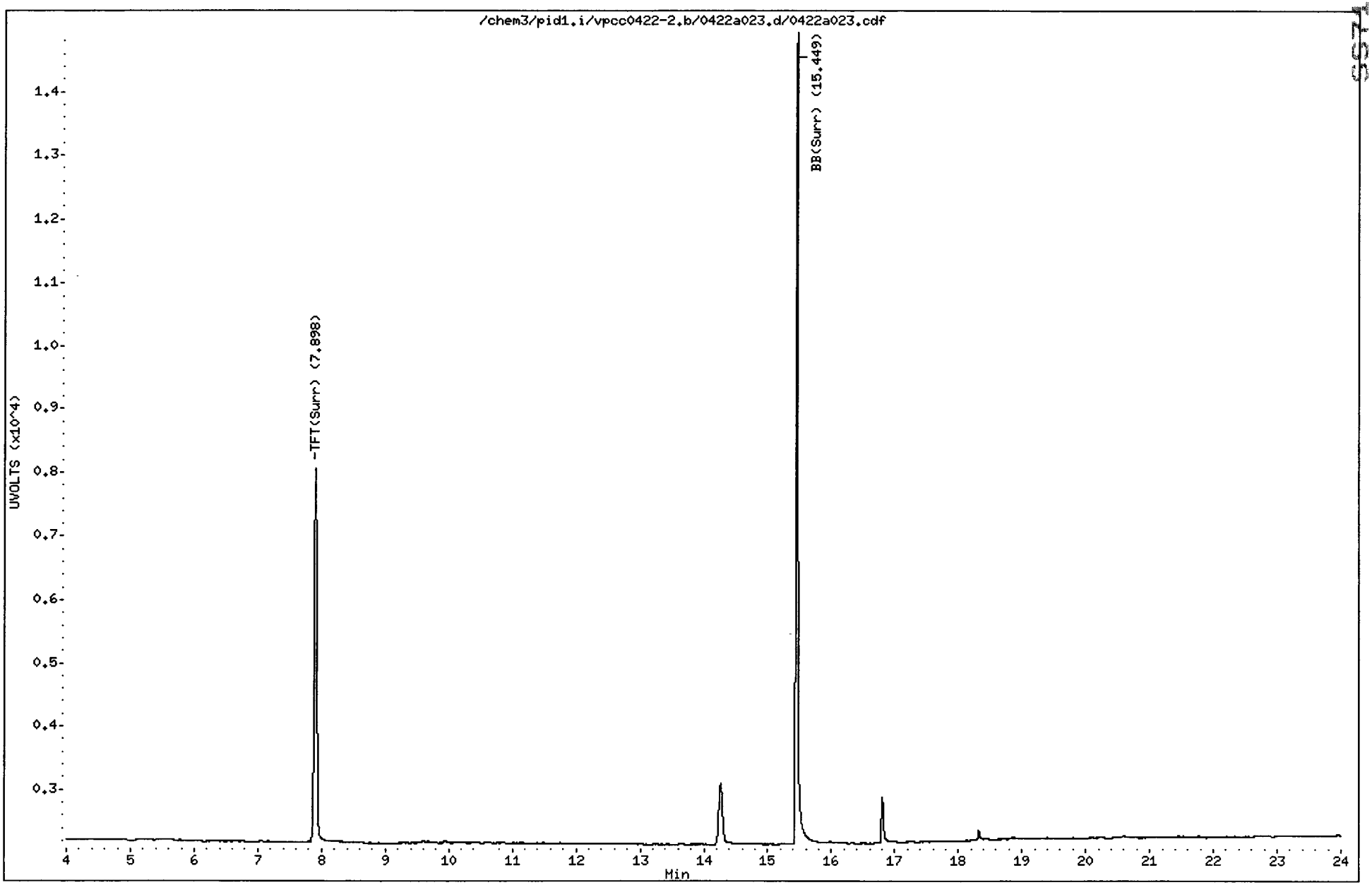
Sample Info: SS71L

Operator: MH

Column phase: RTX 502-2 PID

Column diameter: 0.18

SS71 61682



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a024.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a024.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71M
Client ID: LL-SB2-0-0.5-041911
Injection Date: 22-APR-2011 17:27
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.901	0.002	2681	36154	94.8	TFT(Surr)
15.450	0.004	1995	16694	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	35157	0.094
8015B 2MP-TMB	(4.15 to 16.26)	747017	25518	0.034
AK101 nC6-nC10	(4.66 to 15.16)	604063	25518	0.042
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	36459	0.090

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.899	0.002	5985	91.9	TFT(Surr)
15.450	0.004	12909	95.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a024.d

Page 1

Date : 22-APR-2011 17:27

Client ID: LL-SB2-0-0.5-041911

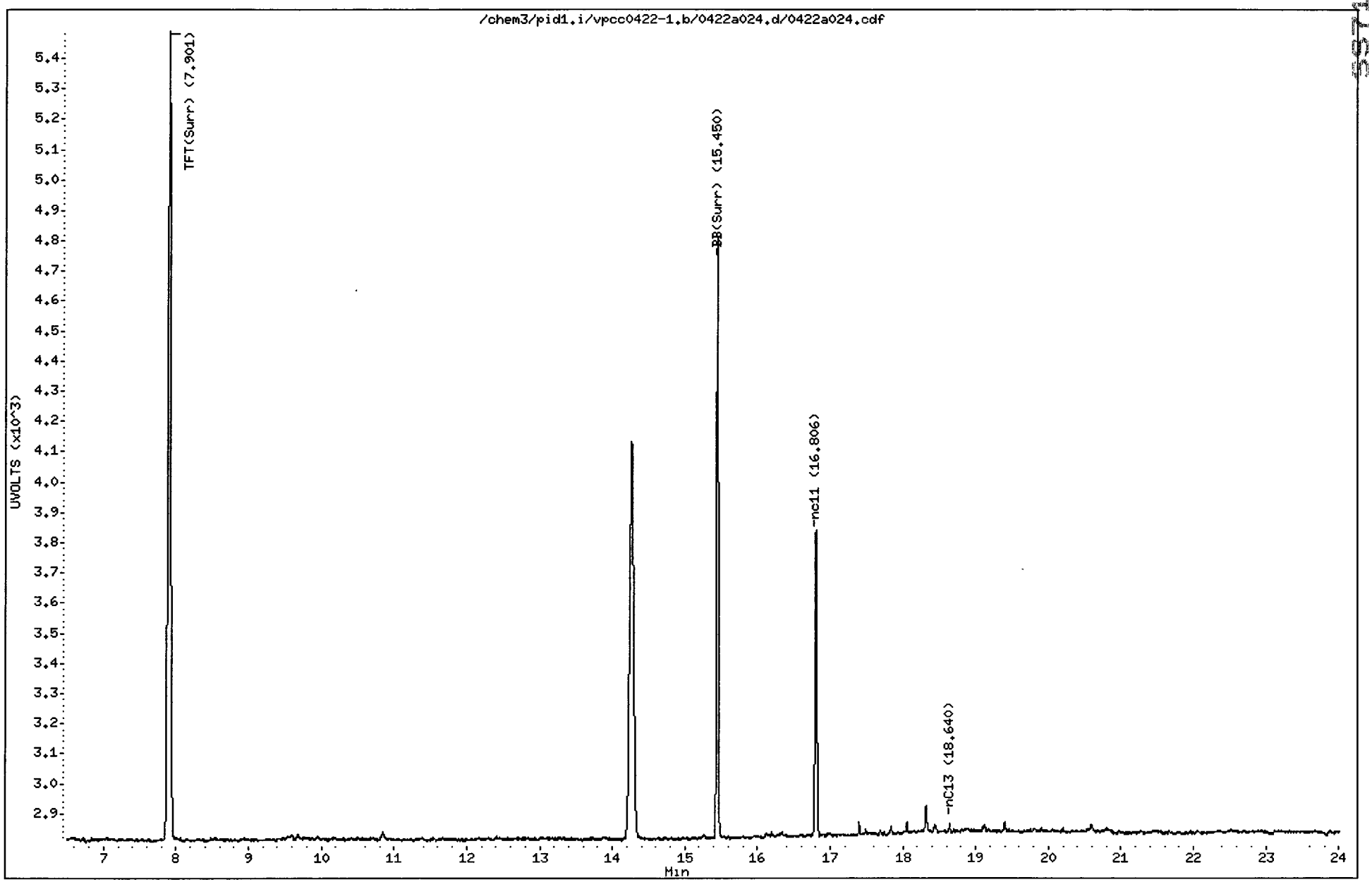
Instrument: pid1.i

Sample Info: SS71M

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a024.d

Date : 22-APR-2011 17:27

Client ID: LL-SB2-0-0.5-041911

Sample Info: SS71M

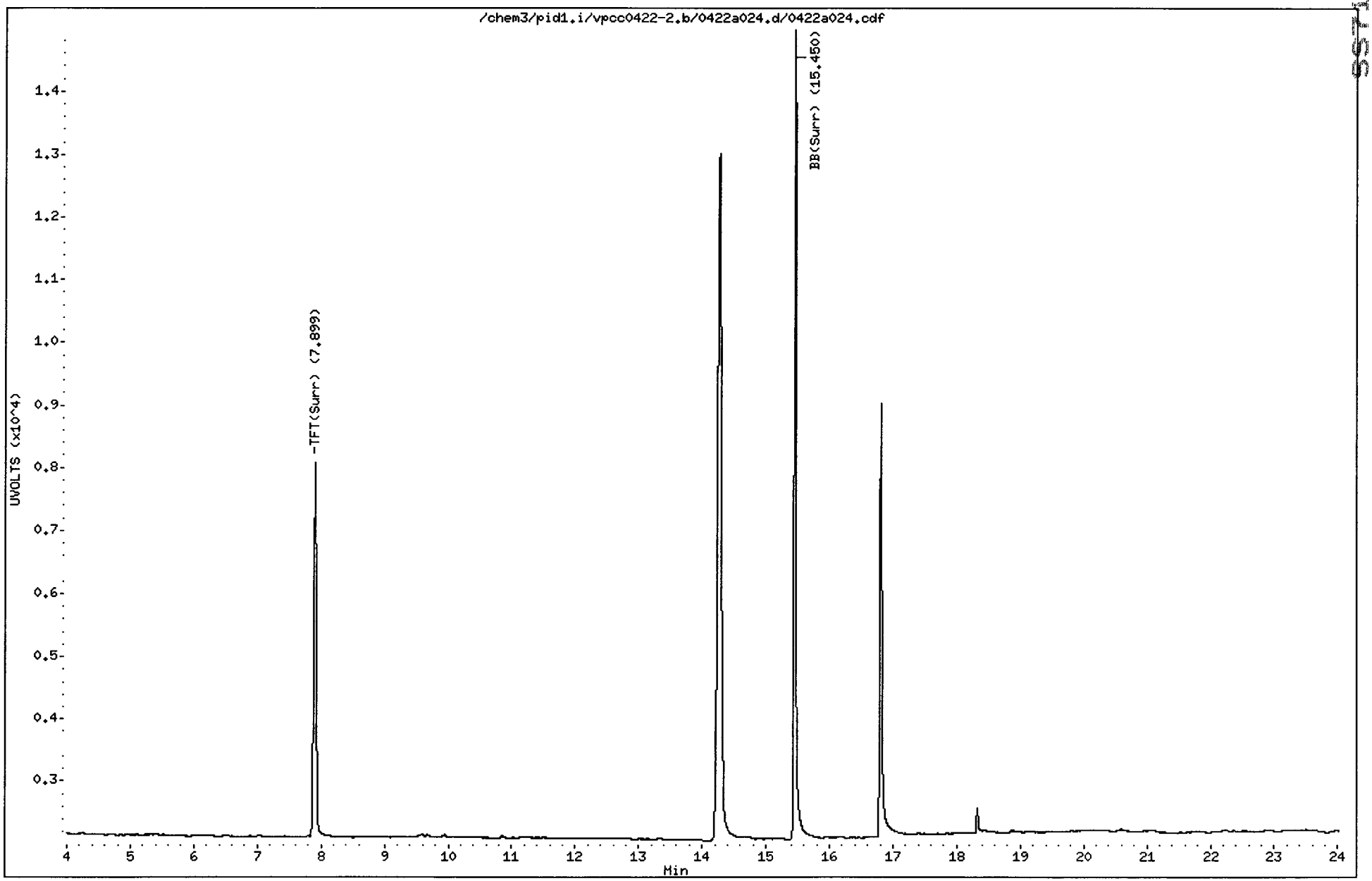
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71.0160



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a025.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a025.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71N
Client ID: LL-SB2-1.5-2-041911
Injection Date: 22-APR-2011 17:57
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.900	0.002	2680	35925	94.7	TFT(Surr)
15.450	0.004	1982	16436	95.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	74181	0.198
8015B 2MP-TMB	(4.15 to 16.26)	747017	53363	0.071
AK101 nC6-nC10	(4.66 to 15.16)	604063	53363	0.088
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	75111	0.186

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.002	5942	91.2	TFT(Surr)
15.450	0.004	12864	95.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a025.d

Page 1

Date : 22-APR-2011 17:57

Client ID: LL-SB2-1.5-2-041911

Instrument: pid1.i

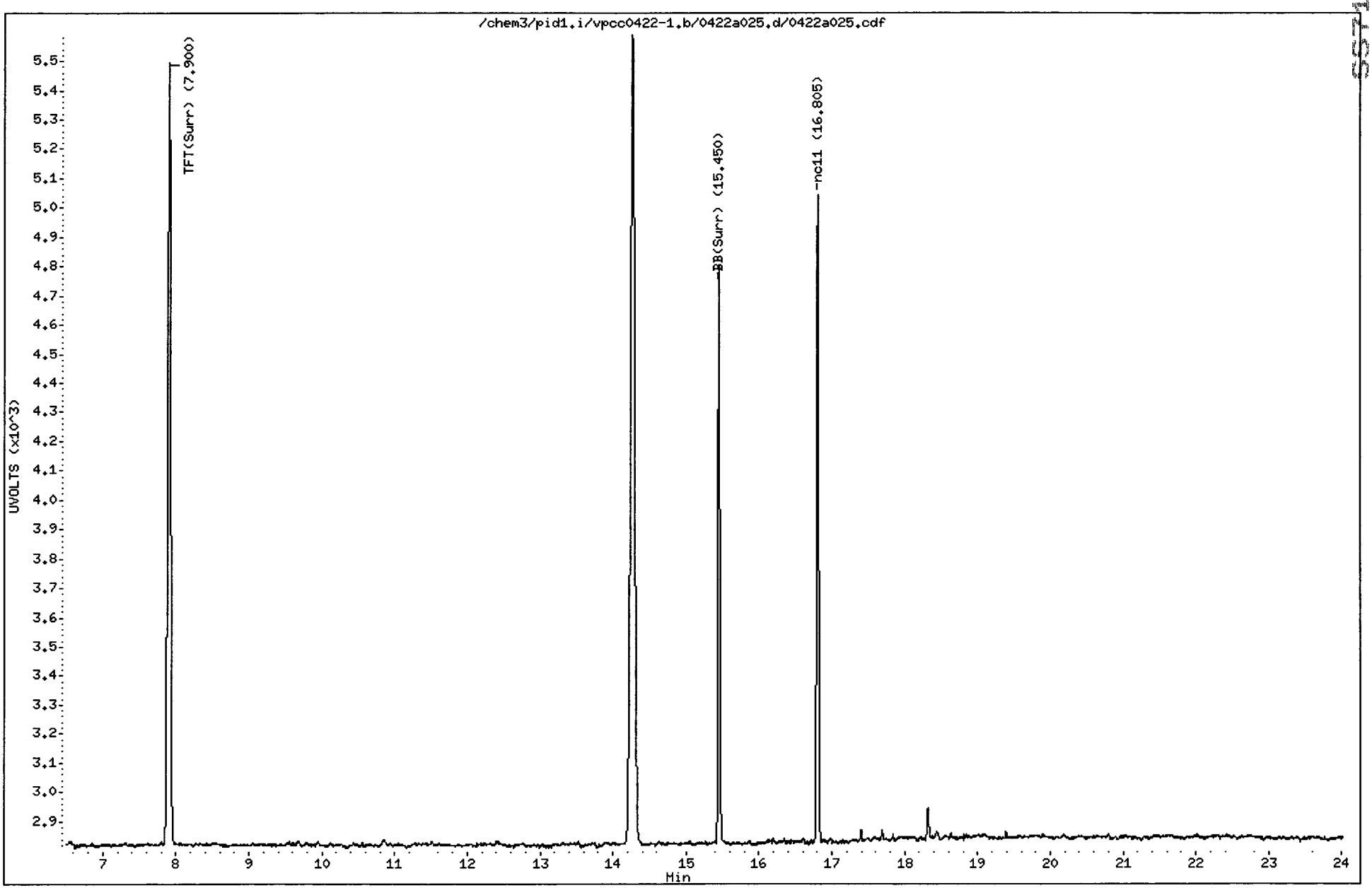
Sample Info: SS71N

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SS71 S1657



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a025.d

Page 1

Date : 22-APR-2011 17:57

Client ID: LL-SB2-1.5-2-041911

Instrument: pid1.i

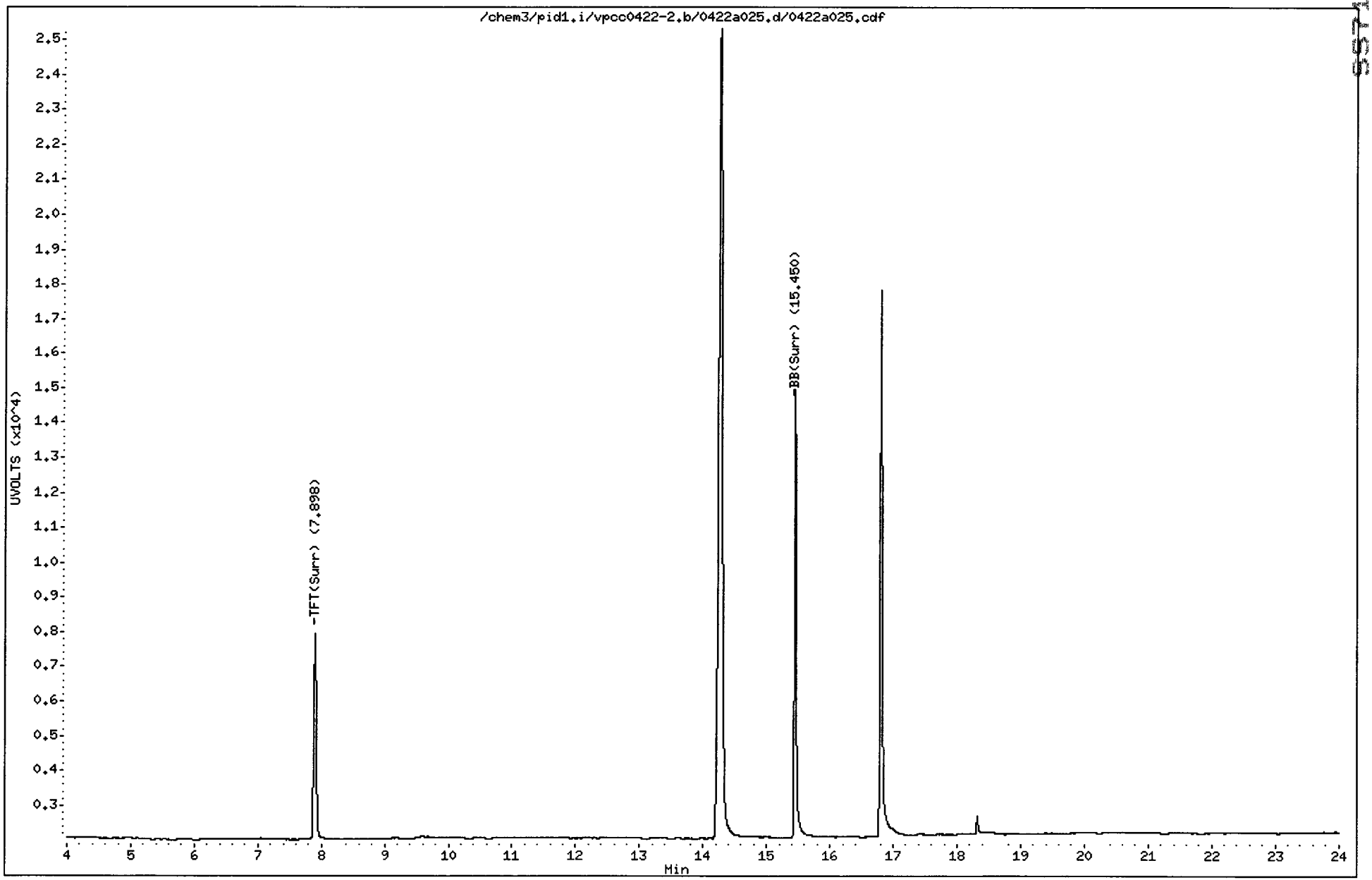
Sample Info: SS71N

Operator: MH

Column phase: RTX 502-2 PID

Column diameter: 0.18

SS71 61568



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a027.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a027.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: BCAL 3
Client ID:
Injection Date: 22-APR-2011 18:55
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.902	0.003	2634	36024	93.1	TFT(Surr)
15.450	0.004	2028	16821	97.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	235059	0.627
8015B 2MP-TMB	(4.15 to 16.26)	747017	232624	0.311
AK101 nC6-nC10	(4.66 to 15.16)	604063	215377	0.357
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	235740	0.584

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.899	0.003	5835	89.6	TFT(Surr)
15.450	0.004	12973	96.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.049	-0.002	10467	23.88	Benzene
9.946	0.004	9031	23.10	Toluene
12.850	0.004	8077	23.65	Ethylbenzene
13.012	0.005	17320	47.16	M/P-Xylene
13.970	0.006	6981	24.38	O-Xylene
4.526	-0.001	3845	22.65	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a027.d

Date : 22-APR-2011 18:55

Client ID:

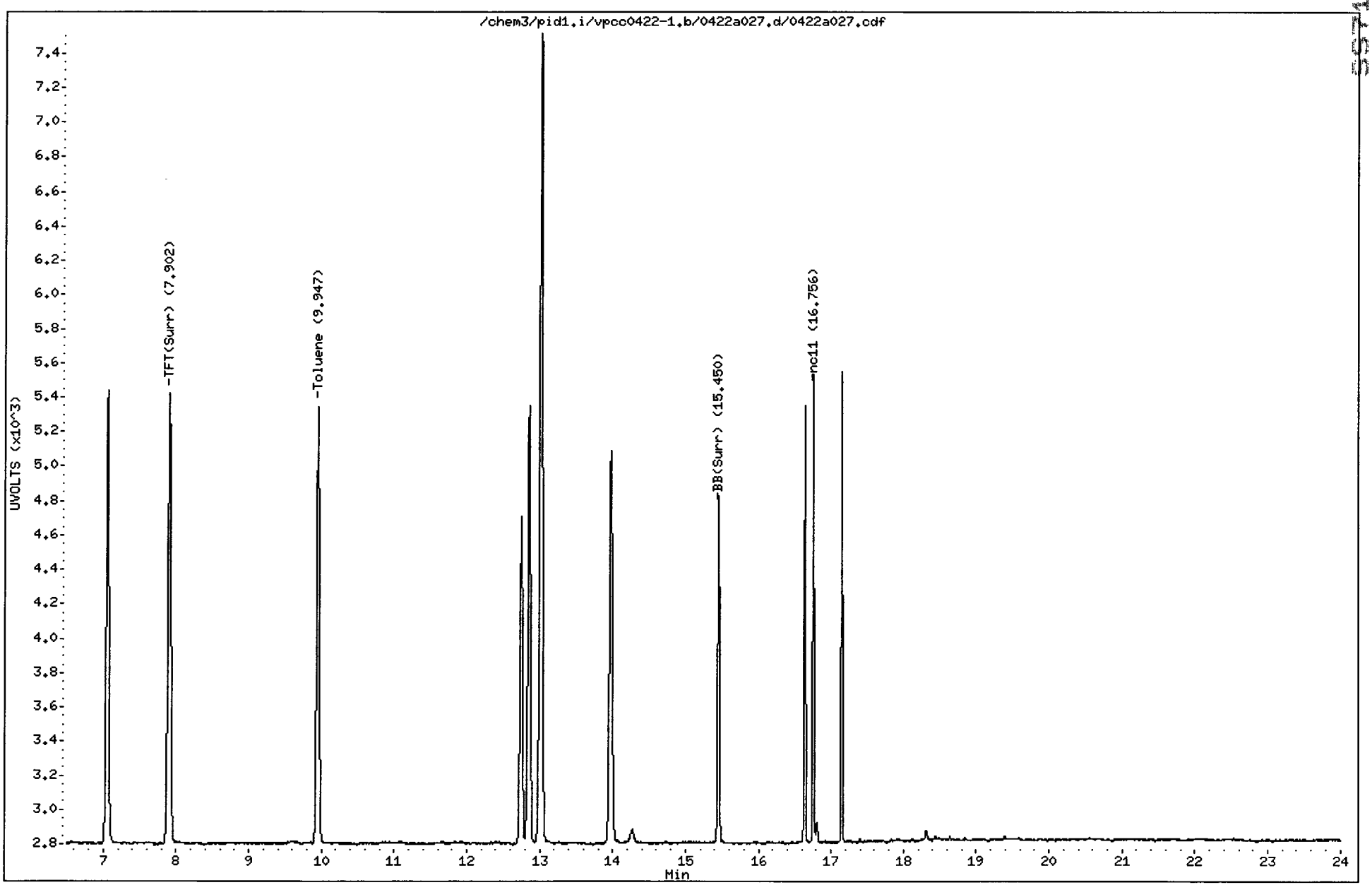
Sample Info: BCAL 3

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a027.d

Date : 22-APR-2011 18:55

Client ID:

Sample Info: BCAL 3

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

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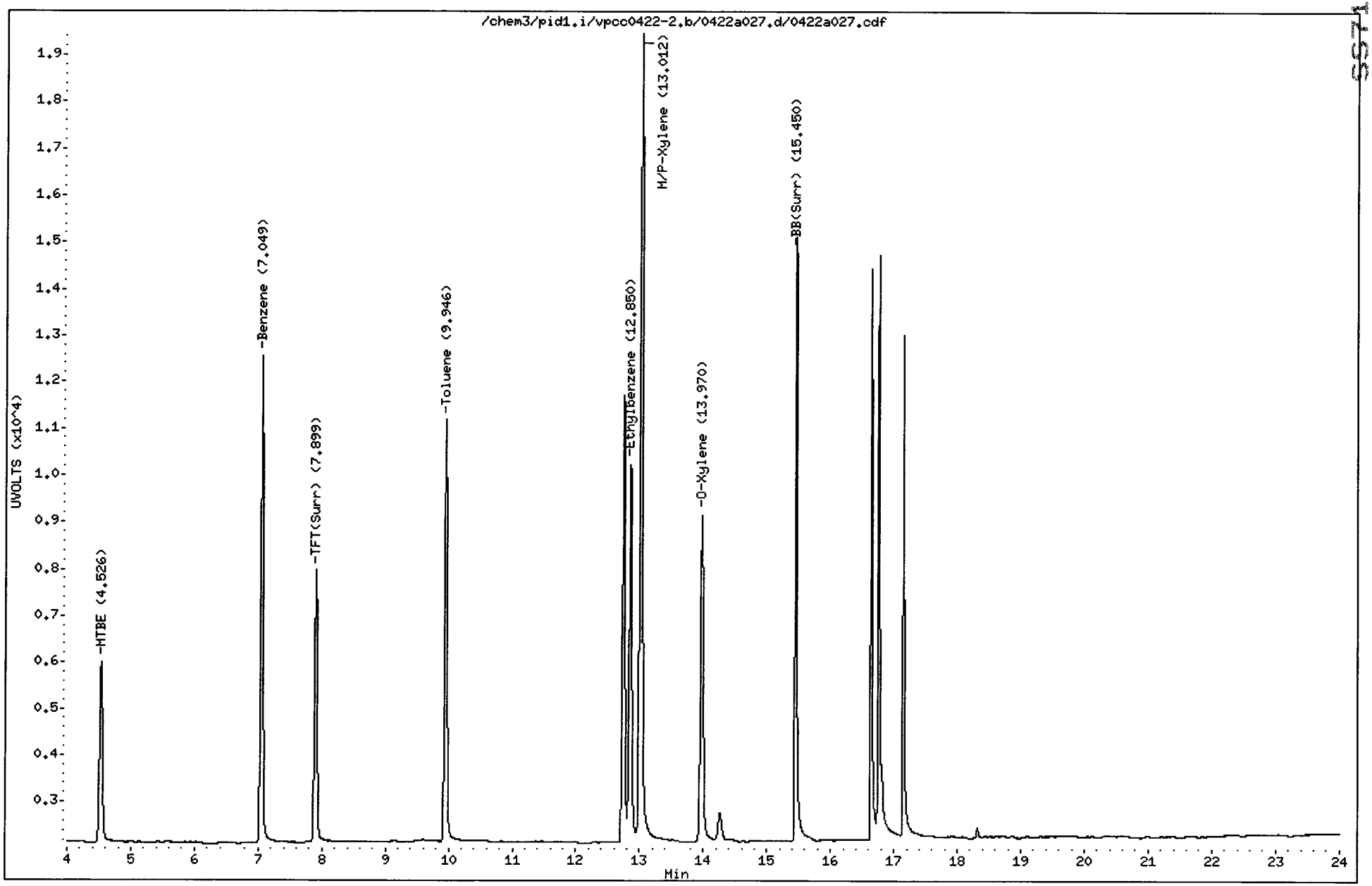


MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a028.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a028.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: GCAL 3
Client ID:
Injection Date: 22-APR-2011 19:24
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.902	0.003	2887	50237	102.0	TFT(Surr)
15.450	0.004	2076	18613	99.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	842482	2.248 M
8015B 2MP-TMB	(4.15 to 16.26)	747017	1661000	2.224 M
AK101 nC6-nC10	(4.66 to 15.16)	604063	1332766	2.206 M
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	890704	2.208 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.901	0.004	6167	94.7	TFT(Surr)
15.450	0.004	13428	99.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.060	0.009	3253	7.42	Benzene
9.948	0.006	34458	88.12	Toluene
12.851	0.005	8727	25.55	Ethylbenzene
13.016	0.009	34610	94.25	M/P-Xylene
13.971	0.007	12414	43.35	O-Xylene
4.531	0.005	593	3.49	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a028.d

Page 1

Date : 22-APR-2011 19:24

Client ID:

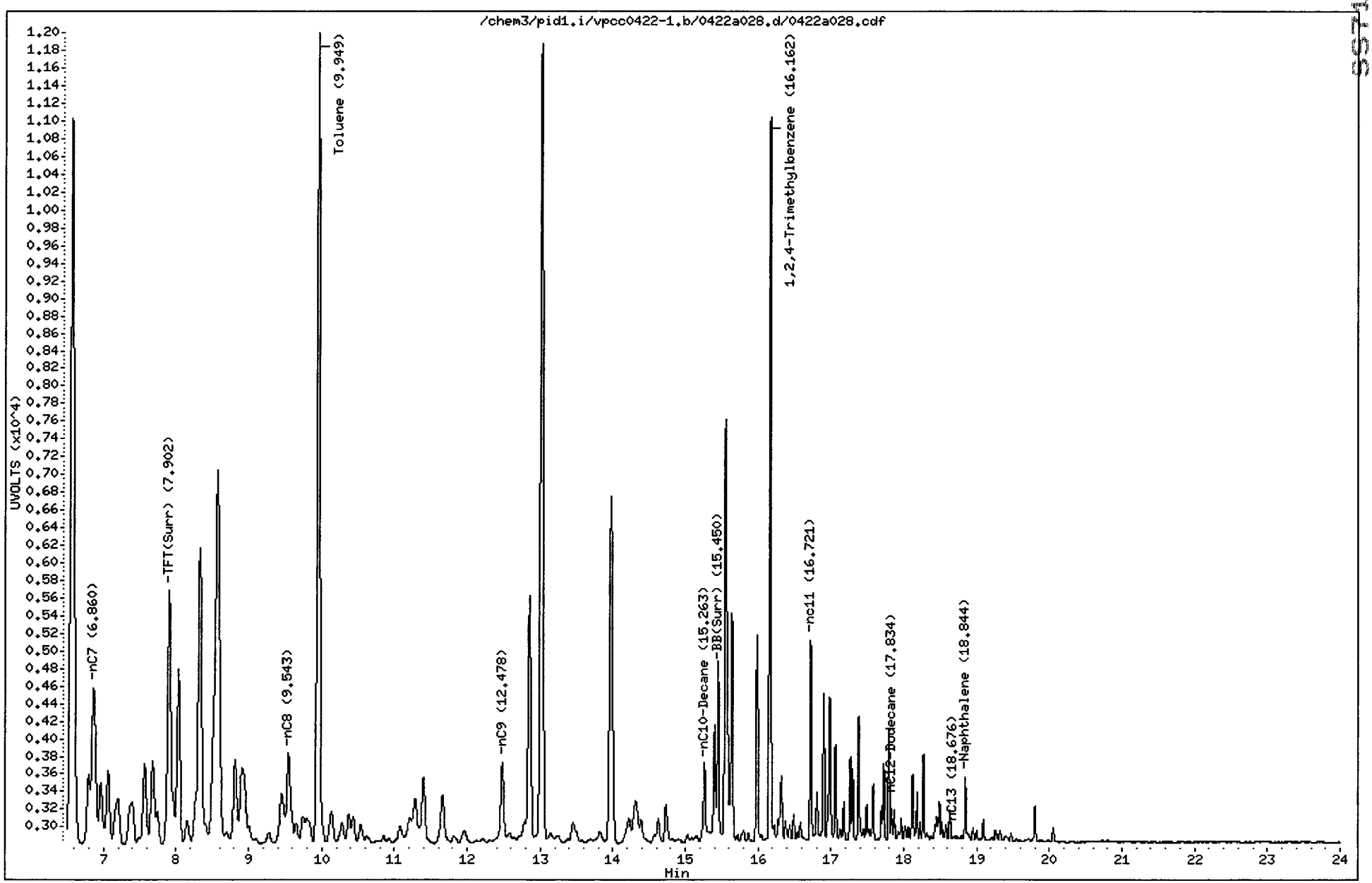
Instrument: pid1.i

Sample Info: GCAL 3

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18



5571 01613

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Date : 22-APR-2011 19:24

Client ID:

Sample Info: GCAL 3

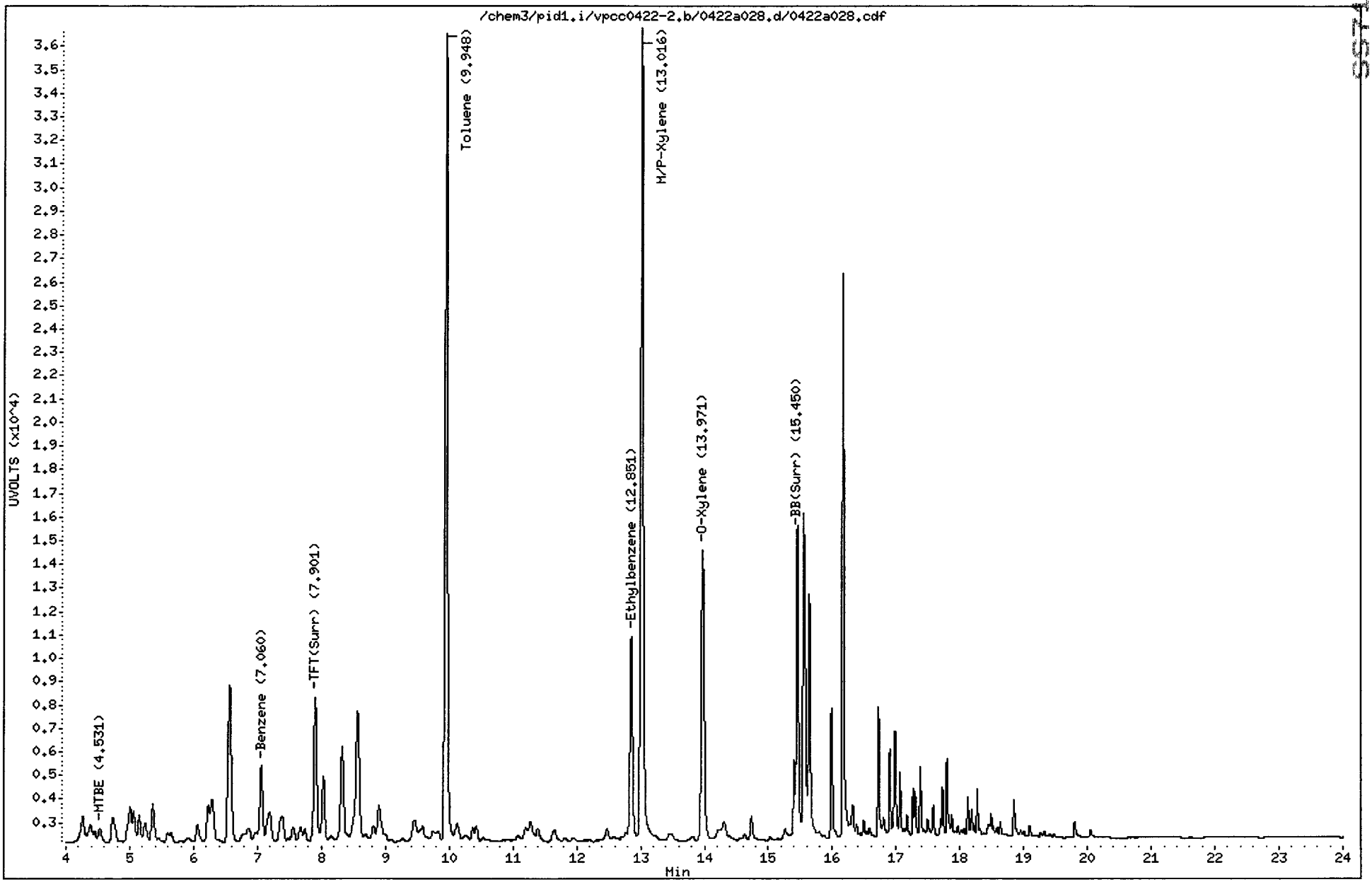
Column phase: RTX 502-2 PID

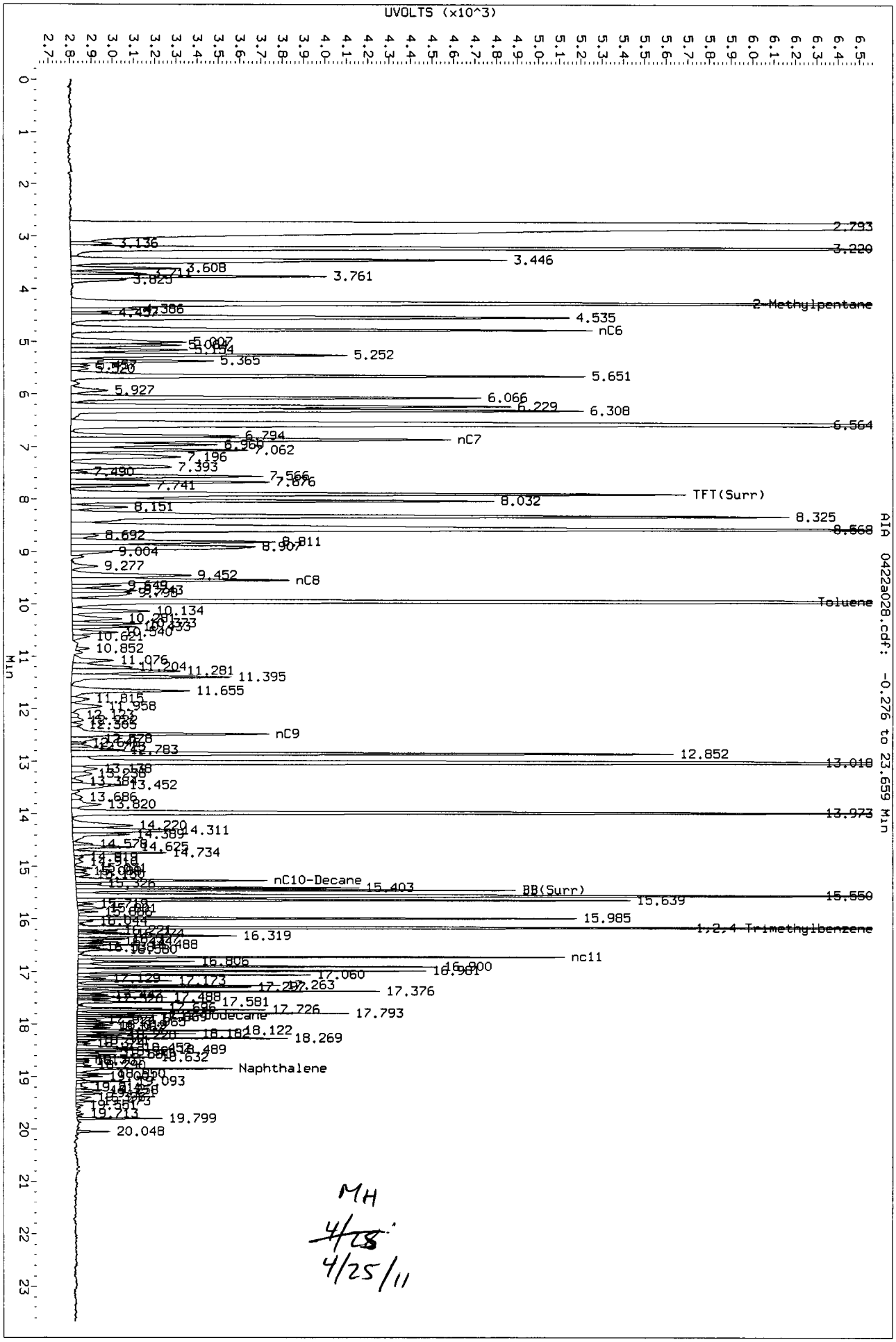
Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SST 91611

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3.446
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5.927
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7.196
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7.490
7.566
7.741
TFT(Surr)
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8.568
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11.281
11.395
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13.018
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13.686
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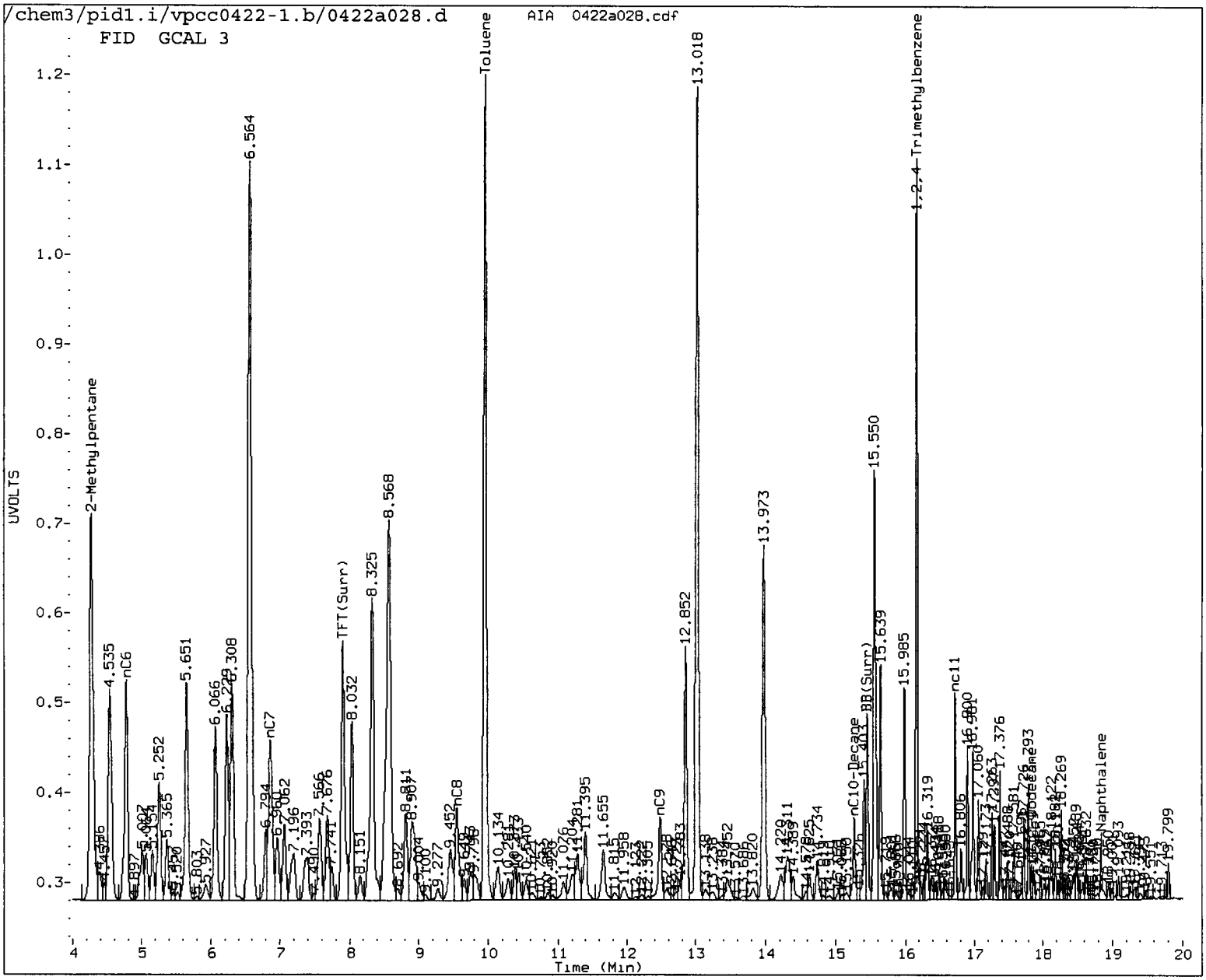
AIA 0422a028.cdf: -0.276 to 23.659 Min
Data File: /chem3/pid1.i/vpcc0422-1.b/0422a028.d/0422a028.cdf
Injection Date: 22-APR-2011 19:24
Instrument: pid1.i
Client Sample ID:

MH
4/28
4/25/11



MANUAL INTEGRATION

~~1~~. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: MH Date: 4/25/11

MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a029.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a029.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS710
Client ID: LL-SB2-2-3.5-041911
Injection Date: 22-APR-2011 19:53
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.902	0.003	2542	34417	89.9	TFT(Surr)
15.449	0.002	1962	16409	94.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	14324	0.038
8015B 2MP-TMB	(4.15 to 16.26)	747017	13117	0.018
AK101 nC6-nC10	(4.66 to 15.16)	604063	8850	0.015
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	15178	0.038

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.900	0.003	5695	87.4	TFT(Surr)
15.448	0.002	12612	93.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a029.d

Page 1

Date : 22-APR-2011 19:53

Client ID: LL-SB2-2-3.5-041911

Instrument: pid1.i

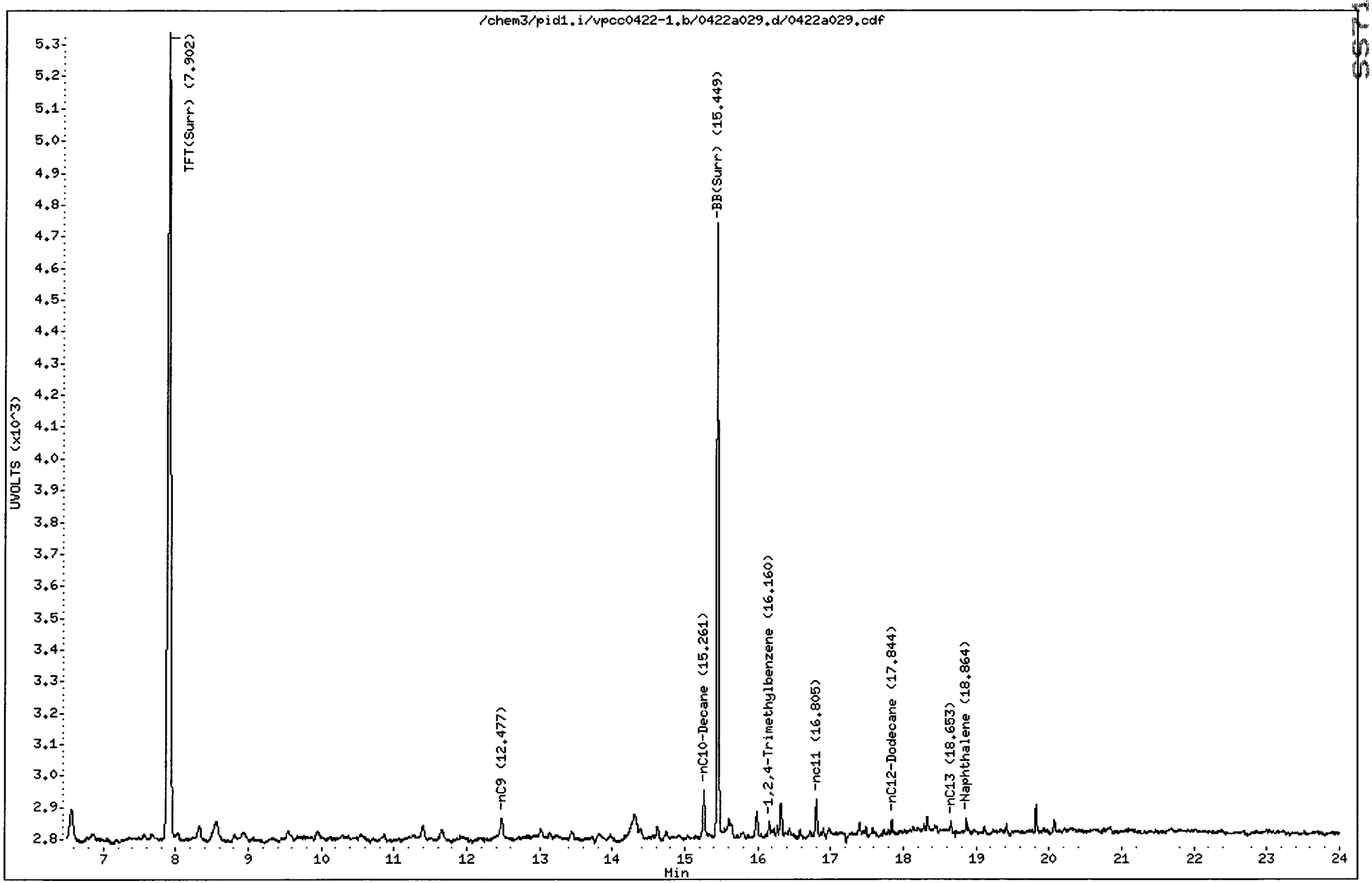
Sample Info: SS710

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SS710 61610



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a029.d

Date : 22-APR-2011 19:53

Client ID: LL-SB2-2-3.5-041911

Sample Info: SS710

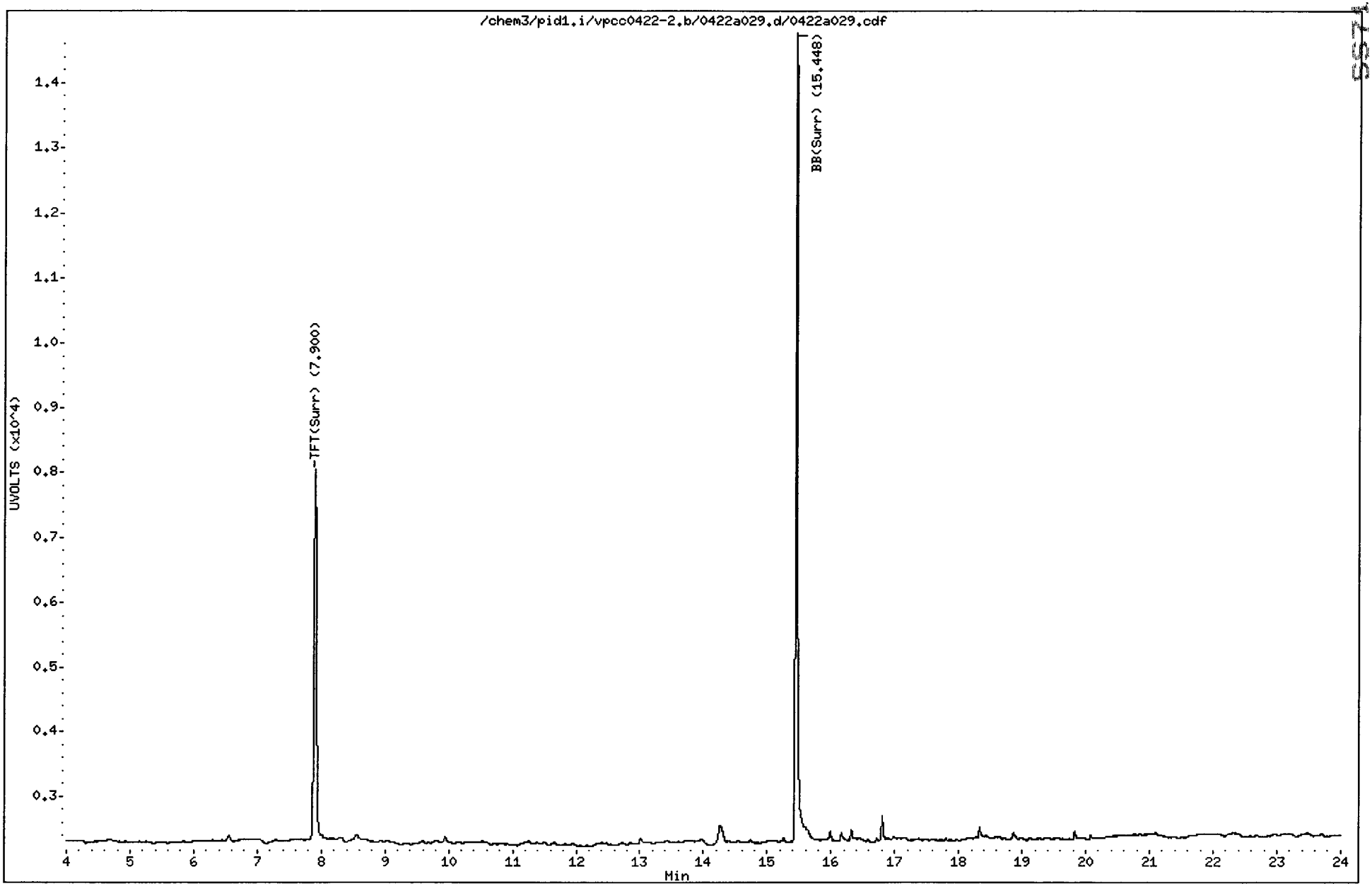
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS710 61610



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a030.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a030.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71P
Client ID: LL-SB1-0-0.5-041911
Injection Date: 22-APR-2011 20:23
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.902	0.003	2538	34585	89.7	TFT(Surr)
15.449	0.003	1917	16034	91.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	2293	0.006
8015B 2MP-TMB	(4.15 to 16.26)	747017	1778	0.002
AK101 nC6-nC10	(4.66 to 15.16)	604063	1778	0.003
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	2623	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.900	0.003	5728	88.0	TFT(Surr)
15.449	0.003	12324	91.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a030.d

Page 1

Date : 22-APR-2011 20:23

Client ID: LL-SB1-0-0.5-041911

Instrument: pid1.i

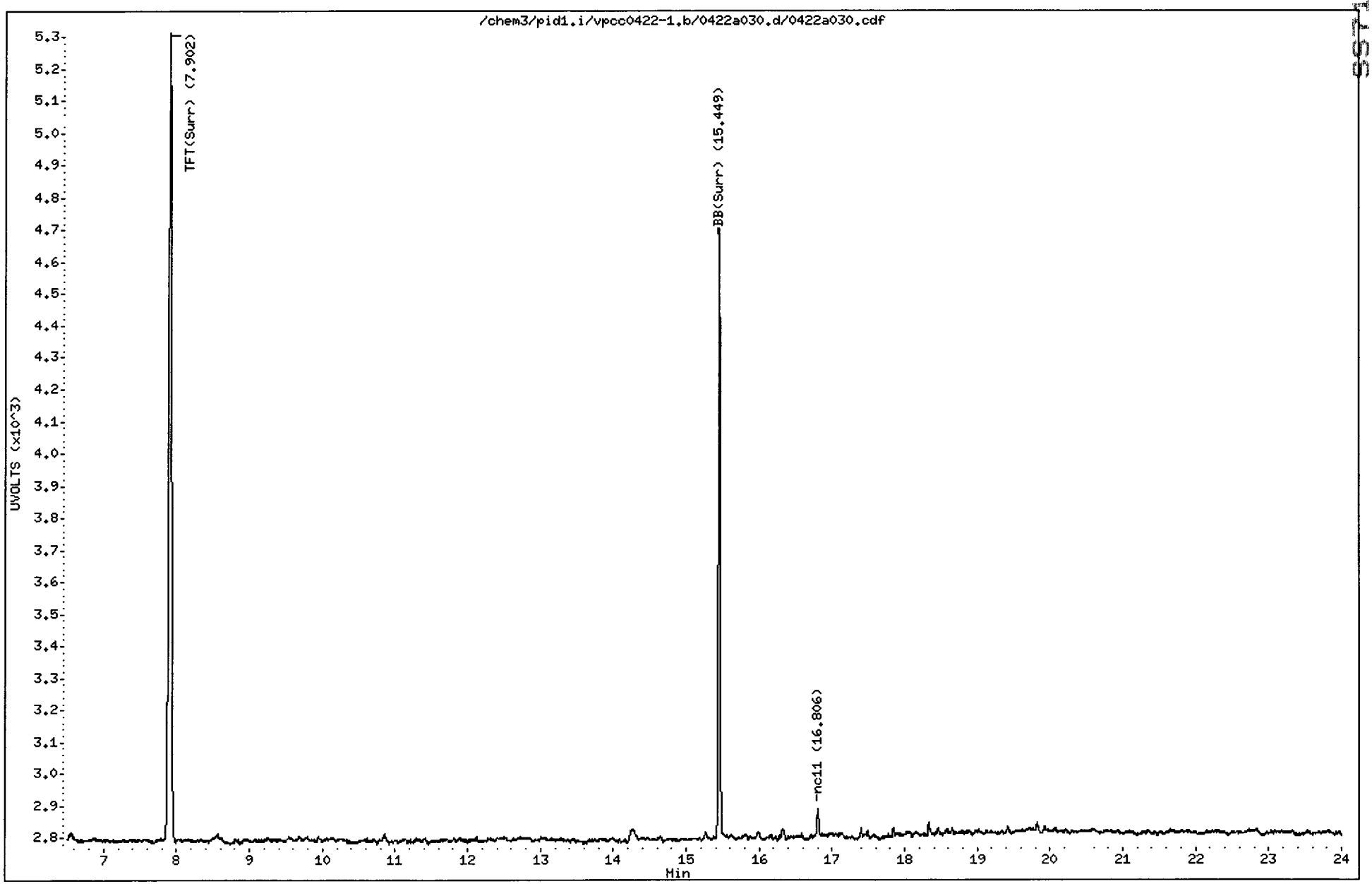
Sample Info: SS71P

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SS71 : 016221



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a030.d

Page 1

Date : 22-APR-2011 20:23

Client ID: LL-SB1-0-0.5-041911

Instrument: pid1.i

Sample Info: SS71P

Operator: MH

Column phase: RTX 502-2 PID

Column diameter: 0.18

SS71 6122

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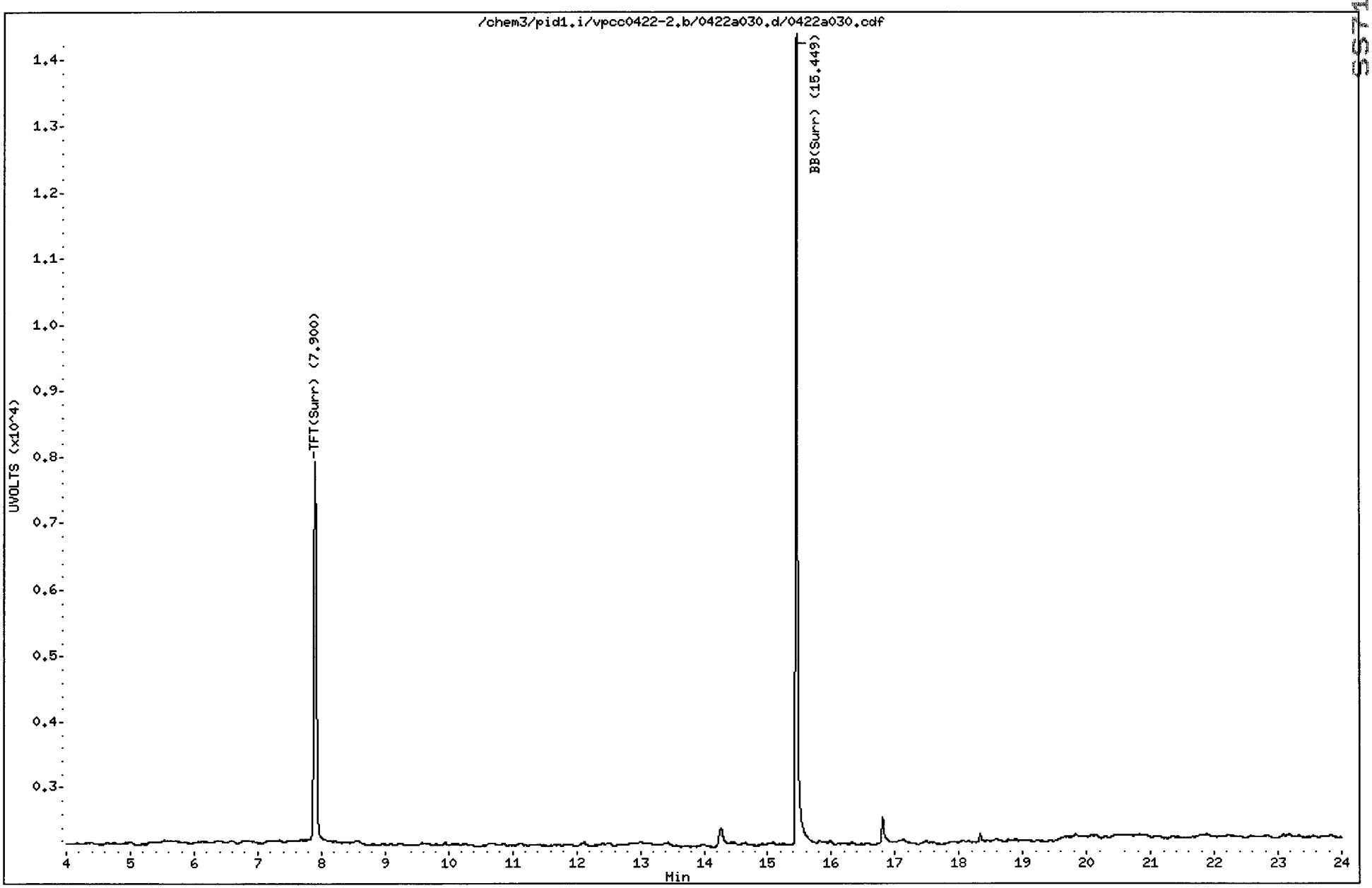


MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a031.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a031.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71Q
Client ID: LL-SB1-0-0.5-041911
Injection Date: 22-APR-2011 20:52
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.901	0.002	2604	35381	92.0	TFT(Surr)
15.449	0.003	1988	16691	95.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	1267	0.003
8015B 2MP-TMB	(4.15 to 16.26)	747017	545	0.001
AK101 nC6-nC10	(4.66 to 15.16)	604063	544	0.001
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	1693	0.004

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.899	0.003	5902	90.6	TFT(Surr)
15.450	0.004	12855	95.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a031.d

Page 1

Date : 22-APR-2011 20:52

Client ID: LL-SB1-0-0.5-041911

Instrument: pid1.i

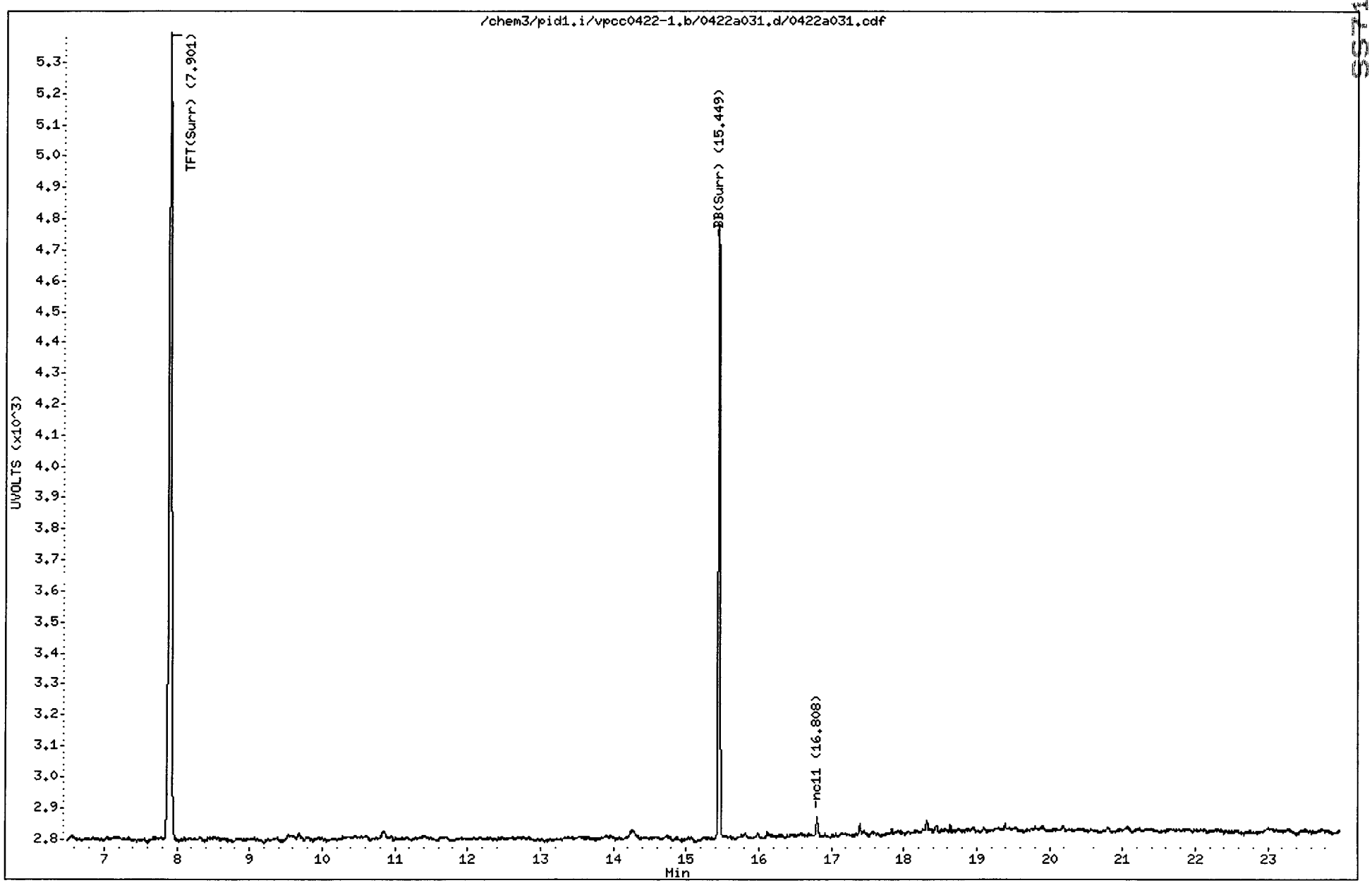
Sample Info: SS71Q

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SST1 : 01627



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a031.d

Page 1

Date : 22-APR-2011 20:52

Client ID: LL-SB1-0-0.5-041911

Instrument: pid1.i

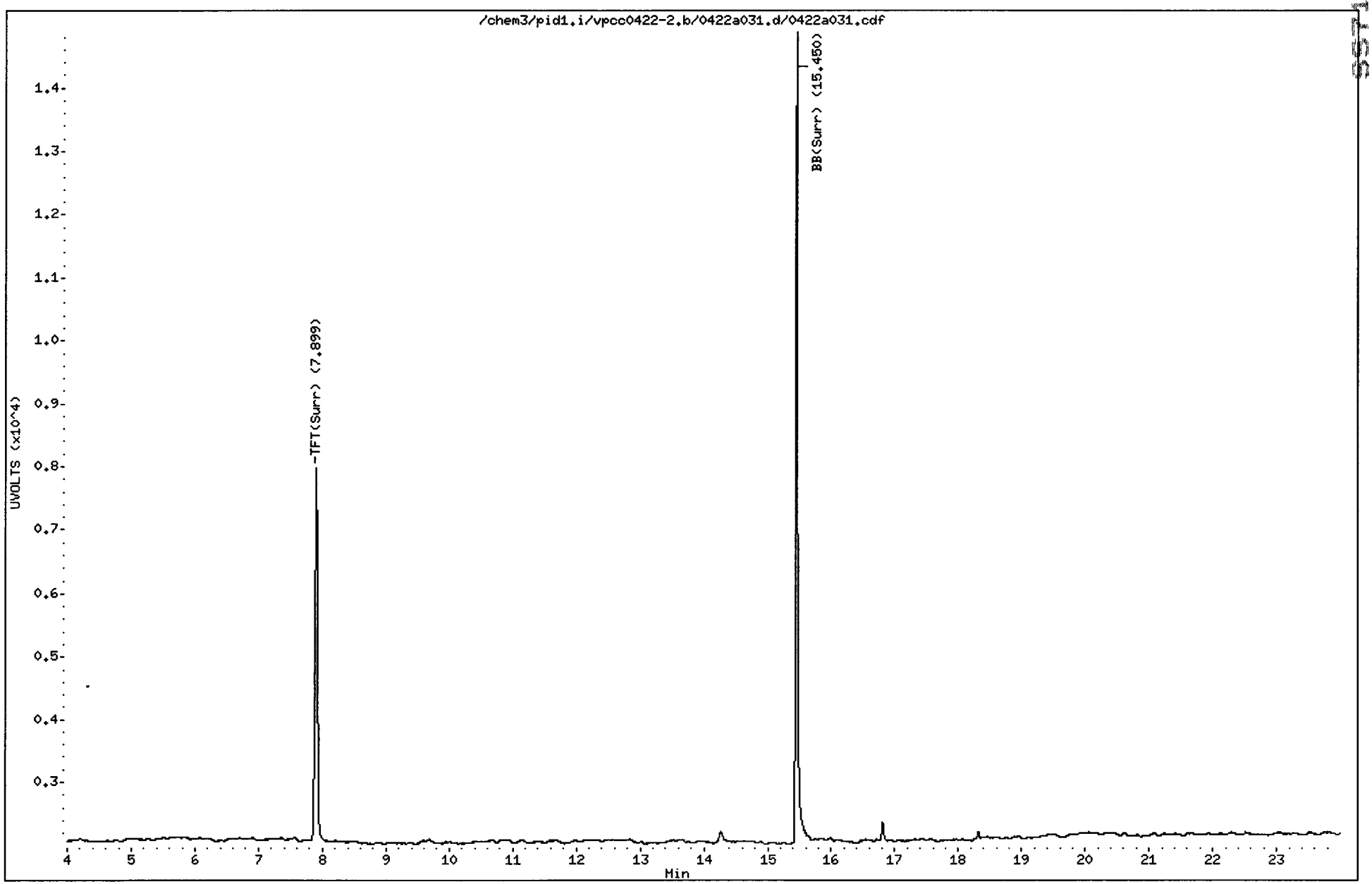
Sample Info: SS71Q

Operator: MH

Column phase: RTX 502-2 PID

Column diameter: 0.18

SS71625



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a032.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a032.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71R
Client ID: LL-SB1-1.5-2-041911
Injection Date: 22-APR-2011 21:21
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.900	0.001	2596	35049	91.8	TFT(Surr)
15.450	0.004	1960	16432	94.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	19266	0.051
8015B 2MP-TMB	(4.15 to 16.26)	747017	13051	0.017
AK101 nC6-nC10	(4.66 to 15.16)	604063	13050	0.022
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	19991	0.050

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.001	5900	90.6	TFT(Surr)
15.450	0.004	12792	94.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a032.d

Date : 22-APR-2011 21:21

Client ID: LL-SB1-1.5-2-041911

Sample Info: SS71R

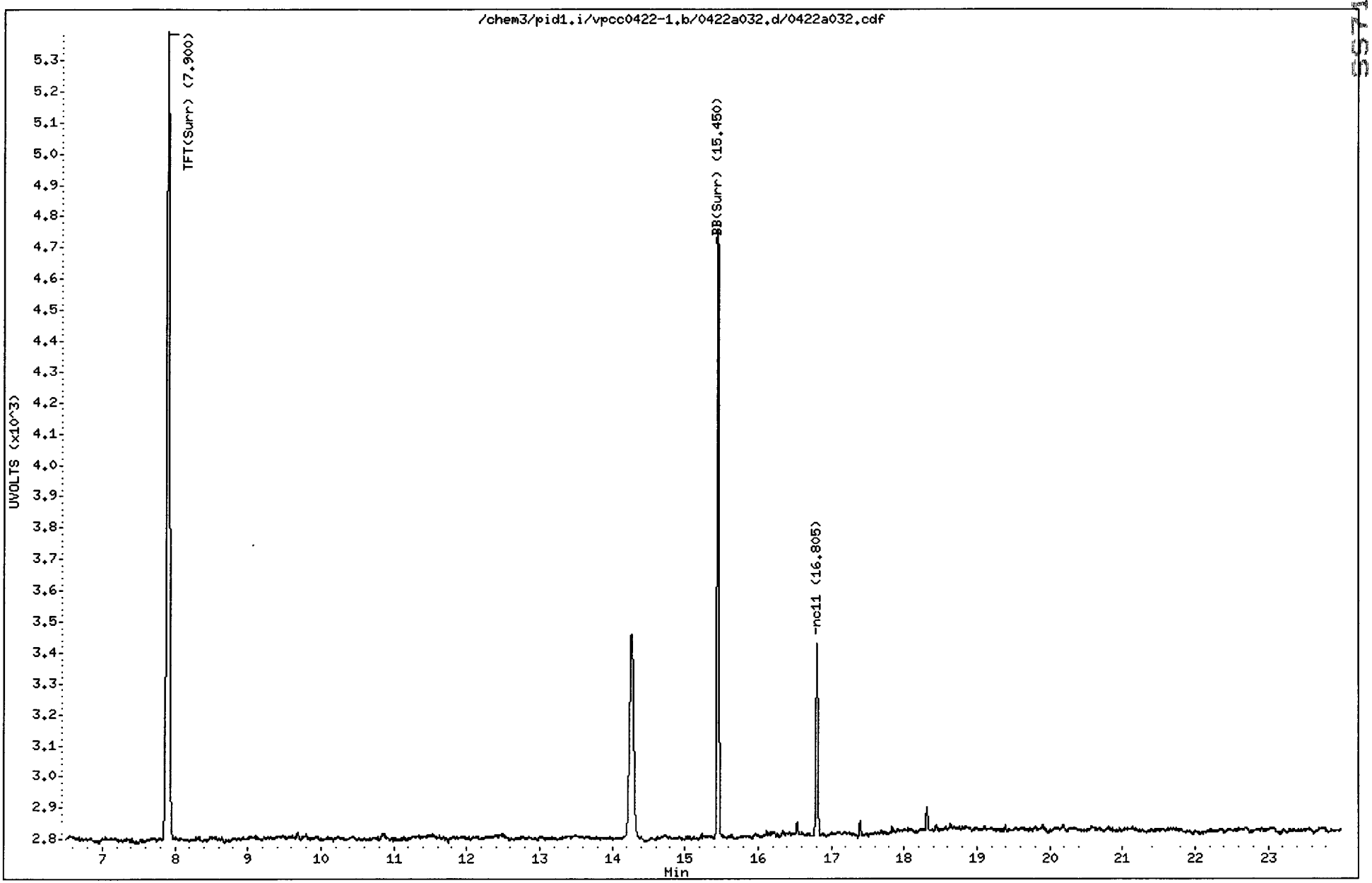
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71 91627



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a032.d

Date : 22-APR-2011 21:21

Client ID: LL-SB1-1.5-2-041911

Sample Info: SS71R

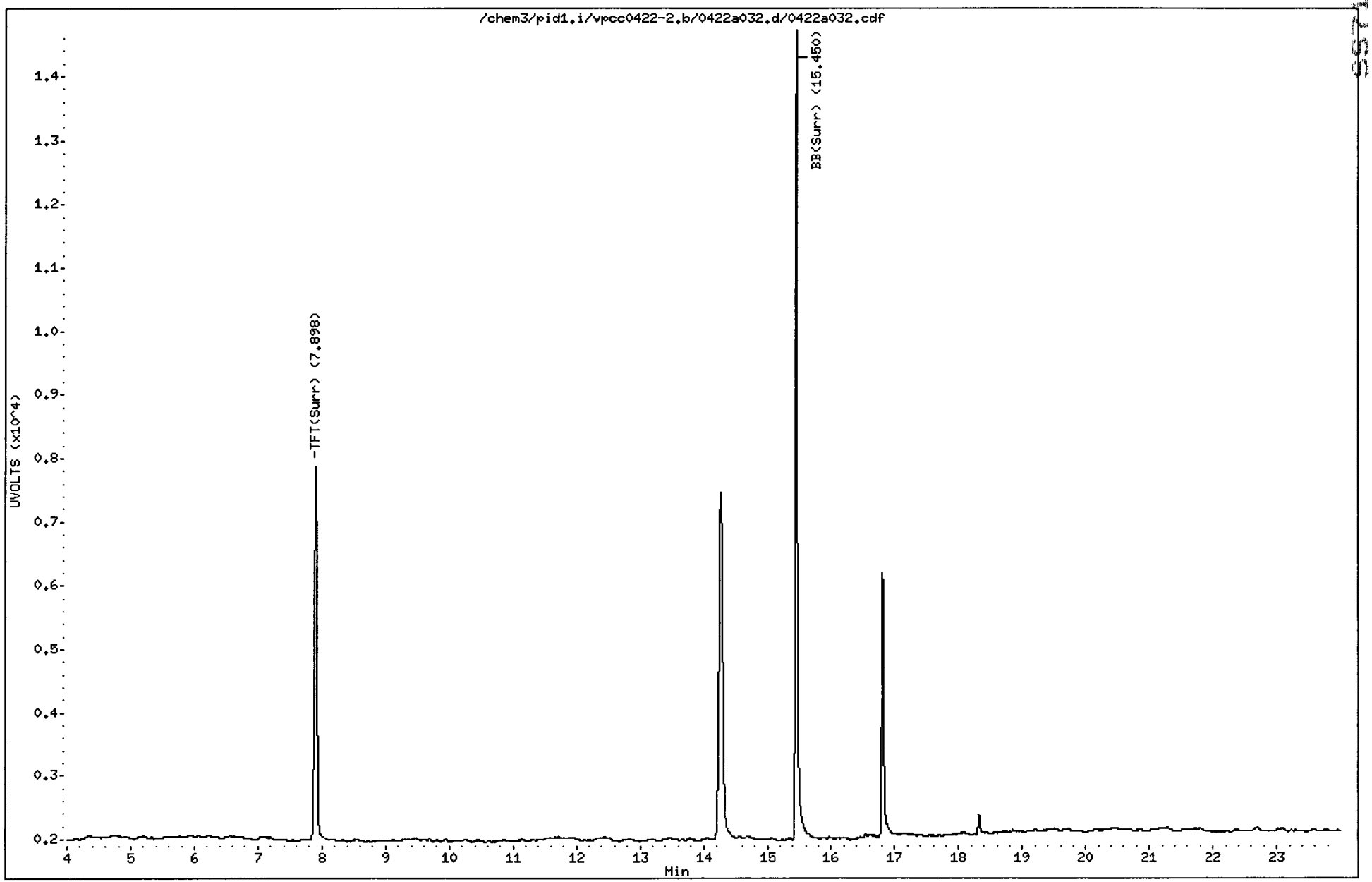
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71.01025



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a033.d
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a033.d
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 16-APRIL-2011
BETX Ical Date: 16-APR-2011

ARI ID: SS71S
Client ID: LL-SB1-2-4-041911
Injection Date: 22-APR-2011 21:50
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.899	0.000	2621	34929	92.6	TFT(Surr)
15.448	0.002	1992	16609	95.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	3375	0.009
8015B 2MP-TMB	(4.15 to 16.26)	747017	2053	0.003
AK101 nC6-nC10	(4.66 to 15.16)	604063	2053	0.003
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	3865	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	5889	90.4	TFT(Surr)
15.448	0.002	12845	95.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a033.d

Date : 22-APR-2011 21:50

Client ID: LL-SB1-2-4-041911

Sample Info: SS71S

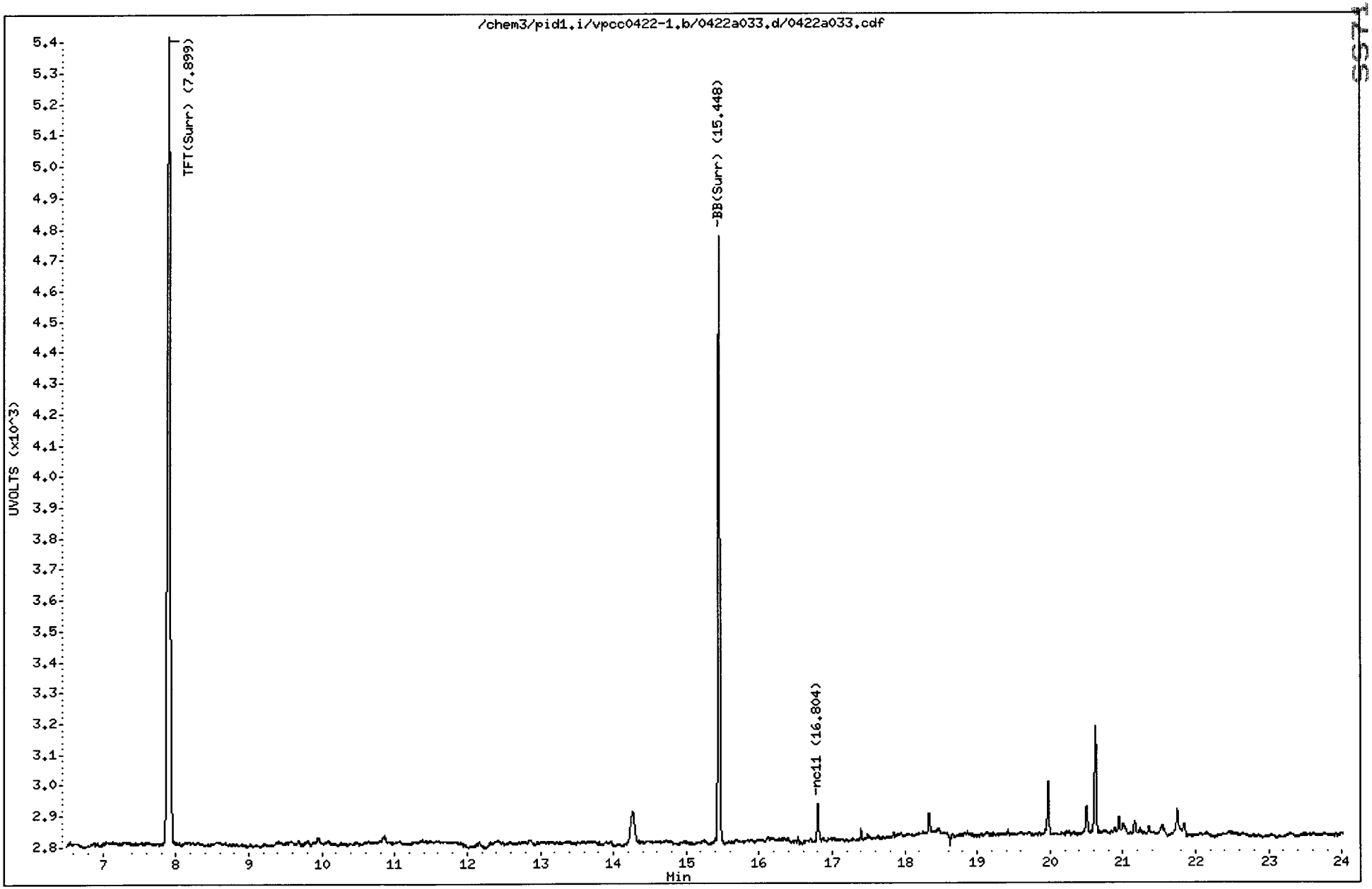
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71 61639



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a033.d

Date : 22-APR-2011 21:50

Client ID: LL-SB1-2-4-041911

Sample Info: SS71S

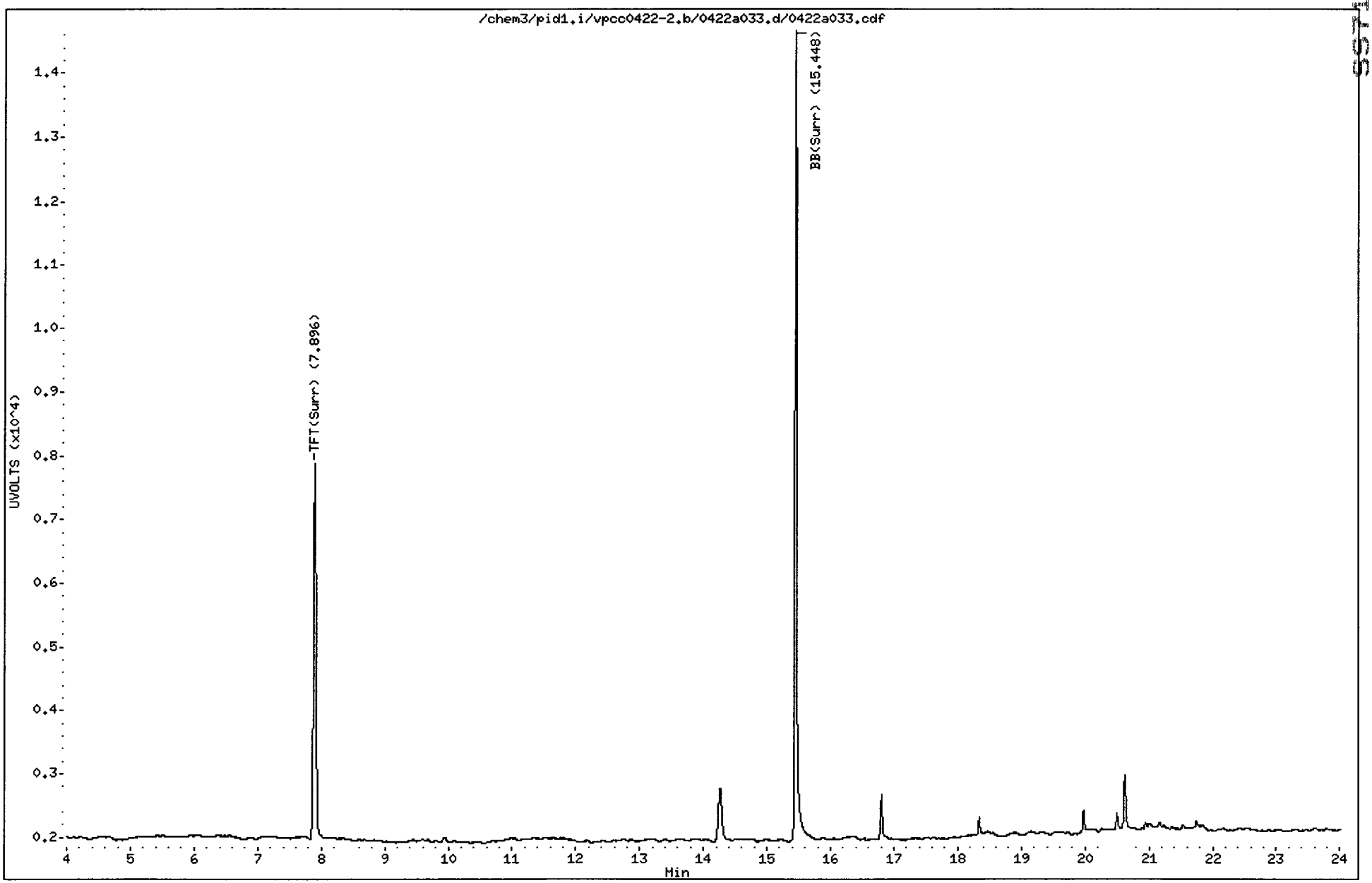
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SS71 91631



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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a035.d ARI ID: BCAL 4
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a035.d Client ID:
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m Injection Date: 22-APR-2011 22:48
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 16-APRIL-2011 Dilution Factor: 1.000
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.901	0.002	2489	33712	88.0	TFT(Surr)
15.450	0.004	1936	16070	92.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	223129	0.595
8015B 2MP-TMB	(4.15 to 16.26)	747017	221985	0.297
AK101 nC6-nC10	(4.66 to 15.16)	604063	204997	0.339
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	223333	0.554

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.899	0.002	5597	85.9	TFT(Surr)
15.450	0.004	12544	93.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.049	-0.002	10340	23.59	Benzene
9.945	0.003	8951	22.89	Toluene
12.850	0.004	7855	23.00	Ethylbenzene
13.012	0.004	16675	45.41	M/P-Xylene
13.970	0.006	6774	23.66	O-Xylene
4.527	0.000	3844	22.64	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a035.d

Page 1

Date : 22-APR-2011 22:48

Client ID:

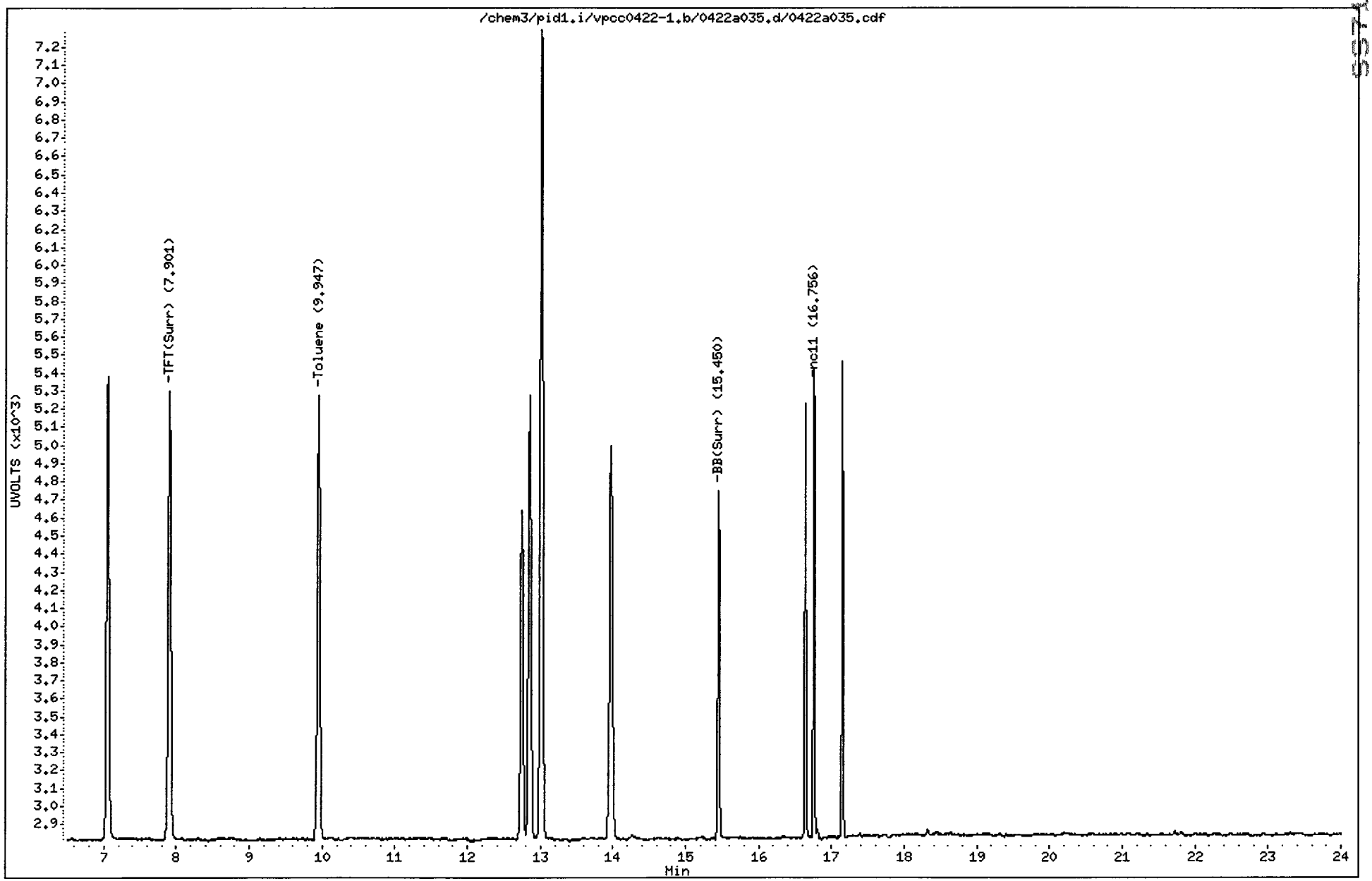
Instrument: pid1.i

Sample Info: BCAL 4

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18



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Date : 22-APR-2011 22:48

Client ID:

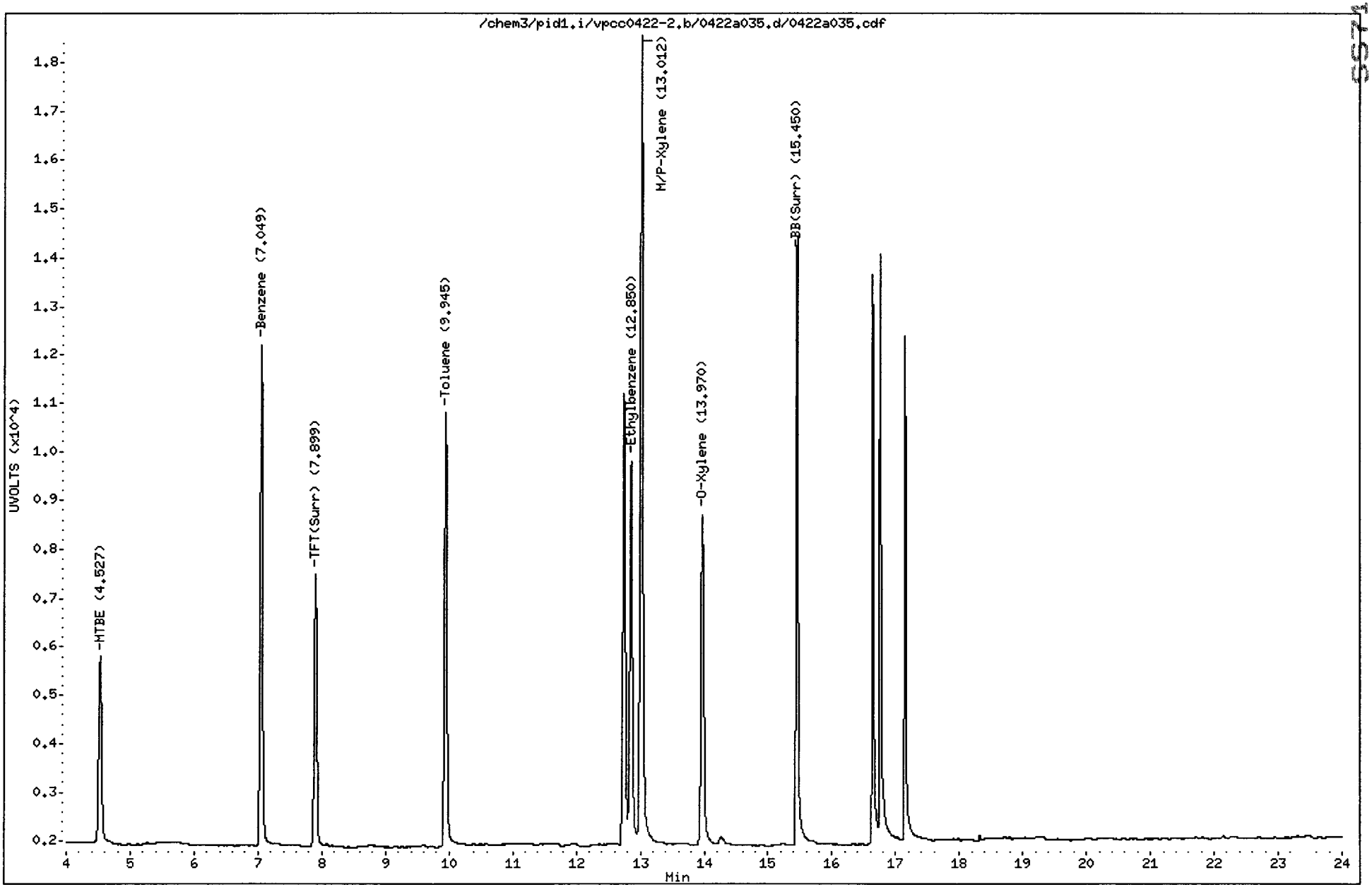
Sample Info: BCAL 4

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18



MH 4/25/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a036.d ARI ID: GCAL 4
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a036.d Client ID:
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m Injection Date: 22-APR-2011 23:18
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 16-APRIL-2011 Dilution Factor: 1.000
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.901	0.002	2773	48817	98.0	TFT(Surr)
15.450	0.004	2008	18002	96.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.84 to 17.94)	374773	820297	2.189 M
8015B 2MP-TMB	(4.15 to 16.26)	747017	1606051	2.150 M
AK101 nC6-nC10	(4.66 to 15.16)	604063	1284036	2.126 M
NWTPHG Tol-Nap	(9.84 to 18.96)	403422	870710	2.158 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.899	0.003	5966	91.6	TFT(Surr)
15.450	0.004	12980	96.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.059	0.008	3227	7.36	Benzene
9.947	0.005	34595	88.47	Toluene
12.851	0.005	8686	25.43	Ethylbenzene
13.016	0.008	34732	94.58	M/P-Xylene
13.971	0.007	12394	43.28	O-Xylene
4.529	0.002	665	3.92	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a036.d

Date : 22-APR-2011 23:18

Client ID:

Sample Info: GCAL 4

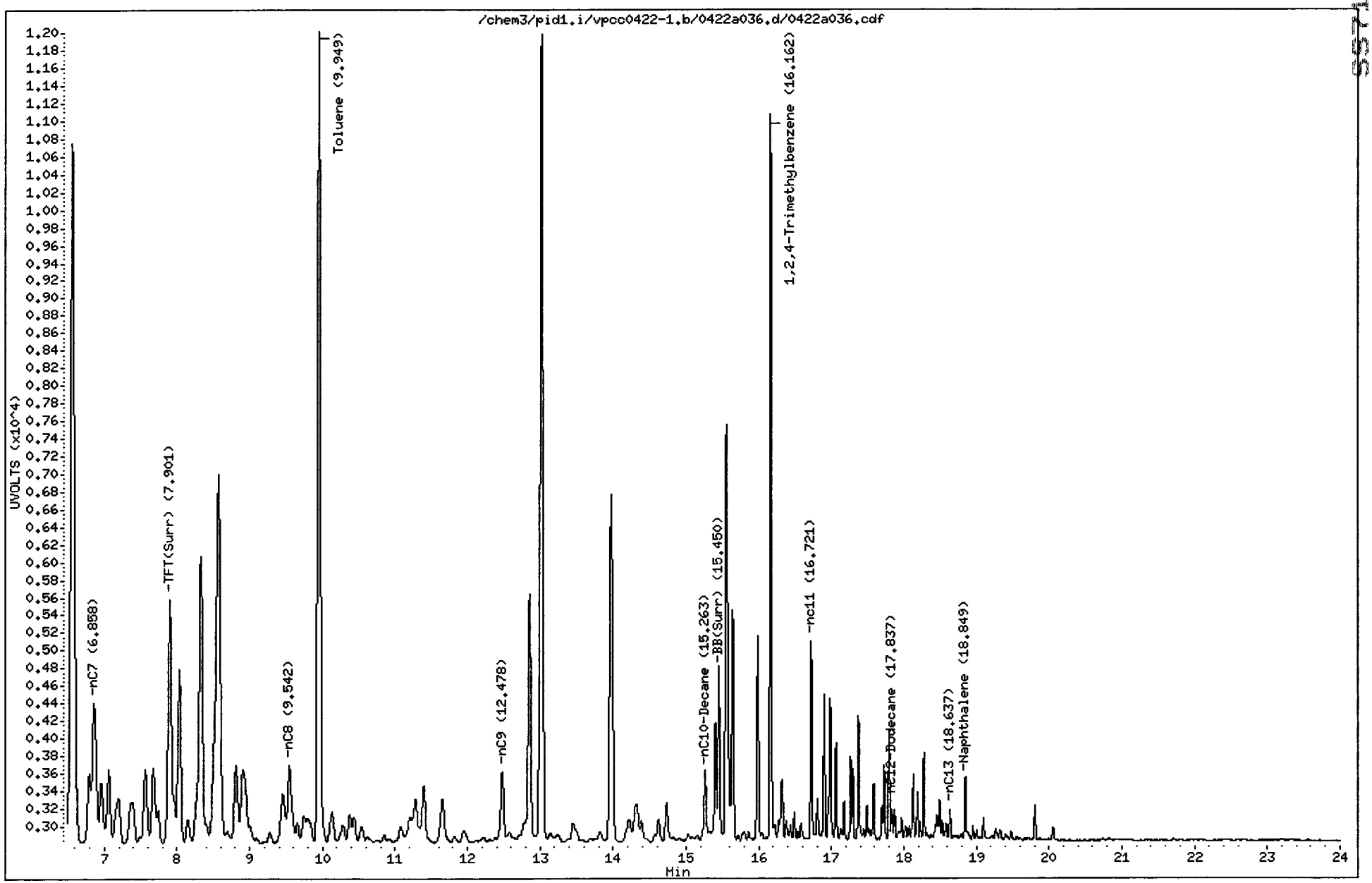
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SSTL 01636



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a036.d

Date : 22-APR-2011 23:18

Client ID:

Sample Info: GCAL 4

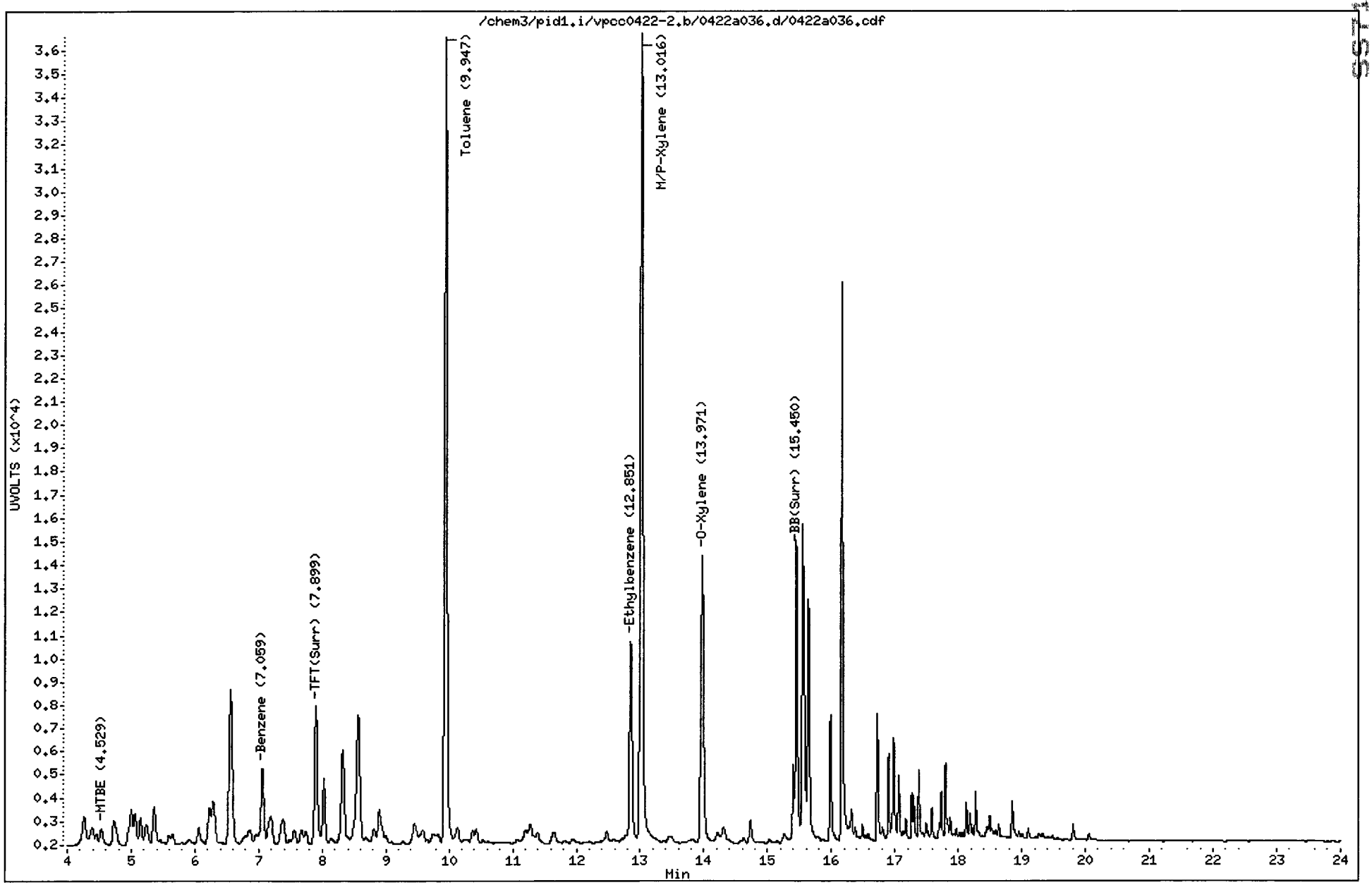
Column phase: RTX 502-2 PID

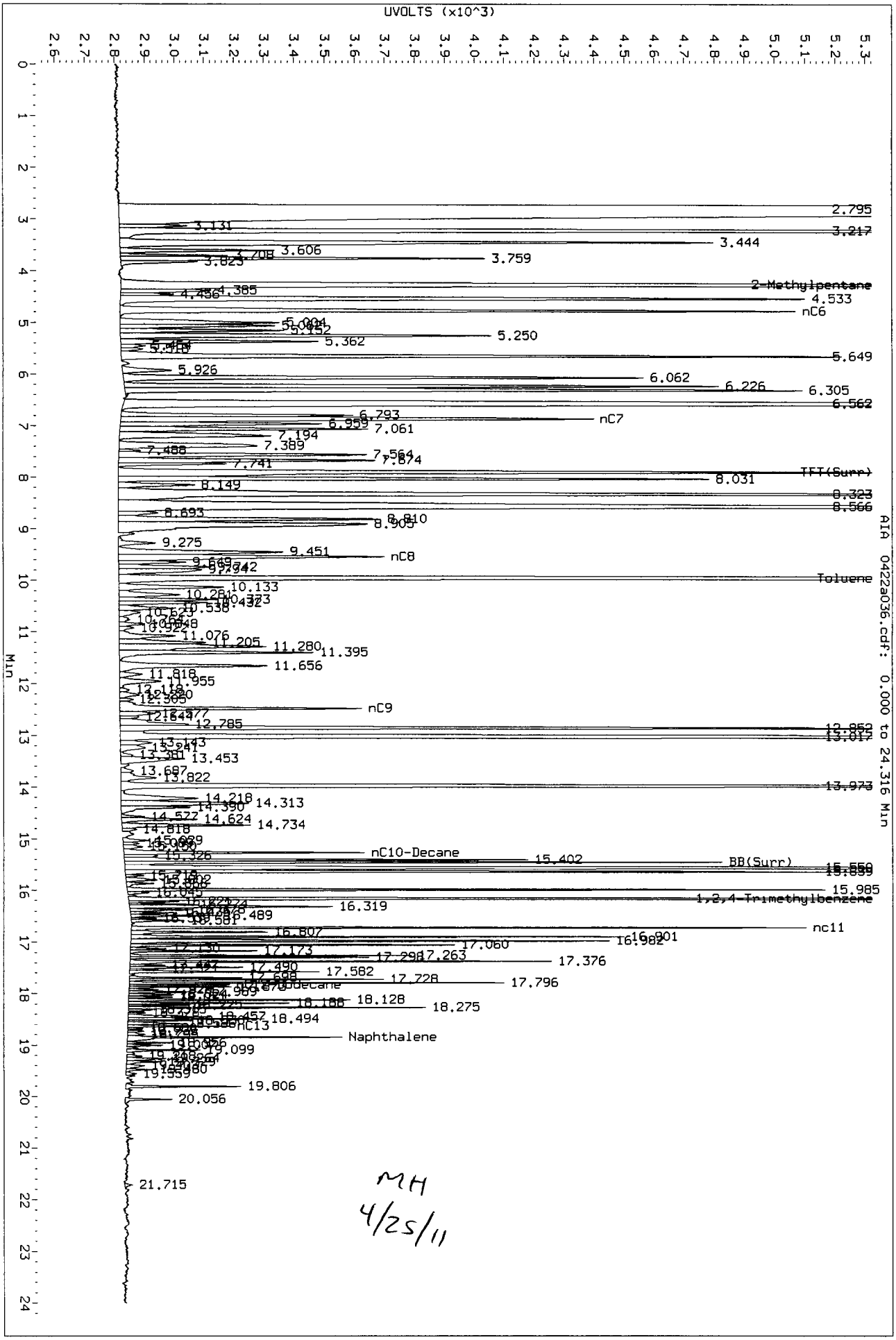
Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SST1 - 91637

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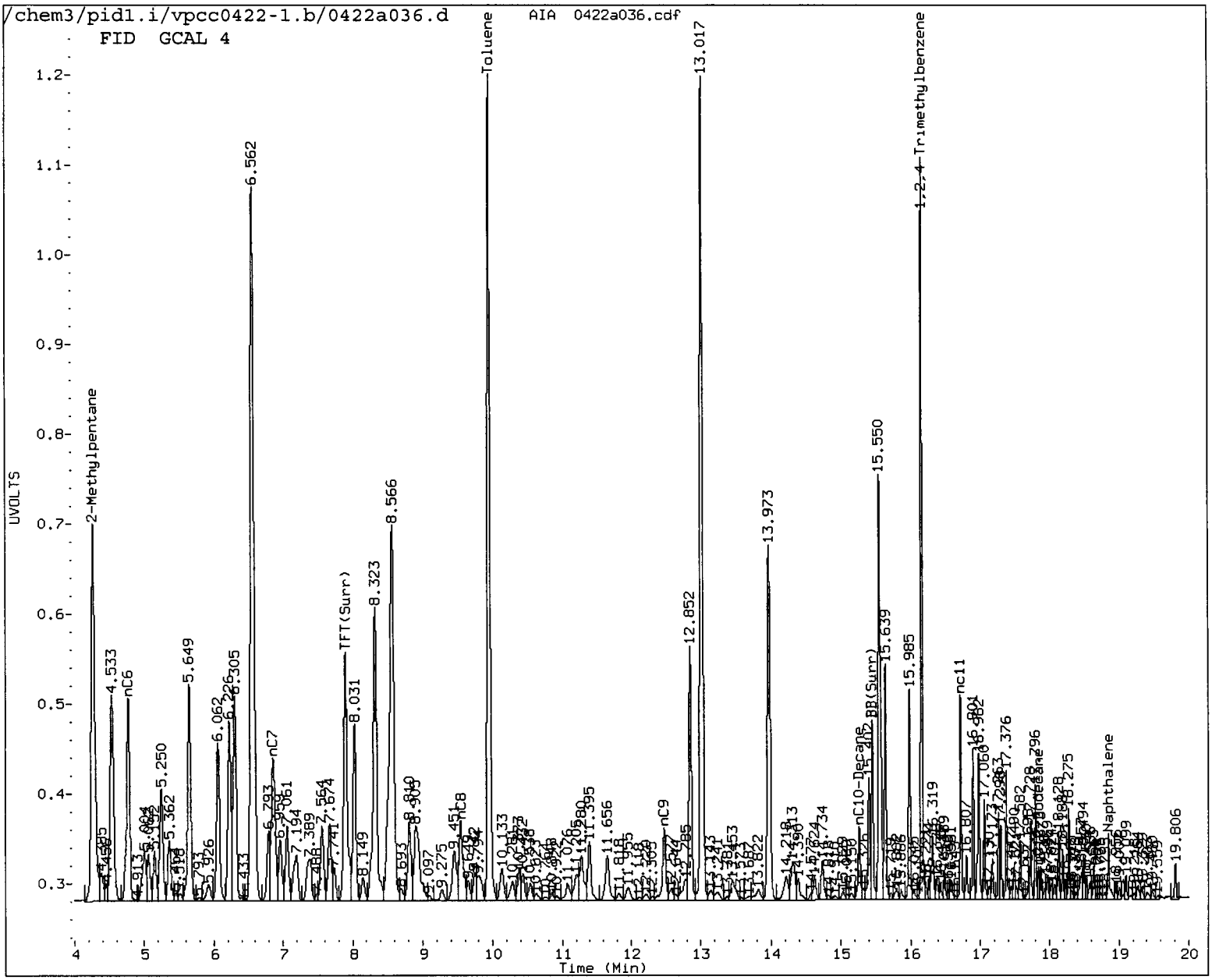
6.562
6.793
nC7
6.959
7.061
7.194
7.389
7.564
7.741
TFT(Surr)
8.031
8.149
8.323
8.566
8.693
8.810
8.905
9.275
9.451
nC8
Toluene
10.133
11.076
11.205
11.280
11.395
11.656
11.818
nC9
12.785
13.017
13.453
13.822
13.973
14.218
14.313
14.390
14.624
14.734
nC10-Decane
15.326
15.402
BB(Surr)
15.839
15.985
1,2,4-Trimethylbenzene
16.319
16.489
nc11
16.807
16.901
16.982
17.060
17.173
17.263
17.376
17.490
17.582
17.728
17.796
18.128
18.275
18.452
18.494
Naphthalene
19.099
19.806
20.056
21.715
AIA 0422a036.cdf: 0.000 to 24.316 Min
Data File: /chem3/pid1.i/vpcc0422-1.b/0422a036.d/0422a036.cdf
Injection Date: 22-APR-2011 23:18
Instrument: pid1.i
Client Sample ID:

MH
4/25/11



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: MH Date: 4/25/11

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: SS71

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM
Date: 4-21-11

Final Volume 50
Final Volume (Hg):

Sample ID SS71 ISPK, MBISPK

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	2781-14		
	Vol Added (mL):	1.0		
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200 ✓		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200 ✓		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK		CVA	1.0		
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: DM Date: 4-21-11

Matrix: Soil Block ID: #2 Block Temp: 90°c Thermometer: MP17

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
5571 A	7	—	1.008	50.0			
" B	7	—	1.080				
" C	7	—	1.097				
" D	7	—	1.028				
" E	7	—	1.046				
" F	7	—	1.075				
" G	7	—	1.079				
" H	7	—	1.079				
" I	19	—	1.028				
" IDUP	19	—	1.025				
" ISPK	19	—	1.028				
" J	7	—	1.076				
" K	7	—	1.046				
" L	7	—	1.043				
" M	7	—	1.059				
" N	7	—	1.040				
" O	7	—	1.092				
" P	7	—	1.055				
" Q	7	—	1.048				
" R	7	—	1.070				
" S	7	—	1.011				
" MB1	—	—	—				
" MB1SPK	—	—	—	50.0			
				4-21-11 DM			

Chemical/Reagent ID:

HNO_3: MP2086/IC167 HCl: I5951 H_2O_2: I6129 Tube Lot #: 1010191

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: KM

Date: 4/21/11

Final Volume 50

Final Volume (Hg):

Sample ID SS83 MB2SPK
SS71 MB2SPK

		Prepcode:	TWC		
		Spike Solution:	ICP Routine	ICP No GFA	GFA
		Standard No.:	2781-14		
		Vol Added (mL):	0.5		
	Ag		50		2.0
S	Al		200	200	
T	As		200 ✓		10
O	Ba		200	200	
C	Be		50	50	
K	Ca		1000	1000	
	Cd		50		2.0
	Co		50	50	
C	Cr		50	50	
O	Cu		50	50	
N	Fe		200	200	
C	K		1000	1000	
E	Mg		1000	1000	
N	Mn		50	50	
T	Na		1000	1000	
R	Ni		50	50	
A	Pb		200 ✓		10
T	Se		200		10
I	Sr		50	50	
O	Tl		200		10
N	V		50	50	
	Zn		50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK		CVA	1.0		
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

SS71-SS83

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: KM Date: 4/21/11

Matrix: Water Block ID: #5 Block Temp: 90°C Thermometer: MP7

ARI Sample ID	Btl #	pH<2	Prep Code: TWC Initial Wt (g) Vol (mL)	Prep Code: TWC Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
SS83 P	7	✓	50.0	50.0			
" MB2	—	✓					
" MB2SPK	—	✓					
SS71 T	1	✓					
" MB2	—	✓					
" MB2SPK	—	✓					
SS82 A	4	✓					
" MB	—	✓					
" MBSPK	—	✓	50.0	50.0			

KM 4/21/11

Chemical/Reagent ID:

HNO_3: I6167 HCl: MP2081 H_2O_2: — Tube Lot #: 1010191

SS71 : 01644

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	SS71
Unacceptable Blank:	☐	Date of Event:	4-27-11
Unacceptable Duplicate:	☑	Client ID:	Floyd Snider
Unacceptable Spike:	☐	Method/Element:	ICP
Unacceptable Reference:	☐	Prep Code:	Sw

Details of Problem/Recommended Corrective Action:

Pb greater than 1 RL Diff in I, IDup

I 0.03025
IDup 0.01902

Samples Affected:

Corrective Action Taken:

OK
RLD

Analyst Initials: AA
Date: 4-27-11

Supervisor: [signature]
Date: 4.28.11

5049F

Revision 007
6/11/10

SS71:01645

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: SS71

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 3-14-11 Analysis Date: 4-27-11 Analyst: MA

LR Date: 2-3-11 Page: 1 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2826-11
		2			-1
		3			-2
		4			-3
		5			-4
		ICV			2819-10
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		STC MB	Soil	2	
		ST42 MB2	LEN	5	
		Bt			
		Ct			
		Dt			
		ATDup			✓
		At			
		ALSplc			✓
		ST70 B	Soil	2	
		MBSplc			✓
		CCV2			
		CCB2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-27-11 Analyst: M

LR Date: — Page: 2 of 5

All corrections made by analyst unless otherwise noted. M 4-27-11

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SS71 MB2	TWC		
		T	↓		
		A	SWC	2	
		B			
		C			
		IDUP			Pb > IRL DIAF
		I			
		~~I Spk~~		✓	
M		M ~~I Post~~	→	↓	
		MB2Spk	TWC	✓	
		CCV3			
		CCB3			
		SS71 MB1	SWC	2	
		D			
		E			
		F			
		G			
		H			
		J			
		K			
		L			
		MB1Spk	↓	↓	
		CCV4			
		CCB4			

SS71 : 01648

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: ~ Analysis Date: 4-27-11 Analyst: M

LR Date: ~ Page: 3 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		SS83 MB2	TWC		
	✓	SS71 I	SWC	2	Confirms 1st Run
	✓	IDup			↓
		N			
		O			
		P			
		Q			
		R			
		S	↓	↓	
		SS83 MB2spk	TWC	✓	
		CCV5			
		CCB5			
		SS83 MB1	SWC	2	
		P	TWC		
		A	SWC	2	
		B			
		C			
		D			
		DDup		✓	
		D			
		Cspk		✓	
		MB1spk	↓	✓	
		CCV6			
		CCB6			

4/27/11

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 4-27-11

ORT 2	Analyst 4-28	Peer JB 4-28-11	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See Log
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	See Log
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	SS71
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	Ctn SS71

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	206.0 kPa	0.75 L/min

4/27/2011 8:13:11 AM Hg ReAlign... Actual peak offset (nm): 0.004
Drift (nm): -0.000 Slit adjustment: 0

Analysis Begun

Start Time: 4/27/2011 8:15:45 AM **Plasma On Time: 4/27/2011 7:27:25 AM**
Logged In Analyst: metals **Technique: ICP Continuous**
Spectrometer Model: Optima 7300 DV, S/N 077C8121202Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: BLANKS
Results Library: C:\pe\metals\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST **Method Last Saved: 4/22/2011 3:43:08 PM**
IEC File: IEC7AMIN.iec **MSF File:**
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: B1 **Date Collected: 4/27/2011 8:15:52 AM**
Data Type: Original

Dilution: 1X
User canceled analysis.

Analysis Begun

Start Time: 4/27/2011 8:17:47 AM **Plasma On Time: 4/27/2011 7:27:25 AM**

AT 4-27-11

==========

Analysis Begun

Start Time: 4/27/2011 8:43:45 AM **Plasma On Time: 4/27/2011 7:27:25 AM**
Logged In Analyst: metals **Technique: ICP Continuous**
Spectrometer Model: Optima 7300 DV, S/N 077C8121202Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2110427
Results Library: C:\pe\metals\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank 1 **Date Collected: 4/27/2011 8:43:46 AM**
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2231506.8	19668.00	0.88%	100.0	%
ScR 361.383	397969.8	2575.58	0.65%	100.0	%
Ag 328.068†	-1572.6	9.76	0.62%	[0.00]	mg/L
Al 308.215†	-156.9	6.94	4.42%	[0.00]	mg/L
As 188.979†	-14.5	3.00	20.68%	[0.00]	mg/L
B 249.677†	19.2	9.73	50.74%	[0.00]	mg/L
Ba 233.527†	46.9	1.42	3.04%	[0.00]	mg/L
Be 313.042†	969.2	14.36	1.48%	[0.00]	mg/L
Ca 317.933†	-375.7	10.78	2.87%	[0.00]	mg/L
Cd 228.802†	252.5	7.75	3.07%	[0.00]	mg/L
Co 228.616†	-124.2	2.30	1.85%	[0.00]	mg/L
Cr 267.716†	-47.5	5.17	10.90%	[0.00]	mg/L
Cu 324.752†	1637.5	18.24	1.11%	[0.00]	mg/L
Fe 273.955†	-26.8	2.04	7.60%	[0.00]	mg/L
K 766.490†	-646.0	18.64	2.89%	[0.00]	mg/L
Mg 279.077†	-200.2	10.21	5.10%	[0.00]	mg/L
Mn 257.610†	101.0	5.86	5.80%	[0.00]	mg/L
Mo 202.031†	44.1	3.19	7.24%	[0.00]	mg/L
Na 589.592†	104.8	30.06	28.69%	[0.00]	mg/L
Na 330.237†	-238.7	12.19	5.11%	[0.00]	mg/L
Ni 231.604†	-24.1	7.74	32.15%	[0.00]	mg/L
Pb 220.353†	-180.9	0.71	0.40%	[0.00]	mg/L
Sb 206.836†	19.1	2.01	10.55%	[0.00]	mg/L
Se 196.026†	-78.0	0.91	1.16%	[0.00]	mg/L
Si 288.158†	96.4	7.53	7.81%	[0.00]	mg/L
Sn 189.927†	-7.3	4.85	66.55%	[0.00]	mg/L
Sr 421.552†	-765.2	20.87	2.73%	[0.00]	mg/L
Ti 334.903†	590.5	31.93	5.41%	[0.00]	mg/L
Tl 190.801†	-18.1	5.62	31.05%	[0.00]	mg/L
V 292.402†	-201.4	5.67	2.81%	[0.00]	mg/L
Zn 206.200†	-4.0	0.89	22.05%	[0.00]	mg/L

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: STD2 **Date Collected: 4/27/2011 8:47:58 AM**
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2249793.2	20064.90	0.89%	100.8	%
ScR 361.383	401342.2	2131.49	0.53%	100.8	%
Ba 233.527†	71889.5	240.18	0.33%	[10]	mg/L
Cd 228.802†	278238.5	1324.09	0.48%	[10]	mg/L
Co 228.616†	315849.4	1057.78	0.33%	[10]	mg/L
Cr 267.716†	79782.9	210.46	0.26%	[10]	mg/L
Cu 324.752†	2317248.7	6265.11	0.27%	[10]	mg/L
Mn 257.610†	471598.0	2259.92	0.48%	[10]	mg/L
V 292.402†	1533834.8	9161.86	0.60%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 4/27/2011 8:49:40 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	206.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2264838.2	2147.54	0.09%	101.5	%
ScR 361.383	397916.4	3979.55	1.00%	99.99	%
Ag 328.068†	185496.3	809.95	0.44%	[1.0]	mg/L
As 188.979†	14205.3	136.99	0.96%	[10]	mg/L
B 249.677†	55522.4	230.10	0.41%	[10]	mg/L
Be 313.042†	4387680.8	32153.78	0.73%	[5.0]	mg/L
Na 589.592†	627716.4	3721.42	0.59%	[50]	mg/L
Ni 231.604†	36430.3	312.63	0.86%	[10]	mg/L
Pb 220.353†	83081.3	629.79	0.76%	[10]	mg/L
Se 196.026†	12277.4	80.93	0.66%	[10]	mg/L
Sr 421.552†	4326253.8	31833.48	0.74%	[5]	mg/L
Tl 190.801†	16558.2	108.47	0.66%	[10]	mg/L
Zn 206.200†	39921.1	232.39	0.58%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 4/27/2011 8:52:10 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Calib Units
ScA 357.253	2303940.3	5513.15	0.24%	103.2	%
ScR 361.383	409801.6	4590.60	1.12%	103.0	%
Mo 202.031†	160281.3	908.20	0.57%	[10]	mg/L
Sb 206.836†	24977.3	197.37	0.79%	[10]	mg/L
Si 288.158†	16573.5	138.75	0.84%	[10]	mg/L
Sn 189.927†	51008.1	201.99	0.40%	[10]	mg/L
Ti 334.903†	311737.7	762.33	0.24%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 4/27/2011 8:54:22 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2126870.8	14072.48	0.66%	95.31	%
ScR 361.383	403875.8	1571.56	0.39%	101.5	%
Al 308.215†	41861.8	54.93	0.13%	[30]	mg/L
Ca 317.933†	348747.7	1328.53	0.38%	[30]	mg/L
Fe 273.955†	127914.9	542.29	0.42%	[100]	mg/L
K 766.490†	183912.0	123.83	0.07%	[100]	mg/L
Mg 279.077†	37702.4	164.80	0.44%	[30]	mg/L
Na 330.237†	2792.0	14.01	0.50%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	185500	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1395	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1421	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	5552	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	7189	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	877500	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	11620	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	27820	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	31580	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	7978	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	231700	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1279	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1839	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1257	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	47160	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	16030	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12550	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	27.92	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3643	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8308	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2498	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1228	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1657	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	5101	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	865300	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	31170	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1656	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	153400	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3992	0.00000	1.000000	

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Analysis Begun

Start Time: 4/27/2011 8:58:47 AM **Plasma On Time: 4/27/2011 7:27:25 AM**
Logged In Analyst: metals **Technique: ICP Continuous**
Spectrometer Model: Optima 7300 DV, S/N 077C8121202 **Autosampler Model: AS-93plus**

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2110427
Results Library: C:\pe\metals\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 7**
Sample ID: CV **Date Collected: 4/27/2011 8:58:48 AM**
Data Type: Original
Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2300825.1	103.1	%	0.64				0.62%
ScR 361.383	404590.4	101.7	%	0.63				0.62%
Ag 328.068†	194950.3	1.051	mg/L	0.0039	1.051	mg/L	0.0039	0.37%
Al 308.215†	2823.2	1.989	mg/L	0.0160	1.989	mg/L	0.0160	0.81%
As 188.979†	2885.8	2.038	mg/L	0.0120	2.038	mg/L	0.0120	0.59%
B 249.677†	5729.3	1.030	mg/L	0.0066	1.030	mg/L	0.0066	0.64%
Ba 233.527†	7221.2	1.004	mg/L	0.0057	1.004	mg/L	0.0057	0.57%
Be 313.042†	897832.0	1.023	mg/L	0.0033	1.023	mg/L	0.0033	0.32%
Ca 317.933†	23771.7	2.045	mg/L	0.0128	2.045	mg/L	0.0128	0.63%
Cd 228.802†	29186.4	1.042	mg/L	0.0046	1.042	mg/L	0.0046	0.44%
Co 228.616†	31254.2	0.9878	mg/L	0.00490	0.9878	mg/L	0.00490	0.50%
Cr 267.716†	8022.0	1.005	mg/L	0.0044	1.005	mg/L	0.0044	0.44%
Cu 324.752†	234659.0	1.013	mg/L	0.0051	1.013	mg/L	0.0051	0.50%
Fe 273.955†	2616.3	2.040	mg/L	0.0124	2.040	mg/L	0.0124	0.61%
K 766.490†	37253.3	20.26	mg/L	0.072	20.26	mg/L	0.072	0.35%
Mg 279.077†	2486.5	1.982	mg/L	0.0170	1.982	mg/L	0.0170	0.86%
Mn 257.610†	47198.5	1.001	mg/L	0.0042	1.001	mg/L	0.0042	0.42%
Mo 202.031†	15986.2	0.9973	mg/L	0.00560	0.9973	mg/L	0.00560	0.56%
Na 589.592†	652506.5	51.97	mg/L	0.196	51.97	mg/L	0.196	0.38%
Na 330.237†	1437.2	51.54	mg/L	0.030	51.54	mg/L	0.030	0.06%
Ni 231.604†	3830.9	1.053	mg/L	0.0021	1.053	mg/L	0.0021	0.20%
Pb 220.353†	16578.6	1.997	mg/L	0.0026	1.997	mg/L	0.0026	0.13%
Sb 206.836†	5063.5	2.034	mg/L	0.0114	2.034	mg/L	0.0114	0.56%
Se 196.026†	2539.4	2.068	mg/L	0.0011	2.068	mg/L	0.0011	0.05%
Si 288.158†	3415.6	2.067	mg/L	0.0098	2.067	mg/L	0.0098	0.47%
Sn 189.927†	5043.0	0.9908	mg/L	0.00476	0.9908	mg/L	0.00476	0.48%
Sr 421.552†	893383.2	1.033	mg/L	0.0030	1.033	mg/L	0.0030	0.29%
Ti 334.903†	30275.8	0.9695	mg/L	0.00552	0.9695	mg/L	0.00552	0.57%
Tl 190.801†	3359.3	2.029	mg/L	0.0114	2.029	mg/L	0.0114	0.56%
V 292.402†	152306.5	0.9981	mg/L	0.00486	0.9981	mg/L	0.00486	0.49%
Zn 206.200†	4056.4	1.016	mg/L	0.0051	1.016	mg/L	0.0051	0.50%

Sequence No.: 2
Sample ID: CB
Dilution: 1X

Autosampler Location: 1
Date Collected: 4/27/2011 9:02:03 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2259979.7	101.3	%	0.21				0.21%
ScR 361.383	410734.4	103.2	%	1.46				1.41%
Ag 328.068†	35.0	0.00019	mg/L	0.000439	0.00019	mg/L	0.000439	232.64%
Al 308.215†	-2.2	-0.00157	mg/L	0.007026	-0.00157	mg/L	0.007026	446.45%
As 188.979†	2.7	0.00192	mg/L	0.001978	0.00192	mg/L	0.001978	102.99%
B 249.677†	22.5	0.00406	mg/L	0.000974	0.00406	mg/L	0.000974	24.01%
Ba 233.527†	5.1	0.00071	mg/L	0.000314	0.00071	mg/L	0.000314	44.34%
Be 313.042†	87.5	0.00010	mg/L	0.000031	0.00010	mg/L	0.000031	31.48%
Ca 317.933†	21.1	0.00181	mg/L	0.001129	0.00181	mg/L	0.001129	62.26%
Cd 228.802†	4.3	0.00015	mg/L	0.000153	0.00015	mg/L	0.000153	103.61%
Co 228.616†	8.2	0.00026	mg/L	0.000111	0.00026	mg/L	0.000111	42.95%
Cr 267.716†	-4.9	-0.00061	mg/L	0.000340	-0.00061	mg/L	0.000340	55.43%
Cu 324.752†	22.1	0.00010	mg/L	0.000158	0.00010	mg/L	0.000158	165.52%
Fe 273.955†	3.7	0.00286	mg/L	0.001679	0.00286	mg/L	0.001679	58.66%
K 766.490†	59.3	0.03225	mg/L	0.027555	0.03225	mg/L	0.027555	85.46%
Mg 279.077†	4.9	0.00391	mg/L	0.002893	0.00391	mg/L	0.002893	73.92%
Mn 257.610†	8.0	0.00017	mg/L	0.000107	0.00017	mg/L	0.000107	63.28%
Mo 202.031†	-4.3	-0.00027	mg/L	0.000290	-0.00027	mg/L	0.000290	107.20%
Na 589.592†	20.1	0.00160	mg/L	0.003830	0.00160	mg/L	0.003830	239.02%
Na 330.237†	20.0	0.7164	mg/L	0.26853	0.7164	mg/L	0.26853	37.48%
Ni 231.604†	5.4	0.00149	mg/L	0.001007	0.00149	mg/L	0.001007	67.42%
Pb 220.353†	3.9	0.00047	mg/L	0.000560	0.00047	mg/L	0.000560	119.59%
Sb 206.836†	-0.7	-0.00027	mg/L	0.002041	-0.00027	mg/L	0.002041	753.02%
Se 196.026†	3.4	0.00273	mg/L	0.005611	0.00273	mg/L	0.005611	205.58%
Si 288.158†	2.1	0.00127	mg/L	0.006851	0.00127	mg/L	0.006851	538.84%
Sn 189.927†	4.1	0.00080	mg/L	0.000569	0.00080	mg/L	0.000569	71.37%
Sr 421.552†	122.0	0.00014	mg/L	0.000044	0.00014	mg/L	0.000044	30.90%
Ti 334.903†	-10.6	-0.00034	mg/L	0.000681	-0.00034	mg/L	0.000681	201.15%
Tl 190.801†	2.6	0.00156	mg/L	0.001481	0.00156	mg/L	0.001481	94.75%
V 292.402†	29.4	0.00019	mg/L	0.000159	0.00019	mg/L	0.000159	84.55%
Zn 206.200†	0.9	0.00023	mg/L	0.000545	0.00023	mg/L	0.000545	241.03%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/27/2011 9:06:15 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2263466.6	101.4	%	1.38				1.36%
ScR 361.383	409273.6	102.8	%	0.76				0.74%
Ag 328.068†	663.4	0.00358	mg/L	0.000164	0.00358	mg/L	0.000164	4.59%
Al 308.215†	77.6	0.05548	mg/L	0.013073	0.05548	mg/L	0.013073	23.56%
As 188.979†	74.5	0.05247	mg/L	0.001023	0.05247	mg/L	0.001023	1.95%
B 249.677†	128.5	0.02315	mg/L	0.001053	0.02315	mg/L	0.001053	4.55%
Ba 233.527†	21.7	0.00301	mg/L	0.000403	0.00301	mg/L	0.000403	13.36%
Be 313.042†	910.9	0.00104	mg/L	0.000016	0.00104	mg/L	0.000016	1.54%
Ca 317.933†	601.5	0.05174	mg/L	0.000356	0.05174	mg/L	0.000356	0.69%
Cd 228.802†	67.4	0.00224	mg/L	0.000106	0.00224	mg/L	0.000106	4.74%
Co 228.616†	100.4	0.00317	mg/L	0.000146	0.00317	mg/L	0.000146	4.62%
Cr 267.716†	37.0	0.00463	mg/L	0.000284	0.00463	mg/L	0.000284	6.13%
Cu 324.752†	470.4	0.00203	mg/L	0.000191	0.00203	mg/L	0.000191	9.38%
Fe 273.955†	72.7	0.05683	mg/L	0.001925	0.05683	mg/L	0.001925	3.39%
K 766.490†	992.5	0.5397	mg/L	0.02469	0.5397	mg/L	0.02469	4.57%
Mg 279.077†	78.7	0.06259	mg/L	0.001432	0.06259	mg/L	0.001432	2.29%
Mn 257.610†	49.1	0.00105	mg/L	0.000057	0.00105	mg/L	0.000057	5.45%
Mo 202.031†	75.5	0.00471	mg/L	0.000296	0.00471	mg/L	0.000296	6.28%
Na 589.592†	6475.2	0.5158	mg/L	0.00400	0.5158	mg/L	0.00400	0.78%
Na 330.237†	19.7	0.7033	mg/L	0.40860	0.7033	mg/L	0.40860	58.09%
Ni 231.604†	40.5	0.01115	mg/L	0.000570	0.01115	mg/L	0.000570	5.11%
Pb 220.353†	186.3	0.02244	mg/L	0.000148	0.02244	mg/L	0.000148	0.66%
Sb 206.836†	130.7	0.05245	mg/L	0.001088	0.05245	mg/L	0.001088	2.07%
Se 196.026†	69.1	0.05628	mg/L	0.002997	0.05628	mg/L	0.002997	5.33%
Si 288.158†	115.6	0.06981	mg/L	0.005346	0.06981	mg/L	0.005346	7.66%
Sn 189.927†	58.2	0.01145	mg/L	0.000421	0.01145	mg/L	0.000421	3.68%
Sr 421.552†	980.7	0.00113	mg/L	0.000029	0.00113	mg/L	0.000029	2.59%
Ti 334.903†	146.2	0.00467	mg/L	0.000269	0.00467	mg/L	0.000269	5.76%
Tl 190.801†	87.0	0.05258	mg/L	0.002251	0.05258	mg/L	0.002251	4.28%
V 292.402†	470.3	0.00309	mg/L	0.000221	0.00309	mg/L	0.000221	7.15%
Zn 206.200†	43.1	0.01080	mg/L	0.000345	0.01080	mg/L	0.000345	3.19%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/27/2011 9:10:27 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2249823.1	100.8	%	0.42				0.41%
ScR 361.383	397258.5	99.82	%	3.318				3.32%
Ag 328.068†	38.8	0.00021	mg/L	0.000038	0.00021	mg/L	0.000038	18.08%
Al 308.215†	281002.2	201.4	mg/L	1.00	201.4	mg/L	1.00	0.50%
As 188.979†	41.9	0.02080	mg/L	0.005504	0.02080	mg/L	0.005504	26.47%
B 249.677†	-35.7	-0.00644	mg/L	0.000765	-0.00644	mg/L	0.000765	11.88%
Ba 233.527†	84.9	-0.00100	mg/L	0.000871	-0.00100	mg/L	0.000871	87.10%
Be 313.042†	74.2	0.00008	mg/L	0.000040	0.00008	mg/L	0.000040	52.65%
Ca 317.933†	1148621.9	98.81	mg/L	0.247	98.81	mg/L	0.247	0.25%
Cd 228.802†	31.0	0.00101	mg/L	0.000136	0.00101	mg/L	0.000136	13.43%
Co 228.616†	43.2	0.00135	mg/L	0.000127	0.00135	mg/L	0.000127	9.44%
Cr 267.716†	-13.8	-0.00111	mg/L	0.000190	-0.00111	mg/L	0.000190	17.10%
Cu 324.752†	-2476.6	-0.00125	mg/L	0.000050	-0.00125	mg/L	0.000050	3.97%
Fe 273.955†	251859.3	196.9	mg/L	1.45	196.9	mg/L	1.45	0.74%
K 766.490†	84.1	0.04573	mg/L	0.003717	0.04573	mg/L	0.003717	8.13%
Mg 279.077†	124567.7	99.03	mg/L	0.404	99.03	mg/L	0.404	0.41%
Mn 257.610†	22.9	0.00039	mg/L	0.000043	0.00039	mg/L	0.000043	11.06%
Mo 202.031†	79.2	0.00311	mg/L	0.000439	0.00311	mg/L	0.000439	14.14%
Na 589.592†	-107.1	-0.00853	mg/L	0.005960	-0.00853	mg/L	0.005960	69.85%
Na 330.237†	35.3	1.269	mg/L	0.3997	1.269	mg/L	0.3997	31.50%
Ni 231.604†	14.2	0.00389	mg/L	0.001047	0.00389	mg/L	0.001047	26.92%
Pb 220.353†	-266.6	-0.00434	mg/L	0.000354	-0.00434	mg/L	0.000354	8.15%
Sb 206.836†	5.2	0.00193	mg/L	0.003384	0.00193	mg/L	0.003384	175.53%
Se 196.026†	60.0	0.02542	mg/L	0.000339	0.02542	mg/L	0.000339	1.34%
Si 288.158†	-30.5	-0.00652	mg/L	0.008197	-0.00652	mg/L	0.008197	125.62%
Sn 189.927†	-108.9	0.00484	mg/L	0.001319	0.00484	mg/L	0.001319	27.26%
Sr 421.552†	3391.4	0.00392	mg/L	0.000064	0.00392	mg/L	0.000064	1.64%
Ti 334.903†	406.6	-0.00411	mg/L	0.001335	-0.00411	mg/L	0.001335	32.50%
Tl 190.801†	-25.3	0.01130	mg/L	0.004108	0.01130	mg/L	0.004108	36.36%
V 292.402†	2685.8	0.00134	mg/L	0.000045	0.00134	mg/L	0.000045	3.32%
Zn 206.200†	15.1	0.00377	mg/L	0.000281	0.00377	mg/L	0.000281	7.45%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/27/2011 9:14:41 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	209.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2306735.4	103.4	%	0.52				0.50%
ScR 361.383	407884.5	102.5	%	2.53				2.47%
Ag 328.068†	191447.0	1.032	mg/L	0.0030	1.032	mg/L	0.0030	0.29%
Al 308.215†	280857.5	201.3	mg/L	0.64	201.3	mg/L	0.64	0.32%
As 188.979†	1470.1	1.026	mg/L	0.0084	1.026	mg/L	0.0084	0.82%
B 249.677†	-27.9	-0.00722	mg/L	0.000177	-0.00722	mg/L	0.000177	2.45%
Ba 233.527†	7330.8	1.006	mg/L	0.0217	1.006	mg/L	0.0217	2.16%
Be 313.042†	901868.4	1.027	mg/L	0.0023	1.027	mg/L	0.0023	0.23%
Ca 317.933†	1157054.3	99.53	mg/L	0.259	99.53	mg/L	0.259	0.26%
Cd 228.802†	27655.1	0.9907	mg/L	0.00153	0.9907	mg/L	0.00153	0.15%
Co 228.616†	29049.3	0.9193	mg/L	0.00212	0.9193	mg/L	0.00212	0.23%
Cr 267.716†	8146.5	1.021	mg/L	0.0215	1.021	mg/L	0.0215	2.10%
Cu 324.752†	231203.7	1.007	mg/L	0.0004	1.007	mg/L	0.0004	0.04%
Fe 273.955†	253056.3	197.8	mg/L	0.34	197.8	mg/L	0.34	0.17%
K 766.490†	1102.0	0.5992	mg/L	0.01587	0.5992	mg/L	0.01587	2.65%
Mg 279.077†	125002.0	99.38	mg/L	0.181	99.38	mg/L	0.181	0.18%
Mn 257.610†	44833.4	0.9509	mg/L	0.00161	0.9509	mg/L	0.00161	0.17%
Mo 202.031†	82.3	0.00329	mg/L	0.000273	0.00329	mg/L	0.000273	8.31%
Na 589.592†	-200.3	-0.01595	mg/L	0.003261	-0.01595	mg/L	0.003261	20.44%
Na 330.237†	52.5	1.621	mg/L	0.1101	1.621	mg/L	0.1101	6.80%
Ni 231.604†	3676.3	1.010	mg/L	0.0221	1.010	mg/L	0.0221	2.19%
Pb 220.353†	7677.4	0.9526	mg/L	0.00648	0.9526	mg/L	0.00648	0.68%
Sb 206.836†	2539.3	1.010	mg/L	0.0100	1.010	mg/L	0.0100	0.99%
Se 196.026†	1309.8	1.043	mg/L	0.0196	1.043	mg/L	0.0196	1.88%
Si 288.158†	-44.8	-0.01145	mg/L	0.002714	-0.01145	mg/L	0.002714	23.70%
Sn 189.927†	-118.0	0.00390	mg/L	0.000692	0.00390	mg/L	0.000692	17.76%
Sr 421.552†	3358.2	0.00388	mg/L	0.000044	0.00388	mg/L	0.000044	1.14%
Ti 334.903†	433.5	-0.00353	mg/L	0.000662	-0.00353	mg/L	0.000662	18.74%
Tl 190.801†	1550.2	0.9587	mg/L	0.01534	0.9587	mg/L	0.01534	1.60%
V 292.402†	149384.2	0.9627	mg/L	0.00285	0.9627	mg/L	0.00285	0.30%
Zn 206.200†	3988.6	0.9991	mg/L	0.01971	0.9991	mg/L	0.01971	1.97%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 4/27/2011 9:19:30 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2285943.4	102.4	%	0.33				0.32%
ScR 361.383	403147.2	101.3	%	1.66				1.63%
Ag 328.068†	185410.3	0.9995	mg/L	0.00138	0.9995	mg/L	0.00138	0.14%
Al 308.215†	2872.1	2.025	mg/L	0.0346	2.025	mg/L	0.0346	1.71%
As 188.979†	2861.1	2.020	mg/L	0.0129	2.020	mg/L	0.0129	0.64%
B 249.677†	5695.5	1.024	mg/L	0.0167	1.024	mg/L	0.0167	1.63%
Ba 233.527†	7217.1	1.003	mg/L	0.0154	1.003	mg/L	0.0154	1.54%
Be 313.042†	895026.7	1.019	mg/L	0.0081	1.019	mg/L	0.0081	0.79%
Ca 317.933†	23858.4	2.052	mg/L	0.0344	2.052	mg/L	0.0344	1.68%
Cd 228.802†	28796.7	1.028	mg/L	0.0024	1.028	mg/L	0.0024	0.24%
Co 228.616†	31016.5	0.9803	mg/L	0.00242	0.9803	mg/L	0.00242	0.25%
Cr 267.716†	8056.2	1.009	mg/L	0.0190	1.009	mg/L	0.0190	1.88%
Cu 324.752†	226854.1	0.9788	mg/L	0.00272	0.9788	mg/L	0.00272	0.28%
Fe 273.955†	2628.9	2.050	mg/L	0.0281	2.050	mg/L	0.0281	1.37%
K 766.490†	37177.4	20.21	mg/L	0.026	20.21	mg/L	0.026	0.13%
Mg 279.077†	2510.6	2.002	mg/L	0.0531	2.002	mg/L	0.0531	2.65%
Mn 257.610†	47142.6	1.000	mg/L	0.0154	1.000	mg/L	0.0154	1.54%
Mo 202.031†	15885.3	0.9910	mg/L	0.00391	0.9910	mg/L	0.00391	0.39%
Na 589.592†	650116.8	51.78	mg/L	0.332	51.78	mg/L	0.332	0.64%
Na 330.237†	1450.8	52.02	mg/L	0.793	52.02	mg/L	0.793	1.52%
Ni 231.604†	3838.2	1.055	mg/L	0.0198	1.055	mg/L	0.0198	1.88%
Pb 220.353†	16852.1	2.030	mg/L	0.0084	2.030	mg/L	0.0084	0.41%
Sb 206.836†	5004.8	2.010	mg/L	0.0084	2.010	mg/L	0.0084	0.42%
Se 196.026†	2502.2	2.038	mg/L	0.0115	2.038	mg/L	0.0115	0.57%
Si 288.158†	3428.7	2.075	mg/L	0.0249	2.075	mg/L	0.0249	1.20%
Sn 189.927†	4995.6	0.9815	mg/L	0.00612	0.9815	mg/L	0.00612	0.62%
Sr 421.552†	892721.0	1.032	mg/L	0.0046	1.032	mg/L	0.0046	0.45%
Ti 334.903†	30259.4	0.9689	mg/L	0.00523	0.9689	mg/L	0.00523	0.54%
Tl 190.801†	3322.9	2.007	mg/L	0.0143	2.007	mg/L	0.0143	0.71%
V 292.402†	147515.0	0.9669	mg/L	0.00433	0.9669	mg/L	0.00433	0.45%
Zn 206.200†	4056.7	1.016	mg/L	0.0181	1.016	mg/L	0.0181	1.78%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 4/27/2011 9:22:31 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2320857.1	104.0	%	0.48				0.46%
ScR 361.383	418306.5	105.1	%	0.12				0.11%
Ag 328.068†	47.6	0.00026	mg/L	0.000178	0.00026	mg/L	0.000178	69.12%
Al 308.215†	25.9	0.01857	mg/L	0.003386	0.01857	mg/L	0.003386	18.23%
As 188.979†	2.4	0.00169	mg/L	0.001249	0.00169	mg/L	0.001249	73.84%
B 249.677†	11.6	0.00209	mg/L	0.000574	0.00209	mg/L	0.000574	27.49%
Ba 233.527†	1.1	0.00015	mg/L	0.000519	0.00015	mg/L	0.000519	348.08%
Be 313.042†	36.0	0.00004	mg/L	0.000004	0.00004	mg/L	0.000004	9.33%
Ca 317.933†	32.7	0.00281	mg/L	0.001328	0.00281	mg/L	0.001328	47.19%
Cd 228.802†	6.5	0.00023	mg/L	0.000077	0.00023	mg/L	0.000077	33.76%
Co 228.616†	11.5	0.00036	mg/L	0.000137	0.00036	mg/L	0.000137	37.69%
Cr 267.716†	-3.1	-0.00039	mg/L	0.000576	-0.00039	mg/L	0.000576	147.89%
Cu 324.752†	12.3	0.00005	mg/L	0.000148	0.00005	mg/L	0.000148	275.54%
Fe 273.955†	6.3	0.00496	mg/L	0.001112	0.00496	mg/L	0.001112	22.43%
K 766.490†	64.0	0.03480	mg/L	0.001784	0.03480	mg/L	0.001784	5.13%
Mg 279.077†	11.3	0.00897	mg/L	0.005375	0.00897	mg/L	0.005375	59.95%
Mn 257.610†	0.0	0.00000	mg/L	0.000036	0.00000	mg/L	0.000036	>999.9%
Mo 202.031†	-5.2	-0.00033	mg/L	0.000106	-0.00033	mg/L	0.000106	32.50%
Na 589.592†	-168.3	-0.01341	mg/L	0.003526	-0.01341	mg/L	0.003526	26.30%
Na 330.237†	23.4	0.8362	mg/L	0.31072	0.8362	mg/L	0.31072	37.16%
Ni 231.604†	0.1	0.00002	mg/L	0.000381	0.00002	mg/L	0.000381	>999.9%
Pb 220.353†	-3.2	-0.00039	mg/L	0.000067	-0.00039	mg/L	0.000067	17.36%
Sb 206.836†	-0.7	-0.00029	mg/L	0.000995	-0.00029	mg/L	0.000995	345.29%
Se 196.026†	3.7	0.00300	mg/L	0.001366	0.00300	mg/L	0.001366	45.62%
Si 288.158†	-0.9	-0.00053	mg/L	0.000485	-0.00053	mg/L	0.000485	90.99%
Sn 189.927†	1.7	0.00033	mg/L	0.000617	0.00033	mg/L	0.000617	188.64%
Sr 421.552†	79.5	0.00009	mg/L	0.000024	0.00009	mg/L	0.000024	26.07%
Ti 334.903†	-12.9	-0.00041	mg/L	0.000741	-0.00041	mg/L	0.000741	178.95%
Tl 190.801†	4.5	0.00274	mg/L	0.001534	0.00274	mg/L	0.001534	56.06%
V 292.402†	12.4	0.00008	mg/L	0.000237	0.00008	mg/L	0.000237	300.55%
Zn 206.200†	3.8	0.00094	mg/L	0.000223	0.00094	mg/L	0.000223	23.63%

Sequence No.: 8
Sample ID: ST70 MB SWC

Autosampler Location: 304
Date Collected: 4/27/2011 9:26:43 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: ST70 MB SWC

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: ST70 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2404882.0	107.8	%	1.13				1.05%
ScR 361.383	430458.7	108.2	%	1.79				1.65%
Ag 328.068†	105.5	0.00057	mg/L	0.000190	0.00114	mg/L	0.000380	33.36%
Al 308.215†	10.2	0.00733	mg/L	0.004054	0.01465	mg/L	0.008108	55.34%
As 188.979†	0.8	0.00053	mg/L	0.000542	0.00106	mg/L	0.001083	102.41%
B 249.677†	6.2	0.00112	mg/L	0.001101	0.00223	mg/L	0.002202	98.73%
Ba 233.527†	-2.7	-0.00038	mg/L	0.000013	-0.00076	mg/L	0.000026	3.42%
Be 313.042†	-13.4	-0.00002	mg/L	0.000028	-0.00003	mg/L	0.000056	181.43%
Ca 317.933†	150.5	0.01294	mg/L	0.000736	0.02589	mg/L	0.001471	5.68%
Cd 228.802†	0.7	0.00003	mg/L	0.000093	0.00005	mg/L	0.000186	363.39%
Co 228.616†	13.5	0.00043	mg/L	0.000131	0.00086	mg/L	0.000262	30.46%
Cr 267.716†	-6.9	-0.00087	mg/L	0.000526	-0.00173	mg/L	0.001053	60.68%
Cu 324.752†	-1.1	0.00000	mg/L	0.000150	-0.00001	mg/L	0.000301	>999.9%
Fe 273.955†	7.8	0.00607	mg/L	0.000962	0.01215	mg/L	0.001925	15.84%
K 766.490†	104.1	0.05658	mg/L	0.004539	0.1132	mg/L	0.00908	8.02%
Mg 279.077†	14.4	0.01143	mg/L	0.007031	0.02286	mg/L	0.014062	61.51%
Mn 257.610†	-3.9	-0.00008	mg/L	0.000070	-0.00017	mg/L	0.000140	84.83%
Mo 202.031†	-8.7	-0.00055	mg/L	0.000028	-0.00109	mg/L	0.000056	5.12%
Na 589.592†	-63.8	-0.00508	mg/L	0.002944	-0.01016	mg/L	0.005887	57.95%
Na 330.237†	25.9	0.9282	mg/L	0.67415	1.856	mg/L	1.3483	72.63%
Ni 231.604†	4.4	0.00119	mg/L	0.000880	0.00239	mg/L	0.001760	73.69%
Pb 220.353†	8.0	0.00097	mg/L	0.001180	0.00193	mg/L	0.002360	122.08%
Sb 206.836†	-0.6	-0.00022	mg/L	0.000526	-0.00044	mg/L	0.001052	236.69%
Se 196.026†	9.1	0.00739	mg/L	0.004895	0.01477	mg/L	0.009789	66.27%
Si 288.158†	8.0	0.00482	mg/L	0.002874	0.00963	mg/L	0.005747	59.67%
Sn 189.927†	5.8	0.00114	mg/L	0.000776	0.00228	mg/L	0.001552	68.22%
Sr 421.552†	89.0	0.00010	mg/L	0.000042	0.00021	mg/L	0.000084	41.08%
Ti 334.903†	-47.0	-0.00151	mg/L	0.001122	-0.00302	mg/L	0.002244	74.34%
Tl 190.801†	2.5	0.00150	mg/L	0.001534	0.00299	mg/L	0.003068	102.55%
V 292.402†	32.2	0.00021	mg/L	0.000088	0.00041	mg/L	0.000176	42.64%
Zn 206.200†	6.7	0.00167	mg/L	0.000505	0.00334	mg/L	0.001011	30.23%

Sequence No.: 9
Sample ID: ST42 MB2 LEN

Autosampler Location: 305
Date Collected: 4/27/2011 9:30:56 AM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: ST42 MB2 LEN

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: ST42 MB2 LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2285525.6	102.4	%	0.62				0.60%
ScR 361.383	419818.9	105.5	%	0.52				0.49%
Ag 328.068†	41.4	0.00022	mg/L	0.000080	0.00112	mg/L	0.000402	36.05%
Al 308.215†	13.8	0.00987	mg/L	0.013606	0.04934	mg/L	0.068030	137.89%
As 188.979†	-0.6	-0.00042	mg/L	0.001772	-0.00209	mg/L	0.008858	423.17%
B 249.677†	56.7	0.01021	mg/L	0.000158	0.05107	mg/L	0.000790	1.55%
Ba 233.527†	7.6	0.00105	mg/L	0.000703	0.00526	mg/L	0.003514	66.81%
Be 313.042†	-13.5	-0.00002	mg/L	0.000010	-0.00008	mg/L	0.000048	62.47%
Ca 317.933†	1913.3	0.1646	mg/L	0.00078	0.8229	mg/L	0.00389	0.47%
Cd 228.802†	9.6	0.00035	mg/L	0.000248	0.00174	mg/L	0.001240	71.20%
Co 228.616†	7.4	0.00024	mg/L	0.000251	0.00118	mg/L	0.001254	106.38%
Cr 267.716†	-3.8	-0.00048	mg/L	0.000466	-0.00240	mg/L	0.002330	97.24%
Cu 324.752†	103.5	0.00045	mg/L	0.000057	0.00224	mg/L	0.000286	12.81%
Fe 273.955†	3.4	0.00264	mg/L	0.000829	0.01318	mg/L	0.004146	31.47%
K 766.490†	138.9	0.07551	mg/L	0.021616	0.3776	mg/L	0.10808	28.63%
Mg 279.077†	31.1	0.02472	mg/L	0.002572	0.1236	mg/L	0.01286	10.40%
Mn 257.610†	1.3	0.00003	mg/L	0.000032	0.00014	mg/L	0.000158	111.74%
Mo 202.031†	-3.4	-0.00022	mg/L	0.000197	-0.00109	mg/L	0.000987	90.58%
Na 589.592†	3673763.1	292.6	mg/L	1.47	1463	mg/L	7.3	0.50%
Na 330.237†	8277.2	296.5	mg/L	0.95	1482	mg/L	4.7	0.32%
Ni 231.604†	14.1	0.00387	mg/L	0.000936	0.01933	mg/L	0.004680	24.21%
Pb 220.353†	-3.6	-0.00044	mg/L	0.000842	-0.00218	mg/L	0.004211	193.27%
Sb 206.836†	-3.3	-0.00133	mg/L	0.001458	-0.00665	mg/L	0.007291	109.70%
Se 196.026†	2.0	0.00158	mg/L	0.001206	0.00792	mg/L	0.006029	76.12%
Si 288.158†	28.3	0.01710	mg/L	0.002705	0.08550	mg/L	0.013525	15.82%
Sn 189.927†	1.5	0.00033	mg/L	0.000832	0.00165	mg/L	0.004159	251.52%
Sr 421.552†	148.7	0.00017	mg/L	0.000006	0.00086	mg/L	0.000029	3.33%
Ti 334.903†	-24.1	-0.00080	mg/L	0.000332	-0.00401	mg/L	0.001661	41.45%
Tl 190.801†	7.0	0.00422	mg/L	0.000866	0.02111	mg/L	0.004331	20.52%
V 292.402†	-9.8	-0.00007	mg/L	0.000159	-0.00033	mg/L	0.000795	239.83%
Zn 206.200†	9.2	0.00230	mg/L	0.000235	0.01151	mg/L	0.001177	10.23%

Sequence No.: 10
Sample ID: ST42 Bt LEN

Autosampler Location: 306
Date Collected: 4/27/2011 9:35:26 AM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: ST42 Bt LEN

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: ST42 Bt LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2299748.7	103.1	%	0.09				0.09%
ScR 361.383	417632.4	104.9	%	1.01				0.96%
Ag 328.068†	31.6	0.00017	mg/L	0.000279	0.00085	mg/L	0.001395	164.81%
Al 308.215†	74.6	0.05341	mg/L	0.014869	0.2670	mg/L	0.07435	27.84%
As 188.979†	5.0	0.00326	mg/L	0.002782	0.01629	mg/L	0.013912	85.43%
B 249.677†	82.7	0.01489	mg/L	0.001522	0.07445	mg/L	0.007608	10.22%
Ba 233.527†	101.4	0.01410	mg/L	0.000250	0.07051	mg/L	0.001248	1.77%
Be 313.042†	-4.4	-0.00001	mg/L	0.000020	-0.00003	mg/L	0.000102	391.99%
Ca 317.933†	33969.5	2.922	mg/L	0.0211	14.61	mg/L	0.105	0.72%
Cd 228.802†	55.5	0.00199	mg/L	0.000101	0.00993	mg/L	0.000506	5.10%
Co 228.616†	19.3	0.00061	mg/L	0.000064	0.00303	mg/L	0.000320	10.57%
Cr 267.716†	-1.4	-0.00028	mg/L	0.000290	-0.00142	mg/L	0.001450	102.26%
Cu 324.752†	442.3	0.00191	mg/L	0.000073	0.00953	mg/L	0.000365	3.83%
Fe 273.955†	34.6	0.02708	mg/L	0.003115	0.1354	mg/L	0.01557	11.50%
K 766.490†	1674.4	0.9104	mg/L	0.03881	4.552	mg/L	0.1940	4.26%
Mg 279.077†	1305.1	1.038	mg/L	0.0104	5.192	mg/L	0.0520	1.00%
Mn 257.610†	348.0	0.00737	mg/L	0.000137	0.03687	mg/L	0.000685	1.86%
Mo 202.031†	2.8	0.00012	mg/L	0.000256	0.00059	mg/L	0.001278	215.33%
Na 589.592†	3632141.7	289.3	mg/L	0.84	1447	mg/L	4.2	0.29%
Na 330.237†	8154.1	292.0	mg/L	3.35	1460	mg/L	16.7	1.15%
Ni 231.604†	13.1	0.00360	mg/L	0.000691	0.01802	mg/L	0.003453	19.16%
Pb 220.353†	28.5	0.00344	mg/L	0.000846	0.01718	mg/L	0.004232	24.63%
Sb 206.836†	-3.1	-0.00125	mg/L	0.002864	-0.00626	mg/L	0.014320	228.67%
Se 196.026†	9.8	0.00744	mg/L	0.001139	0.03721	mg/L	0.005693	15.30%
Si 288.158†	650.3	0.3925	mg/L	0.00319	1.962	mg/L	0.0160	0.81%
Sn 189.927†	-6.3	-0.00046	mg/L	0.000185	-0.00229	mg/L	0.000925	40.41%
Sr 421.552†	18495.0	0.02138	mg/L	0.000019	0.1069	mg/L	0.00009	0.09%
Ti 334.903†	20.3	0.00015	mg/L	0.000193	0.00073	mg/L	0.000965	132.67%
Tl 190.801†	6.4	0.00385	mg/L	0.002281	0.01926	mg/L	0.011406	59.21%
V 292.402†	43.9	0.00028	mg/L	0.000348	0.00142	mg/L	0.001740	122.58%
Zn 206.200†	50.4	0.01262	mg/L	0.000899	0.06310	mg/L	0.004493	7.12%

Sequence No.: 11
Sample ID: ST42 Ct LEN

Autosampler Location: 307
Date Collected: 4/27/2011 9:39:56 AM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: ST42 Ct LEN

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: ST42 Ct LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2310636.6	103.5	%	0.57				0.55%
ScR 361.383	417495.8	104.9	%	1.47				1.40%
Ag 328.068†	53.8	0.00025	mg/L	0.000246	0.00124	mg/L	0.001231	98.94%
Al 308.215†	174.3	0.1245	mg/L	0.00548	0.6224	mg/L	0.02741	4.40%
As 188.979†	6.4	0.00408	mg/L	0.002882	0.02038	mg/L	0.014410	70.70%
B 249.677†	92.9	0.01673	mg/L	0.001552	0.08366	mg/L	0.007761	9.28%
Ba 233.527†	140.8	0.01953	mg/L	0.000478	0.09766	mg/L	0.002391	2.45%
Be 313.042†	137.2	0.00016	mg/L	0.000045	0.00078	mg/L	0.000223	28.53%
Ca 317.933†	57125.2	4.914	mg/L	0.0449	24.57	mg/L	0.225	0.91%
Cd 228.802†	234.0	0.00840	mg/L	0.000200	0.04198	mg/L	0.001001	2.38%
Co 228.616†	111.9	0.00354	mg/L	0.000137	0.01769	mg/L	0.000684	3.87%
Cr 267.716†	1.3	0.00001	mg/L	0.000899	0.00007	mg/L	0.004497	>999.9%
Cu 324.752†	373.7	0.00165	mg/L	0.000132	0.00823	mg/L	0.000658	8.00%
Fe 273.955†	1011.1	0.7904	mg/L	0.00699	3.952	mg/L	0.0350	0.88%
K 766.490†	2191.6	1.192	mg/L	0.0095	5.958	mg/L	0.0477	0.80%
Mg 279.077†	2049.4	1.630	mg/L	0.0100	8.152	mg/L	0.0500	0.61%
Mn 257.610†	11015.9	0.2336	mg/L	0.00159	1.168	mg/L	0.0080	0.68%
Mo 202.031†	4.4	0.00018	mg/L	0.000136	0.00091	mg/L	0.000680	74.52%
Na 589.592†	3571414.9	284.5	mg/L	0.89	1422	mg/L	4.4	0.31%
Na 330.237†	7850.5	281.2	mg/L	0.87	1406	mg/L	4.4	0.31%
Ni 231.604†	27.1	0.00743	mg/L	0.001093	0.03715	mg/L	0.005467	14.71%
Pb 220.353†	-0.4	-0.00007	mg/L	0.000983	-0.00035	mg/L	0.004917	>999.9%
Sb 206.836†	-1.6	-0.00065	mg/L	0.000863	-0.00324	mg/L	0.004313	133.08%
Se 196.026†	12.5	0.00929	mg/L	0.003312	0.04644	mg/L	0.016559	35.65%
Si 288.158†	1069.8	0.6457	mg/L	0.01113	3.228	mg/L	0.0556	1.72%
Sn 189.927†	-9.7	-0.00060	mg/L	0.000352	-0.00298	mg/L	0.001762	59.10%
Sr 421.552†	28554.3	0.03300	mg/L	0.000218	0.1650	mg/L	0.00109	0.66%
Ti 334.903†	21.7	-0.00016	mg/L	0.000582	-0.00078	mg/L	0.002910	373.17%
Tl 190.801†	4.9	0.00304	mg/L	0.001802	0.01522	mg/L	0.009012	59.23%
V 292.402†	3.8	0.00000	mg/L	0.000270	-0.00001	mg/L	0.001348	>999.9%
Zn 206.200†	42.0	0.01051	mg/L	0.001203	0.05254	mg/L	0.006016	11.45%

Sequence No.: 12 **Autosampler Location: 308**
Sample ID: ST42 Dt LEN **Date Collected: 4/27/2011 9:44:11 AM**
Data Type: Original

Dilution: 5X

Nebulizer Parameters: ST42 Dt LEN

Analyte	Back Pressure	Flow
All	209.0 kPa	0.75 L/min

Mean Data: ST42 Dt LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2322703.6	104.1	%	1.33				1.28%
ScR 361.383	429556.6	107.9	%	0.41				0.38%
Ag 328.068†	85.2	0.00045	mg/L	0.000101	0.00227	mg/L	0.000507	22.37%
Al 308.215†	91.6	0.06555	mg/L	0.009106	0.3278	mg/L	0.04553	13.89%
As 188.979†	3.2	0.00212	mg/L	0.000844	0.01062	mg/L	0.004221	39.75%
B 249.677†	69.9	0.01259	mg/L	0.000412	0.06293	mg/L	0.002058	3.27%
Ba 233.527†	98.8	0.01369	mg/L	0.000456	0.06845	mg/L	0.002281	3.33%
Be 313.042†	55.7	0.00006	mg/L	0.000007	0.00031	mg/L	0.000035	11.11%
Ca 317.933†	16018.4	1.378	mg/L	0.0120	6.890	mg/L	0.0601	0.87%
Cd 228.802†	2.9	0.00010	mg/L	0.000143	0.00049	mg/L	0.000716	145.86%
Co 228.616†	13.1	0.00041	mg/L	0.000097	0.00206	mg/L	0.000486	23.63%
Cr 267.716†	0.2	-0.00003	mg/L	0.000868	-0.00014	mg/L	0.004339	>999.9%
Cu 324.752†	783.9	0.00341	mg/L	0.000300	0.01707	mg/L	0.001500	8.79%
Fe 273.955†	908.6	0.7103	mg/L	0.00298	3.551	mg/L	0.0149	0.42%
K 766.490†	905.7	0.4924	mg/L	0.01893	2.462	mg/L	0.0946	3.84%
Mg 279.077†	1127.4	0.8968	mg/L	0.01336	4.484	mg/L	0.0668	1.49%
Mn 257.610†	1511.7	0.03206	mg/L	0.000130	0.1603	mg/L	0.00065	0.40%
Mo 202.031†	0.4	0.00000	mg/L	0.000228	-0.00001	mg/L	0.001140	>999.9%
Na 589.592†	3585960.0	285.6	mg/L	1.27	1428	mg/L	6.3	0.44%
Na 330.237†	8177.2	292.9	mg/L	1.91	1464	mg/L	9.5	0.65%
Ni 231.604†	10.4	0.00285	mg/L	0.000826	0.01427	mg/L	0.004131	28.95%
Pb 220.353†	3.0	0.00033	mg/L	0.000789	0.00163	mg/L	0.003944	241.35%
Sb 206.836†	-3.7	-0.00149	mg/L	0.002018	-0.00747	mg/L	0.010091	135.04%
Se 196.026†	6.8	0.00527	mg/L	0.001387	0.02636	mg/L	0.006936	26.31%
Si 288.158†	397.0	0.2396	mg/L	0.00352	1.198	mg/L	0.0176	1.47%
Sn 189.927†	-0.6	0.00024	mg/L	0.000277	0.00120	mg/L	0.001386	115.17%
Sr 421.552†	11542.3	0.01334	mg/L	0.000092	0.06670	mg/L	0.000461	0.69%
Ti 334.903†	-13.1	-0.00066	mg/L	0.000616	-0.00330	mg/L	0.003080	93.28%
Tl 190.801†	0.4	0.00032	mg/L	0.001211	0.00161	mg/L	0.006056	375.37%
V 292.402†	142.8	0.00088	mg/L	0.000161	0.00439	mg/L	0.000805	18.33%
Zn 206.200†	12.0	0.00302	mg/L	0.000326	0.01509	mg/L	0.001631	10.81%

Sequence No.: 13
Sample ID: ST42 AtDUP LEN

Autosampler Location: 309
Date Collected: 4/27/2011 9:48:41 AM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: ST42 AtDUP LEN

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: ST42 AtDUP LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2316054.7	103.8	%	1.06				1.02%
ScR 361.383	421368.5	105.9	%	0.54				0.51%
Ag 328.068†	37.7	0.00020	mg/L	0.000092	0.00101	mg/L	0.000459	45.47%
Al 308.215†	70.3	0.05034	mg/L	0.000818	0.2517	mg/L	0.00409	1.63%
As 188.979†	3.2	0.00193	mg/L	0.000983	0.00965	mg/L	0.004914	50.92%
B 249.677†	28.6	0.00515	mg/L	0.000783	0.02574	mg/L	0.003913	15.20%
Ba 233.527†	84.9	0.01181	mg/L	0.000625	0.05903	mg/L	0.003127	5.30%
Be 313.042†	34.1	0.00004	mg/L	0.000012	0.00019	mg/L	0.000060	30.73%
Ca 317.933†	37822.9	3.254	mg/L	0.0136	16.27	mg/L	0.068	0.42%
Cd 228.802†	7.7	0.00027	mg/L	0.000097	0.00135	mg/L	0.000487	36.00%
Co 228.616†	6.8	0.00021	mg/L	0.000186	0.00106	mg/L	0.000929	87.72%
Cr 267.716†	-0.6	-0.00020	mg/L	0.000317	-0.00098	mg/L	0.001587	162.49%
Cu 324.752†	540.2	0.00233	mg/L	0.000044	0.01164	mg/L	0.000219	1.89%
Fe 273.955†	16.6	0.01295	mg/L	0.001085	0.06474	mg/L	0.005426	8.38%
K 766.490†	1312.5	0.7137	mg/L	0.00928	3.568	mg/L	0.0464	1.30%
Mg 279.077†	1375.6	1.095	mg/L	0.0060	5.473	mg/L	0.0302	0.55%
Mn 257.610†	273.7	0.00580	mg/L	0.000083	0.02898	mg/L	0.000416	1.44%
Mo 202.031†	0.1	-0.00005	mg/L	0.000149	-0.00026	mg/L	0.000745	286.68%
Na 589.592†	3570097.6	284.4	mg/L	3.56	1422	mg/L	17.8	1.25%
Na 330.237†	7875.1	282.1	mg/L	1.46	1410	mg/L	7.3	0.52%
Ni 231.604†	11.4	0.00312	mg/L	0.000559	0.01560	mg/L	0.002794	17.91%
Pb 220.353†	5.1	0.00062	mg/L	0.000865	0.00308	mg/L	0.004326	140.67%
Sb 206.836†	-2.6	-0.00103	mg/L	0.002887	-0.00515	mg/L	0.014433	280.18%
Se 196.026†	8.4	0.00623	mg/L	0.002620	0.03114	mg/L	0.013099	42.06%
Si 288.158†	441.6	0.2666	mg/L	0.00289	1.333	mg/L	0.0145	1.09%
Sn 189.927†	-4.4	0.00000	mg/L	0.000874	-0.00001	mg/L	0.004372	>999.9%
Sr 421.552†	22204.4	0.02566	mg/L	0.000187	0.1283	mg/L	0.00093	0.73%
Ti 334.903†	9.0	-0.00027	mg/L	0.000211	-0.00137	mg/L	0.001054	76.66%
Tl 190.801†	5.3	0.00318	mg/L	0.000547	0.01590	mg/L	0.002736	17.20%
V 292.402†	24.8	0.00016	mg/L	0.000081	0.00081	mg/L	0.000407	50.43%
Zn 206.200†	14.0	0.00350	mg/L	0.000329	0.01749	mg/L	0.001644	9.40%

Sequence No.: 14
Sample ID: ST42 At LEN

Autosampler Location: 310
Date Collected: 4/27/2011 9:52:55 AM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: ST42 At LEN

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: ST42 At LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2256682.5	101.1	%	1.06				1.04%
ScR 361.383	419421.5	105.4	%	1.10				1.05%
Ag 328.068†	32.5	0.00017	mg/L	0.000067	0.00087	mg/L	0.000334	38.27%
Al 308.215†	60.3	0.04321	mg/L	0.019059	0.2160	mg/L	0.09530	44.11%
As 188.979†	3.3	0.00200	mg/L	0.002772	0.01001	mg/L	0.013859	138.45%
B 249.677†	26.7	0.00481	mg/L	0.000435	0.02405	mg/L	0.002175	9.04%
Ba 233.527†	84.2	0.01171	mg/L	0.000458	0.05857	mg/L	0.002291	3.91%
Be 313.042†	-8.7	-0.00001	mg/L	0.000016	-0.00005	mg/L	0.000079	157.57%
Ca 317.933†	39159.8	3.369	mg/L	0.0267	16.84	mg/L	0.133	0.79%
Cd 228.802†	9.7	0.00034	mg/L	0.000109	0.00171	mg/L	0.000544	31.76%
Co 228.616†	8.2	0.00026	mg/L	0.000192	0.00128	mg/L	0.000961	75.22%
Cr 267.716†	-2.3	-0.00041	mg/L	0.000562	-0.00203	mg/L	0.002809	138.17%
Cu 324.752†	561.7	0.00242	mg/L	0.000022	0.01210	mg/L	0.000110	0.91%
Fe 273.955†	17.0	0.01331	mg/L	0.002112	0.06654	mg/L	0.010560	15.87%
K 766.490†	1081.7	0.5882	mg/L	0.01112	2.941	mg/L	0.0556	1.89%
Mg 279.077†	1320.1	1.050	mg/L	0.0163	5.252	mg/L	0.0815	1.55%
Mn 257.610†	280.2	0.00594	mg/L	0.000067	0.02968	mg/L	0.000337	1.14%
Mo 202.031†	0.7	-0.00002	mg/L	0.000081	-0.00009	mg/L	0.000403	434.47%
Na 589.592†	3590558.9	286.0	mg/L	4.52	1430	mg/L	22.6	1.58%
Na 330.237†	8061.4	288.7	mg/L	1.86	1444	mg/L	9.3	0.65%
Ni 231.604†	14.7	0.00404	mg/L	0.000698	0.02021	mg/L	0.003489	17.26%
Pb 220.353†	-6.9	-0.00082	mg/L	0.000629	-0.00411	mg/L	0.003145	76.50%
Sb 206.836†	-4.8	-0.00192	mg/L	0.001467	-0.00959	mg/L	0.007334	76.47%
Se 196.026†	7.0	0.00512	mg/L	0.002032	0.02560	mg/L	0.010158	39.68%
Si 288.158†	449.3	0.2712	mg/L	0.00327	1.356	mg/L	0.0163	1.20%
Sn 189.927†	-3.8	0.00015	mg/L	0.001004	0.00077	mg/L	0.005019	650.36%
Sr 421.552†	22302.0	0.02578	mg/L	0.000061	0.1289	mg/L	0.00030	0.24%
Ti 334.903†	-4.1	-0.00072	mg/L	0.000597	-0.00358	mg/L	0.002985	83.48%
Tl 190.801†	2.7	0.00164	mg/L	0.002486	0.00821	mg/L	0.012428	151.41%
V 292.402†	22.4	0.00014	mg/L	0.000087	0.00072	mg/L	0.000436	60.15%
Zn 206.200†	17.4	0.00435	mg/L	0.000054	0.02173	mg/L	0.000269	1.24%

Sequence No.: 15
Sample ID: ST42 AtSPK LEN

Autosampler Location: 311
Date Collected: 4/27/2011 9:57:24 AM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: ST42 AtSPK LEN

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: ST42 AtSPK LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2270168.7	101.7	%	0.35				0.34%
ScR 361.383	414049.3	104.0	%	0.98				0.94%
Ag 328.068†	39770.2	0.2144	mg/L	0.00152	1.072	mg/L	0.0076	0.71%
Al 308.215†	1242.6	0.8865	mg/L	0.00483	4.433	mg/L	0.0241	0.54%
As 188.979†	1215.8	0.8552	mg/L	0.00429	4.276	mg/L	0.0214	0.50%
B 249.677†	32.9	0.00545	mg/L	0.000391	0.02723	mg/L	0.001956	7.18%
Ba 233.527†	5993.3	0.8335	mg/L	0.00683	4.168	mg/L	0.0342	0.82%
Be 313.042†	177159.2	0.2018	mg/L	0.00074	1.009	mg/L	0.0037	0.37%
Ca 317.933†	85309.7	7.339	mg/L	0.0085	36.69	mg/L	0.043	0.12%
Cd 228.802†	6030.1	0.2137	mg/L	0.00157	1.069	mg/L	0.0079	0.73%
Co 228.616†	6390.0	0.2021	mg/L	0.00132	1.010	mg/L	0.0066	0.65%
Cr 267.716†	1648.8	0.2062	mg/L	0.00167	1.031	mg/L	0.0084	0.81%
Cu 324.752†	47816.2	0.2064	mg/L	0.00257	1.032	mg/L	0.0129	1.25%
Fe 273.955†	1070.2	0.8356	mg/L	0.00572	4.178	mg/L	0.0286	0.68%
K 766.490†	8821.1	4.796	mg/L	0.0093	23.98	mg/L	0.046	0.19%
Mg 279.077†	6652.9	5.294	mg/L	0.0424	26.47	mg/L	0.212	0.80%
Mn 257.610†	9673.1	0.2053	mg/L	0.00155	1.027	mg/L	0.0078	0.76%
Mo 202.031†	11.6	0.00059	mg/L	0.000455	0.00294	mg/L	0.002276	77.47%
Na 589.592†	3696895.4	294.5	mg/L	0.58	1472	mg/L	2.9	0.20%
Na 330.237†	8115.5	290.6	mg/L	1.04	1453	mg/L	5.2	0.36%
Ni 231.604†	768.1	0.2109	mg/L	0.00249	1.054	mg/L	0.0124	1.18%
Pb 220.353†	6846.7	0.8244	mg/L	0.00488	4.122	mg/L	0.0244	0.59%
Sb 206.836†	1.8	-0.00065	mg/L	0.000790	-0.00323	mg/L	0.003951	122.51%
Se 196.026†	1089.5	0.8858	mg/L	0.00320	4.429	mg/L	0.0160	0.36%
Si 288.158†	450.5	0.2733	mg/L	0.00174	1.366	mg/L	0.0087	0.64%
Sn 189.927†	-14.4	-0.00088	mg/L	0.000357	-0.00439	mg/L	0.001784	40.65%
Sr 421.552†	200583.7	0.2318	mg/L	0.00045	1.159	mg/L	0.0023	0.20%
Ti 334.903†	40.1	-0.00002	mg/L	0.000391	-0.00009	mg/L	0.001957	>999.9%
Tl 190.801†	1332.4	0.8039	mg/L	0.00838	4.020	mg/L	0.0419	1.04%
V 292.402†	30873.4	0.2022	mg/L	0.00148	1.011	mg/L	0.0074	0.73%
Zn 206.200†	847.6	0.2124	mg/L	0.00035	1.062	mg/L	0.0017	0.16%

Sequence No.: 16
Sample ID: ST70 B SWC

Autosampler Location: 312
Date Collected: 4/27/2011 10:01:38 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: ST70 B SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: ST70 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2362474.3	105.9	%	0.39				0.37%
ScR 361.383	415811.7	104.5	%	2.27				2.17%
Ag 328.068†	2811.9	0.01501	mg/L	0.000277	0.03002	mg/L	0.000555	1.85%
Al 308.215†	121261.6	86.88	mg/L	0.168	173.8	mg/L	0.34	0.19%
As 188.979†	37.9	0.06887	mg/L	0.001723	0.1377	mg/L	0.00345	2.50%
B 249.677†	48.3	0.00856	mg/L	0.000221	0.01712	mg/L	0.000443	2.59%
Ba 233.527†	9046.8	1.250	mg/L	0.0298	2.500	mg/L	0.0595	2.38%
Be 313.042†	1290.4	0.00126	mg/L	0.000065	0.00252	mg/L	0.000131	5.19%
Ca 317.933†	1115529.0	95.96	mg/L	0.164	191.9	mg/L	0.33	0.17%
Cd 228.802†	1560.0	0.05604	mg/L	0.000245	0.1121	mg/L	0.00049	0.44%
Co 228.616†	2018.5	0.05335	mg/L	0.000315	0.1067	mg/L	0.00063	0.59%
Cr 267.716†	7550.8	0.9489	mg/L	0.02147	1.898	mg/L	0.0429	2.26%
Cu 324.752†	45133.2	0.1990	mg/L	0.00056	0.3980	mg/L	0.00112	0.28%
Fe 273.955†	158324.7	123.8	mg/L	0.24	247.5	mg/L	0.47	0.19%
K 766.490†	11235.8	6.109	mg/L	0.0285	12.22	mg/L	0.057	0.47%
Mg 279.077†	29555.6	23.46	mg/L	0.057	46.92	mg/L	0.115	0.24%
Mn 257.610†	62344.6	1.322	mg/L	0.0052	2.645	mg/L	0.0104	0.39%
Mo 202.031†	141.7	0.00706	mg/L	0.000180	0.01412	mg/L	0.000360	2.55%
Na 589.592†	66685.2	5.312	mg/L	0.0245	10.62	mg/L	0.049	0.46%
Na 330.237†	162.6	7.345	mg/L	0.1940	14.69	mg/L	0.388	2.64%
Ni 231.604†	454.2	0.1247	mg/L	0.00472	0.2494	mg/L	0.00943	3.78%
Pb 220.353†	2513.2	0.3138	mg/L	0.00086	0.6276	mg/L	0.00171	0.27%
Sb 206.836†	20.2	0.00947	mg/L	0.003470	0.01895	mg/L	0.006939	36.62%
Se 196.026†	46.2	0.02107	mg/L	0.003398	0.04214	mg/L	0.006797	16.13%
Si 288.158†	3815.8	2.305	mg/L	0.0571	4.611	mg/L	0.1142	2.48%
Sn 189.927†	-66.7	0.01458	mg/L	0.000864	0.02917	mg/L	0.001728	5.93%
Sr 421.552†	430880.5	0.4980	mg/L	0.00164	0.9960	mg/L	0.00329	0.33%
Ti 334.903†	197555.8	6.320	mg/L	0.0235	12.64	mg/L	0.047	0.37%
Tl 190.801†	-5.5	0.01227	mg/L	0.006693	0.02455	mg/L	0.013387	54.54%
V 292.402†	60024.8	0.3819	mg/L	0.00031	0.7639	mg/L	0.00062	0.08%
Zn 206.200†	9396.8	2.354	mg/L	0.0546	4.708	mg/L	0.1091	2.32%

Sequence No.: 17 **Autosampler Location: 313**
Sample ID: ST70 MBSPK SWC **Date Collected: 4/27/2011 10:05:37 AM**
Data Type: Original

Dilution: 2X

Nebulizer Parameters: ST70 MBSPK SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: ST70 MBSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2382528.8	106.8	%	0.95				0.89%
ScR 361.383	430068.2	108.1	%	0.39				0.36%
Ag 328.068†	99484.7	0.5363	mg/L	0.00590	1.073	mg/L	0.0118	1.10%
Al 308.215†	2896.5	2.066	mg/L	0.0157	4.131	mg/L	0.0313	0.76%
As 188.979†	2940.2	2.069	mg/L	0.0242	4.138	mg/L	0.0484	1.17%
B 249.677†	5.0	-0.00029	mg/L	0.000957	-0.00058	mg/L	0.001914	329.97%
Ba 233.527†	14598.5	2.030	mg/L	0.0122	4.061	mg/L	0.0244	0.60%
Be 313.042†	448582.4	0.5109	mg/L	0.00176	1.022	mg/L	0.0035	0.34%
Ca 317.933†	115432.2	9.930	mg/L	0.0182	19.86	mg/L	0.036	0.18%
Cd 228.802†	14426.0	0.5113	mg/L	0.00630	1.023	mg/L	0.0126	1.23%
Co 228.616†	15807.0	0.4999	mg/L	0.00580	0.9998	mg/L	0.01159	1.16%
Cr 267.716†	4045.6	0.5062	mg/L	0.00344	1.012	mg/L	0.0069	0.68%
Cu 324.752†	116949.2	0.5049	mg/L	0.00526	1.010	mg/L	0.0105	1.04%
Fe 273.955†	2635.6	2.058	mg/L	0.0125	4.116	mg/L	0.0251	0.61%
K 766.490†	19033.4	10.35	mg/L	0.051	20.70	mg/L	0.101	0.49%
Mg 279.077†	12997.8	10.34	mg/L	0.069	20.69	mg/L	0.137	0.66%
Mn 257.610†	23478.4	0.4983	mg/L	0.00273	0.9967	mg/L	0.00546	0.55%
Mo 202.031†	23.5	0.00128	mg/L	0.000233	0.00256	mg/L	0.000466	18.21%
Na 589.592†	129184.7	10.29	mg/L	0.030	20.58	mg/L	0.061	0.30%
Na 330.237†	322.0	11.40	mg/L	0.076	22.80	mg/L	0.151	0.66%
Ni 231.604†	1866.7	0.5124	mg/L	0.00404	1.025	mg/L	0.0081	0.79%
Pb 220.353†	16719.7	2.013	mg/L	0.0219	4.026	mg/L	0.0438	1.09%
Sb 206.836†	13.1	0.00199	mg/L	0.001803	0.00398	mg/L	0.003606	90.55%
Se 196.026†	2621.2	2.133	mg/L	0.0242	4.265	mg/L	0.0484	1.14%
Si 288.158†	-4.0	0.00072	mg/L	0.001422	0.00144	mg/L	0.002845	197.59%
Sn 189.927†	-22.0	-0.00168	mg/L	0.000131	-0.00337	mg/L	0.000262	7.80%
Sr 421.552†	449343.1	0.5193	mg/L	0.00102	1.039	mg/L	0.0020	0.20%
Ti 334.903†	36.7	-0.00063	mg/L	0.000189	-0.00125	mg/L	0.000378	30.18%
Tl 190.801†	3414.8	2.060	mg/L	0.0197	4.121	mg/L	0.0393	0.95%
V 292.402†	76994.8	0.5043	mg/L	0.00541	1.009	mg/L	0.0108	1.07%
Zn 206.200†	2018.6	0.5057	mg/L	0.00504	1.011	mg/L	0.0101	1.00%

Sequence No.: 18
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 4/27/2011 10:09:34 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2421853.9	108.5	%	2.85				2.62%
ScR 361.383	433921.7	109.0	%	0.89				0.81%
Ag 328.068†	180987.7	0.9756	mg/L	0.00162	0.9756	mg/L	0.00162	0.17%
Al 308.215†	2848.0	2.008	mg/L	0.0460	2.008	mg/L	0.0460	2.29%
As 188.979†	2764.3	1.952	mg/L	0.0380	1.952	mg/L	0.0380	1.94%
B 249.677†	5620.7	1.011	mg/L	0.0154	1.011	mg/L	0.0154	1.53%
Ba 233.527†	7092.6	0.9861	mg/L	0.01000	0.9861	mg/L	0.01000	1.01%
Be 313.042†	882045.5	1.005	mg/L	0.0043	1.005	mg/L	0.0043	0.43%
Ca 317.933†	23751.5	2.043	mg/L	0.0374	2.043	mg/L	0.0374	1.83%
Cd 228.802†	28073.7	1.002	mg/L	0.0034	1.002	mg/L	0.0034	0.34%
Co 228.616†	30306.5	0.9578	mg/L	0.00130	0.9578	mg/L	0.00130	0.14%
Cr 267.716†	7949.5	0.9959	mg/L	0.01183	0.9959	mg/L	0.01183	1.19%
Cu 324.752†	223683.7	0.9652	mg/L	0.00219	0.9652	mg/L	0.00219	0.23%
Fe 273.955†	2593.3	2.022	mg/L	0.0393	2.022	mg/L	0.0393	1.94%
K 766.490†	36753.1	19.98	mg/L	0.054	19.98	mg/L	0.054	0.27%
Mg 279.077†	2479.6	1.977	mg/L	0.0267	1.977	mg/L	0.0267	1.35%
Mn 257.610†	46267.9	0.9816	mg/L	0.00945	0.9816	mg/L	0.00945	0.96%
Mo 202.031†	15360.3	0.9583	mg/L	0.01920	0.9583	mg/L	0.01920	2.00%
Na 589.592†	633782.7	50.48	mg/L	0.174	50.48	mg/L	0.174	0.34%
Na 330.237†	1453.9	52.13	mg/L	0.617	52.13	mg/L	0.617	1.18%
Ni 231.604†	3762.1	1.034	mg/L	0.0133	1.034	mg/L	0.0133	1.29%
Pb 220.353†	16312.4	1.965	mg/L	0.0381	1.965	mg/L	0.0381	1.94%
Sb 206.836†	4850.9	1.948	mg/L	0.0384	1.948	mg/L	0.0384	1.97%
Se 196.026†	2435.5	1.983	mg/L	0.0369	1.983	mg/L	0.0369	1.86%
Si 288.158†	3370.9	2.040	mg/L	0.0281	2.040	mg/L	0.0281	1.38%
Sn 189.927†	4812.9	0.9457	mg/L	0.01716	0.9457	mg/L	0.01716	1.81%
Sr 421.552†	880485.9	1.018	mg/L	0.0014	1.018	mg/L	0.0014	0.14%
Ti 334.903†	29717.3	0.9516	mg/L	0.00683	0.9516	mg/L	0.00683	0.72%
Tl 190.801†	3202.2	1.934	mg/L	0.0331	1.934	mg/L	0.0331	1.71%
V 292.402†	144342.8	0.9461	mg/L	0.00403	0.9461	mg/L	0.00403	0.43%
Zn 206.200†	4000.6	1.002	mg/L	0.0128	1.002	mg/L	0.0128	1.28%

Sequence No.: 19
Sample ID: CB -2

Autosampler Location: 1
Date Collected: 4/27/2011 10:12:35 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2362984.7	105.9	%	0.37				0.35%
ScR 361.383	423068.0	106.3	%	0.61				0.57%
Ag 328.068†	79.7	0.00043	mg/L	0.000132	0.00043	mg/L	0.000132	30.72%
Al 308.215†	27.2	0.01949	mg/L	0.006547	0.01949	mg/L	0.006547	33.59%
As 188.979†	3.0	0.00211	mg/L	0.002395	0.00211	mg/L	0.002395	113.28%
B 249.677†	12.3	0.00221	mg/L	0.000769	0.00221	mg/L	0.000769	34.87%
Ba 233.527†	-4.5	-0.00063	mg/L	0.000305	-0.00063	mg/L	0.000305	48.60%
Be 313.042†	35.6	0.00004	mg/L	0.000016	0.00004	mg/L	0.000016	38.66%
Ca 317.933†	39.9	0.00343	mg/L	0.001255	0.00343	mg/L	0.001255	36.57%
Cd 228.802†	0.7	0.00002	mg/L	0.000119	0.00002	mg/L	0.000119	656.89%
Co 228.616†	10.9	0.00035	mg/L	0.000051	0.00035	mg/L	0.000051	14.73%
Cr 267.716†	-1.4	-0.00018	mg/L	0.001188	-0.00018	mg/L	0.001188	674.14%
Cu 324.752†	-17.7	-0.00008	mg/L	0.000074	-0.00008	mg/L	0.000074	97.56%
Fe 273.955†	2.1	0.00162	mg/L	0.001865	0.00162	mg/L	0.001865	115.10%
K 766.490†	91.3	0.04965	mg/L	0.019059	0.04965	mg/L	0.019059	38.39%
Mg 279.077†	15.1	0.01205	mg/L	0.003076	0.01205	mg/L	0.003076	25.53%
Mn 257.610†	-4.6	-0.00010	mg/L	0.000080	-0.00010	mg/L	0.000080	82.03%
Mo 202.031†	-9.4	-0.00059	mg/L	0.000298	-0.00059	mg/L	0.000298	50.94%
Na 589.592†	358.4	0.02855	mg/L	0.004665	0.02855	mg/L	0.004665	16.34%
Na 330.237†	22.1	0.7909	mg/L	0.24053	0.7909	mg/L	0.24053	30.41%
Ni 231.604†	4.5	0.00123	mg/L	0.001480	0.00123	mg/L	0.001480	120.79%
Pb 220.353†	12.6	0.00152	mg/L	0.000582	0.00152	mg/L	0.000582	38.20%
Sb 206.836†	2.7	0.00109	mg/L	0.001630	0.00109	mg/L	0.001630	149.96%
Se 196.026†	2.7	0.00224	mg/L	0.000905	0.00224	mg/L	0.000905	40.48%
Si 288.158†	-0.5	-0.00029	mg/L	0.002213	-0.00029	mg/L	0.002213	772.70%
Sn 189.927†	5.1	0.00099	mg/L	0.000378	0.00099	mg/L	0.000378	37.99%
Sr 421.552†	83.1	0.00010	mg/L	0.000037	0.00010	mg/L	0.000037	38.76%
Ti 334.903†	-41.2	-0.00132	mg/L	0.000322	-0.00132	mg/L	0.000322	24.37%
Tl 190.801†	4.9	0.00295	mg/L	0.002154	0.00295	mg/L	0.002154	73.03%
V 292.402†	28.7	0.00019	mg/L	0.000225	0.00019	mg/L	0.000225	120.92%
Zn 206.200†	3.1	0.00077	mg/L	0.000368	0.00077	mg/L	0.000368	47.73%

Sequence No.: 20
Sample ID: SS71 MB2 TWC
Autosampler Location: 314
Date Collected: 4/27/2011 10:16:47 AM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SS71 MB2 TWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 MB2 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2356601.9	105.6	%	1.29				1.22%
ScR 361.383	421966.6	106.0	%	2.27				2.14%
Ag 328.068†	106.1	0.00057	mg/L	0.000211	0.00057	mg/L	0.000211	36.90%
Al 308.215†	30.4	0.02176	mg/L	0.009706	0.02176	mg/L	0.009706	44.60%
As 188.979†	1.3	0.00091	mg/L	0.001706	0.00091	mg/L	0.001706	187.03%
B 249.677†	9.3	0.00167	mg/L	0.001631	0.00167	mg/L	0.001631	97.69%
Ba 233.527†	-4.8	-0.00067	mg/L	0.000674	-0.00067	mg/L	0.000674	101.31%
Be 313.042†	-26.9	-0.00003	mg/L	0.000050	-0.00003	mg/L	0.000050	162.56%
Ca 317.933†	113.2	0.00974	mg/L	0.001392	0.00974	mg/L	0.001392	14.30%
Cd 228.802†	-3.6	-0.00013	mg/L	0.000143	-0.00013	mg/L	0.000143	109.98%
Co 228.616†	12.4	0.00039	mg/L	0.000093	0.00039	mg/L	0.000093	23.82%
Cr 267.716†	-4.9	-0.00061	mg/L	0.000718	-0.00061	mg/L	0.000718	117.99%
Cu 324.752†	-2.3	-0.00001	mg/L	0.000090	-0.00001	mg/L	0.000090	970.78%
Fe 273.955†	3.3	0.00256	mg/L	0.001333	0.00256	mg/L	0.001333	52.13%
K 766.490†	87.2	0.04740	mg/L	0.015156	0.04740	mg/L	0.015156	31.98%
Mg 279.077†	12.7	0.01011	mg/L	0.002161	0.01011	mg/L	0.002161	21.38%
Mn 257.610†	-3.6	-0.00008	mg/L	0.000037	-0.00008	mg/L	0.000037	48.27%
Mo 202.031†	-13.7	-0.00086	mg/L	0.000265	-0.00086	mg/L	0.000265	31.00%
Na 589.592†	272.6	0.02171	mg/L	0.004830	0.02171	mg/L	0.004830	22.24%
Na 330.237†	26.4	0.9458	mg/L	0.56072	0.9458	mg/L	0.56072	59.29%
Ni 231.604†	8.7	0.00238	mg/L	0.000925	0.00238	mg/L	0.000925	38.86%
Pb 220.353†	11.3	0.00136	mg/L	0.000424	0.00136	mg/L	0.000424	31.25%
Sb 206.836†	1.3	0.00053	mg/L	0.000566	0.00053	mg/L	0.000566	107.40%
Se 196.026†	6.4	0.00524	mg/L	0.001361	0.00524	mg/L	0.001361	25.98%
Si 288.158†	7.3	0.00439	mg/L	0.001698	0.00439	mg/L	0.001698	38.66%
Sn 189.927†	0.5	0.00010	mg/L	0.000303	0.00010	mg/L	0.000303	297.36%
Sr 421.552†	58.1	0.00007	mg/L	0.000017	0.00007	mg/L	0.000017	25.80%
Ti 334.903†	-29.7	-0.00095	mg/L	0.000965	-0.00095	mg/L	0.000965	101.36%
Tl 190.801†	3.5	0.00212	mg/L	0.001946	0.00212	mg/L	0.001946	91.62%
V 292.402†	9.7	0.00006	mg/L	0.000156	0.00006	mg/L	0.000156	259.95%
Zn 206.200†	7.5	0.00188	mg/L	0.000326	0.00188	mg/L	0.000326	17.32%

Sequence No.: 21
Sample ID: SS71 T TWC
Autosampler Location: 315
Date Collected: 4/27/2011 10:21:00 AM
Data Type: Original
Dilution: 1X

Nebulizer Parameters: SS71 T TWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 T TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2383707.7	106.8	%	0.68				0.64%
ScR 361.383	426671.8	107.2	%	0.56				0.52%
Ag 328.068†	125.4	0.00068	mg/L	0.000158	0.00068	mg/L	0.000158	23.31%
Al 308.215†	91.2	0.06539	mg/L	0.006793	0.06539	mg/L	0.006793	10.39%
As 188.979†	1.9	0.00133	mg/L	0.002225	0.00133	mg/L	0.002225	166.87%
B 249.677†	2.7	0.00048	mg/L	0.000076	0.00048	mg/L	0.000076	16.03%
Ba 233.527†	-0.1	-0.00002	mg/L	0.000390	-0.00002	mg/L	0.000390	>999.9%
Be 313.042†	-60.1	-0.00007	mg/L	0.000011	-0.00007	mg/L	0.000011	16.71%
Ca 317.933†	754.7	0.06492	mg/L	0.000849	0.06492	mg/L	0.000849	1.31%
Cd 228.802†	-4.4	-0.00016	mg/L	0.000112	-0.00016	mg/L	0.000112	68.54%
Co 228.616†	11.4	0.00036	mg/L	0.000076	0.00036	mg/L	0.000076	21.01%
Cr 267.716†	2.2	0.00027	mg/L	0.000445	0.00027	mg/L	0.000445	162.40%
Cu 324.752†	4.2	0.00002	mg/L	0.000088	0.00002	mg/L	0.000088	435.95%
Fe 273.955†	60.7	0.04748	mg/L	0.001819	0.04748	mg/L	0.001819	3.83%
K 766.490†	79.4	0.04318	mg/L	0.023727	0.04318	mg/L	0.023727	54.95%
Mg 279.077†	31.9	0.02535	mg/L	0.002849	0.02535	mg/L	0.002849	11.24%
Mn 257.610†	46.1	0.00098	mg/L	0.000066	0.00098	mg/L	0.000066	6.74%
Mo 202.031†	-7.3	-0.00046	mg/L	0.000324	-0.00046	mg/L	0.000324	71.01%
Na 589.592†	1762.0	0.1404	mg/L	0.00164	0.1404	mg/L	0.00164	1.17%
Na 330.237†	24.0	0.8575	mg/L	0.37932	0.8575	mg/L	0.37932	44.24%
Ni 231.604†	5.4	0.00147	mg/L	0.001553	0.00147	mg/L	0.001553	105.75%
Pb 220.353†	10.1	0.00123	mg/L	0.000675	0.00123	mg/L	0.000675	55.07%
Sb 206.836†	-1.1	-0.00044	mg/L	0.000954	-0.00044	mg/L	0.000954	218.65%
Se 196.026†	8.8	0.00717	mg/L	0.004071	0.00717	mg/L	0.004071	56.80%
Si 288.158†	256.8	0.1549	mg/L	0.00329	0.1549	mg/L	0.00329	2.12%
Sn 189.927†	2.9	0.00059	mg/L	0.000617	0.00059	mg/L	0.000617	104.40%
Sr 421.552†	217.5	0.00025	mg/L	0.000016	0.00025	mg/L	0.000016	6.45%
Ti 334.903†	10.7	0.00033	mg/L	0.000394	0.00033	mg/L	0.000394	118.13%
Tl 190.801†	3.1	0.00186	mg/L	0.002015	0.00186	mg/L	0.002015	108.63%
V 292.402†	41.9	0.00027	mg/L	0.000050	0.00027	mg/L	0.000050	18.60%
Zn 206.200†	11.0	0.00275	mg/L	0.000571	0.00275	mg/L	0.000571	20.81%

Sequence No.: 22 **Autosampler Location: 316**
Sample ID: SS71 A SWC **Date Collected: 4/27/2011 10:25:11 AM**
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 A SWC

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: SS71 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2458768.5	110.2	%	0.69				0.63%
ScR 361.383	437012.4	109.8	%	2.26				2.06%
Ag 328.068†	170.4	0.00054	mg/L	0.000090	0.00107	mg/L	0.000181	16.81%
Al 308.215†	151199.0	108.3	mg/L	0.09	216.7	mg/L	0.19	0.09%
As 188.979†	28.4	0.07250	mg/L	0.003712	0.1450	mg/L	0.00742	5.12%
B 249.677†	86.3	0.01538	mg/L	0.001319	0.03075	mg/L	0.002637	8.57%
Ba 233.527†	3746.4	0.5122	mg/L	0.00817	1.024	mg/L	0.0163	1.59%
Be 313.042†	1646.1	0.00166	mg/L	0.000123	0.00331	mg/L	0.000245	7.40%
Ca 317.933†	576332.9	49.58	mg/L	0.133	99.15	mg/L	0.266	0.27%
Cd 228.802†	60.4	0.00226	mg/L	0.000040	0.00452	mg/L	0.000080	1.78%
Co 228.616†	2298.4	0.06126	mg/L	0.000313	0.1225	mg/L	0.00063	0.51%
Cr 267.716†	2256.7	0.2853	mg/L	0.00462	0.5707	mg/L	0.00924	1.62%
Cu 324.752†	51387.3	0.2262	mg/L	0.00056	0.4523	mg/L	0.00111	0.25%
Fe 273.955†	170843.2	133.6	mg/L	0.34	267.1	mg/L	0.67	0.25%
K 766.490†	9671.0	5.258	mg/L	0.0287	10.52	mg/L	0.057	0.55%
Mg 279.077†	49605.6	39.41	mg/L	0.114	78.82	mg/L	0.228	0.29%
Mn 257.610†	125473.1	2.661	mg/L	0.0049	5.322	mg/L	0.0098	0.18%
Mo 202.031†	111.6	0.00604	mg/L	0.000534	0.01209	mg/L	0.001068	8.83%
Na 589.592†	29747.2	2.369	mg/L	0.0850	4.739	mg/L	0.1701	3.59%
Na 330.237†	56.6	4.265	mg/L	0.2083	8.530	mg/L	0.4165	4.88%
Ni 231.604†	1000.7	0.2747	mg/L	0.00464	0.5494	mg/L	0.00928	1.69%
Pb 220.353†	1058.6	0.1410	mg/L	0.00108	0.2820	mg/L	0.00216	0.77%
Sb 206.836†	-5.6	0.00684	mg/L	0.001398	0.01367	mg/L	0.002796	20.45%
Se 196.026†	49.0	0.02901	mg/L	0.002188	0.05801	mg/L	0.004376	7.54%
Si 288.158†	12294.9	7.423	mg/L	0.1306	14.85	mg/L	0.261	1.76%
Sn 189.927†	-73.5	0.00119	mg/L	0.000402	0.00237	mg/L	0.000804	33.85%
Sr 421.552†	245982.5	0.2843	mg/L	0.00061	0.5686	mg/L	0.00121	0.21%
Ti 334.903†	218889.9	7.013	mg/L	0.0155	14.03	mg/L	0.031	0.22%
Tl 190.801†	-15.1	0.00803	mg/L	0.002113	0.01605	mg/L	0.004226	26.33%
V 292.402†	62678.4	0.3951	mg/L	0.00086	0.7902	mg/L	0.00173	0.22%
Zn 206.200†	2025.3	0.5073	mg/L	0.00837	1.015	mg/L	0.0167	1.65%

Sequence No.: 23
Sample ID: SS71 B SWC

Autosampler Location: 317
Date Collected: 4/27/2011 10:29:09 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 B SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2449549.0	109.8	%	1.26				1.15%
ScR 361.383	446100.2	112.1	%	1.21				1.08%
Ag 328.068†	142.0	0.00049	mg/L	0.000217	0.00097	mg/L	0.000433	44.57%
Al 308.215†	147314.7	105.5	mg/L	0.43	211.1	mg/L	0.85	0.40%
As 188.979†	67.8	0.09141	mg/L	0.000619	0.1828	mg/L	0.00124	0.68%
B 249.677†	92.6	0.01654	mg/L	0.001279	0.03308	mg/L	0.002559	7.74%
Ba 233.527†	3079.2	0.4200	mg/L	0.00490	0.8401	mg/L	0.00981	1.17%
Be 313.042†	1723.9	0.00177	mg/L	0.000023	0.00353	mg/L	0.000047	1.33%
Ca 317.933†	389143.1	33.47	mg/L	0.189	66.95	mg/L	0.378	0.56%
Cd 228.802†	50.2	0.00181	mg/L	0.000248	0.00361	mg/L	0.000497	13.76%
Co 228.616†	1979.5	0.05323	mg/L	0.000326	0.1065	mg/L	0.00065	0.61%
Cr 267.716†	2232.5	0.2824	mg/L	0.00388	0.5647	mg/L	0.00776	1.37%
Cu 324.752†	28852.6	0.1289	mg/L	0.00105	0.2577	mg/L	0.00209	0.81%
Fe 273.955†	158971.1	124.3	mg/L	0.53	248.6	mg/L	1.07	0.43%
K 766.490†	8247.3	4.484	mg/L	0.0098	8.969	mg/L	0.0196	0.22%
Mg 279.077†	45269.3	35.96	mg/L	0.166	71.93	mg/L	0.333	0.46%
Mn 257.610†	95798.8	2.032	mg/L	0.0099	4.063	mg/L	0.0198	0.49%
Mo 202.031†	110.6	0.00628	mg/L	0.000174	0.01255	mg/L	0.000348	2.77%
Na 589.592†	17975.0	1.432	mg/L	0.0083	2.864	mg/L	0.0166	0.58%
Na 330.237†	35.7	3.139	mg/L	0.0532	6.278	mg/L	0.1063	1.69%
Ni 231.604†	1078.4	0.2960	mg/L	0.00415	0.5920	mg/L	0.00829	1.40%
Pb 220.353†	909.5	0.1232	mg/L	0.00059	0.2463	mg/L	0.00117	0.48%
Sb 206.836†	-8.5	0.00368	mg/L	0.001047	0.00736	mg/L	0.002094	28.44%
Se 196.026†	40.4	0.02478	mg/L	0.006656	0.04955	mg/L	0.013311	26.86%
Si 288.158†	14362.1	8.670	mg/L	0.0899	17.34	mg/L	0.180	1.04%
Sn 189.927†	-59.9	-0.00085	mg/L	0.000845	-0.00169	mg/L	0.001690	99.97%
Sr 421.552†	174598.4	0.2018	mg/L	0.00080	0.4036	mg/L	0.00161	0.40%
Ti 334.903†	179393.4	5.749	mg/L	0.0229	11.50	mg/L	0.046	0.40%
Tl 190.801†	-14.6	0.00715	mg/L	0.000769	0.01429	mg/L	0.001537	10.76%
V 292.402†	56277.5	0.3548	mg/L	0.00345	0.7096	mg/L	0.00689	0.97%
Zn 206.200†	1284.1	0.3216	mg/L	0.00317	0.6433	mg/L	0.00635	0.99%

Sequence No.: 24
Sample ID: SS71 C SWC

Autosampler Location: 318
Date Collected: 4/27/2011 10:33:06 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 C SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2437112.4	109.2	%	1.45				1.33%
ScR 361.383	441429.7	110.9	%	1.19				1.07%
Ag 328.068†	120.9	0.00039	mg/L	0.000226	0.00077	mg/L	0.000451	58.58%
Al 308.215†	171420.3	122.8	mg/L	0.38	245.6	mg/L	0.76	0.31%
As 188.979†	23.8	0.06773	mg/L	0.003716	0.1355	mg/L	0.00743	5.49%
B 249.677†	79.1	0.01407	mg/L	0.001029	0.02814	mg/L	0.002058	7.32%
Ba 233.527†	3724.3	0.5092	mg/L	0.00605	1.018	mg/L	0.0121	1.19%
Be 313.042†	1758.5	0.00180	mg/L	0.000042	0.00360	mg/L	0.000085	2.35%
Ca 317.933†	400198.1	34.43	mg/L	0.122	68.85	mg/L	0.244	0.35%
Cd 228.802†	47.6	0.00184	mg/L	0.000128	0.00368	mg/L	0.000255	6.94%
Co 228.616†	2322.4	0.06259	mg/L	0.000934	0.1252	mg/L	0.00187	1.49%
Cr 267.716†	2701.2	0.3413	mg/L	0.00263	0.6826	mg/L	0.00527	0.77%
Cu 324.752†	27268.6	0.1222	mg/L	0.00132	0.2443	mg/L	0.00264	1.08%
Fe 273.955†	170249.4	133.1	mg/L	0.51	266.2	mg/L	1.03	0.39%
K 766.490†	8714.3	4.738	mg/L	0.0303	9.477	mg/L	0.0607	0.64%
Mg 279.077†	48595.5	38.61	mg/L	0.160	77.21	mg/L	0.320	0.41%
Mn 257.610†	93314.6	1.979	mg/L	0.0106	3.958	mg/L	0.0211	0.53%
Mo 202.031†	87.3	0.00481	mg/L	0.000020	0.00962	mg/L	0.000039	0.41%
Na 589.592†	19244.0	1.533	mg/L	0.0068	3.066	mg/L	0.0135	0.44%
Na 330.237†	34.9	3.407	mg/L	0.1054	6.813	mg/L	0.2108	3.09%
Ni 231.604†	1175.0	0.3225	mg/L	0.00387	0.6450	mg/L	0.00773	1.20%
Pb 220.353†	904.8	0.1256	mg/L	0.00031	0.2512	mg/L	0.00061	0.24%
Sb 206.836†	-12.0	0.00317	mg/L	0.002463	0.00633	mg/L	0.004925	77.76%
Se 196.026†	35.4	0.02030	mg/L	0.008298	0.04060	mg/L	0.016596	40.88%
Si 288.158†	14393.9	8.690	mg/L	0.0826	17.38	mg/L	0.165	0.95%
Sn 189.927†	-57.6	0.00017	mg/L	0.001533	0.00034	mg/L	0.003065	890.81%
Sr 421.552†	202848.1	0.2344	mg/L	0.00104	0.4689	mg/L	0.00207	0.44%
Ti 334.903†	207772.8	6.659	mg/L	0.0308	13.32	mg/L	0.062	0.46%
Tl 190.801†	-12.1	0.00980	mg/L	0.006293	0.01960	mg/L	0.012585	64.22%
V 292.402†	58407.2	0.3677	mg/L	0.00496	0.7353	mg/L	0.00991	1.35%
Zn 206.200†	1415.1	0.3545	mg/L	0.00286	0.7089	mg/L	0.00572	0.81%

Sequence No.: 25
Sample ID: SS71 IDUP SWC

Autosampler Location: 319
Date Collected: 4/27/2011 10:37:03 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 IDUP SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 IDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2425523.5	108.7	%	1.41				1.30%
ScR 361.383	441544.1	110.9	%	1.13				1.01%
Ag 328.068†	-24.3	-0.00033	mg/L	0.000474	-0.00067	mg/L	0.000949	142.28%
Al 308.215†	209018.2	149.8	mg/L	0.18	299.5	mg/L	0.36	0.12%
As 188.979†	-15.6	0.04520	mg/L	0.004765	0.09039	mg/L	0.009531	10.54%
B 249.677†	55.6	0.00983	mg/L	0.000641	0.01966	mg/L	0.001282	6.52%
Ba 233.527†	3710.4	0.5052	mg/L	0.00806	1.010	mg/L	0.0161	1.60%
Be 313.042†	2011.7	0.00205	mg/L	0.000065	0.00411	mg/L	0.000131	3.19%
Ca 317.933†	401830.7	34.57	mg/L	0.030	69.13	mg/L	0.060	0.09%
Cd 228.802†	33.0	0.00145	mg/L	0.000156	0.00291	mg/L	0.000313	10.76%
Co 228.616†	2430.3	0.06496	mg/L	0.000898	0.1299	mg/L	0.00180	1.38%
Cr 267.716†	2843.3	0.3601	mg/L	0.00473	0.7202	mg/L	0.00945	1.31%
Cu 324.752†	40033.7	0.1786	mg/L	0.00231	0.3572	mg/L	0.00462	1.29%
Fe 273.955†	210629.8	164.7	mg/L	0.16	329.3	mg/L	0.33	0.10%
K 766.490†	9771.6	5.313	mg/L	0.0129	10.63	mg/L	0.026	0.24%
Mg 279.077†	56666.0	45.01	mg/L	0.086	90.03	mg/L	0.173	0.19%
Mn 257.610†	80113.6	1.699	mg/L	0.0027	3.398	mg/L	0.0054	0.16%
Mo 202.031†	42.7	0.00202	mg/L	0.000116	0.00405	mg/L	0.000233	5.75%
Na 589.592†	19564.1	1.558	mg/L	0.0029	3.117	mg/L	0.0057	0.18%
Na 330.237†	22.3	3.191	mg/L	0.0520	6.383	mg/L	0.1040	1.63%
Ni 231.604†	1403.0	0.3851	mg/L	0.00589	0.7702	mg/L	0.01177	1.53%
Pb 220.353†	-8.6	0.01902	mg/L	0.001060	0.03804	mg/L	0.002120	5.57%
Sb 206.836†	-11.4	0.00440	mg/L	0.000581	0.00879	mg/L	0.001161	13.20%
Se 196.026†	35.2	0.01960	mg/L	0.006521	0.03919	mg/L	0.013041	33.27%
Si 288.158†	9234.1	5.577	mg/L	0.0782	11.15	mg/L	0.156	1.40%
Sn 189.927†	-72.8	-0.00254	mg/L	0.000874	-0.00509	mg/L	0.001748	34.36%
Sr 421.552†	244364.6	0.2824	mg/L	0.00008	0.5648	mg/L	0.00015	0.03%
Ti 334.903†	227790.4	7.301	mg/L	0.0126	14.60	mg/L	0.025	0.17%
Tl 190.801†	-23.9	0.00680	mg/L	0.008249	0.01361	mg/L	0.016497	121.24%
V 292.402†	68425.1	0.4300	mg/L	0.00688	0.8600	mg/L	0.01376	1.60%
Zn 206.200†	1127.7	0.2824	mg/L	0.00319	0.5649	mg/L	0.00638	1.13%

Sequence No.: 26
Sample ID: SS71 I SWC

Autosampler Location: 320
Date Collected: 4/27/2011 10:41:01 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 I SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2477230.8	111.0	%	0.03				0.03%
ScR 361.383	446022.9	112.1	%	0.47				0.42%
Ag 328.068†	62.5	0.00017	mg/L	0.000105	0.00034	mg/L	0.000211	62.82%
Al 308.215†	206880.2	148.2	mg/L	0.26	296.5	mg/L	0.52	0.18%
As 188.979†	-19.4	0.04375	mg/L	0.002824	0.08750	mg/L	0.005647	6.45%
B 249.677†	55.9	0.00988	mg/L	0.000508	0.01977	mg/L	0.001016	5.14%
Ba 233.527†	3773.1	0.5145	mg/L	0.00081	1.029	mg/L	0.0016	0.16%
Be 313.042†	2862.4	0.00302	mg/L	0.000008	0.00605	mg/L	0.000017	0.27%
Ca 317.933†	418203.7	35.97	mg/L	0.061	71.95	mg/L	0.121	0.17%
Cd 228.802†	42.2	0.00180	mg/L	0.000033	0.00359	mg/L	0.000066	1.84%
Co 228.616†	2374.9	0.06292	mg/L	0.000381	0.1258	mg/L	0.00076	0.61%
Cr 267.716†	2783.3	0.3523	mg/L	0.00085	0.7046	mg/L	0.00170	0.24%
Cu 324.752†	38852.8	0.1730	mg/L	0.00148	0.3460	mg/L	0.00295	0.85%
Fe 273.955†	198962.8	155.5	mg/L	0.44	311.1	mg/L	0.88	0.28%
K 766.490†	8949.7	4.866	mg/L	0.0325	9.733	mg/L	0.0649	0.67%
Mg 279.077†	53622.7	42.60	mg/L	0.100	85.19	mg/L	0.199	0.23%
Mn 257.610†	71072.5	1.507	mg/L	0.0029	3.015	mg/L	0.0058	0.19%
Mo 202.031†	45.5	0.00217	mg/L	0.000236	0.00434	mg/L	0.000472	10.88%
Na 589.592†	24721.5	1.969	mg/L	0.0048	3.938	mg/L	0.0097	0.25%
Na 330.237†	35.7	3.728	mg/L	0.1787	7.456	mg/L	0.3575	4.79%
Ni 231.604†	1399.6	0.3842	mg/L	0.00192	0.7684	mg/L	0.00384	0.50%
Pb 220.353†	82.9	0.03025	mg/L	0.000801	0.06051	mg/L	0.001601	2.65%
Sb 206.836†	-13.3	0.00396	mg/L	0.002236	0.00792	mg/L	0.004472	56.45%
Se 196.026†	36.4	0.02055	mg/L	0.006410	0.04110	mg/L	0.012819	31.19%
Si 288.158†	11643.3	7.030	mg/L	0.0140	14.06	mg/L	0.028	0.20%
Sn 189.927†	-70.5	-0.00165	mg/L	0.000967	-0.00331	mg/L	0.001934	58.48%
Sr 421.552†	242564.6	0.2803	mg/L	0.00086	0.5607	mg/L	0.00172	0.31%
Ti 334.903†	233138.3	7.472	mg/L	0.0153	14.94	mg/L	0.031	0.21%
Tl 190.801†	-28.5	0.00275	mg/L	0.006793	0.00550	mg/L	0.013587	246.81%
V 292.402†	67837.4	0.4268	mg/L	0.00433	0.8535	mg/L	0.00866	1.01%
Zn 206.200†	1154.4	0.2891	mg/L	0.00092	0.5783	mg/L	0.00184	0.32%

Sequence No.: 27
Sample ID: SS71 ISPK SWC

Autosampler Location: 321
Date Collected: 4/27/2011 10:44:59 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 ISPK SWC

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: SS71 ISPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2417691.6	108.3	%	0.81				0.75%
ScR 361.383	446189.7	112.1	%	0.92				0.82%
Ag 328.068†	92456.2	0.4983	mg/L	0.00505	0.9966	mg/L	0.01009	1.01%
Al 308.215†	188216.0	134.9	mg/L	0.25	269.7	mg/L	0.51	0.19%
As 188.979†	2728.8	1.965	mg/L	0.0099	3.931	mg/L	0.0199	0.51%
B 249.677†	51.0	0.00789	mg/L	0.000962	0.01579	mg/L	0.001924	12.18%
Ba 233.527†	16733.3	2.318	mg/L	0.0255	4.636	mg/L	0.0511	1.10%
Be 313.042†	424276.0	0.4830	mg/L	0.00170	0.9660	mg/L	0.00340	0.35%
Ca 317.933†	453127.7	38.98	mg/L	0.028	77.96	mg/L	0.055	0.07%
Cd 228.802†	14044.8	0.4983	mg/L	0.00211	0.9966	mg/L	0.00422	0.42%
Co 228.616†	17021.2	0.5287	mg/L	0.00223	1.057	mg/L	0.0045	0.42%
Cr 267.716†	6551.2	0.8234	mg/L	0.00857	1.647	mg/L	0.0171	1.04%
Cu 324.752†	149545.9	0.6507	mg/L	0.01090	1.301	mg/L	0.0218	1.67%
Fe 273.955†	184244.3	144.0	mg/L	0.36	288.1	mg/L	0.72	0.25%
K 766.490†	23667.2	12.87	mg/L	0.027	25.74	mg/L	0.054	0.21%
Mg 279.077†	63414.6	50.39	mg/L	0.062	100.8	mg/L	0.12	0.12%
Mn 257.610†	88397.4	1.875	mg/L	0.0032	3.750	mg/L	0.0065	0.17%
Mo 202.031†	49.0	0.00233	mg/L	0.000121	0.00467	mg/L	0.000241	5.17%
Na 589.592†	137462.0	10.95	mg/L	0.029	21.90	mg/L	0.059	0.27%
Na 330.237†	304.0	12.69	mg/L	0.049	25.39	mg/L	0.098	0.39%
Ni 231.604†	2996.8	0.8226	mg/L	0.00718	1.645	mg/L	0.0144	0.87%
Pb 220.353†	15900.8	1.933	mg/L	0.0108	3.865	mg/L	0.0216	0.56%
Sb 206.836†	3.6	0.00521	mg/L	0.001002	0.01042	mg/L	0.002004	19.22%
Se 196.026†	2474.1	2.005	mg/L	0.0012	4.010	mg/L	0.0025	0.06%
Si 288.158†	14944.9	9.025	mg/L	0.0956	18.05	mg/L	0.191	1.06%
Sn 189.927†	-77.6	-0.00280	mg/L	0.001264	-0.00560	mg/L	0.002529	45.17%
Sr 421.552†	613493.0	0.7090	mg/L	0.00089	1.418	mg/L	0.0018	0.13%
Ti 334.903†	184372.9	5.907	mg/L	0.0073	11.81	mg/L	0.015	0.12%
Tl 190.801†	3090.3	1.883	mg/L	0.0089	3.766	mg/L	0.0178	0.47%
V 292.402†	133577.1	0.8596	mg/L	0.01160	1.719	mg/L	0.0232	1.35%
Zn 206.200†	2890.1	0.7240	mg/L	0.00675	1.448	mg/L	0.0135	0.93%

Sequence No.: 28
Sample ID: SS71-~~IPOST~~ SWC

Dilution: 2X

Autosampler Location: 322
Date Collected: 4/27/2011 10:48:58 AM
Data Type: Original

Nebulizer Parameters: SS71 ~~IPOST~~ SWC

Analyte	Back Pressure	Flow
All	209.0 kPa	0.75 L/min

Mean Data: SS71 ~~IPOST~~ SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2462622.4	110.4	%	0.86				0.78%
ScR 361.383	443288.8	111.4	%	1.78				1.60%
Ag 328.068†	94.1	0.00013	mg/L	0.000216	0.00026	mg/L	0.000433	166.76%
Al 308.215†	175451.9	125.7	mg/L	1.13	251.4	mg/L	2.26	0.90%
As 188.979†	89.0	0.1178	mg/L	0.00202	0.2357	mg/L	0.00404	1.71%
B 249.677†	53.3	0.00940	mg/L	0.000973	0.01881	mg/L	0.001946	10.35%
Ba 233.527†	3444.0	0.4679	mg/L	0.00974	0.9359	mg/L	0.01949	2.08%
Be 313.042†	1790.2	0.00179	mg/L	0.000065	0.00359	mg/L	0.000131	3.65%
Ca 317.933†	641743.9	55.20	mg/L	0.655	110.4	mg/L	1.31	1.19%
Cd 228.802†	105.3	0.00373	mg/L	0.000103	0.00747	mg/L	0.000205	2.75%
Co 228.616†	2713.2	0.07379	mg/L	0.001144	0.1476	mg/L	0.00229	1.55%
Cr 267.716†	2052.5	0.2606	mg/L	0.00563	0.5213	mg/L	0.01126	2.16%
Cu 324.752†	64092.4	0.2825	mg/L	0.00438	0.5651	mg/L	0.00876	1.55%
Fe 273.955†	214302.4	167.5	mg/L	1.74	335.1	mg/L	3.47	1.04%
K 766.490†	10213.8	5.554	mg/L	0.0060	11.11	mg/L	0.012	0.11%
Mg 279.077†	59567.9	47.32	mg/L	0.507	94.64	mg/L	1.014	1.07%
Mn 257.610†	127437.3	2.703	mg/L	0.0284	5.406	mg/L	0.0568	1.05%
Mo 202.031†	115.7	0.00619	mg/L	0.000692	0.01238	mg/L	0.001384	11.18%
Na 589.592†	73932.2	5.889	mg/L	0.0547	11.78	mg/L	0.109	0.93%
Na 330.237†	157.7	8.017	mg/L	0.1770	16.03	mg/L	0.354	2.21%
Ni 231.604†	1099.6	0.3018	mg/L	0.00539	0.6037	mg/L	0.01078	1.79%
Pb 220.353†	4323.4	0.5352	mg/L	0.00586	1.070	mg/L	0.0117	1.09%
Sb 206.836†	-9.5	0.00627	mg/L	0.000968	0.01255	mg/L	0.001936	15.43%
Se 196.026†	37.8	0.01837	mg/L	0.006983	0.03674	mg/L	0.013965	38.01%
Si 288.158†	8294.4	5.010	mg/L	0.0884	10.02	mg/L	0.177	1.76%
Sn 189.927†	-74.4	0.00263	mg/L	0.000060	0.00527	mg/L	0.000120	2.28%
Sr 421.552†	276034.4	0.3190	mg/L	0.00235	0.6380	mg/L	0.00470	0.74%
Ti 334.903†	230698.3	7.391	mg/L	0.0731	14.78	mg/L	0.146	0.99%
Tl 190.801†	-28.3	0.00452	mg/L	0.005686	0.00905	mg/L	0.011371	125.70%
V 292.402†	70443.1	0.4426	mg/L	0.00741	0.8852	mg/L	0.01481	1.67%
Zn 206.200†	2003.4	0.5019	mg/L	0.00862	1.004	mg/L	0.0172	1.72%

Sequence No.: 29
Sample ID: SS71 MB2SPK TWC

Autosampler Location: 323
Date Collected: 4/27/2011 10:52:56 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: SS71 MB2SPK TWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 MB2SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2402316.6	107.7	%	0.69				0.64%
ScR 361.383	428210.8	107.6	%	0.92				0.85%
Ag 328.068†	96531.2	0.5204	mg/L	0.00167	0.5204	mg/L	0.00167	0.32%
Al 308.215†	2875.7	2.051	mg/L	0.0234	2.051	mg/L	0.0234	1.14%
As 188.979†	2895.2	2.037	mg/L	0.0088	2.037	mg/L	0.0088	0.43%
B 249.677†	6.4	-0.00001	mg/L	0.000764	-0.00001	mg/L	0.000764	>999.9%
Ba 233.527†	14372.0	1.999	mg/L	0.0172	1.999	mg/L	0.0172	0.86%
Be 313.042†	439244.3	0.5003	mg/L	0.00061	0.5003	mg/L	0.00061	0.12%
Ca 317.933†	113512.8	9.765	mg/L	0.0199	9.765	mg/L	0.0199	0.20%
Cd 228.802†	13992.9	0.4958	mg/L	0.00275	0.4958	mg/L	0.00275	0.55%
Co 228.616†	15406.6	0.4872	mg/L	0.00186	0.4872	mg/L	0.00186	0.38%
Cr 267.716†	3971.8	0.4969	mg/L	0.00337	0.4969	mg/L	0.00337	0.68%
Cu 324.752†	114350.0	0.4936	mg/L	0.00090	0.4936	mg/L	0.00090	0.18%
Fe 273.955†	2635.7	2.058	mg/L	0.0225	2.058	mg/L	0.0225	1.09%
K 766.490†	18523.3	10.07	mg/L	0.064	10.07	mg/L	0.064	0.64%
Mg 279.077†	12851.1	10.23	mg/L	0.089	10.23	mg/L	0.089	0.87%
Mn 257.610†	23086.6	0.4900	mg/L	0.00470	0.4900	mg/L	0.00470	0.96%
Mo 202.031†	21.8	0.00118	mg/L	0.000472	0.00118	mg/L	0.000472	40.01%
Na 589.592†	126317.0	10.06	mg/L	0.038	10.06	mg/L	0.038	0.38%
Na 330.237†	311.2	11.02	mg/L	0.328	11.02	mg/L	0.328	2.98%
Ni 231.604†	1841.2	0.5054	mg/L	0.00546	0.5054	mg/L	0.00546	1.08%
Pb 220.353†	16377.4	1.972	mg/L	0.0063	1.972	mg/L	0.0063	0.32%
Sb 206.836†	9.5	0.00060	mg/L	0.000571	0.00060	mg/L	0.000571	94.36%
Se 196.026†	2566.9	2.088	mg/L	0.0117	2.088	mg/L	0.0117	0.56%
Si 288.158†	9.2	0.00867	mg/L	0.002357	0.00867	mg/L	0.002357	27.20%
Sn 189.927†	-24.9	-0.00229	mg/L	0.000182	-0.00229	mg/L	0.000182	7.92%
Sr 421.552†	439719.0	0.5082	mg/L	0.00083	0.5082	mg/L	0.00083	0.16%
Ti 334.903†	82.2	0.00086	mg/L	0.000904	0.00086	mg/L	0.000904	104.72%
Tl 190.801†	3347.0	2.019	mg/L	0.0037	2.019	mg/L	0.0037	0.18%
V 292.402†	75857.3	0.4968	mg/L	0.00133	0.4968	mg/L	0.00133	0.27%
Zn 206.200†	2002.3	0.5017	mg/L	0.00368	0.5017	mg/L	0.00368	0.73%

Sequence No.: 30
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 4/27/2011 10:56:54 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2416777.3	108.3	%	0.38				0.35%
ScR 361.383	426289.5	107.1	%	1.11				1.03%
Ag 328.068†	187675.3	1.012	mg/L	0.0046	1.012	mg/L	0.0046	0.46%
Al 308.215†	2792.3	1.968	mg/L	0.0153	1.968	mg/L	0.0153	0.78%
As 188.979†	2825.7	1.995	mg/L	0.0204	1.995	mg/L	0.0204	1.02%
B 249.677†	5587.8	1.005	mg/L	0.0082	1.005	mg/L	0.0082	0.82%
Ba 233.527†	7064.1	0.9821	mg/L	0.01061	0.9821	mg/L	0.01061	1.08%
Be 313.042†	884648.6	1.008	mg/L	0.0088	1.008	mg/L	0.0088	0.87%
Ca 317.933†	23503.7	2.022	mg/L	0.0191	2.022	mg/L	0.0191	0.94%
Cd 228.802†	28398.0	1.014	mg/L	0.0008	1.014	mg/L	0.0008	0.08%
Co 228.616†	30524.2	0.9647	mg/L	0.00107	0.9647	mg/L	0.00107	0.11%
Cr 267.716†	7914.4	0.9914	mg/L	0.01007	0.9914	mg/L	0.01007	1.02%
Cu 324.752†	222580.7	0.9604	mg/L	0.00351	0.9604	mg/L	0.00351	0.37%
Fe 273.955†	2563.4	1.999	mg/L	0.0168	1.999	mg/L	0.0168	0.84%
K 766.490†	36654.2	19.93	mg/L	0.253	19.93	mg/L	0.253	1.27%
Mg 279.077†	2460.9	1.962	mg/L	0.0143	1.962	mg/L	0.0143	0.73%
Mn 257.610†	46005.1	0.9760	mg/L	0.01055	0.9760	mg/L	0.01055	1.08%
Mo 202.031†	15546.5	0.9699	mg/L	0.00781	0.9699	mg/L	0.00781	0.80%
Na 589.592†	636151.5	50.67	mg/L	0.480	50.67	mg/L	0.480	0.95%
Na 330.237†	1432.8	51.38	mg/L	0.485	51.38	mg/L	0.485	0.94%
Ni 231.604†	3748.8	1.030	mg/L	0.0127	1.030	mg/L	0.0127	1.23%
Pb 220.353†	16108.9	1.940	mg/L	0.0015	1.940	mg/L	0.0015	0.08%
Sb 206.836†	4939.8	1.984	mg/L	0.0159	1.984	mg/L	0.0159	0.80%
Se 196.026†	2474.9	2.015	mg/L	0.0210	2.015	mg/L	0.0210	1.04%
Si 288.158†	3373.5	2.041	mg/L	0.0098	2.041	mg/L	0.0098	0.48%
Sn 189.927†	4908.6	0.9645	mg/L	0.00970	0.9645	mg/L	0.00970	1.01%
Sr 421.552†	881061.6	1.018	mg/L	0.0078	1.018	mg/L	0.0078	0.77%
Ti 334.903†	29795.6	0.9541	mg/L	0.00784	0.9541	mg/L	0.00784	0.82%
Tl 190.801†	3257.3	1.967	mg/L	0.0122	1.967	mg/L	0.0122	0.62%
V 292.402†	149012.3	0.9765	mg/L	0.00286	0.9765	mg/L	0.00286	0.29%
Zn 206.200†	3992.8	1.0000	mg/L	0.01264	1.0000	mg/L	0.01264	1.26%

Sequence No.: 31
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 4/27/2011 11:00:09 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	207.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2387828.7	107.0	%	1.04				0.97%
ScR 361.383	426478.5	107.2	%	0.34				0.31%
Ag 328.068†	111.0	0.00060	mg/L	0.000159	0.00060	mg/L	0.000159	26.52%
Al 308.215†	23.5	0.01688	mg/L	0.005447	0.01688	mg/L	0.005447	32.27%
As 188.979†	0.3	0.00018	mg/L	0.001725	0.00018	mg/L	0.001725	938.70%
B 249.677†	-0.4	-0.00007	mg/L	0.000985	-0.00007	mg/L	0.000985	>999.9%
Ba 233.527†	2.3	0.00032	mg/L	0.001220	0.00032	mg/L	0.001220	383.78%
Be 313.042†	59.9	0.00007	mg/L	0.000029	0.00007	mg/L	0.000029	42.18%
Ca 317.933†	39.1	0.00336	mg/L	0.001275	0.00336	mg/L	0.001275	37.94%
Cd 228.802†	-2.1	-0.00008	mg/L	0.000043	-0.00008	mg/L	0.000043	56.06%
Co 228.616†	11.4	0.00036	mg/L	0.000162	0.00036	mg/L	0.000162	44.81%
Cr 267.716†	-0.5	-0.00006	mg/L	0.000854	-0.00006	mg/L	0.000854	>999.9%
Cu 324.752†	-28.6	-0.00012	mg/L	0.000141	-0.00012	mg/L	0.000141	114.80%
Fe 273.955†	7.0	0.00545	mg/L	0.000618	0.00545	mg/L	0.000618	11.32%
K 766.490†	74.6	0.04056	mg/L	0.011742	0.04056	mg/L	0.011742	28.95%
Mg 279.077†	10.0	0.00799	mg/L	0.006209	0.00799	mg/L	0.006209	77.73%
Mn 257.610†	1.7	0.00004	mg/L	0.000188	0.00004	mg/L	0.000188	513.94%
Mo 202.031†	-5.2	-0.00033	mg/L	0.000100	-0.00033	mg/L	0.000100	30.53%
Na 589.592†	-123.9	-0.00987	mg/L	0.000576	-0.00987	mg/L	0.000576	5.84%
Na 330.237†	24.9	0.8917	mg/L	0.30110	0.8917	mg/L	0.30110	33.77%
Ni 231.604†	3.6	0.00098	mg/L	0.000912	0.00098	mg/L	0.000912	92.66%
Pb 220.353†	10.2	0.00123	mg/L	0.000788	0.00123	mg/L	0.000788	64.21%
Sb 206.836†	-1.6	-0.00064	mg/L	0.000112	-0.00064	mg/L	0.000112	17.50%
Se 196.026†	10.6	0.00866	mg/L	0.001311	0.00866	mg/L	0.001311	15.14%
Si 288.158†	-7.6	-0.00458	mg/L	0.006389	-0.00458	mg/L	0.006389	139.65%
Sn 189.927†	2.8	0.00055	mg/L	0.000236	0.00055	mg/L	0.000236	43.21%
Sr 421.552†	146.2	0.00017	mg/L	0.000038	0.00017	mg/L	0.000038	22.72%
Ti 334.903†	-34.0	-0.00109	mg/L	0.000516	-0.00109	mg/L	0.000516	47.29%
Tl 190.801†	3.4	0.00206	mg/L	0.001210	0.00206	mg/L	0.001210	58.64%
V 292.402†	18.5	0.00012	mg/L	0.000093	0.00012	mg/L	0.000093	77.06%
Zn 206.200†	3.8	0.00094	mg/L	0.000671	0.00094	mg/L	0.000671	71.15%

Sequence No.: 32
Sample ID: SS71 MB1 SWC

Autosampler Location: 324
Date Collected: 4/27/2011 11:04:21 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 MB1 SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2441874.6	109.4	%	1.37				1.26%
ScR 361.383	442328.2	111.1	%	1.44				1.29%
Ag 328.068†	168.3	0.00091	mg/L	0.000089	0.00182	mg/L	0.000177	9.78%
Al 308.215†	29.7	0.02132	mg/L	0.011894	0.04265	mg/L	0.023789	55.78%
As 188.979†	-1.0	-0.00069	mg/L	0.001127	-0.00137	mg/L	0.002254	164.04%
B 249.677†	4.1	0.00074	mg/L	0.001371	0.00149	mg/L	0.002742	184.06%
Ba 233.527†	-3.1	-0.00043	mg/L	0.000399	-0.00086	mg/L	0.000799	93.40%
Be 313.042†	-52.0	-0.00006	mg/L	0.000006	-0.00012	mg/L	0.000012	9.71%
Ca 317.933†	201.6	0.01734	mg/L	0.001298	0.03469	mg/L	0.002597	7.49%
Cd 228.802†	-8.5	-0.00030	mg/L	0.000071	-0.00060	mg/L	0.000142	23.67%
Co 228.616†	9.9	0.00031	mg/L	0.000047	0.00063	mg/L	0.000093	14.83%
Cr 267.716†	-1.8	-0.00023	mg/L	0.000621	-0.00045	mg/L	0.001241	273.37%
Cu 324.752†	-55.3	-0.00024	mg/L	0.000120	-0.00048	mg/L	0.000240	50.47%
Fe 273.955†	5.7	0.00445	mg/L	0.001539	0.00889	mg/L	0.003078	34.62%
K 766.490†	173.8	0.09448	mg/L	0.002228	0.1890	mg/L	0.00446	2.36%
Mg 279.077†	22.5	0.01789	mg/L	0.007063	0.03578	mg/L	0.014127	39.48%
Mn 257.610†	-2.3	-0.00005	mg/L	0.000151	-0.00010	mg/L	0.000302	314.54%
Mo 202.031†	-10.9	-0.00068	mg/L	0.000191	-0.00136	mg/L	0.000382	27.98%
Na 589.592†	-13.8	-0.00110	mg/L	0.001508	-0.00219	mg/L	0.003016	137.53%
Na 330.237†	22.2	0.7935	mg/L	0.30381	1.587	mg/L	0.6076	38.29%
Ni 231.604†	7.7	0.00212	mg/L	0.000578	0.00423	mg/L	0.001156	27.30%
Pb 220.353†	6.8	0.00082	mg/L	0.000273	0.00164	mg/L	0.000546	33.28%
Sb 206.836†	-2.1	-0.00082	mg/L	0.001652	-0.00165	mg/L	0.003305	200.35%
Se 196.026†	10.7	0.00870	mg/L	0.002387	0.01740	mg/L	0.004775	27.44%
Si 288.158†	0.9	0.00052	mg/L	0.002402	0.00105	mg/L	0.004805	458.50%
Sn 189.927†	2.8	0.00056	mg/L	0.000202	0.00112	mg/L	0.000404	35.96%
Sr 421.552†	98.4	0.00011	mg/L	0.000024	0.00023	mg/L	0.000049	21.50%
Ti 334.903†	-49.7	-0.00160	mg/L	0.001005	-0.00319	mg/L	0.002011	62.97%
Tl 190.801†	0.3	0.00020	mg/L	0.001746	0.00040	mg/L	0.003491	881.77%
V 292.402†	11.6	0.00007	mg/L	0.000051	0.00015	mg/L	0.000102	68.33%
Zn 206.200†	6.7	0.00167	mg/L	0.000325	0.00334	mg/L	0.000649	19.46%

Sequence No.: 33
Sample ID: SS71 D SWC

Autosampler Location: 325
Date Collected: 4/27/2011 11:08:34 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 D SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2436548.0	109.2	%	0.35				0.32%
ScR 361.383	432575.8	108.7	%	2.50				2.30%
Ag 328.068†	218.4	0.00087	mg/L	0.000292	0.00173	mg/L	0.000585	33.72%
Al 308.215†	121396.4	86.98	mg/L	0.250	174.0	mg/L	0.50	0.29%
As 188.979†	81.5	0.09290	mg/L	0.000504	0.1858	mg/L	0.00101	0.54%
B 249.677†	103.1	0.01844	mg/L	0.000585	0.03687	mg/L	0.001169	3.17%
Ba 233.527†	3412.1	0.4670	mg/L	0.01130	0.9339	mg/L	0.02261	2.42%
Be 313.042†	1266.4	0.00128	mg/L	0.000064	0.00256	mg/L	0.000127	4.97%
Ca 317.933†	557005.0	47.91	mg/L	0.063	95.83	mg/L	0.126	0.13%
Cd 228.802†	105.5	0.00371	mg/L	0.000135	0.00743	mg/L	0.000270	3.63%
Co 228.616†	1742.1	0.04708	mg/L	0.000093	0.09416	mg/L	0.000186	0.20%
Cr 267.716†	1880.6	0.2377	mg/L	0.00659	0.4754	mg/L	0.01318	2.77%
Cu 324.752†	53285.4	0.2341	mg/L	0.00338	0.4682	mg/L	0.00676	1.44%
Fe 273.955†	147877.6	115.6	mg/L	0.24	231.2	mg/L	0.48	0.21%
K 766.490†	10543.0	5.733	mg/L	0.0106	11.47	mg/L	0.021	0.18%
Mg 279.077†	44602.5	35.44	mg/L	0.047	70.88	mg/L	0.094	0.13%
Mn 257.610†	100005.8	2.121	mg/L	0.0093	4.242	mg/L	0.0185	0.44%
Mo 202.031†	122.9	0.00678	mg/L	0.000232	0.01356	mg/L	0.000465	3.43%
Na 589.592†	20701.2	1.649	mg/L	0.0042	3.298	mg/L	0.0084	0.25%
Na 330.237†	46.1	3.133	mg/L	0.0781	6.265	mg/L	0.1562	2.49%
Ni 231.604†	815.4	0.2238	mg/L	0.00405	0.4476	mg/L	0.00811	1.81%
Pb 220.353†	3890.5	0.4786	mg/L	0.00036	0.9573	mg/L	0.00073	0.08%
Sb 206.836†	0.3	0.00627	mg/L	0.002188	0.01254	mg/L	0.004377	34.90%
Se 196.026†	45.9	0.02707	mg/L	0.001274	0.05414	mg/L	0.002547	4.71%
Si 288.158†	10848.2	6.550	mg/L	0.1616	13.10	mg/L	0.323	2.47%
Sn 189.927†	-1.5	0.01413	mg/L	0.000924	0.02826	mg/L	0.001847	6.54%
Sr 421.552†	246121.7	0.2845	mg/L	0.00061	0.5689	mg/L	0.00121	0.21%
Ti 334.903†	152989.2	4.899	mg/L	0.0162	9.799	mg/L	0.0325	0.33%
Tl 190.801†	-10.2	0.00879	mg/L	0.000817	0.01759	mg/L	0.001634	9.29%
V 292.402†	45925.5	0.2883	mg/L	0.00379	0.5767	mg/L	0.00757	1.31%
Zn 206.200†	2650.1	0.6638	mg/L	0.01631	1.328	mg/L	0.0326	2.46%

Sequence No.: 34
Sample ID: SS71 E SWC

Autosampler Location: 326
Date Collected: 4/27/2011 11:12:32 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 E SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2453754.4	110.0	%	1.11				1.01%
ScR 361.383	443112.1	111.3	%	1.10				0.99%
Ag 328.068†	158.8	0.00057	mg/L	0.000308	0.00114	mg/L	0.000615	54.09%
Al 308.215†	154041.3	110.4	mg/L	0.35	220.7	mg/L	0.70	0.32%
As 188.979†	87.0	0.1083	mg/L	0.00309	0.2165	mg/L	0.00618	2.86%
B 249.677†	60.6	0.01075	mg/L	0.000587	0.02151	mg/L	0.001174	5.46%
Ba 233.527†	3002.7	0.4093	mg/L	0.00439	0.8187	mg/L	0.00879	1.07%
Be 313.042†	1713.2	0.00174	mg/L	0.000034	0.00347	mg/L	0.000068	1.96%
Ca 317.933†	337325.7	29.02	mg/L	0.091	58.03	mg/L	0.181	0.31%
Cd 228.802†	63.9	0.00223	mg/L	0.000233	0.00446	mg/L	0.000466	10.44%
Co 228.616†	2166.8	0.05857	mg/L	0.000994	0.1171	mg/L	0.00199	1.70%
Cr 267.716†	2209.0	0.2796	mg/L	0.00231	0.5592	mg/L	0.00462	0.83%
Cu 324.752†	46302.5	0.2041	mg/L	0.00214	0.4082	mg/L	0.00427	1.05%
Fe 273.955†	159988.2	125.1	mg/L	0.32	250.1	mg/L	0.64	0.25%
K 766.490†	9666.2	5.256	mg/L	0.0175	10.51	mg/L	0.035	0.33%
Mg 279.077†	43427.8	34.50	mg/L	0.107	69.00	mg/L	0.214	0.31%
Mn 257.610†	99934.1	2.119	mg/L	0.0088	4.239	mg/L	0.0175	0.41%
Mo 202.031†	106.6	0.00611	mg/L	0.000302	0.01222	mg/L	0.000603	4.94%
Na 589.592†	17746.5	1.414	mg/L	0.0051	2.827	mg/L	0.0103	0.36%
Na 330.237†	34.6	3.208	mg/L	0.0596	6.415	mg/L	0.1192	1.86%
Ni 231.604†	981.1	0.2693	mg/L	0.00329	0.5386	mg/L	0.00658	1.22%
Pb 220.353†	963.5	0.1305	mg/L	0.00240	0.2609	mg/L	0.00480	1.84%
Sb 206.836†	-7.5	0.00479	mg/L	0.000742	0.00959	mg/L	0.001485	15.49%
Se 196.026†	36.7	0.02256	mg/L	0.007475	0.04512	mg/L	0.014950	33.13%
Si 288.158†	14395.2	8.690	mg/L	0.0710	17.38	mg/L	0.142	0.82%
Sn 189.927†	-52.4	-0.00043	mg/L	0.001573	-0.00085	mg/L	0.003146	368.44%
Sr 421.552†	136495.0	0.1578	mg/L	0.00033	0.3155	mg/L	0.00067	0.21%
Ti 334.903†	190811.9	6.116	mg/L	0.0179	12.23	mg/L	0.036	0.29%
Tl 190.801†	-12.5	0.00845	mg/L	0.008894	0.01690	mg/L	0.017788	105.25%
V 292.402†	61515.7	0.3887	mg/L	0.00551	0.7773	mg/L	0.01103	1.42%
Zn 206.200†	1491.6	0.3736	mg/L	0.00340	0.7472	mg/L	0.00679	0.91%

Sequence No.: 35
Sample ID: SS71 F SWC

Autosampler Location: 327
Date Collected: 4/27/2011 11:16:29 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 F SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2443227.3	109.5	%	0.46				0.42%
ScR 361.383	439574.7	110.5	%	1.27				1.15%
Ag 328.068†	135.1	0.00055	mg/L	0.000146	0.00110	mg/L	0.000292	26.57%
Al 308.215†	156953.1	112.5	mg/L	0.45	224.9	mg/L	0.90	0.40%
As 188.979†	62.5	0.09042	mg/L	0.002788	0.1808	mg/L	0.00558	3.08%
B 249.677†	77.6	0.01383	mg/L	0.000219	0.02767	mg/L	0.000439	1.59%
Ba 233.527†	3138.1	0.4285	mg/L	0.00540	0.8571	mg/L	0.01079	1.26%
Be 313.042†	1853.4	0.00190	mg/L	0.000039	0.00381	mg/L	0.000078	2.06%
Ca 317.933†	340793.1	29.32	mg/L	0.157	58.63	mg/L	0.315	0.54%
Cd 228.802†	56.1	0.00204	mg/L	0.000024	0.00408	mg/L	0.000047	1.16%
Co 228.616†	1871.9	0.04934	mg/L	0.000410	0.09867	mg/L	0.000820	0.83%
Cr 267.716†	2409.1	0.3043	mg/L	0.00353	0.6087	mg/L	0.00707	1.16%
Cu 324.752†	33661.9	0.1493	mg/L	0.00102	0.2986	mg/L	0.00204	0.68%
Fe 273.955†	153370.7	119.9	mg/L	0.21	239.8	mg/L	0.43	0.18%
K 766.490†	9295.3	5.054	mg/L	0.0264	10.11	mg/L	0.053	0.52%
Mg 279.077†	45803.0	36.39	mg/L	0.097	72.78	mg/L	0.194	0.27%
Mn 257.610†	70308.4	1.491	mg/L	0.0023	2.982	mg/L	0.0045	0.15%
Mo 202.031†	119.2	0.00689	mg/L	0.000323	0.01379	mg/L	0.000645	4.68%
Na 589.592†	17254.9	1.374	mg/L	0.0065	2.749	mg/L	0.0129	0.47%
Na 330.237†	26.1	2.885	mg/L	0.3136	5.769	mg/L	0.6272	10.87%
Ni 231.604†	1104.5	0.3032	mg/L	0.00442	0.6064	mg/L	0.00883	1.46%
Pb 220.353†	928.2	0.1270	mg/L	0.00262	0.2541	mg/L	0.00524	2.06%
Sb 206.836†	-12.4	0.00244	mg/L	0.001818	0.00488	mg/L	0.003635	74.54%
Se 196.026†	45.8	0.02977	mg/L	0.002305	0.05953	mg/L	0.004611	7.74%
Si 288.158†	11073.8	6.686	mg/L	0.0793	13.37	mg/L	0.159	1.19%
Sn 189.927†	-47.7	0.00055	mg/L	0.001280	0.00110	mg/L	0.002560	233.73%
Sr 421.552†	145587.5	0.1683	mg/L	0.00044	0.3365	mg/L	0.00087	0.26%
Ti 334.903†	188715.4	6.049	mg/L	0.0128	12.10	mg/L	0.026	0.21%
Tl 190.801†	-17.6	0.00472	mg/L	0.002443	0.00945	mg/L	0.004887	51.73%
V 292.402†	59108.9	0.3734	mg/L	0.00225	0.7469	mg/L	0.00450	0.60%
Zn 206.200†	1414.0	0.3542	mg/L	0.00494	0.7084	mg/L	0.00988	1.39%

Sequence No.: 36
Sample ID: SS71 G SWC

Autosampler Location: 328
Date Collected: 4/27/2011 11:20:26 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 G SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2443224.8	109.5	%	0.35				0.32%
ScR 361.383	445542.3	112.0	%	1.53				1.36%
Ag 328.068†	252.9	0.00105	mg/L	0.000204	0.00210	mg/L	0.000407	19.40%
Al 308.215†	192265.9	137.8	mg/L	0.55	275.5	mg/L	1.09	0.40%
As 188.979†	94.8	0.1110	mg/L	0.00287	0.2220	mg/L	0.00573	2.58%
B 249.677†	89.1	0.01589	mg/L	0.001491	0.03178	mg/L	0.002981	9.38%
Ba 233.527†	4315.2	0.5915	mg/L	0.01033	1.183	mg/L	0.0207	1.75%
Be 313.042†	2158.2	0.00225	mg/L	0.000054	0.00450	mg/L	0.000109	2.42%
Ca 317.933†	442390.0	38.06	mg/L	0.155	76.11	mg/L	0.309	0.41%
Cd 228.802†	116.1	0.00410	mg/L	0.000053	0.00820	mg/L	0.000105	1.28%
Co 228.616†	2044.8	0.05506	mg/L	0.000298	0.1101	mg/L	0.00060	0.54%
Cr 267.716†	2278.1	0.2883	mg/L	0.00464	0.5766	mg/L	0.00928	1.61%
Cu 324.752†	41149.7	0.1822	mg/L	0.00032	0.3645	mg/L	0.00063	0.17%
Fe 273.955†	168433.5	131.7	mg/L	0.56	263.3	mg/L	1.12	0.42%
K 766.490†	6229.1	3.387	mg/L	0.0127	6.774	mg/L	0.0254	0.38%
Mg 279.077†	46374.4	36.84	mg/L	0.144	73.68	mg/L	0.289	0.39%
Mn 257.610†	106166.6	2.251	mg/L	0.0172	4.503	mg/L	0.0343	0.76%
Mo 202.031†	96.8	0.00533	mg/L	0.000075	0.01067	mg/L	0.000151	1.41%
Na 589.592†	15070.1	1.200	mg/L	0.0048	2.401	mg/L	0.0097	0.40%
Na 330.237†	29.0	2.902	mg/L	0.0442	5.805	mg/L	0.0884	1.52%
Ni 231.604†	1061.2	0.2913	mg/L	0.00426	0.5826	mg/L	0.00853	1.46%
Pb 220.353†	1735.5	0.2284	mg/L	0.00206	0.4568	mg/L	0.00413	0.90%
Sb 206.836†	-10.1	0.00330	mg/L	0.002359	0.00661	mg/L	0.004718	71.42%
Se 196.026†	41.3	0.02473	mg/L	0.002328	0.04946	mg/L	0.004656	9.41%
Si 288.158†	5677.9	3.430	mg/L	0.0631	6.861	mg/L	0.1261	1.84%
Sn 189.927†	-45.2	0.00329	mg/L	0.000456	0.00658	mg/L	0.000913	13.86%
Sr 421.552†	170805.7	0.1974	mg/L	0.00130	0.3948	mg/L	0.00260	0.66%
Ti 334.903†	183234.4	5.871	mg/L	0.0424	11.74	mg/L	0.085	0.72%
Tl 190.801†	-15.1	0.00778	mg/L	0.002274	0.01557	mg/L	0.004547	29.22%
V 292.402†	59837.5	0.3774	mg/L	0.00051	0.7548	mg/L	0.00102	0.14%
Zn 206.200†	1835.2	0.4597	mg/L	0.00772	0.9194	mg/L	0.01544	1.68%

Sequence No.: 37
Sample ID: SS71 H SWC

Autosampler Location: 329
Date Collected: 4/27/2011 11:24:20 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 H SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2503249.7	112.2	%	0.35				0.32%
ScR 361.383	446147.7	112.1	%	0.63				0.56%
Ag 328.068†	35.5	-0.00004	mg/L	0.000019	-0.00008	mg/L	0.000038	47.42%
Al 308.215†	215498.1	154.4	mg/L	0.29	308.8	mg/L	0.57	0.18%
As 188.979†	-23.6	0.04631	mg/L	0.001011	0.09263	mg/L	0.002022	2.18%
B 249.677†	48.1	0.00847	mg/L	0.000814	0.01694	mg/L	0.001628	9.61%
Ba 233.527†	3255.3	0.4420	mg/L	0.00194	0.8841	mg/L	0.00388	0.44%
Be 313.042†	2290.8	0.00237	mg/L	0.000014	0.00475	mg/L	0.000029	0.61%
Ca 317.933†	372481.0	32.04	mg/L	0.033	64.08	mg/L	0.067	0.10%
Cd 228.802†	27.7	0.00128	mg/L	0.000120	0.00257	mg/L	0.000239	9.33%
Co 228.616†	2529.8	0.06682	mg/L	0.000111	0.1336	mg/L	0.00022	0.17%
Cr 267.716†	2793.4	0.3535	mg/L	0.00212	0.7071	mg/L	0.00424	0.60%
Cu 324.752†	32850.5	0.1473	mg/L	0.00064	0.2945	mg/L	0.00128	0.44%
Fe 273.955†	207974.0	162.6	mg/L	0.58	325.2	mg/L	1.17	0.36%
K 766.490†	7988.1	4.343	mg/L	0.0260	8.687	mg/L	0.0520	0.60%
Mg 279.077†	60918.4	48.40	mg/L	0.092	96.80	mg/L	0.184	0.19%
Mn 257.610†	87587.5	1.857	mg/L	0.0082	3.715	mg/L	0.0165	0.44%
Mo 202.031†	36.5	0.00168	mg/L	0.000772	0.00337	mg/L	0.001543	45.80%
Na 589.592†	16471.6	1.312	mg/L	0.0036	2.624	mg/L	0.0071	0.27%
Na 330.237†	7.8	2.953	mg/L	0.1067	5.906	mg/L	0.2135	3.61%
Ni 231.604†	1408.4	0.3866	mg/L	0.00146	0.7732	mg/L	0.00292	0.38%
Pb 220.353†	-3.2	0.02072	mg/L	0.000364	0.04144	mg/L	0.000728	1.76%
Sb 206.836†	-12.0	0.00542	mg/L	0.001648	0.01085	mg/L	0.003295	30.38%
Se 196.026†	32.2	0.01723	mg/L	0.007782	0.03447	mg/L	0.015564	45.16%
Si 288.158†	12582.2	7.598	mg/L	0.0373	15.20	mg/L	0.075	0.49%
Sn 189.927†	-69.6	-0.00231	mg/L	0.000803	-0.00462	mg/L	0.001605	34.73%
Sr 421.552†	173128.3	0.2001	mg/L	0.00044	0.4002	mg/L	0.00088	0.22%
Ti 334.903†	252934.8	8.108	mg/L	0.0255	16.22	mg/L	0.051	0.31%
Tl 190.801†	-15.8	0.01140	mg/L	0.007768	0.02280	mg/L	0.015537	68.14%
V 292.402†	67379.4	0.4229	mg/L	0.00318	0.8457	mg/L	0.00637	0.75%
Zn 206.200†	1003.7	0.2514	mg/L	0.00104	0.5028	mg/L	0.00209	0.42%

Sequence No.: 38
Sample ID: SS71 J SWC

Autosampler Location: 330
Date Collected: 4/27/2011 11:28:18 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 J SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2457083.2	110.1	%	0.90				0.81%
ScR 361.383	444516.8	111.7	%	0.83				0.74%
Ag 328.068†	137.0	0.00043	mg/L	0.000076	0.00086	mg/L	0.000152	17.65%
Al 308.215†	161922.3	116.0	mg/L	0.21	232.0	mg/L	0.43	0.18%
As 188.979†	33.6	0.07429	mg/L	0.003431	0.1486	mg/L	0.00686	4.62%
B 249.677†	56.6	0.01001	mg/L	0.001402	0.02002	mg/L	0.002803	14.00%
Ba 233.527†	3529.3	0.4815	mg/L	0.00438	0.9629	mg/L	0.00877	0.91%
Be 313.042†	1749.0	0.00179	mg/L	0.000040	0.00358	mg/L	0.000081	2.26%
Ca 317.933†	517032.5	44.48	mg/L	0.190	88.95	mg/L	0.380	0.43%
Cd 228.802†	67.3	0.00253	mg/L	0.000115	0.00505	mg/L	0.000230	4.55%
Co 228.616†	2349.9	0.06335	mg/L	0.000628	0.1267	mg/L	0.00126	0.99%
Cr 267.716†	2501.6	0.3163	mg/L	0.00155	0.6326	mg/L	0.00309	0.49%
Cu 324.752†	38367.8	0.1705	mg/L	0.00244	0.3410	mg/L	0.00488	1.43%
Fe 273.955†	182602.1	142.8	mg/L	0.71	285.5	mg/L	1.42	0.50%
K 766.490†	11814.6	6.424	mg/L	0.0490	12.85	mg/L	0.098	0.76%
Mg 279.077†	53827.9	42.77	mg/L	0.121	85.53	mg/L	0.241	0.28%
Mn 257.610†	104063.6	2.207	mg/L	0.0171	4.414	mg/L	0.0343	0.78%
Mo 202.031†	85.6	0.00451	mg/L	0.000091	0.00903	mg/L	0.000183	2.02%
Na 589.592†	22260.5	1.773	mg/L	0.0132	3.546	mg/L	0.0263	0.74%
Na 330.237†	39.7	3.588	mg/L	0.0924	7.176	mg/L	0.1849	2.58%
Ni 231.604†	1179.4	0.3237	mg/L	0.00550	0.6475	mg/L	0.01100	1.70%
Pb 220.353†	1451.3	0.1894	mg/L	0.00207	0.3787	mg/L	0.00413	1.09%
Sb 206.836†	-5.8	0.00596	mg/L	0.001462	0.01192	mg/L	0.002924	24.52%
Se 196.026†	41.1	0.02306	mg/L	0.006933	0.04613	mg/L	0.013865	30.06%
Si 288.158†	12213.0	7.374	mg/L	0.0678	14.75	mg/L	0.136	0.92%
Sn 189.927†	-72.8	-0.00012	mg/L	0.000376	-0.00025	mg/L	0.000751	304.55%
Sr 421.552†	201612.6	0.2330	mg/L	0.00112	0.4660	mg/L	0.00223	0.48%
Ti 334.903†	210046.5	6.730	mg/L	0.0401	13.46	mg/L	0.080	0.60%
Tl 190.801†	-18.7	0.00709	mg/L	0.006455	0.01418	mg/L	0.012910	91.03%
V 292.402†	58610.6	0.3681	mg/L	0.00661	0.7361	mg/L	0.01323	1.80%
Zn 206.200†	1647.6	0.4127	mg/L	0.00429	0.8254	mg/L	0.00858	1.04%

Sequence No.: 39
Sample ID: SS71 K SWC

Autosampler Location: 331
Date Collected: 4/27/2011 11:32:16 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 K SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2484875.3	111.4	%	0.42				0.38%
ScR 361.383	451076.1	113.3	%	0.62				0.55%
Ag 328.068†	127.0	0.00033	mg/L	0.000119	0.00065	mg/L	0.000238	36.46%
Al 308.215†	168834.9	121.0	mg/L	0.65	241.9	mg/L	1.30	0.54%
As 188.979†	2.3	0.05723	mg/L	0.001271	0.1145	mg/L	0.00254	2.22%
B 249.677†	47.4	0.00834	mg/L	0.000659	0.01667	mg/L	0.001319	7.91%
Ba 233.527†	3239.2	0.4404	mg/L	0.00263	0.8808	mg/L	0.00526	0.60%
Be 313.042†	1617.9	0.00162	mg/L	0.000006	0.00325	mg/L	0.000013	0.40%
Ca 317.933†	449092.1	38.63	mg/L	0.152	77.26	mg/L	0.304	0.39%
Cd 228.802†	41.6	0.00168	mg/L	0.000116	0.00336	mg/L	0.000232	6.88%
Co 228.616†	2616.2	0.07091	mg/L	0.000703	0.1418	mg/L	0.00141	0.99%
Cr 267.716†	2686.5	0.3398	mg/L	0.00207	0.6795	mg/L	0.00414	0.61%
Cu 324.752†	31690.3	0.1421	mg/L	0.00194	0.2841	mg/L	0.00389	1.37%
Fe 273.955†	196427.4	153.6	mg/L	0.98	307.1	mg/L	1.96	0.64%
K 766.490†	10871.2	5.911	mg/L	0.0254	11.82	mg/L	0.051	0.43%
Mg 279.077†	58887.2	46.79	mg/L	0.241	93.57	mg/L	0.482	0.51%
Mn 257.610†	119396.2	2.532	mg/L	0.0191	5.064	mg/L	0.0383	0.76%
Mo 202.031†	60.1	0.00303	mg/L	0.000725	0.00606	mg/L	0.001451	23.93%
Na 589.592†	19318.4	1.539	mg/L	0.0092	3.078	mg/L	0.0185	0.60%
Na 330.237†	28.9	3.415	mg/L	0.1337	6.830	mg/L	0.2673	3.91%
Ni 231.604†	1199.7	0.3293	mg/L	0.00201	0.6586	mg/L	0.00401	0.61%
Pb 220.353†	312.3	0.05268	mg/L	0.001259	0.1054	mg/L	0.00252	2.39%
Sb 206.836†	-9.5	0.00518	mg/L	0.000902	0.01036	mg/L	0.001803	17.40%
Se 196.026†	37.7	0.02085	mg/L	0.002525	0.04170	mg/L	0.005049	12.11%
Si 288.158†	14385.2	8.685	mg/L	0.0373	17.37	mg/L	0.075	0.43%
Sn 189.927†	-70.9	-0.00110	mg/L	0.000820	-0.00220	mg/L	0.001641	74.49%
Sr 421.552†	209743.5	0.2424	mg/L	0.00126	0.4848	mg/L	0.00252	0.52%
Ti 334.903†	226971.2	7.274	mg/L	0.0434	14.55	mg/L	0.087	0.60%
Tl 190.801†	-22.6	0.00612	mg/L	0.004917	0.01223	mg/L	0.009833	80.40%
V 292.402†	62549.8	0.3927	mg/L	0.00498	0.7854	mg/L	0.00996	1.27%
Zn 206.200†	1195.8	0.2995	mg/L	0.00141	0.5990	mg/L	0.00282	0.47%

Sequence No.: 40
Sample ID: SS71 L SWC

Autosampler Location: 332
Date Collected: 4/27/2011 11:36:14 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 L SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2483890.2	111.3	%	1.52				1.36%
ScR 361.383	450813.7	113.3	%	0.87				0.77%
Ag 328.068†	114.7	0.00028	mg/L	0.000115	0.00056	mg/L	0.000229	40.68%
Al 308.215†	169648.1	121.5	mg/L	0.79	243.1	mg/L	1.58	0.65%
As 188.979†	15.3	0.06484	mg/L	0.001618	0.1297	mg/L	0.00324	2.50%
B 249.677†	51.3	0.00906	mg/L	0.001046	0.01812	mg/L	0.002093	11.55%
Ba 233.527†	3156.5	0.4294	mg/L	0.00371	0.8589	mg/L	0.00742	0.86%
Be 313.042†	1647.4	0.00167	mg/L	0.000017	0.00333	mg/L	0.000033	0.99%
Ca 317.933†	463059.5	39.83	mg/L	0.196	79.67	mg/L	0.393	0.49%
Cd 228.802†	39.6	0.00157	mg/L	0.000184	0.00313	mg/L	0.000368	11.73%
Co 228.616†	2382.7	0.06381	mg/L	0.001236	0.1276	mg/L	0.00247	1.94%
Cr 267.716†	2545.0	0.3219	mg/L	0.00241	0.6439	mg/L	0.00482	0.75%
Cu 324.752†	33319.2	0.1487	mg/L	0.00120	0.2975	mg/L	0.00241	0.81%
Fe 273.955†	185523.3	145.0	mg/L	0.96	290.1	mg/L	1.92	0.66%
K 766.490†	8981.0	4.883	mg/L	0.0022	9.767	mg/L	0.0045	0.05%
Mg 279.077†	53137.9	42.22	mg/L	0.230	84.43	mg/L	0.461	0.55%
Mn 257.610†	112708.5	2.390	mg/L	0.0180	4.780	mg/L	0.0361	0.75%
Mo 202.031†	65.4	0.00334	mg/L	0.000256	0.00668	mg/L	0.000512	7.65%
Na 589.592†	20669.8	1.646	mg/L	0.0064	3.293	mg/L	0.0127	0.39%
Na 330.237†	34.8	3.559	mg/L	0.2075	7.117	mg/L	0.4151	5.83%
Ni 231.604†	1136.3	0.3119	mg/L	0.00224	0.6238	mg/L	0.00448	0.72%
Pb 220.353†	454.3	0.07034	mg/L	0.000381	0.1407	mg/L	0.00076	0.54%
Sb 206.836†	-9.0	0.00521	mg/L	0.000847	0.01042	mg/L	0.001694	16.26%
Se 196.026†	39.8	0.02275	mg/L	0.008321	0.04550	mg/L	0.016642	36.58%
Si 288.158†	7420.2	4.482	mg/L	0.0319	8.964	mg/L	0.0639	0.71%
Sn 189.927†	-73.4	-0.00133	mg/L	0.001515	-0.00267	mg/L	0.003030	113.66%
Sr 421.552†	183068.2	0.2116	mg/L	0.00126	0.4232	mg/L	0.00253	0.60%
Ti 334.903†	221454.4	7.097	mg/L	0.0482	14.19	mg/L	0.096	0.68%
Tl 190.801†	-21.6	0.00560	mg/L	0.002177	0.01121	mg/L	0.004354	38.84%
V 292.402†	60306.5	0.3788	mg/L	0.00402	0.7575	mg/L	0.00804	1.06%
Zn 206.200†	1300.2	0.3257	mg/L	0.00102	0.6514	mg/L	0.00204	0.31%

Sequence No.: 41
Sample ID: SS71 MB1SPK SWC

Autosampler Location: 333
Date Collected: 4/27/2011 11:40:11 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 MB1SPK SWC

Analyte	Back Pressure	Flow
All	209.0 kPa	0.75 L/min

Mean Data: SS71 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2467537.3	110.6	%	0.71				0.64%
ScR 361.383	437393.9	109.9	%	0.23				0.21%
Ag 328.068†	95388.4	0.5143	mg/L	0.00077	1.029	mg/L	0.0015	0.15%
Al 308.215†	2849.2	2.032	mg/L	0.0592	4.064	mg/L	0.1183	2.91%
As 188.979†	2824.4	1.987	mg/L	0.0084	3.975	mg/L	0.0168	0.42%
B 249.677†	-1.5	-0.00142	mg/L	0.000360	-0.00284	mg/L	0.000721	25.42%
Ba 233.527†	14136.7	1.966	mg/L	0.0112	3.932	mg/L	0.0223	0.57%
Be 313.042†	430100.4	0.4899	mg/L	0.00431	0.9797	mg/L	0.00862	0.88%
Ca 317.933†	110987.7	9.547	mg/L	0.0271	19.09	mg/L	0.054	0.28%
Cd 228.802†	13689.1	0.4851	mg/L	0.00253	0.9701	mg/L	0.00505	0.52%
Co 228.616†	15112.0	0.4779	mg/L	0.00329	0.9558	mg/L	0.00658	0.69%
Cr 267.716†	3910.0	0.4892	mg/L	0.00407	0.9784	mg/L	0.00814	0.83%
Cu 324.752†	111958.9	0.4833	mg/L	0.00381	0.9666	mg/L	0.00762	0.79%
Fe 273.955†	2612.9	2.040	mg/L	0.0694	4.080	mg/L	0.1389	3.40%
K 766.490†	18199.7	9.896	mg/L	0.0614	19.79	mg/L	0.123	0.62%
Mg 279.077†	12633.6	10.05	mg/L	0.080	20.11	mg/L	0.160	0.80%
Mn 257.610†	22740.4	0.4827	mg/L	0.00305	0.9653	mg/L	0.00611	0.63%
Mo 202.031†	19.4	0.00103	mg/L	0.000124	0.00206	mg/L	0.000248	12.03%
Na 589.592†	123355.0	9.826	mg/L	0.0676	19.65	mg/L	0.135	0.69%
Na 330.237†	307.3	10.88	mg/L	0.120	21.75	mg/L	0.241	1.11%
Ni 231.604†	1811.5	0.4972	mg/L	0.00217	0.9945	mg/L	0.00434	0.44%
Pb 220.353†	16081.7	1.936	mg/L	0.0158	3.873	mg/L	0.0315	0.81%
Sb 206.836†	5.8	-0.00083	mg/L	0.001952	-0.00167	mg/L	0.003903	233.96%
Se 196.026†	2516.6	2.047	mg/L	0.0079	4.095	mg/L	0.0157	0.38%
Si 288.158†	3.1	0.00491	mg/L	0.003008	0.00982	mg/L	0.006015	61.28%
Sn 189.927†	-18.9	-0.00117	mg/L	0.001063	-0.00233	mg/L	0.002126	91.14%
Sr 421.552†	431093.8	0.4982	mg/L	0.00246	0.9965	mg/L	0.00492	0.49%
Ti 334.903†	111.5	0.00184	mg/L	0.003101	0.00368	mg/L	0.006201	168.29%
Tl 190.801†	3259.0	1.966	mg/L	0.0123	3.933	mg/L	0.0247	0.63%
V 292.402†	73764.9	0.4831	mg/L	0.00717	0.9663	mg/L	0.01434	1.48%
Zn 206.200†	1966.7	0.4927	mg/L	0.00418	0.9855	mg/L	0.00837	0.85%

Sequence No.: 42
Sample ID: CV 4
Dilution: 1X

Autosampler Location: 7
Date Collected: 4/27/2011 11:44:09 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2428235.3	108.8	%	0.26				0.24%
ScR 361.383	432317.5	108.6	%	0.85				0.78%
Ag 328.068†	179606.8	0.9682	mg/L	0.00336	0.9682	mg/L	0.00336	0.35%
Al 308.215†	2796.9	1.972	mg/L	0.0185	1.972	mg/L	0.0185	0.94%
As 188.979†	2800.0	1.977	mg/L	0.0083	1.977	mg/L	0.0083	0.42%
B 249.677†	5552.6	0.9986	mg/L	0.00473	0.9986	mg/L	0.00473	0.47%
Ba 233.527†	6983.0	0.9708	mg/L	0.00643	0.9708	mg/L	0.00643	0.66%
Be 313.042†	871987.7	0.9932	mg/L	0.00412	0.9932	mg/L	0.00412	0.41%
Ca 317.933†	23264.3	2.001	mg/L	0.0171	2.001	mg/L	0.0171	0.86%
Cd 228.802†	28047.9	1.001	mg/L	0.0018	1.001	mg/L	0.0018	0.18%
Co 228.616†	30277.4	0.9569	mg/L	0.00346	0.9569	mg/L	0.00346	0.36%
Cr 267.716†	7856.0	0.9841	mg/L	0.00856	0.9841	mg/L	0.00856	0.87%
Cu 324.752†	222598.3	0.9605	mg/L	0.00402	0.9605	mg/L	0.00402	0.42%
Fe 273.955†	2537.6	1.979	mg/L	0.0152	1.979	mg/L	0.0152	0.77%
K 766.490†	36291.5	19.73	mg/L	0.137	19.73	mg/L	0.137	0.69%
Mg 279.077†	2458.2	1.960	mg/L	0.0110	1.960	mg/L	0.0110	0.56%
Mn 257.610†	45540.3	0.9662	mg/L	0.00919	0.9662	mg/L	0.00919	0.95%
Mo 202.031†	15496.7	0.9668	mg/L	0.00369	0.9668	mg/L	0.00369	0.38%
Na 589.592†	627942.2	50.02	mg/L	0.105	50.02	mg/L	0.105	0.21%
Na 330.237†	1430.1	51.28	mg/L	0.206	51.28	mg/L	0.206	0.40%
Ni 231.604†	3690.9	1.014	mg/L	0.0033	1.014	mg/L	0.0033	0.33%
Pb 220.353†	16495.4	1.987	mg/L	0.0100	1.987	mg/L	0.0100	0.50%
Sb 206.836†	4897.9	1.967	mg/L	0.0097	1.967	mg/L	0.0097	0.49%
Se 196.026†	2460.9	2.004	mg/L	0.0103	2.004	mg/L	0.0103	0.51%
Si 288.158†	3326.9	2.013	mg/L	0.0142	2.013	mg/L	0.0142	0.71%
Sn 189.927†	4868.9	0.9566	mg/L	0.00466	0.9566	mg/L	0.00466	0.49%
Sr 421.552†	871686.9	1.007	mg/L	0.0035	1.007	mg/L	0.0035	0.34%
Ti 334.903†	29393.3	0.9412	mg/L	0.00227	0.9412	mg/L	0.00227	0.24%
Tl 190.801†	3237.3	1.955	mg/L	0.0125	1.955	mg/L	0.0125	0.64%
V 292.402†	144630.8	0.9479	mg/L	0.00584	0.9479	mg/L	0.00584	0.62%
Zn 206.200†	3947.9	0.9887	mg/L	0.00210	0.9887	mg/L	0.00210	0.21%

Sequence No.: 43
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 4/27/2011 11:47:10 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2445018.6	109.6	%	0.81				0.74%
ScR 361.383	440757.5	110.8	%	0.75				0.68%
Ag 328.068†	152.4	0.00082	mg/L	0.000183	0.00082	mg/L	0.000183	22.25%
Al 308.215†	48.2	0.03456	mg/L	0.014900	0.03456	mg/L	0.014900	43.12%
As 188.979†	1.5	0.00105	mg/L	0.001099	0.00105	mg/L	0.001099	104.49%
B 249.677†	4.6	0.00082	mg/L	0.000183	0.00082	mg/L	0.000183	22.18%
Ba 233.527†	-2.9	-0.00041	mg/L	0.000313	-0.00041	mg/L	0.000313	77.19%
Be 313.042†	-15.0	-0.00002	mg/L	0.000023	-0.00002	mg/L	0.000023	132.20%
Ca 317.933†	42.5	0.00366	mg/L	0.001903	0.00366	mg/L	0.001903	52.01%
Cd 228.802†	-5.3	-0.00019	mg/L	0.000146	-0.00019	mg/L	0.000146	75.54%
Co 228.616†	10.8	0.00035	mg/L	0.000083	0.00035	mg/L	0.000083	24.12%
Cr 267.716†	-4.0	-0.00050	mg/L	0.000533	-0.00050	mg/L	0.000533	107.15%
Cu 324.752†	-56.2	-0.00024	mg/L	0.000097	-0.00024	mg/L	0.000097	40.29%
Fe 273.955†	5.3	0.00418	mg/L	0.000632	0.00418	mg/L	0.000632	15.13%
K 766.490†	120.0	0.06524	mg/L	0.008545	0.06524	mg/L	0.008545	13.10%
Mg 279.077†	25.3	0.02012	mg/L	0.006205	0.02012	mg/L	0.006205	30.84%
Mn 257.610†	-7.2	-0.00015	mg/L	0.000074	-0.00015	mg/L	0.000074	48.95%
Mo 202.031†	-7.5	-0.00047	mg/L	0.000022	-0.00047	mg/L	0.000022	4.66%
Na 589.592†	-239.1	-0.01905	mg/L	0.003011	-0.01905	mg/L	0.003011	15.81%
Na 330.237†	35.0	1.253	mg/L	0.3469	1.253	mg/L	0.3469	27.69%
Ni 231.604†	3.7	0.00101	mg/L	0.001429	0.00101	mg/L	0.001429	141.85%
Pb 220.353†	9.1	0.00110	mg/L	0.000922	0.00110	mg/L	0.000922	83.43%
Sb 206.836†	-0.8	-0.00032	mg/L	0.001261	-0.00032	mg/L	0.001261	399.08%
Se 196.026†	5.4	0.00440	mg/L	0.001366	0.00440	mg/L	0.001366	31.01%
Si 288.158†	1.1	0.00067	mg/L	0.002728	0.00067	mg/L	0.002728	404.18%
Sn 189.927†	1.5	0.00030	mg/L	0.000071	0.00030	mg/L	0.000071	23.60%
Sr 421.552†	95.8	0.00011	mg/L	0.000011	0.00011	mg/L	0.000011	10.38%
Ti 334.903†	-40.5	-0.00130	mg/L	0.000274	-0.00130	mg/L	0.000274	21.15%
Tl 190.801†	5.3	0.00322	mg/L	0.001135	0.00322	mg/L	0.001135	35.30%
V 292.402†	26.4	0.00017	mg/L	0.000130	0.00017	mg/L	0.000130	76.54%
Zn 206.200†	3.9	0.00098	mg/L	0.000126	0.00098	mg/L	0.000126	12.85%

Sequence No.: 44
Sample ID: SS83 MB2 TWC

Autosampler Location: 334
Date Collected: 4/27/2011 11:51:23 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: SS83 MB2 TWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS83 MB2 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2461162.5	110.3	%	0.37				0.33%
ScR 361.383	437274.1	109.9	%	0.96				0.88%
Ag 328.068†	195.3	0.00105	mg/L	0.000155	0.00105	mg/L	0.000155	14.71%
Al 308.215†	35.1	0.02515	mg/L	0.007407	0.02515	mg/L	0.007407	29.46%
As 188.979†	1.8	0.00129	mg/L	0.001329	0.00129	mg/L	0.001329	103.08%
B 249.677†	-2.4	-0.00044	mg/L	0.000291	-0.00044	mg/L	0.000291	66.14%
Ba 233.527†	-2.7	-0.00037	mg/L	0.000193	-0.00037	mg/L	0.000193	51.81%
Be 313.042†	-35.5	-0.00004	mg/L	0.000019	-0.00004	mg/L	0.000019	46.40%
Ca 317.933†	128.4	0.01105	mg/L	0.000765	0.01105	mg/L	0.000765	6.92%
Cd 228.802†	-6.2	-0.00023	mg/L	0.000148	-0.00023	mg/L	0.000148	65.54%
Co 228.616†	10.9	0.00034	mg/L	0.000035	0.00034	mg/L	0.000035	10.05%
Cr 267.716†	0.5	0.00007	mg/L	0.000725	0.00007	mg/L	0.000725	>999.9%
Cu 324.752†	-64.2	-0.00028	mg/L	0.000050	-0.00028	mg/L	0.000050	18.08%
Fe 273.955†	13.8	0.01076	mg/L	0.001309	0.01076	mg/L	0.001309	12.16%
K 766.490†	299.3	0.1628	mg/L	0.01277	0.1628	mg/L	0.01277	7.84%
Mg 279.077†	17.9	0.01423	mg/L	0.006512	0.01423	mg/L	0.006512	45.77%
Mn 257.610†	-0.4	-0.00001	mg/L	0.000057	-0.00001	mg/L	0.000057	630.28%
Mo 202.031†	-9.0	-0.00056	mg/L	0.000157	-0.00056	mg/L	0.000157	28.08%
Na 589.592†	-269.5	-0.02147	mg/L	0.002101	-0.02147	mg/L	0.002101	9.79%
Na 330.237†	26.7	0.9552	mg/L	0.11163	0.9552	mg/L	0.11163	11.69%
Ni 231.604†	4.2	0.00114	mg/L	0.000751	0.00114	mg/L	0.000751	65.64%
Pb 220.353†	16.7	0.00202	mg/L	0.000990	0.00202	mg/L	0.000990	49.00%
Sb 206.836†	-3.9	-0.00156	mg/L	0.000969	-0.00156	mg/L	0.000969	61.96%
Se 196.026†	12.7	0.01035	mg/L	0.002343	0.01035	mg/L	0.002343	22.62%
Si 288.158†	9.5	0.00574	mg/L	0.004497	0.00574	mg/L	0.004497	78.38%
Sn 189.927†	2.4	0.00047	mg/L	0.000748	0.00047	mg/L	0.000748	157.81%
Sr 421.552†	85.5	0.00010	mg/L	0.000034	0.00010	mg/L	0.000034	34.60%
Ti 334.903†	-11.2	-0.00036	mg/L	0.000098	-0.00036	mg/L	0.000098	27.36%
Tl 190.801†	3.5	0.00214	mg/L	0.000304	0.00214	mg/L	0.000304	14.23%
V 292.402†	30.8	0.00020	mg/L	0.000085	0.00020	mg/L	0.000085	42.40%
Zn 206.200†	7.7	0.00193	mg/L	0.000603	0.00193	mg/L	0.000603	31.29%

Sequence No.: 45
Sample ID: SS71 I SWC

Dilution: 2X

Autosampler Location: 335
Date Collected: 4/27/2011 11:55:21 AM
Data Type: Original

Nebulizer Parameters: SS71 I SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2548090.1	114.2	%	0.62				0.54%
ScR 361.383	455902.5	114.6	%	1.81				1.58%
Ag 328.068†	107.1	0.00041	mg/L	0.000142	0.00082	mg/L	0.000284	34.82%
Al 308.215†	205772.8	147.4	mg/L	0.31	294.9	mg/L	0.62	0.21%
As 188.979†	-20.2	0.04302	mg/L	0.003945	0.08605	mg/L	0.007891	9.17%
B 249.677†	52.8	0.00934	mg/L	0.000712	0.01867	mg/L	0.001423	7.62%
Ba 233.527†	3772.9	0.5145	mg/L	0.00701	1.029	mg/L	0.0140	1.36%
Be 313.042†	2932.0	0.00311	mg/L	0.000108	0.00621	mg/L	0.000216	3.47%
Ca 317.933†	417372.9	35.90	mg/L	0.163	71.81	mg/L	0.325	0.45%
Cd 228.802†	41.5	0.00177	mg/L	0.000094	0.00355	mg/L	0.000188	5.30%
Co 228.616†	2367.4	0.06272	mg/L	0.000373	0.1254	mg/L	0.00075	0.59%
Cr 267.716†	2794.8	0.3537	mg/L	0.00422	0.7075	mg/L	0.00843	1.19%
Cu 324.752†	38253.3	0.1704	mg/L	0.00173	0.3409	mg/L	0.00347	1.02%
Fe 273.955†	198590.1	155.2	mg/L	0.15	310.5	mg/L	0.30	0.10%
K 766.490†	8846.0	4.810	mg/L	0.0304	9.620	mg/L	0.0607	0.63%
Mg 279.077†	53587.6	42.57	mg/L	0.114	85.14	mg/L	0.229	0.27%
Mn 257.610†	70854.4	1.503	mg/L	0.0017	3.005	mg/L	0.0033	0.11%
Mo 202.031†	42.2	0.00196	mg/L	0.000199	0.00393	mg/L	0.000399	10.14%
Na 589.592†	24508.4	1.952	mg/L	0.0049	3.904	mg/L	0.0099	0.25%
Na 330.237†	37.5	3.785	mg/L	0.2084	7.570	mg/L	0.4167	5.50%
Ni 231.604†	1411.5	0.3874	mg/L	0.00562	0.7749	mg/L	0.01123	1.45%
Pb 220.353†	84.1	0.03028	mg/L	0.000996	0.06055	mg/L	0.001992	3.29%
Sb 206.836†	-17.0	0.00238	mg/L	0.001110	0.00476	mg/L	0.002219	46.62%
Se 196.026†	34.1	0.01865	mg/L	0.004540	0.03729	mg/L	0.009080	24.35%
Si 288.158†	11856.7	7.159	mg/L	0.1043	14.32	mg/L	0.209	1.46%
Sn 189.927†	-76.1	-0.00279	mg/L	0.000627	-0.00558	mg/L	0.001255	22.50%
Sr 421.552†	241622.2	0.2793	mg/L	0.00025	0.5585	mg/L	0.00050	0.09%
Ti 334.903†	232439.4	7.450	mg/L	0.0073	14.90	mg/L	0.015	0.10%
Tl 190.801†	-24.8	0.00497	mg/L	0.007213	0.00994	mg/L	0.014427	145.09%
V 292.402†	66926.7	0.4209	mg/L	0.00405	0.8417	mg/L	0.00811	0.96%
Zn 206.200†	1163.5	0.2914	mg/L	0.00397	0.5828	mg/L	0.00793	1.36%

Sequence No.: 46
Sample ID: SS71 IDUP SWC

Dilution: 2X

Autosampler Location: 336
Date Collected: 4/27/2011 11:59:19 AM
Data Type: Original

Nebulizer Parameters: SS71 IDUP SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 IDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2498895.3	112.0	%	0.68				0.61%
ScR 361.383	451467.2	113.4	%	1.20				1.06%
Ag 328.068†	52.3	0.00008	mg/L	0.000133	0.00016	mg/L	0.000265	168.74%
Al 308.215†	208364.8	149.3	mg/L	1.27	298.6	mg/L	2.54	0.85%
As 188.979†	-18.9	0.04265	mg/L	0.004036	0.08531	mg/L	0.008073	9.46%
B 249.677†	50.6	0.00893	mg/L	0.000784	0.01785	mg/L	0.001567	8.78%
Ba 233.527†	3688.0	0.5021	mg/L	0.00514	1.004	mg/L	0.0103	1.02%
Be 313.042†	2024.3	0.00207	mg/L	0.000050	0.00414	mg/L	0.000099	2.39%
Ca 317.933†	398736.2	34.30	mg/L	0.541	68.60	mg/L	1.083	1.58%
Cd 228.802†	27.8	0.00128	mg/L	0.000297	0.00255	mg/L	0.000594	23.28%
Co 228.616†	2404.7	0.06419	mg/L	0.000251	0.1284	mg/L	0.00050	0.39%
Cr 267.716†	2828.6	0.3582	mg/L	0.00303	0.7165	mg/L	0.00606	0.85%
Cu 324.752†	39030.8	0.1743	mg/L	0.00158	0.3485	mg/L	0.00316	0.91%
Fe 273.955†	210013.9	164.2	mg/L	1.77	328.4	mg/L	3.53	1.08%
K 766.490†	9789.1	5.323	mg/L	0.0663	10.65	mg/L	0.133	1.24%
Mg 279.077†	56519.4	44.90	mg/L	0.523	89.80	mg/L	1.046	1.17%
Mn 257.610†	79867.9	1.694	mg/L	0.0209	3.388	mg/L	0.0418	1.23%
Mo 202.031†	40.7	0.00190	mg/L	0.000238	0.00381	mg/L	0.000475	12.48%
Na 589.592†	19417.0	1.547	mg/L	0.0156	3.093	mg/L	0.0312	1.01%
Na 330.237†	24.4	3.259	mg/L	0.1365	6.518	mg/L	0.2729	4.19%
Ni 231.604†	1400.0	0.3843	mg/L	0.00474	0.7686	mg/L	0.00948	1.23%
Pb 220.353†	-22.6	0.01727	mg/L	0.000760	0.03454	mg/L	0.001519	4.40%
Sb 206.836†	-13.8	0.00338	mg/L	0.000994	0.00675	mg/L	0.001988	29.44%
Se 196.026†	31.9	0.01693	mg/L	0.004185	0.03386	mg/L	0.008370	24.72%
Si 288.158†	9274.9	5.602	mg/L	0.0474	11.20	mg/L	0.095	0.85%
Sn 189.927†	-68.2	-0.00173	mg/L	0.000840	-0.00346	mg/L	0.001681	48.51%
Sr 421.552†	244388.8	0.2824	mg/L	0.00313	0.5649	mg/L	0.00626	1.11%
Ti 334.903†	227012.4	7.276	mg/L	0.0813	14.55	mg/L	0.163	1.12%
Tl 190.801†	-24.2	0.00654	mg/L	0.003284	0.01309	mg/L	0.006568	50.19%
V 292.402†	67110.2	0.4215	mg/L	0.00340	0.8430	mg/L	0.00681	0.81%
Zn 206.200†	1133.2	0.2838	mg/L	0.00210	0.5677	mg/L	0.00420	0.74%

Sequence No.: 47
Sample ID: SS71 N SWC
Autosampler Location: 337
Date Collected: 4/27/2011 12:03:17 PM
Data Type: Original
Dilution: 2X

Nebulizer Parameters: SS71 N SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 N SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2477380.1	111.0	%	0.78				0.70%
ScR 361.383	446836.5	112.3	%	0.63				0.56%
Ag 328.068†	92.8	0.00019	mg/L	0.000293	0.00039	mg/L	0.000586	150.69%
Al 308.215†	140377.3	100.6	mg/L	0.35	201.1	mg/L	0.71	0.35%
As 188.979†	-13.8	0.04536	mg/L	0.003326	0.09072	mg/L	0.006653	7.33%
B 249.677†	55.2	0.00978	mg/L	0.000261	0.01955	mg/L	0.000522	2.67%
Ba 233.527†	3092.3	0.4214	mg/L	0.00321	0.8429	mg/L	0.00642	0.76%
Be 313.042†	1275.1	0.00127	mg/L	0.000031	0.00253	mg/L	0.000062	2.44%
Ca 317.933†	501813.0	43.17	mg/L	0.215	86.33	mg/L	0.431	0.50%
Cd 228.802†	25.0	0.00113	mg/L	0.000049	0.00225	mg/L	0.000098	4.37%
Co 228.616†	2157.9	0.05644	mg/L	0.000258	0.1129	mg/L	0.00052	0.46%
Cr 267.716†	2111.4	0.2670	mg/L	0.00216	0.5341	mg/L	0.00431	0.81%
Cu 324.752†	20092.8	0.09092	mg/L	0.000800	0.1818	mg/L	0.00160	0.88%
Fe 273.955†	167789.9	131.2	mg/L	0.82	262.3	mg/L	1.64	0.63%
K 766.490†	8303.0	4.515	mg/L	0.0284	9.029	mg/L	0.0569	0.63%
Mg 279.077†	51338.1	40.79	mg/L	0.177	81.58	mg/L	0.354	0.43%
Mn 257.610†	101664.9	2.156	mg/L	0.0120	4.312	mg/L	0.0241	0.56%
Mo 202.031†	58.6	0.00285	mg/L	0.000379	0.00570	mg/L	0.000758	13.29%
Na 589.592†	25486.9	2.030	mg/L	0.0179	4.060	mg/L	0.0358	0.88%
Na 330.237†	41.6	3.882	mg/L	0.1575	7.764	mg/L	0.3150	4.06%
Ni 231.604†	1182.5	0.3246	mg/L	0.00222	0.6492	mg/L	0.00444	0.68%
Pb 220.353†	68.2	0.02055	mg/L	0.000886	0.04110	mg/L	0.001772	4.31%
Sb 206.836†	-7.2	0.00654	mg/L	0.001391	0.01308	mg/L	0.002782	21.26%
Se 196.026†	36.6	0.01980	mg/L	0.001225	0.03961	mg/L	0.002449	6.18%
Si 288.158†	11773.0	7.108	mg/L	0.0402	14.22	mg/L	0.080	0.57%
Sn 189.927†	-83.1	-0.00231	mg/L	0.000368	-0.00461	mg/L	0.000736	15.96%
Sr 421.552†	234779.7	0.2713	mg/L	0.00131	0.5427	mg/L	0.00262	0.48%
Ti 334.903†	226279.5	7.251	mg/L	0.0389	14.50	mg/L	0.078	0.54%
Tl 190.801†	-21.1	0.00417	mg/L	0.006643	0.00834	mg/L	0.013285	159.20%
V 292.402†	53044.2	0.3322	mg/L	0.00206	0.6643	mg/L	0.00413	0.62%
Zn 206.200†	899.3	0.2252	mg/L	0.00142	0.4505	mg/L	0.00284	0.63%

Sequence No.: 48
Sample ID: SS71 O SWC

Autosampler Location: 338
Date Collected: 4/27/2011 12:07:15 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 O SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 O SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2499651.8	112.0	%	0.47				0.42%
ScR 361.383	453000.8	113.8	%	0.65				0.57%
Ag 328.068†	129.3	0.00038	mg/L	0.000193	0.00077	mg/L	0.000387	50.53%
Al 308.215†	149399.0	107.0	mg/L	0.04	214.1	mg/L	0.09	0.04%
As 188.979†	-17.5	0.04678	mg/L	0.002423	0.09357	mg/L	0.004847	5.18%
B 249.677†	47.4	0.00836	mg/L	0.001751	0.01673	mg/L	0.003502	20.94%
Ba 233.527†	3228.7	0.4393	mg/L	0.00405	0.8785	mg/L	0.00810	0.92%
Be 313.042†	1452.7	0.00144	mg/L	0.000022	0.00289	mg/L	0.000043	1.50%
Ca 317.933†	523077.4	45.00	mg/L	0.207	89.99	mg/L	0.414	0.46%
Cd 228.802†	28.3	0.00126	mg/L	0.000067	0.00253	mg/L	0.000133	5.28%
Co 228.616†	2322.7	0.06082	mg/L	0.000595	0.1216	mg/L	0.00119	0.98%
Cr 267.716†	2213.2	0.2802	mg/L	0.00209	0.5603	mg/L	0.00419	0.75%
Cu 324.752†	23181.3	0.1049	mg/L	0.00019	0.2099	mg/L	0.00039	0.18%
Fe 273.955†	189926.9	148.5	mg/L	0.32	297.0	mg/L	0.63	0.21%
K 766.490†	10048.7	5.464	mg/L	0.0366	10.93	mg/L	0.073	0.67%
Mg 279.077†	58326.2	46.34	mg/L	0.172	92.69	mg/L	0.345	0.37%
Mn 257.610†	106718.6	2.263	mg/L	0.0110	4.527	mg/L	0.0220	0.49%
Mo 202.031†	64.4	0.00318	mg/L	0.000087	0.00637	mg/L	0.000173	2.72%
Na 589.592†	27226.5	2.169	mg/L	0.0046	4.337	mg/L	0.0092	0.21%
Na 330.237†	44.5	4.155	mg/L	0.1034	8.309	mg/L	0.2068	2.49%
Ni 231.604†	1239.8	0.3403	mg/L	0.00229	0.6806	mg/L	0.00459	0.67%
Pb 220.353†	77.4	0.02191	mg/L	0.000802	0.04382	mg/L	0.001604	3.66%
Sb 206.836†	-8.8	0.00671	mg/L	0.003194	0.01343	mg/L	0.006387	47.58%
Se 196.026†	39.2	0.02110	mg/L	0.003052	0.04220	mg/L	0.006103	14.46%
Si 288.158†	8302.1	5.015	mg/L	0.0359	10.03	mg/L	0.072	0.72%
Sn 189.927†	-85.0	-0.00200	mg/L	0.000620	-0.00400	mg/L	0.001240	30.99%
Sr 421.552†	254139.8	0.2937	mg/L	0.00075	0.5874	mg/L	0.00150	0.26%
Ti 334.903†	242348.8	7.766	mg/L	0.0238	15.53	mg/L	0.048	0.31%
Tl 190.801†	-37.0	-0.00316	mg/L	0.002274	-0.00633	mg/L	0.004547	71.87%
V 292.402†	60119.3	0.3766	mg/L	0.00160	0.7533	mg/L	0.00320	0.43%
Zn 206.200†	990.6	0.2481	mg/L	0.00242	0.4962	mg/L	0.00483	0.97%

Sequence No.: 49
Sample ID: SS71 P SWC

Autosampler Location: 339
Date Collected: 4/27/2011 12:11:13 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 P SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 P SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2504049.7	112.2	%	0.73				0.65%
ScR 361.383	455222.3	114.4	%	0.67				0.59%
Ag 328.068†	126.8	0.00033	mg/L	0.000205	0.00065	mg/L	0.000410	63.10%
Al 308.215†	130997.4	93.85	mg/L	0.425	187.7	mg/L	0.85	0.45%
As 188.979†	2.3	0.04760	mg/L	0.000860	0.09521	mg/L	0.001719	1.81%
B 249.677†	54.4	0.00963	mg/L	0.000357	0.01926	mg/L	0.000714	3.71%
Ba 233.527†	2814.0	0.3822	mg/L	0.00453	0.7644	mg/L	0.00906	1.19%
Be 313.042†	1349.5	0.00136	mg/L	0.000034	0.00271	mg/L	0.000068	2.51%
Ca 317.933†	496081.9	42.67	mg/L	0.111	85.35	mg/L	0.222	0.26%
Cd 228.802†	26.7	0.00117	mg/L	0.000099	0.00235	mg/L	0.000199	8.46%
Co 228.616†	2298.5	0.06270	mg/L	0.000630	0.1254	mg/L	0.00126	1.01%
Cr 267.716†	2086.9	0.2636	mg/L	0.00262	0.5272	mg/L	0.00524	0.99%
Cu 324.752†	23149.3	0.1048	mg/L	0.00071	0.2097	mg/L	0.00142	0.68%
Fe 273.955†	178685.4	139.7	mg/L	0.88	279.4	mg/L	1.77	0.63%
K 766.490†	10762.0	5.852	mg/L	0.0214	11.70	mg/L	0.043	0.37%
Mg 279.077†	65022.9	51.68	mg/L	0.185	103.4	mg/L	0.37	0.36%
Mn 257.610†	115146.9	2.442	mg/L	0.0138	4.884	mg/L	0.0275	0.56%
Mo 202.031†	62.6	0.00312	mg/L	0.000453	0.00623	mg/L	0.000906	14.54%
Na 589.592†	30326.7	2.416	mg/L	0.0112	4.831	mg/L	0.0223	0.46%
Na 330.237†	65.1	4.335	mg/L	0.2518	8.671	mg/L	0.5037	5.81%
Ni 231.604†	1335.9	0.3667	mg/L	0.00508	0.7334	mg/L	0.01016	1.38%
Pb 220.353†	81.5	0.02031	mg/L	0.000413	0.04062	mg/L	0.000826	2.03%
Sb 206.836†	-5.9	0.00542	mg/L	0.000528	0.01084	mg/L	0.001055	9.74%
Se 196.026†	41.7	0.02310	mg/L	0.005068	0.04620	mg/L	0.010136	21.94%
Si 288.158†	7896.7	4.771	mg/L	0.0513	9.542	mg/L	0.1025	1.07%
Sn 189.927†	-75.1	-0.00126	mg/L	0.000853	-0.00251	mg/L	0.001705	67.84%
Sr 421.552†	231926.1	0.2680	mg/L	0.00095	0.5361	mg/L	0.00190	0.36%
Ti 334.903†	191449.3	6.134	mg/L	0.0255	12.27	mg/L	0.051	0.42%
Tl 190.801†	-19.6	0.00620	mg/L	0.003410	0.01240	mg/L	0.006819	55.01%
V 292.402†	51729.4	0.3236	mg/L	0.00180	0.6472	mg/L	0.00360	0.56%
Zn 206.200†	1047.2	0.2623	mg/L	0.00214	0.5246	mg/L	0.00428	0.82%

Sequence No.: 50
Sample ID: SS71 Q SWC

Autosampler Location: 340
Date Collected: 4/27/2011 12:15:11 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 Q SWC

Analyte	Back Pressure	Flow
All	209.0 kPa	0.75 L/min

Mean Data: SS71 Q SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2492936.0	111.7	%	0.07				0.07%
ScR 361.383	450310.0	113.2	%	2.38				2.10%
Ag 328.068†	138.1	0.00039	mg/L	0.000215	0.00078	mg/L	0.000431	55.20%
Al 308.215†	132248.9	94.75	mg/L	0.219	189.5	mg/L	0.44	0.23%
As 188.979†	-1.1	0.04802	mg/L	0.002302	0.09604	mg/L	0.004604	4.79%
B 249.677†	55.9	0.00990	mg/L	0.000739	0.01980	mg/L	0.001477	7.46%
Ba 233.527†	2681.2	0.3635	mg/L	0.00314	0.7271	mg/L	0.00629	0.86%
Be 313.042†	1388.0	0.00140	mg/L	0.000018	0.00279	mg/L	0.000035	1.26%
Ca 317.933†	507559.8	43.66	mg/L	0.115	87.32	mg/L	0.231	0.26%
Cd 228.802†	24.9	0.00112	mg/L	0.000105	0.00223	mg/L	0.000210	9.42%
Co 228.616†	2361.4	0.06412	mg/L	0.000787	0.1282	mg/L	0.00157	1.23%
Cr 267.716†	2409.4	0.3041	mg/L	0.00218	0.6083	mg/L	0.00437	0.72%
Cu 324.752†	24035.7	0.1087	mg/L	0.00112	0.2173	mg/L	0.00223	1.03%
Fe 273.955†	181869.9	142.2	mg/L	0.12	284.4	mg/L	0.24	0.08%
K 766.490†	11507.9	6.257	mg/L	0.0328	12.51	mg/L	0.066	0.52%
Mg 279.077†	64702.0	51.42	mg/L	0.035	102.8	mg/L	0.07	0.07%
Mn 257.610†	114519.8	2.429	mg/L	0.0056	4.857	mg/L	0.0112	0.23%
Mo 202.031†	69.3	0.00351	mg/L	0.000347	0.00702	mg/L	0.000694	9.88%
Na 589.592†	33478.2	2.667	mg/L	0.0029	5.333	mg/L	0.0058	0.11%
Na 330.237†	68.3	4.568	mg/L	0.1027	9.135	mg/L	0.2054	2.25%
Ni 231.604†	1339.8	0.3678	mg/L	0.00132	0.7356	mg/L	0.00264	0.36%
Pb 220.353†	66.9	0.01865	mg/L	0.001310	0.03731	mg/L	0.002620	7.02%
Sb 206.836†	-4.2	0.00622	mg/L	0.000883	0.01244	mg/L	0.001765	14.19%
Se 196.026†	42.0	0.02320	mg/L	0.002283	0.04639	mg/L	0.004566	9.84%
Si 288.158†	7432.1	4.491	mg/L	0.0332	8.981	mg/L	0.0664	0.74%
Sn 189.927†	-79.5	-0.00173	mg/L	0.000836	-0.00345	mg/L	0.001673	48.47%
Sr 421.552†	218087.6	0.2521	mg/L	0.00003	0.5041	mg/L	0.00006	0.01%
Ti 334.903†	202596.9	6.491	mg/L	0.0080	12.98	mg/L	0.016	0.12%
Tl 190.801†	-22.6	0.00473	mg/L	0.002960	0.00946	mg/L	0.005919	62.59%
V 292.402†	53004.1	0.3317	mg/L	0.00400	0.6634	mg/L	0.00800	1.21%
Zn 206.200†	1109.1	0.2778	mg/L	0.00291	0.5556	mg/L	0.00581	1.05%

Sequence No.: 51
Sample ID: SS71 R SWC

Autosampler Location: 341
Date Collected: 4/27/2011 12:19:10 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 R SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 R SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2497015.3	111.9	%	1.03				0.92%
ScR 361.383	453150.7	113.9	%	0.21				0.19%
Ag 328.068†	124.8	0.00027	mg/L	0.000272	0.00055	mg/L	0.000545	99.62%
Al 308.215†	167242.6	119.8	mg/L	0.74	239.6	mg/L	1.48	0.62%
As 188.979†	-3.6	0.05950	mg/L	0.001412	0.1190	mg/L	0.00282	2.37%
B 249.677†	61.9	0.01095	mg/L	0.001535	0.02190	mg/L	0.003069	14.01%
Ba 233.527†	3590.7	0.4886	mg/L	0.00350	0.9773	mg/L	0.00701	0.72%
Be 313.042†	1741.7	0.00175	mg/L	0.000025	0.00350	mg/L	0.000051	1.46%
Ca 317.933†	551913.4	47.48	mg/L	0.353	94.95	mg/L	0.705	0.74%
Cd 228.802†	38.2	0.00160	mg/L	0.000121	0.00319	mg/L	0.000242	7.58%
Co 228.616†	2683.8	0.07161	mg/L	0.000548	0.1432	mg/L	0.00110	0.77%
Cr 267.716†	2484.8	0.3143	mg/L	0.00169	0.6287	mg/L	0.00337	0.54%
Cu 324.752†	32707.7	0.1466	mg/L	0.00169	0.2933	mg/L	0.00338	1.15%
Fe 273.955†	208669.7	163.1	mg/L	1.24	326.3	mg/L	2.49	0.76%
K 766.490†	12687.7	6.899	mg/L	0.0094	13.80	mg/L	0.019	0.14%
Mg 279.077†	66985.7	53.23	mg/L	0.285	106.5	mg/L	0.57	0.54%
Mn 257.610†	132013.0	2.800	mg/L	0.0151	5.599	mg/L	0.0303	0.54%
Mo 202.031†	63.9	0.00310	mg/L	0.000358	0.00621	mg/L	0.000716	11.53%
Na 589.592†	31844.8	2.537	mg/L	0.0139	5.073	mg/L	0.0278	0.55%
Na 330.237†	54.8	4.631	mg/L	0.1467	9.263	mg/L	0.2934	3.17%
Ni 231.604†	1330.1	0.3651	mg/L	0.00301	0.7302	mg/L	0.00602	0.82%
Pb 220.353†	590.4	0.08531	mg/L	0.001712	0.1706	mg/L	0.00342	2.01%
Sb 206.836†	-6.5	0.00805	mg/L	0.002633	0.01611	mg/L	0.005266	32.69%
Se 196.026†	45.0	0.02485	mg/L	0.004882	0.04971	mg/L	0.009765	19.64%
Si 288.158†	11804.2	7.129	mg/L	0.0336	14.26	mg/L	0.067	0.47%
Sn 189.927†	-78.4	0.00007	mg/L	0.001567	0.00014	mg/L	0.003133	>999.9%
Sr 421.552†	241289.1	0.2789	mg/L	0.00133	0.5577	mg/L	0.00266	0.48%
Ti 334.903†	254432.7	8.153	mg/L	0.0474	16.31	mg/L	0.095	0.58%
Tl 190.801†	-25.4	0.00566	mg/L	0.007411	0.01132	mg/L	0.014822	130.92%
V 292.402†	66957.3	0.4200	mg/L	0.00594	0.8400	mg/L	0.01187	1.41%
Zn 206.200†	1347.7	0.3376	mg/L	0.00259	0.6751	mg/L	0.00519	0.77%

Sequence No.: 52
Sample ID: SS71 S SWC

Autosampler Location: 342
Date Collected: 4/27/2011 12:23:08 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: SS71 S SWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS71 S SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2518493.3	112.9	%	0.29				0.26%
ScR 361.383	460112.9	115.6	%	0.91				0.79%
Ag 328.068†	167.8	0.00052	mg/L	0.000165	0.00104	mg/L	0.000331	31.77%
Al 308.215†	173043.1	124.0	mg/L	0.52	248.0	mg/L	1.05	0.42%
As 188.979†	9.9	0.07028	mg/L	0.003035	0.1406	mg/L	0.00607	4.32%
B 249.677†	66.5	0.01178	mg/L	0.001173	0.02357	mg/L	0.002346	9.95%
Ba 233.527†	3499.5	0.4765	mg/L	0.00552	0.9530	mg/L	0.01104	1.16%
Be 313.042†	1725.5	0.00173	mg/L	0.000049	0.00346	mg/L	0.000097	2.81%
Ca 317.933†	558417.3	48.04	mg/L	0.095	96.07	mg/L	0.189	0.20%
Cd 228.802†	49.9	0.00197	mg/L	0.000071	0.00393	mg/L	0.000143	3.63%
Co 228.616†	2642.4	0.07003	mg/L	0.000513	0.1401	mg/L	0.00103	0.73%
Cr 267.716†	2546.9	0.3223	mg/L	0.00238	0.6447	mg/L	0.00476	0.74%
Cu 324.752†	37916.0	0.1687	mg/L	0.00078	0.3374	mg/L	0.00156	0.46%
Fe 273.955†	198621.5	155.3	mg/L	0.56	310.5	mg/L	1.12	0.36%
K 766.490†	10247.8	5.572	mg/L	0.0448	11.14	mg/L	0.090	0.80%
Mg 279.077†	56459.5	44.85	mg/L	0.117	89.71	mg/L	0.234	0.26%
Mn 257.610†	127899.1	2.712	mg/L	0.0087	5.425	mg/L	0.0174	0.32%
Mo 202.031†	69.1	0.00342	mg/L	0.000414	0.00683	mg/L	0.000828	12.12%
Na 589.592†	38405.2	3.059	mg/L	0.0130	6.118	mg/L	0.0259	0.42%
Na 330.237†	61.2	4.916	mg/L	0.2060	9.831	mg/L	0.4120	4.19%
Ni 231.604†	1235.0	0.3390	mg/L	0.00309	0.6780	mg/L	0.00617	0.91%
Pb 220.353†	1034.4	0.1400	mg/L	0.00079	0.2800	mg/L	0.00157	0.56%
Sb 206.836†	-11.2	0.00634	mg/L	0.000949	0.01268	mg/L	0.001898	14.97%
Se 196.026†	41.8	0.02293	mg/L	0.007033	0.04587	mg/L	0.014067	30.67%
Si 288.158†	9853.1	5.951	mg/L	0.0665	11.90	mg/L	0.133	1.12%
Sn 189.927†	-78.6	0.00025	mg/L	0.001287	0.00049	mg/L	0.002574	520.12%
Sr 421.552†	225581.8	0.2607	mg/L	0.00087	0.5214	mg/L	0.00175	0.34%
Ti 334.903†	259783.2	8.325	mg/L	0.0238	16.65	mg/L	0.048	0.29%
Tl 190.801†	-14.1	0.01144	mg/L	0.003066	0.02287	mg/L	0.006132	26.81%
V 292.402†	67310.1	0.4229	mg/L	0.00260	0.8457	mg/L	0.00519	0.61%
Zn 206.200†	1353.4	0.3390	mg/L	0.00426	0.6780	mg/L	0.00852	1.26%

Sequence No.: 53
Sample ID: SS83 MB2SPK TWC

Autosampler Location: 343
Date Collected: 4/27/2011 12:27:06 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: SS83 MB2SPK TWC

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: SS83 MB2SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2479986.6	111.1	%	0.54				0.48%
ScR 361.383	448726.1	112.8	%	1.27				1.13%
Ag 328.068†	98720.0	0.5322	mg/L	0.00435	0.5322	mg/L	0.00435	0.82%
Al 308.215†	2914.7	2.079	mg/L	0.0585	2.079	mg/L	0.0585	2.81%
As 188.979†	2919.2	2.054	mg/L	0.0149	2.054	mg/L	0.0149	0.73%
B 249.677†	6.2	-0.00007	mg/L	0.001341	-0.00007	mg/L	0.001341	>999.9%
Ba 233.527†	14344.6	1.995	mg/L	0.0265	1.995	mg/L	0.0265	1.33%
Be 313.042†	443088.3	0.5047	mg/L	0.00479	0.5047	mg/L	0.00479	0.95%
Ca 317.933†	113469.3	9.761	mg/L	0.0786	9.761	mg/L	0.0786	0.81%
Cd 228.802†	14154.8	0.5016	mg/L	0.00591	0.5016	mg/L	0.00591	1.18%
Co 228.616†	15642.0	0.4947	mg/L	0.00376	0.4947	mg/L	0.00376	0.76%
Cr 267.716†	3959.9	0.4954	mg/L	0.00633	0.4954	mg/L	0.00633	1.28%
Cu 324.752†	115728.6	0.4996	mg/L	0.00323	0.4996	mg/L	0.00323	0.65%
Fe 273.955†	2678.4	2.091	mg/L	0.0805	2.091	mg/L	0.0805	3.85%
K 766.490†	18592.4	10.11	mg/L	0.096	10.11	mg/L	0.096	0.95%
Mg 279.077†	12825.6	10.21	mg/L	0.111	10.21	mg/L	0.111	1.09%
Mn 257.610†	23129.7	0.4909	mg/L	0.00551	0.4909	mg/L	0.00551	1.12%
Mo 202.031†	22.2	0.00120	mg/L	0.000126	0.00120	mg/L	0.000126	10.47%
Na 589.592†	126774.8	10.10	mg/L	0.093	10.10	mg/L	0.093	0.92%
Na 330.237†	328.1	11.62	mg/L	0.119	11.62	mg/L	0.119	1.03%
Ni 231.604†	1839.1	0.5048	mg/L	0.00656	0.5048	mg/L	0.00656	1.30%
Pb 220.353†	16617.8	2.001	mg/L	0.0222	2.001	mg/L	0.0222	1.11%
Sb 206.836†	9.9	0.00080	mg/L	0.000861	0.00080	mg/L	0.000861	107.59%
Se 196.026†	2592.8	2.109	mg/L	0.0112	2.109	mg/L	0.0112	0.53%
Si 288.158†	0.8	0.00362	mg/L	0.004551	0.00362	mg/L	0.004551	125.85%
Sn 189.927†	-23.8	-0.00208	mg/L	0.000898	-0.00208	mg/L	0.000898	43.10%
Sr 421.552†	442319.6	0.5112	mg/L	0.00466	0.5112	mg/L	0.00466	0.91%
Ti 334.903†	129.7	0.00239	mg/L	0.004932	0.00239	mg/L	0.004932	206.46%
Tl 190.801†	3374.2	2.036	mg/L	0.0211	2.036	mg/L	0.0211	1.04%
V 292.402†	76665.4	0.5021	mg/L	0.00404	0.5021	mg/L	0.00404	0.80%
Zn 206.200†	1988.1	0.4981	mg/L	0.00615	0.4981	mg/L	0.00615	1.23%

Sequence No.: 54
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 4/27/2011 12:31:04 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2443017.0	109.5	%	0.57				0.52%
ScR 361.383	437187.1	109.9	%	0.93				0.84%
Ag 328.068†	188324.5	1.015	mg/L	0.0063	1.015	mg/L	0.0063	0.62%
Al 308.215†	2837.5	2.000	mg/L	0.0299	2.000	mg/L	0.0299	1.49%
As 188.979†	2824.0	1.994	mg/L	0.0228	1.994	mg/L	0.0228	1.14%
B 249.677†	5602.8	1.008	mg/L	0.0051	1.008	mg/L	0.0051	0.51%
Ba 233.527†	7092.5	0.9860	mg/L	0.00456	0.9860	mg/L	0.00456	0.46%
Be 313.042†	888314.4	1.012	mg/L	0.0017	1.012	mg/L	0.0017	0.17%
Ca 317.933†	23657.4	2.035	mg/L	0.0077	2.035	mg/L	0.0077	0.38%
Cd 228.802†	28290.8	1.010	mg/L	0.0090	1.010	mg/L	0.0090	0.89%
Co 228.616†	30462.2	0.9628	mg/L	0.00910	0.9628	mg/L	0.00910	0.95%
Cr 267.716†	7946.1	0.9954	mg/L	0.00531	0.9954	mg/L	0.00531	0.53%
Cu 324.752†	223479.0	0.9643	mg/L	0.00824	0.9643	mg/L	0.00824	0.85%
Fe 273.955†	2615.4	2.040	mg/L	0.0089	2.040	mg/L	0.0089	0.43%
K 766.490†	36679.3	19.94	mg/L	0.077	19.94	mg/L	0.077	0.39%
Mg 279.077†	2485.2	1.981	mg/L	0.0129	1.981	mg/L	0.0129	0.65%
Mn 257.610†	46351.2	0.9834	mg/L	0.00601	0.9834	mg/L	0.00601	0.61%
Mo 202.031†	15523.0	0.9684	mg/L	0.01058	0.9684	mg/L	0.01058	1.09%
Na 589.592†	636741.1	50.72	mg/L	0.175	50.72	mg/L	0.175	0.34%
Na 330.237†	1442.6	51.73	mg/L	0.250	51.73	mg/L	0.250	0.48%
Ni 231.604†	3757.8	1.033	mg/L	0.0072	1.033	mg/L	0.0072	0.69%
Pb 220.353†	16058.7	1.934	mg/L	0.0215	1.934	mg/L	0.0215	1.11%
Sb 206.836†	4948.8	1.988	mg/L	0.0248	1.988	mg/L	0.0248	1.25%
Se 196.026†	2470.1	2.011	mg/L	0.0255	2.011	mg/L	0.0255	1.27%
Si 288.158†	3376.3	2.043	mg/L	0.0055	2.043	mg/L	0.0055	0.27%
Sn 189.927†	4904.7	0.9637	mg/L	0.01167	0.9637	mg/L	0.01167	1.21%
Sr 421.552†	883300.0	1.021	mg/L	0.0013	1.021	mg/L	0.0013	0.12%
Ti 334.903†	29896.9	0.9573	mg/L	0.00210	0.9573	mg/L	0.00210	0.22%
Tl 190.801†	3263.6	1.971	mg/L	0.0189	1.971	mg/L	0.0189	0.96%
V 292.402†	148481.2	0.9731	mg/L	0.01544	0.9731	mg/L	0.01544	1.59%
Zn 206.200†	4009.5	1.004	mg/L	0.0049	1.004	mg/L	0.0049	0.48%

Sequence No.: 55
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 4/27/2011 12:34:19 PM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	208.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2416662.8	108.3	%	0.75				0.69%
ScR 361.383	437810.2	110.0	%	0.55				0.50%
Ag 328.068†	133.4	0.00072	mg/L	0.000236	0.00072	mg/L	0.000236	32.84%
Al 308.215†	30.1	0.02160	mg/L	0.009149	0.02160	mg/L	0.009149	42.35%
As 188.979†	2.1	0.00146	mg/L	0.000901	0.00146	mg/L	0.000901	61.89%
B 249.677†	6.5	0.00117	mg/L	0.000892	0.00117	mg/L	0.000892	76.25%
Ba 233.527†	-2.8	-0.00039	mg/L	0.000766	-0.00039	mg/L	0.000766	196.20%
Be 313.042†	7.3	0.00001	mg/L	0.000026	0.00001	mg/L	0.000026	313.55%
Ca 317.933†	78.9	0.00678	mg/L	0.000923	0.00678	mg/L	0.000923	13.61%
Cd 228.802†	-3.6	-0.00013	mg/L	0.000179	-0.00013	mg/L	0.000179	135.52%
Co 228.616†	16.7	0.00053	mg/L	0.000101	0.00053	mg/L	0.000101	19.08%
Cr 267.716†	-2.3	-0.00029	mg/L	0.000989	-0.00029	mg/L	0.000989	343.32%
Cu 324.752†	-22.9	-0.00010	mg/L	0.000048	-0.00010	mg/L	0.000048	48.75%
Fe 273.955†	20.4	0.01592	mg/L	0.009291	0.01592	mg/L	0.009291	58.37%
K 766.490†	85.4	0.04642	mg/L	0.021587	0.04642	mg/L	0.021587	46.51%
Mg 279.077†	25.8	0.02048	mg/L	0.003789	0.02048	mg/L	0.003789	18.50%
Mn 257.610†	9.2	0.00019	mg/L	0.000232	0.00019	mg/L	0.000232	119.33%
Mo 202.031†	-6.8	-0.00043	mg/L	0.000226	-0.00043	mg/L	0.000226	53.12%
Na 589.592†	-294.4	-0.02345	mg/L	0.001939	-0.02345	mg/L	0.001939	8.27%
Na 330.237†	19.4	0.6960	mg/L	0.23777	0.6960	mg/L	0.23777	34.16%
Ni 231.604†	7.3	0.00200	mg/L	0.000767	0.00200	mg/L	0.000767	38.24%
Pb 220.353†	14.0	0.00169	mg/L	0.000214	0.00169	mg/L	0.000214	12.67%
Sb 206.836†	2.4	0.00099	mg/L	0.001199	0.00099	mg/L	0.001199	121.48%
Se 196.026†	10.1	0.00820	mg/L	0.004065	0.00820	mg/L	0.004065	49.59%
Si 288.158†	-3.0	-0.00179	mg/L	0.004139	-0.00179	mg/L	0.004139	231.77%
Sn 189.927†	5.7	0.00113	mg/L	0.000053	0.00113	mg/L	0.000053	4.69%
Sr 421.552†	138.5	0.00016	mg/L	0.000025	0.00016	mg/L	0.000025	15.71%
Ti 334.903†	-30.3	-0.00097	mg/L	0.000864	-0.00097	mg/L	0.000864	88.69%
Tl 190.801†	3.1	0.00189	mg/L	0.001930	0.00189	mg/L	0.001930	102.36%
V 292.402†	31.3	0.00020	mg/L	0.000137	0.00020	mg/L	0.000137	68.06%
Zn 206.200†	4.5	0.00114	mg/L	0.000369	0.00114	mg/L	0.000369	32.41%

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: SS71

4-21-11

TOC Solids Prep Log

DATE:	4/20/2011
ANALYST:	KET 20:20

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.2582	0.0000	13.2588	0.6 mg	
SS71 A6		-	13.3188	17.6678	17.1351	87.75%	
SS71 B6		-	13.3250	17.8663	17.5238	92.46%	
SS71 C6		-	13.2869	17.2921	17.0060	92.86%	
SS71 D6		-	13.2982	16.2257	15.5377	76.50%	
SS71 E6		-	13.3875	16.8624	16.5069	89.77%	
SS71 A6		-	13.2753	17.7099	17.0435	84.97%	
SS71 G6		-	13.3232	17.3952	16.7655	84.54%	
SS71 H6		-	13.2209	17.3296	17.0208	92.48%	
SS71 I6		-	13.3199	18.2236	17.7017	89.36%	
SS71 I6 DU		-	13.2235	17.9431	17.4660	89.89%	0.60
SS71 I6 TP		-	13.2648	18.5672	17.9728	88.79%	0.64
SS71 J6		-	13.3590	16.6061	16.2554	89.20%	
SS71 K6		-	13.2896	17.8524	17.5241	92.80%	
SS71 L6		-	13.2881	18.6760	18.2362	91.84%	
SS71 M6		-	13.2480	18.0208	17.6515	92.26%	
SS71 N6		-	13.3467	18.0120	17.7543	94.48%	
SS71 O6		-	13.2615	17.4451	17.2138	94.47%	
SS71 P6		-	13.2195	16.4124	16.3499	98.04%	
SS71 Q6		-	13.3558	17.9497	17.7676	96.04%	
SS71 R6		-	13.2569	17.6225	17.4068	95.06%	
SS71 S6		-	13.3416	18.1728	17.8576	93.48%	

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC an alysis
Add general notes regarding samples and preparation and identify the acid used

Analyst KBT Date 4/20/11 20:20

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.2582	Ø	13.2588		
SS71 A6		—	13.3188	17.6678	17.1351		soil w/ roots
B6		—	13.3250	17.8663	17.5238		soil
C6		—	13.2869	17.2921	17.0060		"
D6		—	13.2982	16.2257	15.5377		soil w/ roots
E6		—	13.3875	16.8624	16.5069		soil
F6		—	13.2753	17.7099	17.0435		"
G6		—	13.3232	17.3952	16.7655		soil w/ roots
H6		—	13.2209	17.3296	17.0208		soil
I6		—	13.3199	18.2236	17.7017		
I6 DU		—	13.2235	17.9431	17.4660		
I6 TP		—	13.2648	18.5672	17.9728		
J6		—	13.3590	16.6061	16.2554		soil w/ roots
K6		—	13.2896	17.8524	17.5241		soil
L6		—	13.2881	18.6760	18.2362		"
M6		—	13.2480	18.0208	17.6515		soil w/ roots
N6		—	13.3467	18.0120	17.7543		soil w/ rocks
O6		—	13.2615	17.4451	17.2138		"
P6		—	13.2195	16.4124	16.3499		soil w/ roots
Q6		—	13.3558	17.9497	17.7676		
R6		—	13.2569	17.6225	17.4068		
S6		—	13.3416	18.1728	17.8576		soil w/ rocks

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 4/20/2011

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KET

Instrumentation ***Drying Ovens:*** 1 ***Analytical Balance:*** "FRANK"/1123230597

Muffle Furnace: 62790918520

Batch drying time

record times as mm/dd/yy hh:mm

4/20/2011 20:00 date/time in oven

4/21/2011 12:30 date/time out

elapsed hrs = 16.5

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

ij 4-22-11

Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
Date & Time	4/20/11 17:19	4/20/11 15:59	4/21/11 13:20					4/19/11 13:10	4/19/11 14:03				
Cal Wt (g) 10.0000	10.0000	10.0000	10.0000					10.0000	10 0000				
record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*					*Cal OK!*	*Cal OK!*				
Date & Time	NA	4/1811 17:35 *	NA					NA	NA				
Cal Wt (g) 10.0000	NA	9.9999	NA					NA	NA				
record weights to 4 places	*NA*	*Cal OK!*	*NA*					*NA*	*NA*				

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank		0.0000	1.0887	1.0886			0.00		1.0536	1.0535	OK	-0.04		
SS71 A6		6.3756	1.0784	5.4949			4.42	**83.4%**						
SS71 B6		6.4076	1.0854	5.7714			4.69	**88.0%**						
SS71 C6		6.0144	1.0819	5.4428			4.36	**88.4%**						
SS71 D6		5.8656	1.0642	4.6194			3.56	**74.0%**						
SS71 E6		5.8738	1.0653	5.1580			4.09	**85.1%**						
SS71 F6 *		5.5884	1.0776	4.7875			3.71	**82.2%**						
SS71 G6 *		5.3869	1.0807	4.7064			3.63	**84.2%**						
SS71 H6 *		5.4056	1.0813	4.9337			3.85	**89.1%**						
SS71 I6 *		6.0489	1.0741	5.3407			4.27	**85.8%**						
SS71 I6 * dup		6.8592	1.0862	6.0311			4.94	**85.7%**						
							RPD =	0.13%				RPD =	NA	
SS71 I6 * trp		6.6914	1.0494	5.9086			4.86	**86.1%**						
							RSD =	0.29%				RSD =	NA	
SS71 J6 *		5.4035	1.0867	4.7526			3.67	**84.9%**						
SS71 K6 *		5.4695	1.0684	5.0075			3.94	**89.5%**						
SS71 L6 *		5.9618	1.0739	5.3693			4.30	**87.9%**						
SS71 M6 *		6.1682	1.0939	5.5655			4.47	**88.1%**						
SS71 N6 *		6.1887	1.0802	5.7314			4.65	**91.0%**						
SS71 O6 *		6.8400	1.0712	6.2696			5.20	**90.1%**						
SS71 P6 *		5.2560	1.0759	4.9563			3.88	**92.8%**						
SS71 Q6 *		6.3268	1.0717	5.9559			4.88	**92.9%**						
SS71 R6 *		6.0193	1.0725	5.6039			4.53	**91.6%**						
SS71 S6 *		6.0222	1.0705	5.5283			4.46	**90.0%**						

F6 down 4/18/11 17:35 9.9999 (FRANK) KET

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

FRANK↓

Analyst: KET		Date: 4/20/11		Oven ID: 001		Balance ID: 1123230597
Time in Oven: 20:00		Time Out of Oven: 4/21/11 12:30		Elapsed Time (> 12 Hrs):		

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	Dry Weight 104°C 2	Dry Weight 104°C 3	Dry Weight grams	Ash Weight 550°C 1	Ash Weight 550°C 2	Ash Weight 550°C 3
Cal Weight ID		CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		4/20/11 17:19	4/20/11 15:59	4/21/11 13:20						
Cal Weight (10.0000):		10.0000 KET	10.0000 KET	10.0000 KET						
BLANK	1	0	1.0887	1.0886						
SS71 A6	2	6.3756	1.0784	5.4949						
B6	3	6.4076	1.0854	5.7714						
C6	4	6.0144	1.0819	5.4428						
D6	5	5.8656	1.0642	4.6194						
E6	6	5.8738	1.0653	5.1580						
F6	7	5.5884	1.0776	4.7875						
G6	8	5.3869	1.0807	4.7064						
H6	9	5.4056	1.0813	4.9337						
I6	10	6.0489	1.0741	5.3407						
I6 DU	11	6.8592	1.0862	6.0311						
I6 TP	12	6.6914	1.0494	5.9086						
J6	13	5.4035	1.0867	4.7526						
K6	14	5.4695	1.0684	5.0075						
L6	15	5.9618	1.0739	5.3693						
M6	16	6.1682	1.0939	~~5.6~~ 5.5655						
N6	17	6.1887	1.0802	5.7314						
O6	18	6.8400	1.0712	6.2696						
P6	19	5.2560	1.0759	4.9563						
Q6	20	6.3268	1.0717	5.9559						
R6	21	6.0193	1.0725	5.6039						
S6	22	6.0222	1.0705	5.5283						

SS71 01716

W
4-28-11

TOC, Solids Data Analysis

DATE: 2/27/2011
ANALYST: KE 10:02

Instrument: Apollo 2
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*

Calibration Data

Cal Curve ID: **41911 BOAT CAL** *Conc:* 5,000 *ppm*
Calibration Curve Standard: **ARI # 00115 - 7** *Curve Date:* **04/19/11**
CalFact: **3.116E+05** *intercept:* **-80028** *r2 :* **0.99955**
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): **8** *to* **100** *40 µL injections of designated standard*

Verification Standard Source: *ERA# 0513 - 10 - 06* *Conc:* **5,000** *ppm*
dilution : 10 *mL to* 50 **1,000** *ppm*

Standard Reference Material Source: ***NIST 8704*** *Conc:* **33,510** *ppm*
Source: ***NIST 1941B*** *Conc:* **29,900** *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
37.4	21.6	27.0	21.4			17.5	18.2%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
~~ICV~~			-	~~1.00~~		~~40.0~~	~~1656~~	~~1,656~~	~~165.60%~~
ICV				1.00		40.0	970	970	*97.00%*
Blank				1.00		40.0	9.95	10	*Blank OK*
NIST 1941B				1.00		2.9	25407	25,407	*84.97%*
Silica Blanks 1				1.00		39.8	37.43	37	*Low Scale*
Silica Blanks 2				1.00		39.4	21.57	22	*Low Scale*
Silica Blanks 3				1.00		46.2	26.99	27	*Low Scale*
Silica Blanks 4				1.00		44.8	21.37	21	*Low Scale*
SQ45 A1				1.00		0.9	45695	45,695	*Range OK!*
~~SQ45 B1~~	~~10.0~~	~~100.0~~	~~90.00%~~	~~10.00~~		~~1.6~~	~~10378~~	~~103,623~~	~~Range OK!~~
SQ45 B1 dup	10.7	100.7	89.37%	9.41		1.6	15279	143,647	*RPD=32.4%*
SQ45 B1	10.0	100.0	90.00%	10.00		1.6	13839	138,233	*Range OK!*
SQ45 B1 trp	10.2	100.6	89.86%	9.86		1.6	13331	131,325	*RSD=4.5%*
SQ45 B1 ms	10.0	100.0	90.00%	10.00	10	1.8	24765	247,493	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*138,889*	*ppm*		*79%*	
CCV				1.00		40.0	903	903	*90.30%*
Blank				1.00		40.0	26.37	26	*Blank OK*
SQ45 C1	13.3	109.5	87.85%	8.23		1.8	3493	28,632	*Low Scale*
SQ45 D1	17.1	148.7	88.50%	8.70		0.9	18867	163,931	*Range OK!*
SQ45 E1	12.3	107.3	88.54%	8.72		1.5	7889	68,685	*Range OK!*
SQ45 F1	14.1	101.1	86.05%	7.17		1.2	14359	102,849	*Range OK!*
SQ45 G1	12.4	115.5	89.26%	9.31		1.4	9664	89,870	*Range OK!*
SS71 D6	13.3	102.2	86.99%	7.68		1.7	11064	84,901	*Range OK!*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike (µL Std)	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor		Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
SS71 L6				1.00		2.6	9932	9,932	*Range OK!*
SS71 M6				1.00		1.6	15310	15,310	*Range OK!*
SS71 N6				1.00		4.8	770	770	*Low Scale*
SS71 O6				1.00		4.7	686	686	*Low Scale*
~~CCV~~			-	~~1.00~~		~~40.0~~	~~883~~	~~883~~	~~*88.30%*~~
CCV				1.00		40.0	911	911	*91.10%*
Blank				1.00		40.0	10.0	10	*Blank OK*
~~SS71 P6~~			-	~~1.00~~		~~2.5~~	~~6081~~	~~6,081~~	~~*Range OK!*~~
~~SS71 Q6~~			-	~~1.00~~		~~3.6~~	~~6226~~	~~6,226~~	~~*Range OK!*~~
~~SS71 R6~~			-	~~1.00~~		~~3.0~~	~~6627~~	~~6,627~~	~~*Range OK!*~~
~~SS71 S6~~			-	~~1.00~~		~~4.0~~	~~6418~~	~~6,418~~	~~*Range OK!*~~
~~ST56 A2~~			-	~~1.00~~		~~2.8~~	~~3700~~	~~3,700~~	~~*Range OK!*~~
~~ST56 B2~~			-	~~1.00~~		~~1.6~~	~~7588~~	~~7,588~~	~~*Range OK!*~~
~~SR72 C2~~	~~47.7~~	~~252.1~~	~~81.08%~~	~~5.29~~		~~2.2~~	~~17688~~	~~93,408~~	~~*Range OK!*~~
~~NIST 1941B~~			-	~~1.00~~		~~2.9~~	~~21281~~	~~21,281~~	~~*71.17%*~~
NIST 1941B				1.00		2.9	26234	26,234	*87.74%*
Blank				1.00		40.0	10.42	10	*Blank OK*
CCV				1.00		40.0	930	930	*93.00%*

Analytical Resources, Incorporated
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04-27-11 (N)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC (Boat)			INLET: Boat Sampler
Standards:	Source	Conc (ppm)	
Calibration:	ARI 00115-7	5000	
Verification:	ERA 0513-10-06	5000to1000forCCVs	10:02
SRM:	NBS 1941 B	29900	
Sample Sequence:			

Sample ID	Dilution Data (mg) Sample	+ Silica Gel	Burn Wt mg	Matrix Spike Data mg/L	µL added	Comments
ICV			40			Change O Ring cooling air Retain
ICV			40			
ICB			40			
NBS 1941B			2.9			
SB 1			39.8			
2			39.4			
3			46.2			
4			44.8			
SQ45 A'			0.9			
B'	10.0	100.0	1.6/~~1.2~~ (1)			[illegible]
mB'	10.7	100.7	1.6			
B'	10.0	100.0	1.6			
sB'	10.2	100.6	1.8	~~2500~~	~~10~~ (1)	
msB'	10.0	100.0	1.8	2500	10	
CCV			40			
CCB			40			
SQ45 C'	13.3	109.5	1.8			
D'	17.1	148.7	0.9			
E'	12.3	107.3	1.5			
F'	14.1	101.1	1.2			
G'	12.4	115.5	1.4			
SS71 D6	13.3	102.2	1.7			
L6			2.6			
M6			1.6			
N6			4.8			
O6			4.7			
CCV			40/40			
CCB			40			
SS71 P6			2.5			
Q6			3.6			
R6			3.0			
S6			4.0			

Analytical Resources, Incorporated
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① 4-27-11 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 2 of 2

Set-Up Parameters MODE: NPOC (Boat)		INLET: Boat Sampler
Standards:	**Source**	**Conc (ppm)**
Calibration:	ARI 0215-7	5000
Verification:	ERA0513-10-06	Scottolanford US
SRM:	NBS 1941 B	29900

10:02

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
STS6 A3			2.8			
✓ B3			1.6			
SR72 C2	47.1	252.1	2.2			
NBS 1941B			2.9 / 2.9			
CCV			40/40/40 140	mg not run	AL	(check air regrs low) still bads
CCV/CCB/CCV			40/40/40			

4-27-11 (W)

4-27-11(W)

Detailed Analysis Report Print Date/Time: 2011/04/27 20:17:21

Sample ID: CVS BOAT 1000 — Mode: TOC
Method: Boat Sampler — Filename: 04271018
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/27 10:23
Operator ID: TRINA — Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1656.1312	66.2452	20561424	33.698	34.695	242

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000 — Mode: TOC
Method: Boat Sampler — Filename: 04271026
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/27 10:32
Operator ID: TRINA — Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	969.6076	38.7843	12004829	33.459	34.456	129

Sample ID: ICB BOAT — Mode: TOC
Method: Boat Sampler — Filename: 04271040
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/27 10:42
Operator ID: TRINA — Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.9502	0.3980	43988	32.700	32.730	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B — Mode: TOC
Method: Boat Sampler — Filename: 04271048
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/27 10:54
Operator ID: TRINA — Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25407.1738	73.6808	22878280	32.786	33.785	176

Sample ID: SB 1 — Mode: TOC
Method: Boat Sampler — Filename: 04271150
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/27 11:52
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	37.4264	1.4896	464137	34.182	35.172	64

Sample ID: SB 2 — Mode: TOC
Method: Boat Sampler — Filename: 04271156
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/27 11:58
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.5732	0.8500	264848	33.639	34.630	60

Sample ID: SB 3 — Mode: TOC
Method: Boat Sampler — Filename: 04271202
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/27 12:04
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26.9915	1.2470	388557	33.271	34.271	61

Sample ID: SB 4
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271213
Timestamp: 2011/04/27 12:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.3712	0.9574	298327	32.720	33.719	57

Sample ID: SQ45 A1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271220
Timestamp: 2011/04/27 12:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	45695.2812	41.1258	12814433	32.394	33.388	135

Sample ID: SQ45 B1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271227
Timestamp: 2011/04/27 12:31
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10377.6904	16.6043	5173759	32.128	33.125	103

Sample ID: SQ45 B1 DUP
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271234
Timestamp: 2011/04/27 12:37
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15278.8105	24.4461	7617195	32.035	33.028	117

Sample ID: SQ45 B1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271249
Timestamp: 2011/04/27 12:58
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13839.1367	22.1426	6899450	31.701	32.700	112

Sample ID: SQ45 B1 TRIP
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271304
Timestamp: 2011/04/27 13:07
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13331.3799	21.3302	6646310	31.631	32.629	117

Sample ID: SQ45 B1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271312
Timestamp: 2011/04/27 13:16
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24764.6309	44.5763	13889605	31.613	32.612	140

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271319
Timestamp: 2011/04/27 13:22
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	903.4415	36.1377	11180158	31.878	32.875	118

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271328
Timestamp: 2011/04/27 13:30
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26.3730	1.0549	248676	31.685	32.682	60

Sample ID: SQ45 C1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271334
Timestamp: 2011/04/27 13:37
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3493.4934	6.2883	1959377	31.574	32.560	84

Sample ID: SQ45 D1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271340
Timestamp: 2011/04/27 13:50
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18867.2617	16.9805	5290990	31.683	32.683	125

Sample ID: SQ45 E1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271403
Timestamp: 2011/04/27 14:05
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7889.3838	11.8341	3687397	33.456	34.456	101

Sample ID: SQ45 F1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271409
Timestamp: 2011/04/27 14:13
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14358.7578	17.2305	5368879	34.218	35.215	114

Sample ID: SQ45 G1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271415
Timestamp: 2011/04/27 14:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	9664.1826	13.5299	4215787	34.619	35.614	93

Sample ID: SS71 D6 Mode: TOC
Method: Boat Sampler Filename: 04271426
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 14:29
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11064.0654	18.8089	5860696	34.342	35.339	97

Sample ID: SS71 L6 Mode: TOC
Method: Boat Sampler Filename: 04271511
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 15:15
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9931.7129	25.8225	8046055	32.054	33.046	164

Sample ID: SS71 M6 Mode: TOC
Method: Boat Sampler Filename: 04271517
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 15:20
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15309.5723	24.4953	7632531	32.006	32.997	119

Sample ID: SS71 N6 Mode: TOC
Method: Boat Sampler Filename: 04271524
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 15:26
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	769.5258	3.6937	1150933	31.807	32.803	80

Sample ID: SS71 O6 Mode: TOC
Method: Boat Sampler Filename: 04271532
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 15:35
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	686.3992	3.2261	1005218	31.572	32.572	83

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 04271543
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 15:46
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	883.4927	35.3397	10931523	31.836	32.835	122

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 04271549
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 15:51
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

				Baseline	Baseline	Time
1	911.3107	36.4524	11278236	31.828	32.826	117

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271557
Timestamp: 2011/04/27 16:04
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.9991	0.4000	44598	31.563	32.559	44

Sample ID: SS71 P6
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271610
Timestamp: 2011/04/27 16:16
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6080.7300	15.2018	4736759	31.712	32.708	133

Sample ID: SS71 Q6
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271644
Timestamp: 2011/04/27 16:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6226.0781	22.4139	6983973	36.001	37.001	142

Sample ID: SS71 R6
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271706
Timestamp: 2011/04/27 17:14
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6627.0469	19.8811	6194793	34.655	35.653	106

Sample ID: SS71 S6
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271731
Timestamp: 2011/04/27 17:34
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6418.0874	25.6723	7999284	32.817	33.813	124

Sample ID: ST56 A2
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271757
Timestamp: 2011/04/27 18:01
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3699.9695	10.3599	3228061	31.395	32.392	88

Sample ID: ST56 B2
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04271804
Timestamp: 2011/04/27 18:07
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rerun Due To Error with final ICV 4-27-11 (W)

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7588.2495	12.1412	3783094	31.437	32.436	90

Sample ID: SR72 C2
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04271846
Timestamp: 2011/04/27 18:50
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17687.6934	38.9129	12124934	30.944	31.944	125

Rerun due to Error in final rep 4-27-11

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04271855
Timestamp: 2011/04/27 18:59
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21280.9434	61.7147	19149756	30.816	31.816	152

Last Message: Out of Calibration

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04271904
Timestamp: 2011/04/27 19:11
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26234.1367	76.0790	23625536	30.666	31.664	164

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04271915
Timestamp: 2011/04/27 19:18
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	886.1080	35.4443	10964119	31.004	32.000	119

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04271921
Timestamp: 2011/04/27 19:24
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	875.0085	35.0003	10825779	30.903	31.897	120

Last Message: Out of Calibration

4-27-11

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04271927
Timestamp: 2011/04/27 19:30
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	891.1536	35.6461	11027006	30.936	31.927	120

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 04271933
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 19:36
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	884.8810	35.3952	10948826	30.925	31.924	123

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 04271943
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 19:46
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	889.1254	35.5650	11001727	31.145	32.136	120

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 04271954
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 19:57
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	897.2754	35.8910	11103306	31.756	32.754	138

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 04272000
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 20:03
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	895.5960	35.8238	11082373	32.657	33.656	140

Last Message: Out of Calibration

Sample ID: ICB BOAT Mode: TOC
Method: Boat Sampler Filename: 04272005
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 20:07
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.4170	0.4167	49807	33.689	34.681	47

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 04272011
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/27 20:15
Operator ID: TRINA Sample Type: Cal. Verification

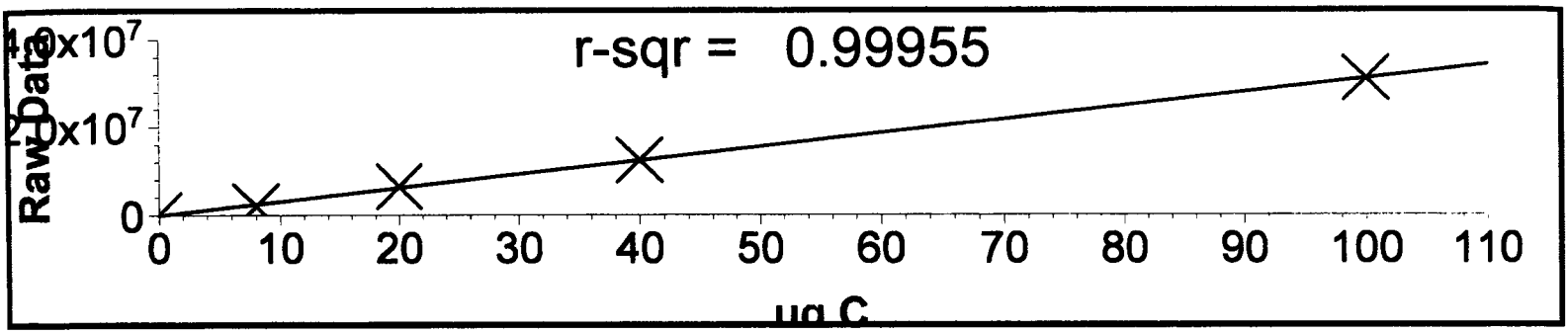
Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	929.5134	37.1805	11505109	34.935	35.932	199

Analyst Ran ICV Several Times To Find Problem ICV was Being Ran under (MG) should have been under (UL) once Ran under (UL) ICV was fine 4-27-11

Calibration Report Print Date/Time: 2011/04/19 18:22:42

Cal. Curve ID: 041911 BOAT CAL
Created: 2011/04/19 18:06
Calibration Factor (m): 3.116e+05
Y Intercept (b): -80028
r-squared: 0.99955

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI WATEER	30053	0.000	0.353	Low Sample De	2011/04/19 16:52
200 PPM	1996979	8.000	6.666		2011/04/19 16:57
500 PPM	6459582	20.000	20.988		2011/04/19 17:12
1000 PPM	12427234	40.000	40.140		2011/04/19 17:33
2500 PPM	31033376	100.000	99.853	Over-range	2011/04/19 17:52


r-sqr = 0.99955
Raw Data
x10^7
x10^7
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2011/04/19 18:28:27

Sample ID: DI WATEER
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191649
Timestamp: 2011/04/19 16:52
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			30053	49.055	49.144	120

Last Message: Low Sample Detected

Sample ID: 200 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191655
Timestamp: 2011/04/19 16:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1996979	49.493	50.490	67

Sample ID: 500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191701
Timestamp: 2011/04/19 17:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			4483189	49.954	50.952	96

Sample ID: 500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191707
Timestamp: 2011/04/19 17:12
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6459582	50.297	51.297	132

Sample ID: 500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191720
Timestamp: 2011/04/19 17:23
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6064090	50.604	51.603	115

Sample ID: 1000 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191730
Timestamp: 2011/04/19 17:33
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12427234	50.569	51.567	154

Sample ID: 1000 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191740
Timestamp: 2011/04/19 17:44
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	12531159	50.184	51.182	164

Sample ID: 2500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191748
Timestamp: 2011/04/19 17:52
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			31033376	50.475	51.469	190

Last Message: Over-range

Sample ID: 2500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191758
Timestamp: 2011/04/19 18:04
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			31980592	49.823	50.820	230

Last Message: Over-range

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191817
Timestamp: 2011/04/19 18:21
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1072.8492	42.9140	13291597	50.282	51.281	156

TOC, Solids Data Analysis

DATE: 4/25/2011
ANALYST: KE 12:14

Instrument: Apollo 2
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*

Calibration Data

Cal Curve ID: **41911 BOAT CAL** *Conc:* 5,000 *ppm*
Calibration Curve Standard: **ARI # 00115 - 7** *Curve Date:* **04/19/11**
CalFact: **3.116E+05** *intercept:* **-80028** *r2 :* **0.99955**
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): **8** *to* **100** *40 µL injections of designated standard*

Verification Standard

Source: *ERA# 0513 - 10 - 06* *Conc:* **5,000** *ppm*
dilution : 10 *mL to* 50 **1,000** *ppm*

Standard Reference Material

Source: *NIST 8704* *Conc:* **33,510** *ppm*
Source: *NIST 1941B* *Conc:* **29,900** *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
~~ICV~~			-	~~1.00~~		~~40.0~~	~~1153~~	~~1,153~~	~~115.30%~~
ICV				1.00		40.0	927	927	92.70%
Blank				1.00		40.0	10.32	10	Blank OK
NIST 1941B				1.00		3.6	27469	27,469	91.87%
~~SR91 B1~~			-	~~1.00~~		~~4.1~~	~~892~~	~~892~~	~~Low Scale~~
SR91 B1				1.00		3.6	554	554	Low Scale
SR91 B1 dup				1.00		4.1	506	506	RPD=9.1%
SR91 B1 trp				1.00		4.3	495	495	RSD=6.1%
SR91 B1 ms				1.00	10	4.3	5982	5,982	Range OK!
Spike =	*0.025*	*mg C to*	*4.3*	*mg samp=*	*5,814*	*ppm*		*93%*	
SS71 I 6				1.00		4.6	2380	2,380	Range OK!
SS71 I 6 dup				1.00		4.5	2342	2,342	RPD=1.6%
SS71 I 6 trp				1.00		4.3	2505	2,505	RSD=3.5%
SS71 I 6 ms				1.00	10	4.2	8009	8,009	Range OK!
Spike =	*0.025*	*mg C to*	*4.2*	*mg samp=*	*5,952*	*ppm*		*95%*	
CCV				1.00		40.0	981	981	98.10%
Blank				1.00		40.0	8.62	9	Blank OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	*comments*
SS71 A6				1.00		0.9	48396	48,396	*Range OK!*
SS71 B6				1.00		1.0	27645	27,645	*Range OK!*
SS71 C6				1.00		2.2	16882	16,882	*Range OK!*
~~SS71 D6~~			-	~~1.00~~		~~1.0~~	~~100102~~	~~100,102~~	~~*Offscale, dilute*~~
SS71 E6				1.00		1.2	36593	36,593	*Range OK!*
SS71 F6				1.00		0.9	45944	45,944	*Range OK!*
SS71 G6				1.00		0.9	61087	61,087	*Range OK!*
SS71 H6				1.00		4.0	5269	5,269	*Range OK!*
SS71 J 6				1.00		1.4	24800	24,800	*Range OK!*
SS71 K6				1.00		5.1	7105	7,105	*Range OK!*
~~NIST 1941B~~			-	~~1.00~~		~~3.5~~	~~29612~~	~~29,612~~	~~*Offscale, dilute*~~
~~NIST 1941B~~			-	~~1.00~~		~~3.2~~	~~23765~~	~~23,765~~	~~*79.48%*~~
NIST 1941B				1.00		3.1	25143	25,143	*84.09%*
CCV				1.00		40.0	948	948	*94.80%*
Blank				1.00		40.0	10.29	10	*Blank OK*

Analytical Resources, Incorporated
Analytical Chemists and Consultants

① 4-25-11 ②

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 1

Set-Up Parameters MODE: NPOC (Boat) **INLET:** Boat Sampler

Standards:	Source	Conc (ppm)
Calibration:	ARI 00115-7	5000
Verification:	ERA 05134-06	5000 to 100 for CVS
SRM:	NBS 1941 B	29100

12:14

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICV			40			
ICB			40			
NBS 1941B			3.6			
SR91 B1			4.1			
B1			3.6			
DP B1			4.1			
FP B1			4.3			
MS B1			4.3	2500	10	
SS71 I6			4.6			
DP I6			4.5			
FP I6			4.3			
MS I6			3.7	2500	10	
① ~~SR71~~ CCV			40			
CCB			40			
SR71 A6			0.9			
B6			1.0			
C6			2.2			
D6			1.0			offscale Rebule
E6			1.2			
F6			0.9			
G6			0.9			
H6			4.0			
J6			1.4			
K6			5.1			
NBS 1941B			3.5/3.2/3.1			
CCV			40			
CCB			40			
			~~4-25-11~~			
			②			

SS71 : 01734

4-25-11(W)

Detailed Analysis Report Print Date/Time: 2011/04/25 21:27:42

Sample ID: CVS BOAT 1000 — Mode: TOC
Method: Boat Sampler — Filename: 04251100
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/25 11:04
Operator ID: TRINA — Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1153.0085	46.1203	14290675	34.035	35.033	146

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000 — Mode: TOC
Method: Boat Sampler — Filename: 04251122
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/25 11:25
Operator ID: TRINA — Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	926.6937	37.0677	11469966	34.231	35.231	133

Sample ID: ICB BOAT — Mode: TOC
Method: Boat Sampler — Filename: 04251230
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/25 12:32
Operator ID: TRINA — Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.3239	0.4130	48646	38.212	39.211	46

Sample ID: NBS 1941B — Mode: TOC
Method: Boat Sampler — Filename: 04251304
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/25 13:22
Operator ID: TRINA — Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27469.0449	98.8886	30732800	35.860	36.854	187

Last Message: Over-range

Sample ID: SR91 B1 — Mode: TOC
Method: Boat Sampler — Filename: 04251547
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/25 15:50
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	892.3430	3.6586	1139990	34.902	35.897	93

Sample ID: SR91 B1 DP — Mode: TOC
Method: Boat Sampler — Filename: 04251600
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/25 16:02
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	554.2085	1.9952	621672	35.032	36.030	76

Sample ID: SR91 B1 — Mode: TOC
Method: Boat Sampler — Filename: 04251607
Cal. Curve: 041911 BOAT CAL — Timestamp: 2011/04/25 16:10
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	506.0246	2.0747	646459	35.010	36.007	75

Sample ID: SR91 B1 4P
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251613
Timestamp: 2011/04/25 16:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	494.8318	2.1278	662997	35.174	36.171	72

Sample ID: SR91 B1 MS
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251622
Timestamp: 2011/04/25 16:25
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5982.3608	25.7242	8015426	35.594	36.593	108

Sample ID: SS71 I 6
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251632
Timestamp: 2011/04/25 16:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2380.4265	10.9500	3411914	34.968	35.966	107

Sample ID: SS71 I 6 5P
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251732
Timestamp: 2011/04/25 17:36
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2341.6458	10.5374	3283365	35.042	36.040	108

Sample ID: SS71 I 6 4P
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251748
Timestamp: 2011/04/25 17:53
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2504.5955	10.7698	3355765	35.063	36.056	106

Sample ID: SS71 I 6 MS
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251818
Timestamp: 2011/04/25 18:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8008.7988	33.6370	10480987	35.443	36.441	135

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251836
Timestamp: 2011/04/25 18:39
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

				Baseline	Baseline	Time
1	981.0996	39.2440	12148062	35.412	36.408	138

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251853
Timestamp: 2011/04/25 18:56
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8.6177	0.3447	27380	35.383	35.324	120

Last Message: Low Sample Detected

Sample ID: SR71 A1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251900
Timestamp: 2011/04/25 19:04
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	48395.5391	38.7164	12063708	35.518	36.516	143

Sample ID: SR71 B1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251914
Timestamp: 2011/04/25 19:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27645.2656	27.6453	8614028	35.655	36.652	141

Sample ID: SR71 C1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251921
Timestamp: 2011/04/25 19:28
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16882.2480	37.1409	11572801	36.083	37.076	212

Sample ID: SR71 D1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251931
Timestamp: 2011/04/25 19:38
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	100102.1953	100.1022	31190986	37.298	38.295	222

Last Message: Over-range

Sample ID: SR71 E1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04251955
Timestamp: 2011/04/25 19:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36592.6055	43.9111	13682331	37.589	38.588	148

Sample ID: SR71 F1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Mode: TOC
Filename: 04252002
Timestamp: 2011/04/25 20:06

Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	45943.6523	41.3493	12884084	37.255	38.250	145

Sample ID: SR71 F1 Mode: TOC
Method: Boat Sampler Filename: 04252012
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/25 20:15
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	61087.3672	54.9786	17130870	36.913	37.911	149

Sample ID: SR71 H1 Mode: TOC
Method: Boat Sampler Filename: 04252018
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/25 20:21
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5269.2593	21.0770	6567424	36.609	37.609	117

Sample ID: SR71 J1 Mode: TOC
Method: Boat Sampler Filename: 04252025
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/25 20:29
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24799.5977	34.7194	10818279	36.314	37.311	139

Sample ID: SR71 K1 Mode: TOC
Method: Boat Sampler Filename: 04252042
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/25 20:46
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7105.4629	36.2379	11291407	35.841	36.841	155

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 04252050
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/25 20:54
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29612.0352	103.6421	32213972	35.570	36.568	181

Last Message: Over-range

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 04252057
Cal. Curve: 041911 BOAT CAL Timestamp: 2011/04/25 21:00
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23764.7812	76.0473	23615660	35.730	36.728	168

Last Message: Out of Calibration

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04252104
Timestamp: 2011/04/25 21:09
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25142.7969	77.9427	24206240	35.313	36.312	179

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04252113
Timestamp: 2011/04/25 21:16
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	948.1120	37.9245	11736916	35.807	36.807	126

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

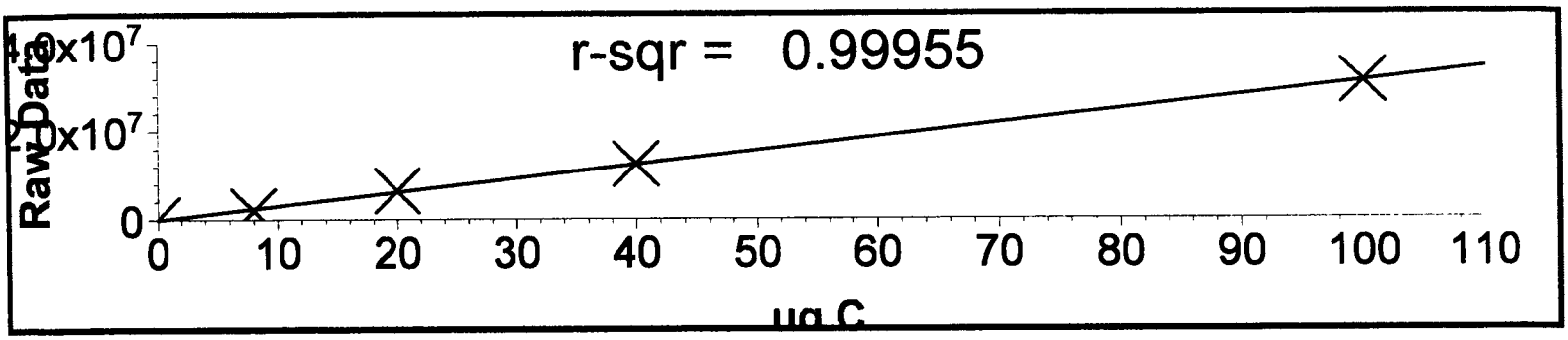
Mode: TOC
Filename: 04252120
Timestamp: 2011/04/25 21:22
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.2918	0.4117	48245	35.567	36.565	44

Calibration Report Print Date/Time: 2011/04/19 18:22:42

Cal. Curve ID: 041911 BOAT CAL
Created: 2011/04/19 18:06
Calibration Factor (m): 3.116e+05
Y Intercept (b): -80028
r-squared: 0.99955

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI WATEER	30053	0.000	0.353	Low Sample De	2011/04/19 16:52
200 PPM	1996979	8.000	6.666		2011/04/19 16:57
500 PPM	6459582	20.000	20.988		2011/04/19 17:12
1000 PPM	12427234	40.000	40.140		2011/04/19 17:33
2500 PPM	31033376	100.000	99.853	Over-range	2011/04/19 17:52


r-sqr = 0.99955
Raw Data
4.0x10^7
2.0x10^7
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2011/04/19 18:28:27

Sample ID: DI WATEER
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191649
Timestamp: 2011/04/19 16:52
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			30053	49.055	49.144	120

Last Message: Low Sample Detected

Sample ID: 200 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191655
Timestamp: 2011/04/19 16:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1996979	49.493	50.490	67

Sample ID: 500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191701
Timestamp: 2011/04/19 17:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			4483189	49.954	50.952	96

Sample ID: 500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191707
Timestamp: 2011/04/19 17:12
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6459582	50.297	51.297	132

Sample ID: 500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191720
Timestamp: 2011/04/19 17:23
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6064090	50.604	51.603	115

Sample ID: 1000 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191730
Timestamp: 2011/04/19 17:33
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12427234	50.569	51.567	154

Sample ID: 1000 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191740
Timestamp: 2011/04/19 17:44
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	12531159	50.184	51.182	164

Sample ID: 2500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191748
Timestamp: 2011/04/19 17:52
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			31033376	50.475	51.469	190

Last Message: Over-range

Sample ID: 2500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191758
Timestamp: 2011/04/19 18:04
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			31980592	49.823	50.820	230

Last Message: Over-range

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191817
Timestamp: 2011/04/19 18:21
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1072.8492	42.9140	13291597	50.282	51.281	156

TOC, Solids Data Analysis

DATE: 4/28/2011

Instrument: Apollo 2 ANALYST: KE 10:14

Mode: NPOC *Inlet:* Boat

Spike Std = 2,500 *ppm C*

Calibration Data

Cal Curve ID: 41911 BOAT CAL *Conc:* 5,000 *ppm*

Calibration Curve Standard: ARI # 00115 - 7 *Curve Date:* 04/19/11

CalFact: 3.116E+05 *intercept:* -80028 *r2 :* 0.99955

Curve Range (ppm) 200 *to* 2,500

Curve Range (µgC): 8 *to* 100 *40 µL injections of designated standard*

Verification Standard

Source: *ERA# 0513 - 10 - 06* *Conc:* 5,000 *ppm*

dilution : 10 *mL to* 50 1,000 *ppm*

Standard Reference Material

Source: *NIST 8704* *Conc:* 33,510 *ppm*

Source: *NIST 1941B* *Conc:* 29,900 *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
32.1	25.6	17.1	29.4			26.1	25.0%	*OK*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	*comments*
ICV				1.00		40.0	914	914	*91.40%*
Blank				1.00		40.0	11.21	11	*Blank OK*
~~NIST 1941B~~			-	~~1.00~~		~~3.9~~	~~34744~~	~~34,744~~	~~*Offscale, dilute*~~
NIST 1941B				1.00		2.5	28906	28,906	*96.68%*
Silica Blanks 1				1.00		52.9	32.11	32	*Low Scale*
Silica Blanks 2				1.00		50.3	25.60	26	*Low Scale*
Silica Blanks 3				1.00		51.6	17.14	17	*Low Scale*
Silica Blanks 4				1.00		53.6	29.35	29	*Low Scale*
SS71 P6				1.00		4.3	6763	6,763	*Range OK!*
SS71 Q6				1.00		3.9	6329	6,329	*Range OK!*
SS71 R6				1.00		4.8	6421	6,421	*Range OK!*
SS71 S6				1.00		4.3	9960	9,960	*Range OK!*
CCV				1.00		40.0	957	957	*95.70%*
Blank				1.00		40.0	9.73	10	*Blank OK*
~~SR72 A2~~			-	~~1.00~~		~~1.5~~	~~27898~~	~~27,898~~	~~*Range OK!*~~
SR72 A2				1.00		1.5	20807	20,807	*Range OK!*
SR72 A2 dup				1.00		1.6	21764	21,764	*RPD=4.5%*
SR72 A2 trp				1.00		1.4	22229	22,229	*RSD=3.4%*
SR72 A2 ms				1.00	10	1.1	38284	38,284	*Range OK!*
Spike =	*0.025*	*mg C to*	*1.1*	*mg samp=*	*22,727*	*ppm*		*77%*	

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
SR72 B2				1.00		1.1	8838	8,838	*Range OK!*
SR72 C2	47.1	252.1	81.32%	5.35		2.3	18525	99,041	*Range OK!*
SR72 D2				1.00		1.1	48394	48,394	*Range OK!*
SR72 E2				1.00		1.3	32488	32,488	*Range OK!*
~~ST56 A2~~			-	~~1.00~~		~~2.7~~	~~2.54~~	*boat stuck*	*Inject deleated*
ST56 A2				1.00		4.8	3462	3,462	*Range OK!*
CCV				1.00		40.0	947	947	*94.70%*
Blank				1.00		40.0	8.99	9	*Blank OK*
ST56 B2				1.00		3.4	8333	8,333	*Range OK!*
~~SS47 A1~~			-	~~1.00~~		~~0.9~~	~~74447~~	~~74,447~~	~~*Range OK!*~~
NIST 1941B				1.00		2.5	28117	28,117	*94.04%*
CCV				1.00		40.0	934	934	*93.40%*
Blank				1.00		40.0	16.55	17	*Blank OK*

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 4-28-11 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 1

Set-Up Parameters MODE: NPOC (Boat)		INLET: Boat Sampler
Standards:	**Source**	**Conc (ppm)**
Calibration:	ARI 0018-7	5000
Verification:	ERA 0513-10-06	5000 to 10000 for CVS
SRM:	NBS 1941 B	29900

10:14

Sample Sequence:

Sample ID	Dilution Data (mg) Sample	Dilution Data (mg) + Silica Gel	Burn Wt mg	Matrix Spike Data mg/L	Matrix Spike Data µL added	Comments
ICV			40			
ICB			40			
NBS 1941B			3.9			
↓			2.5			
SB 1			52.9			
2			50.3			
3			51.6			
4			53.6			
SS71 P6			4.3			
Q6			3.9			
R6			4.8			
S6			4.3			
CCV			40			
CCB			40			
~~ST56 A3~~			~~1.5~~			
~~↓ B3~~			~~1.6~~	~~4-28-11 (W)~~		
~~SR72 C2~~	~~47.1~~	~~252.1~~	~~1.5~~			
ST72 A2			1.5			wrong # injected Rerun
A2			1.6			
DP A2			1.5			
TP A2			1.4			
MS A2			1.1	2500	10	
B2			1.1			
C2	47.1	252.1	2.3			
D2			1.1			
E2			1.3			
ST56 A3			* 2.7/48			* miss inject Anrichel
CCV			40			
CCB			40			
ST56 B3			3.4			
SS47 A1			0.9			
~~+ + +~~ ~~A1~~			25/40/40			

NBS/CCV/CCB

4-28-11 (W)

Detailed Analysis Report Print Date/Time: 2011/04/28 18:31:28

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281048
Timestamp: 2011/04/28 10:51
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	914.3115	36.5725	11315637	36.442	37.442	121

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281143
Timestamp: 2011/04/28 11:44
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11.2084	0.4483	59670	34.563	35.550	48

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281150
Timestamp: 2011/04/28 11:54
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	34743.9844	100.7576	31315164	34.401	35.396	177

Last Message: Over-range

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281214
Timestamp: 2011/04/28 12:17
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28906.1836	72.2655	22437270	33.849	34.845	166

Sample ID: SB 1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281243
Timestamp: 2011/04/28 12:46
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	32.1095	1.6986	529267	33.290	34.280	65

Sample ID: SB 2
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281301
Timestamp: 2011/04/28 13:03
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25.5902	1.2872	401077	32.801	33.792	66

Sample ID: SB 3
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281312
Timestamp: 2011/04/28 13:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17.1417	0.8845	275607	32.454	33.446	58

Sample ID: SB 4
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281340
Timestamp: 2011/04/28 13:43
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29.3517	1.5733	490212	31.994	32.982	63

Sample ID: SS71 P6
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281348
Timestamp: 2011/04/28 13:51
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6763.0400	29.0811	9061413	31.735	32.733	130

Sample ID: SS71 Q6
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281356
Timestamp: 2011/04/28 13:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6329.1094	24.6835	7691175	31.646	32.645	125

Sample ID: SS71 R6
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281408
Timestamp: 2011/04/28 14:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6420.9053	30.8203	9603356	31.518	32.517	141

Sample ID: SS71 S6
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281453
Timestamp: 2011/04/28 14:56
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9960.3574	42.8295	13345317	31.160	32.156	150

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281459
Timestamp: 2011/04/28 15:02
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	957.2663	38.2907	11851012	31.263	32.262	130

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04281505
Timestamp: 2011/04/28 15:07
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.7336	0.3893	41289	31.256	32.256	41

Sample ID: SS71 A2
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281510
Timestamp: 2011/04/28 15:14
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27898.3398	41.8475	13039326	31.103	32.102	137

Sample ID: SS71 A2
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281518
Timestamp: 2011/04/28 15:22
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20807.2363	33.2916	10373370	31.314	32.313	138

Sample ID: SS71 A2 DUP
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281532
Timestamp: 2011/04/28 15:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21763.7305	32.6456	10172088	31.691	32.689	131

Sample ID: SS71 A2 DUP
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281541
Timestamp: 2011/04/28 15:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22229.3730	31.1211	9697075	32.254	33.249	147

Sample ID: SS71 A2 MS
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281549
Timestamp: 2011/04/28 15:52
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	38283.8555	42.1122	13121814	33.343	34.341	137

Sample ID: SR72 B2
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281557
Timestamp: 2011/04/28 16:00
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8837.7754	9.7216	3029153	33.706	34.704	97

Sample ID: SR72 C2
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281605
Timestamp: 2011/04/28 16:09
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18525.0312	42.6076	13276154	33.977	34.975	142

Sample ID: SR72 D2 | Mode: TOC
Method: Boat Sampler | Filename: 04281625
Cal. Curve: 041911 BOAT CAL | Timestamp: 2011/04/28 16:29
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	48393.5156	53.2329	16586906	33.532	34.530	149

Sample ID: SR72 E2 | Mode: TOC
Method: Boat Sampler | Filename: 04281633
Cal. Curve: 041911 BOAT CAL | Timestamp: 2011/04/28 16:37
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	32488.2930	42.2348	13159996	33.347	34.342	140

Sample ID: ST56 A2 | Mode: TOC
Method: Boat Sampler | Filename: 04281649
Cal. Curve: 041911 BOAT CAL | Timestamp: 2011/04/28 16:53
Operator ID: TRINA | Sample Type: Sample

Corrected 4-28-11 (W)

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.5410	0.0069	2138	32.737	32.755	120

Last Message: Low Sample Detected

Sample ID: ST56 B2 AL 4-28-11 (W) | Mode: TOC
Method: Boat Sampler | Filename: 04281700
Cal. Curve: 041911 BOAT CAL | Timestamp: 2011/04/28 17:03
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3462.3284	16.6192	5178393	32.534	33.528	117

Sample ID: CVS BOAT 1000 | Mode: TOC
Method: Boat Sampler | Filename: 04281708
Cal. Curve: 041911 BOAT CAL | Timestamp: 2011/04/28 17:11
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	947.0733	37.8829	11723969	32.694	33.692	124

Sample ID: ICB BOAT | Mode: TOC
Method: Boat Sampler | Filename: 04281718
Cal. Curve: 041911 BOAT CAL | Timestamp: 2011/04/28 17:23
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8.9907	0.3596	32030	32.300	32.159	120

Last Message: Low Sample Detected

Sample ID: ST56 B2 | Mode: TOC
Method: Boat Sampler | Filename: 04281725
Cal. Curve: 041911 BOAT CAL | Timestamp: 2011/04/28 17:30
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

SS71 : 01750

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8333.0195	28.3323	8828091	32.100	33.098	126

Sample ID: SS47 A1
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281734
Timestamp: 2011/04/28 17:39
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	74446.8281	67.0021	20877296	32.153	33.151	175

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281759
Timestamp: 2011/04/28 18:03
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28117.1328	70.2928	21822616	34.362	35.362	185

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04281809
Timestamp: 2011/04/28 18:12
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	934.3418	37.3737	11565288	35.359	36.358	123

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

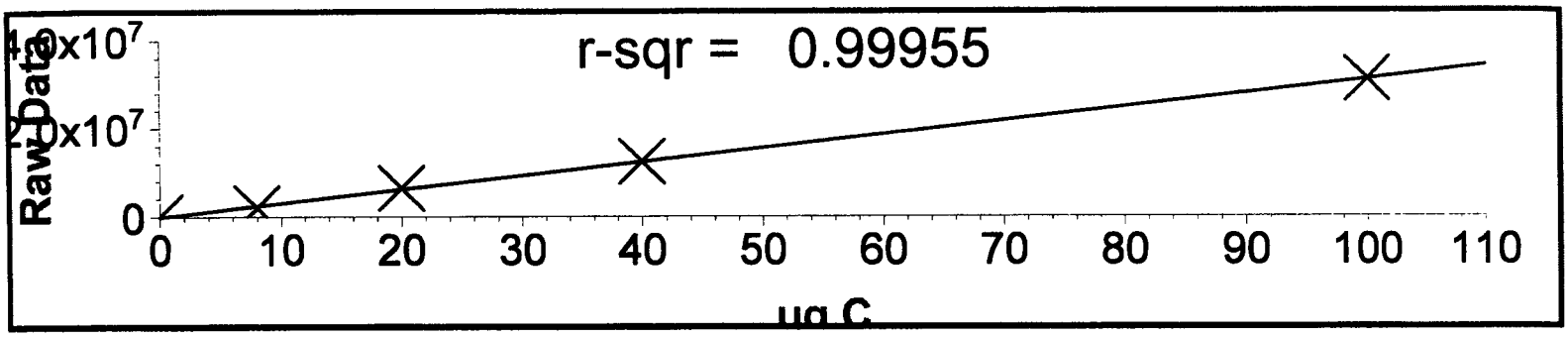
Mode: TOC
Filename: 04281823
Timestamp: 2011/04/28 18:29
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16.5513	0.6621	126262	34.465	35.451	54

Calibration Report Print Date/Time: 2011/04/19 18:22:42

Cal. Curve ID: 041911 BOAT CAL
Created: 2011/04/19 18:06
Calibration Factor (m): 3.116e+05
Y Intercept (b): -80028
r-squared: 0.99955

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI WATEER	30053	0.000	0.353	Low Sample De	2011/04/19 16:52
200 PPM	1996979	8.000	6.666		2011/04/19 16:57
500 PPM	6459582	20.000	20.988		2011/04/19 17:12
1000 PPM	12427234	40.000	40.140		2011/04/19 17:33
2500 PPM	31033376	100.000	99.853	Over-range	2011/04/19 17:52


r-sqr = 0.99955
Raw Data
x10^7
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2011/04/19 18:28:27

Sample ID: DI WATEER
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191649
Timestamp: 2011/04/19 16:52
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			30053	49.055	49.144	120

Last Message: Low Sample Detected

Sample ID: 200 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191655
Timestamp: 2011/04/19 16:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1996979	49.493	50.490	67

Sample ID: 500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191701
Timestamp: 2011/04/19 17:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			4483189	49.954	50.952	96

Sample ID: 500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191707
Timestamp: 2011/04/19 17:12
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6459582	50.297	51.297	132

Sample ID: 500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191720
Timestamp: 2011/04/19 17:23
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6064090	50.604	51.603	115

Sample ID: 1000 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191730
Timestamp: 2011/04/19 17:33
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12427234	50.569	51.567	154

Sample ID: 1000 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04191740
Timestamp: 2011/04/19 17:44
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	12531159	50.184	51.182	164

Sample ID: 2500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04191748
Timestamp: 2011/04/19 17:52
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			31033376	50.475	51.469	190

Last Message: Over-range

Sample ID: 2500 PPM
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04191758
Timestamp: 2011/04/19 18:04
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			31980592	49.823	50.820	230

Last Message: Over-range

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: 041911 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04191817
Timestamp: 2011/04/19 18:21
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1072.8492	42.9140	13291597	50.282	51.281	156

FRONTIER
ANALYTICAL LABORATORY

April 21, 2011

Ms. Sue Dunnihoo
Analytical Resources Incorporated
4611 South 134th Place
Tukwila, WA 98168-3240

Dear Ms. Dunnihoo,

Enclosed are the results for Frontier Analytical Laboratory project **6701**. This corresponds to your **Lora Lake Surface Sediment Sampling** project under ARI project number **SP34**. One aqueous sample and nine sediment samples were received on 3/31/2011 in good condition. These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The 2005 World Health Organizations toxic equivalency factors were used to calculate the toxic equivalency (TEQs) on your report. As per your email request dated 3/31/2011, a matrix spike (MS) and matrix spike duplicate (MSD) were performed on sample 6701-002-SA (ARI Sample ID: LL-SED2-0-15-032911). Analytical Resources Incorporated requested a Level IV report and a turnaround time of fifteen business days for project **6701**.

Please note that due to high concentrations of several isomers, the extracts from samples 6701-001-SA, 6701-002-SA, 6701-003-SA, 6701-004-SA and 6701-005-SA (ARI sample IDs: LL-SED1-0-15-032911, LL-SED2-0-15-032911, LL-SED3-0-15-032911, LL-SED4-0-15-032911 and LL-SED1-0-15-032911-D respectively) were diluted and reanalyzed. The results taken from the analysis of the diluted extracts have been identified with a "*" qualifier on their corresponding sample data sheet.

The following Level IV report consists of an Analytical Data section, a Sample Receipt section, a Laboratory Raw Data section, and an Instrument Raw Data section. The Analytical Data section contains our project-sample tracking log and the analytical results. The Sample Receipt section contains your original chain of custodies, our sample login form and a sample photo. The Laboratory Raw Data section contains our project request sheet, a percent solids sheet, an extraction bench sheet, and the cleanup bench sheet. The instrument raw data section contains three sub-sections; the sample results section, the initial calibration section and the continuing/ending calibration section. The sample results sub-section consists of the quantitation summary forms with chromatograms for all samples and QC. The initial calibration sub-section consists of the individual quantitation summary forms and chromatograms for each point of the initial calibration curve as well as an overall quantitation summary form of the initial calibration curve. The continuing/ending calibration sub-section consists of the quantitation summary forms and chromatograms for all beginning and ending calibration injections associated with the samples and QC. The Level I summary and the Electronic Data Deliverables (EDDs) have been sent to you via email. A hardcopy of the Level IV data package has been sent to you via OnTrac overnight delivery. The enclosed results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full.

If you have any questions regarding project **6701**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **6701**

Received on: **03/31/2011** Project Due: **04/22/2011** Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
6701-001-SA	0	SP34	LL-SED1-0-15-032911	EPA 1613 D/F	Sediment	03/29/2011	02:05 pm	03/28/2012
6701-002-SA	0	SP34	LL-SED2-0-15-032911	EPA 1613 D/F	Sediment	03/29/2011	12:00 pm	03/28/2012
6701-002-MS	0	SP34	LL-SED2-0-15-032911	EPA 1613 D/F	Sediment	03/29/2011	12:00 pm	03/28/2012
6701-002-MSD	0	SP34	LL-SED2-0-15-032911	EPA 1613 D/F	Sediment	03/29/2011	12:00 pm	03/28/2012
6701-003-SA	0	SP34	LL-SED3-0-15-032911	EPA 1613 D/F	Sediment	03/29/2011	11:10 am	03/28/2012
6701-004-SA	0	SP34	LL-SED4-0-15-032911	EPA 1613 D/F	Sediment	03/29/2011	01:10 pm	03/28/2012
6701-005-SA	0	SP34	LL-SED1-0-15-032911-D	EPA 1613 D/F	Sediment	03/29/2011	02:05 pm	03/28/2012
6701-006-SA	0	SP34	LL-SED5-0-15-032911	EPA 1613 D/F	Sediment	03/29/2011	03:10 pm	03/28/2012
6701-007-SA	0	SP34	MC-SED1-0-10-032911	EPA 1613 D/F	Sediment	03/29/2011	04:50 pm	03/28/2012
6701-008-SA	0	SP34	MC-SED2-0-10-032911	EPA 1613 D/F	Sediment	03/29/2011	04:35 pm	03/28/2012
6701-009-SA	0	SP34	MC-SED3-0-10-032911	EPA 1613 D/F	Sediment	03/29/2011	04:15 pm	03/28/2012
6701-010-SA	1	SP34	LL-SED1-0-15-032911-ER	EPA 1613 D/F	Aqueous	03/29/2011	03:50 pm	03/28/2012

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-001-MB
Client ID: Method Blank
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-20-2011
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.140		-	0.0259				
1,2,3,7,8-PeCDD	ND	0.208		-	0.0434				
1,2,3,4,7,8-HxCDD	ND	0.223		-	0.0467				
1,2,3,6,7,8-HxCDD	ND	0.292		-	0.0587	Total TCDD	ND	0.140	
1,2,3,7,8,9-HxCDD	ND	0.251		-	0.0529	Total PeCDD	ND	0.208	
1,2,3,4,6,7,8-HpCDD	ND	0.398		-	0.0742	Total HxCDD	ND	0.292	
OCDD	ND	0.956		-	0.144	Total HpCDD	ND	0.398	
2,3,7,8-TCDF	ND	0.114		-	0.0200				
1,2,3,7,8-PeCDF	ND	0.159		-	0.0304				
2,3,4,7,8-PeCDF	ND	0.179		-	0.0322				
1,2,3,4,7,8-HxCDF	ND	0.183		-	0.0365				
1,2,3,6,7,8-HxCDF	ND	0.180		-	0.0357				
2,3,4,6,7,8-HxCDF	ND	0.214		-	0.0399				
1,2,3,7,8,9-HxCDF	ND	0.182		-	0.0386	Total TCDF	ND	0.114	
1,2,3,4,6,7,8-HpCDF	ND	0.270		-	0.0393	Total PeCDF	ND	0.179	
1,2,3,4,7,8,9-HpCDF	ND	0.317		-	0.0418	Total HxCDF	ND	0.214	
OCDF	ND	0.475		-	0.105	Total HpCDF	ND	0.317	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	72.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	63.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	74.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	77.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	90.2	23.0 - 140	
13C-OCDD	64.6	17.0 - 157	
13C-2,3,7,8-TCDF	78.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	75.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	70.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	82.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	81.4	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	72.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	77.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	103	26.0 - 138	
13C-OCDF	69.6	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	66.1	35.0 - 197

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/21/11

Reviewed By: DN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-001-OPR
Client ID: OPR
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: ng/ml

Acquired: 04-20-2011
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	8.39	6.70 - 15.8	
1,2,3,7,8-PeCDD	51.2	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	50.1	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	49.6	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	50.9	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	47.8	35.0 - 70.0	
OCDD	96.2	78.0 - 144	
2,3,7,8-TCDF	10.2	7.50 - 15.8	
1,2,3,7,8-PeCDF	50.8	40.0 - 67.0	
2,3,4,7,8-PeCDF	50.4	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	47.7	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	48.7	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	47.6	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	49.4	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	47.2	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	48.0	39.0 - 69.0	
OCDF	89.4	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	88.8	20.0 - 175	
13C-1,2,3,7,8-PeCDD	77.8	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	89.5	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	94.9	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	111	26.0 - 166	
13C-OCDD	86.8	13.0 - 198	
13C-2,3,7,8-TCDF	93.8	22.0 - 152	
13C-1,2,3,7,8-PeCDF	90.5	21.0 - 192	
13C-2,3,4,7,8-PeCDF	90.7	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	95.9	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	95.2	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	94.6	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	96.8	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	105	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	127	20.0 - 186	
13C-OCDF	93.0	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	78.1	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/21/11

Reviewed By: DN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-001-MB
Client ID: Method Blank
Matrix: Aqueous
Batch No: X2265

Date Extracted: 04-07-2011
Date Received: NA
Amount: 1.000 L

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/L

Acquired: 04-08-2011
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.787		-	0.215				
1,2,3,7,8-PeCDD	ND	0.974		-	0.317				
1,2,3,4,7,8-HxCDD	ND	1.11		-	0.326				
1,2,3,6,7,8-HxCDD	ND	1.38		-	0.424	Total TCDD	ND	0.787	
1,2,3,7,8,9-HxCDD	ND	1.22		-	0.367	Total PeCDD	ND	0.974	
1,2,3,4,6,7,8-HpCDD	ND	1.15		-	0.497	Total HxCDD	ND	1.38	
OCDD	ND	2.42		-	1.41	Total HpCDD	ND	1.15	
2,3,7,8-TCDF	ND	0.538		-	0.209				
1,2,3,7,8-PeCDF	ND	0.693		-	0.235				
2,3,4,7,8-PeCDF	ND	0.682		-	0.243				
1,2,3,4,7,8-HxCDF	ND	0.797		-	0.255				
1,2,3,6,7,8-HxCDF	ND	0.737		-	0.248				
2,3,4,6,7,8-HxCDF	ND	0.755		-	0.262				
1,2,3,7,8,9-HxCDF	ND	0.749		-	0.258	Total TCDF	ND	0.538	
1,2,3,4,6,7,8-HpCDF	ND	1.02		-	0.324	Total PeCDF	ND	0.693	
1,2,3,4,7,8,9-HpCDF	ND	1.45		-	0.490	Total HxCDF	ND	0.797	
OCDF	ND	1.53		-	0.805	Total HpCDF	ND	1.45	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.3	25.0 - 164	
13C-1,2,3,7,8-PeCDD	89.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	83.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	99.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	107	23.0 - 140	
13C-OCDD	92.3	17.0 - 157	
13C-2,3,7,8-TCDF	104	24.0 - 169	
13C-1,2,3,7,8-PeCDF	106	24.0 - 185	
13C-2,3,4,7,8-PeCDF	108	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	86.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	94.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	92.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	93.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	102	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	107	26.0 - 138	
13C-OCDF	94.6	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	89.2	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/11/11

Reviewed By: _____
Date: 4/11/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-001-OPR
Client ID: OPR
Matrix: Aqueous
Batch No: X2265

Date Extracted: 04-07-2011
Date Received: NA
Amount: 1.000 L

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: ng/ml

Acquired: 04-08-2011
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	9.60	6.70 - 15.8	
1,2,3,7,8-PeCDD	53.7	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	51.2	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	53.1	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	55.9	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	51.7	35.0 - 70.0	
OCDD	110	78.0 - 144	
2,3,7,8-TCDF	11.2	7.50 - 15.8	
1,2,3,7,8-PeCDF	54.5	40.0 - 67.0	
2,3,4,7,8-PeCDF	54.0	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	52.8	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	53.7	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	52.6	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	53.3	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	51.3	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	52.1	39.0 - 69.0	
OCDF	102	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.0	20.0 - 175	
13C-1,2,3,7,8-PeCDD	79.5	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	68.5	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	76.3	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	83.3	26.0 - 166	
13C-OCDD	74.1	13.0 - 198	
13C-2,3,7,8-TCDF	99.2	22.0 - 152	
13C-1,2,3,7,8-PeCDF	90.8	21.0 - 192	
13C-2,3,4,7,8-PeCDF	95.8	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	72.0	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	75.0	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	78.7	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	74.3	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	83.6	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	84.1	20.0 - 186	
13C-OCDF	75.2	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	95.3	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/11/11

Reviewed By: _____
Date: 4/11/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-001-SA
Client ID: LL-SED1-0-15-032911
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Amount: 3.28 g
% Solids: 20.00

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-21-2011
2005 WHO TEQ: 193

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	4.31	-		4.31	0.0259				
1,2,3,7,8-PeCDD	20.7	-		20.7	0.0434				
1,2,3,4,7,8-HxCDD	53.8	-		5.38	0.0467				
1,2,3,6,7,8-HxCDD	188	-		18.8	0.0587	Total TCDD	62.9	-	
1,2,3,7,8,9-HxCDD	113	-		11.3	0.0529	Total PeCDD	312	-	
1,2,3,4,6,7,8-HpCDD	6770	-	*	67.7	0.0742	Total HxCDD	1380	-	
OCDD	68500	-	*	20.6	0.144	Total HpCDD	12200	-	*
2,3,7,8-TCDF	8.37	-	F	0.837	0.0200				
1,2,3,7,8-PeCDF	10.5	-		0.315	0.0304				
2,3,4,7,8-PeCDF	13.0	-		3.90	0.0322				
1,2,3,4,7,8-HxCDF	130	-		13.0	0.0365				
1,2,3,6,7,8-HxCDF	42.3	-		4.23	0.0357				
2,3,4,6,7,8-HxCDF	56.4	-		5.64	0.0399				
1,2,3,7,8,9-HxCDF	11.5	-		1.15	0.0386	Total TCDF	177	-	
1,2,3,4,6,7,8-HpCDF	1320	-		13.2	0.0393	Total PeCDF	351	-	
1,2,3,4,7,8,9-HpCDF	88.7	-		0.887	0.0418	Total HxCDF	1500	-	D,M
OCDF	3830	-		1.15	0.105	Total HpCDF	4460	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	65.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	61.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	65.7	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	63.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	91.0	23.0 - 140	*
13C-OCDD	84.5	17.0 - 157	*
13C-2,3,7,8-TCDF	71.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	73.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	72.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	70.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	69.0	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	68.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	72.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	77.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	82.5	26.0 - 138	
13C-OCDF	58.8	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	60.2	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/21/11

Reviewed By: DPJ
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-002-SA
Client ID: LL-SED2-0-15-032911
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Amount: 3.01 g
% Solids: 14.44

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-21-2011
2005 WHO TEQ: 217

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	4.80	-		4.80	0.0259				
1,2,3,7,8-PeCDD	25.7	-		25.7	0.0434				
1,2,3,4,7,8-HxCDD	60.3	-		6.03	0.0467				
1,2,3,6,7,8-HxCDD	217	-		21.7	0.0587	Total TCDD	78.7	-	
1,2,3,7,8,9-HxCDD	135	-		13.5	0.0529	Total PeCDD	403	-	
1,2,3,4,6,7,8-HpCDD	7500	-	*	75.0	0.0742	Total HxCDD	1600	-	
OCDD	67100	-	*	20.1	0.144	Total HpCDD	13200	-	*
2,3,7,8-TCDF	10.7	-	F	1.07	0.0200				
1,2,3,7,8-PeCDF	11.3	-		0.339	0.0304				
2,3,4,7,8-PeCDF	18.5	-		5.55	0.0322				
1,2,3,4,7,8-HxCDF	139	-		13.9	0.0365				
1,2,3,6,7,8-HxCDF	49.0	-		4.90	0.0357				
2,3,4,6,7,8-HxCDF	64.4	-		6.44	0.0399				
1,2,3,7,8,9-HxCDF	12.2	-		1.22	0.0386	Total TCDF	229	-	
1,2,3,4,6,7,8-HpCDF	1480	-		14.8	0.0393	Total PeCDF	422	-	
1,2,3,4,7,8,9-HpCDF	92.6	-		0.926	0.0418	Total HxCDF	1680	-	D,M
OCDF	4050	-		1.22	0.105	Total HpCDF	4630	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	88.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	89.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	126	23.0 - 140	*
13C-OCDD	116	17.0 - 157	*
13C-2,3,7,8-TCDF	92.1	24.0 - 169	
13C-1,2,3,7,8-PeCDF	98.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	99.0	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	95.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	92.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	94.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	99.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	107	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	114	26.0 - 138	
13C-OCDF	88.3	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	84.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: [signature]
Date: 4/21/11

Reviewed By: DN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-002-MS/MSD
Client ID: LL-SED2-0-15-032911
Matrix: Sediment

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Sample Amount: 3.01 g
MS Amount: 3.01 g
MSD Amount: 3.02 g

ICal: PCDDFAL3-3-7-11
Batch No: X2272
Units: pg/g

MS Acquired: 2011-04-20
MSD Acquired: 2011-04-20
GC Column: DB5

Compound	Amount Spiked (pg)	Sample Amount	MS Amount	MSD Amount	% RSD	Qual
2,3,7,8-TCDD	200	4.80	59.7	59.3	1.21	
1,2,3,7,8-PeCDD	1000	25.7	372	364	1.94	
1,2,3,4,7,8-HxCDD	1000	60.3	400	400	0.976	
1,2,3,6,7,8-HxCDD	1000	217	554	544	3.49	
1,2,3,7,8,9-HxCDD	1000	135	492	495	0.930	
1,2,3,4,6,7,8-HpCDD	1000	7500	-	-	0.00	+
OCDD	2000	67100	-	-	0.00	+
2,3,7,8-TCDF	200	10.7	81.0	81.0	0.471	
1,2,3,7,8-PeCDF	1000	11.3	344	341	1.40	
2,3,4,7,8-PeCDF	1000	18.5	370	360	1.92	
1,2,3,4,7,8-HxCDF	1000	139	484	482	0.00	
1,2,3,6,7,8-HxCDF	1000	49.0	366	371	1.97	
2,3,4,6,7,8-HxCDF	1000	64.4	384	383	0.00	
1,2,3,7,8,9-HxCDF	1000	12.2	332	334	1.14	
1,2,3,4,6,7,8-HpCDF	1000	1480	1790	1800	3.14	
1,2,3,4,7,8,9-HpCDF	1000	92.6	393	390	0.111	
OCDF	2000	4050	4690	4690	5.13	

+ Inappropriate spike level

Internal Standards		% Rec	% Rec	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	2000	92.0	98.8	90.5	25.0 - 164	
13C-1,2,3,7,8-PeCDD	2000	86.5	90.0	85.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	2000	88.2	93.2	89.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	2000	89.7	97.3	94.5	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	2000	126	126	122	23.0 - 140	
13C-OCDD	4000	116	105	105	17.0 - 157	
13C-2,3,7,8-TCDF	2000	92.1	103	99.1	24.0 - 169	
13C-1,2,3,7,8-PeCDF	2000	98.0	106	100	24.0 - 185	
13C-2,3,4,7,8-PeCDF	2000	99.0	107	102	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	2000	95.0	101	94.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	2000	92.8	99.8	92.0	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	2000	94.9	101	95.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	2000	99.7	105	100	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	2000	107	117	109	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	2000	114	131	122	26.0 - 138	
13C-OCDF	4000	88.3	101	101	17.0 - 157	

Cleanup Surrogate						
37Cl-2,3,7,8-TCDD	800	84.9	86.8	85.7	35.0 - 197	

Analyst: _____
Date: 4/21/11

Reviewed By: _____
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-003-SA
Client ID: LL-SED3-0-15-032911
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Amount: 3.14 g
% Solids: 19.72

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-21-2011
2005 WHO TEQ: 152

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	10.4	-		10.4	0.0259				
1,2,3,7,8-PeCDD	18.1	-		18.1	0.0434				
1,2,3,4,7,8-HxCDD	45.5	-		4.55	0.0467				
1,2,3,6,7,8-HxCDD	156	-		15.6	0.0587	Total TCDD	109	-	
1,2,3,7,8,9-HxCDD	81.0	-		8.10	0.0529	Total PeCDD	445	-	
1,2,3,4,6,7,8-HpCDD	4690	-		46.9	0.0742	Total HxCDD	1590	-	
OCDD	54600	-	*	16.4	0.144	Total HpCDD	9670	-	
2,3,7,8-TCDF	14.3	-	F	1.43	0.0200				
1,2,3,7,8-PeCDF	10.0	-		0.300	0.0304				
2,3,4,7,8-PeCDF	13.9	-		4.17	0.0322				
1,2,3,4,7,8-HxCDF	60.9	-		6.09	0.0365				
1,2,3,6,7,8-HxCDF	30.5	-		3.05	0.0357				
2,3,4,6,7,8-HxCDF	44.9	-		4.49	0.0399				
1,2,3,7,8,9-HxCDF	7.92	-	J	0.792	0.0386	Total TCDF	293	-	D,M
1,2,3,4,6,7,8-HpCDF	1050	-		10.5	0.0393	Total PeCDF	394	-	D,M
1,2,3,4,7,8,9-HpCDF	46.7	-		0.467	0.0418	Total HxCDF	1080	-	D,M
OCDF	2480	-		0.744	0.105	Total HpCDF	2970	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	86.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	97.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	85.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	90.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	118	23.0 - 140	
13C-OCDD	113	17.0 - 157	*
13C-2,3,7,8-TCDF	92.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	108	24.0 - 185	
13C-2,3,4,7,8-PeCDF	111	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	88.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	90.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	93.9	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	102	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	121	26.0 - 138	
13C-OCDF	101	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	81.2	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/21/11

Reviewed By: DN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-004-SA
Client ID: LL-SED4-0-15-032911
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Amount: 3.02 g
% Solids: 17.49

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-21-2011
2005 WHO TEQ: 149

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	5.23	-		5.23	0.0259				
1,2,3,7,8-PeCDD	16.2	-		16.2	0.0434				
1,2,3,4,7,8-HxCDD	40.1	-		4.01	0.0467				
1,2,3,6,7,8-HxCDD	164	-		16.4	0.0587	Total TCDD	78.1	-	
1,2,3,7,8,9-HxCDD	93.4	-		9.34	0.0529	Total PeCDD	477	-	
1,2,3,4,6,7,8-HpCDD	4980	-		49.8	0.0742	Total HxCDD	1490	-	
OCDD	51500	-	*	15.4	0.144	Total HpCDD	9300	-	
2,3,7,8-TCDF	9.95	-	F	0.995	0.0200				
1,2,3,7,8-PeCDF	12.2	-		0.366	0.0304				
2,3,4,7,8-PeCDF	12.1	-		3.63	0.0322				
1,2,3,4,7,8-HxCDF	78.5	-		7.85	0.0365				
1,2,3,6,7,8-HxCDF	34.5	-		3.45	0.0357				
2,3,4,6,7,8-HxCDF	44.3	-		4.43	0.0399				
1,2,3,7,8,9-HxCDF	9.57	-		0.957	0.0386	Total TCDF	212	-	
1,2,3,4,6,7,8-HpCDF	979	-		9.79	0.0393	Total PeCDF	365	-	
1,2,3,4,7,8,9-HpCDF	54.6	-		0.546	0.0418	Total HxCDF	1120	-	D,M
OCDF	2470	-		0.741	0.105	Total HpCDF	2910	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	80.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	73.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	77.7	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	83.5	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	110	23.0 - 140	
13C-OCDD	107	17.0 - 157	*
13C-2,3,7,8-TCDF	88.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	86.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	87.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	89.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	85.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	91.9	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	101	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	115	26.0 - 138	
13C-OCDF	96.4	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	71.3	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: A
Date: 4/21/11

Reviewed By: DN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-005-SA
Client ID: LL-SED1-0-15-032911-D
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Amount: 3.05 g
% Solids: 18.65

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-21-2011
2005 WHO TEQ: 187

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	4.28	-		4.28	0.0259				
1,2,3,7,8-PeCDD	21.8	-		21.8	0.0434				
1,2,3,4,7,8-HxCDD	51.3	-		5.13	0.0467				
1,2,3,6,7,8-HxCDD	183	-		18.3	0.0587	Total TCDD	55.5	-	
1,2,3,7,8,9-HxCDD	111	-		11.1	0.0529	Total PeCDD	287	-	
1,2,3,4,6,7,8-HpCDD	6100	-		61.0	0.0742	Total HxCDD	1250	-	
OCDD	67000	-	*	20.1	0.144	Total HpCDD	10800	-	
2,3,7,8-TCDF	7.09	-	F	0.709	0.0200				
1,2,3,7,8-PeCDF	10.1	-		0.303	0.0304				
2,3,4,7,8-PeCDF	12.9	-		3.87	0.0322				
1,2,3,4,7,8-HxCDF	137	-		13.7	0.0365				
1,2,3,6,7,8-HxCDF	43.6	-		4.36	0.0357				
2,3,4,6,7,8-HxCDF	57.7	-		5.77	0.0399				
1,2,3,7,8,9-HxCDF	11.4	-		1.14	0.0386	Total TCDF	164	-	
1,2,3,4,6,7,8-HpCDF	1350	-		13.5	0.0393	Total PeCDF	352	-	
1,2,3,4,7,8,9-HpCDF	93.6	-		0.936	0.0418	Total HxCDF	1500	-	D,M
OCDF	4040	-		1.21	0.105	Total HpCDF	4450	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	101	25.0 - 164	
13C-1,2,3,7,8-PeCDD	91.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	95.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	101	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	127	23.0 - 140	
13C-OCDD	135	17.0 - 157	*
13C-2,3,7,8-TCDF	107	24.0 - 169	
13C-1,2,3,7,8-PeCDF	110	24.0 - 185	
13C-2,3,4,7,8-PeCDF	109	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	96.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	97.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	98.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	105	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	114	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	128	26.0 - 138	
13C-OCDF	101	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	90.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/21/11

Reviewed By: DN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-006-SA
Client ID: LL-SED5-0-15-032911
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Amount: 5.03 g
% Solids: 77.77

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-20-2011
2005 WHO TEQ: 7.41

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.269		-	0.0259				
1,2,3,7,8-PeCDD	1.26	-	J	1.26	0.0434				
1,2,3,4,7,8-HxCDD	2.03	-	J	0.203	0.0467				
1,2,3,6,7,8-HxCDD	7.46	-		0.746	0.0587	Total TCDD	ND	0.269	
1,2,3,7,8,9-HxCDD	3.88	-	J	0.388	0.0529	Total PeCDD	5.30	-	
1,2,3,4,6,7,8-HpCDD	202	-		2.02	0.0742	Total HxCDD	35.0	-	
OCDD	2110	-		0.633	0.144	Total HpCDD	340	-	
2,3,7,8-TCDF	ND	0.185		-	0.0200				
1,2,3,7,8-PeCDF	0.518	-	J	0.0155	0.0304				
2,3,4,7,8-PeCDF	0.894	-	J	0.268	0.0322				
1,2,3,4,7,8-HxCDF	8.09	-		0.809	0.0365				
1,2,3,6,7,8-HxCDF	2.30	-	J	0.230	0.0357				
2,3,4,6,7,8-HxCDF	2.75	-	J	0.275	0.0399				
1,2,3,7,8,9-HxCDF	0.645	-	J	0.0645	0.0386	Total TCDF	4.70	-	
1,2,3,4,6,7,8-HpCDF	41.9	-		0.419	0.0393	Total PeCDF	18.9	-	
1,2,3,4,7,8,9-HpCDF	4.20	-	J	0.0420	0.0418	Total HxCDF	72.0	-	
OCDF	114	-		0.0342	0.105	Total HpCDF	155	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	86.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	75.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	88.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	92.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	114	23.0 - 140	
13C-OCDD	100	17.0 - 157	
13C-2,3,7,8-TCDF	94.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	90.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	91.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	93.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	94.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	93.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	104	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	105	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	130	26.0 - 138	
13C-OCDF	97.5	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	79.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/21/11

Reviewed By: BN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-007-SA
Client ID: MC-SED1-0-10-032911
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Amount: 6.29 g
% Solids: 83.04

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-20-2011
2005 WHO TEQ: 0.109

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.158		-	0.0259				
1,2,3,7,8-PeCDD	ND	0.250		-	0.0434				
1,2,3,4,7,8-HxCDD	ND	0.308		-	0.0467				
1,2,3,6,7,8-HxCDD	ND	0.402		-	0.0587	Total TCDD	ND	0.158	
1,2,3,7,8,9-HxCDD	ND	0.345		-	0.0529	Total PeCDD	ND	0.250	
1,2,3,4,6,7,8-HpCDD	7.83	-		0.0783	0.0742	Total HxCDD	0.822	-	J
OCDD	52.6	-		0.0158	0.144	Total HpCDD	12.9	-	
2,3,7,8-TCDF	ND	0.152		-	0.0200				
1,2,3,7,8-PeCDF	ND	0.180		-	0.0304				
2,3,4,7,8-PeCDF	ND	0.175		-	0.0322				
1,2,3,4,7,8-HxCDF	ND	0.197		-	0.0365				
1,2,3,6,7,8-HxCDF	ND	0.188		-	0.0357				
2,3,4,6,7,8-HxCDF	ND	0.200		-	0.0399				
1,2,3,7,8,9-HxCDF	ND	0.182		-	0.0386	Total TCDF	ND	0.152	
1,2,3,4,6,7,8-HpCDF	1.37	-	J	0.0137	0.0393	Total PeCDF	0.638	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.270		-	0.0418	Total HxCDF	1.76	-	J
OCDF	3.22	-	J	0.000966	0.105	Total HpCDF	3.42	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	77.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	88.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	91.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	118	23.0 - 140	
13C-OCDD	92.3	17.0 - 157	
13C-2,3,7,8-TCDF	97.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	89.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	95.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	95.4	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	95.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	100	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	108	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	137	26.0 - 138	
13C-OCDF	97.6	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	80.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/21/11

Reviewed By: DN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-008-SA
Client ID: MC-SED2-0-10-032911
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Amount: 5.09 g
% Solids: 85.11

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-20-2011
2005 WHO TEQ: 0.0383

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.209		-	0.0259				
1,2,3,7,8-PeCDD	ND	0.334		-	0.0434				
1,2,3,4,7,8-HxCDD	ND	0.282		-	0.0467				
1,2,3,6,7,8-HxCDD	ND	0.352		-	0.0587	Total TCDD	ND	0.209	
1,2,3,7,8,9-HxCDD	ND	0.310		-	0.0529	Total PeCDD	ND	0.334	
1,2,3,4,6,7,8-HpCDD	2.83	-	J	0.0283	0.0742	Total HxCDD	ND	0.352	
OCDD	15.4	-		0.00462	0.144	Total HpCDD	4.77	-	J
2,3,7,8-TCDF	ND	0.132		-	0.0200				
1,2,3,7,8-PeCDF	ND	0.215		-	0.0304				
2,3,4,7,8-PeCDF	ND	0.221		-	0.0322				
1,2,3,4,7,8-HxCDF	ND	0.178		-	0.0365				
1,2,3,6,7,8-HxCDF	ND	0.173		-	0.0357				
2,3,4,6,7,8-HxCDF	ND	0.177		-	0.0399				
1,2,3,7,8,9-HxCDF	ND	0.160		-	0.0386	Total TCDF	ND	0.132	
1,2,3,4,6,7,8-HpCDF	0.536	-	J	0.00536	0.0393	Total PeCDF	ND	0.221	
1,2,3,4,7,8,9-HpCDF	ND	0.202		-	0.0418	Total HxCDF	ND	0.340	
OCDF	ND	0.868		-	0.105	Total HpCDF	1.44	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	86.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	77.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	87.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	91.5	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	114	23.0 - 140	
13C-OCDD	80.5	17.0 - 157	
13C-2,3,7,8-TCDF	92.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	90.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	91.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	94.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	95.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	92.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	98.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	102	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	127	26.0 - 138	
13C-OCDF	87.6	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	76.2	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/21/11

Reviewed By: DN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-009-SA
Client ID: MC-SED3-0-10-032911
Matrix: Sediment
Batch No: X2272

Date Extracted: 04-18-2011
Date Received: 03-31-2011
Amount: 6.00 g
% Solids: 88.38

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/g

Acquired: 04-20-2011
2005 WHO TEQ: 0.0121

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.159		-	0.0259				
1,2,3,7,8-PeCDD	ND	0.204		-	0.0434				
1,2,3,4,7,8-HxCDD	ND	0.336		-	0.0467				
1,2,3,6,7,8-HxCDD	ND	0.441		-	0.0587	Total TCDD	ND	0.159	
1,2,3,7,8,9-HxCDD	ND	0.378		-	0.0529	Total PeCDD	ND	0.204	
1,2,3,4,6,7,8-HpCDD	1.03	-	J	0.0103	0.0742	Total HxCDD	ND	0.441	
OCDD	5.93	-	J	0.00178	0.144	Total HpCDD	1.80	-	J
2,3,7,8-TCDF	ND	0.0986		-	0.0200				
1,2,3,7,8-PeCDF	ND	0.152		-	0.0304				
2,3,4,7,8-PeCDF	ND	0.155		-	0.0322				
1,2,3,4,7,8-HxCDF	ND	0.208		-	0.0365				
1,2,3,6,7,8-HxCDF	ND	0.206		-	0.0357				
2,3,4,6,7,8-HxCDF	ND	0.220		-	0.0399				
1,2,3,7,8,9-HxCDF	ND	0.203		-	0.0386	Total TCDF	ND	0.0986	
1,2,3,4,6,7,8-HpCDF	ND	0.301		-	0.0393	Total PeCDF	ND	0.155	
1,2,3,4,7,8,9-HpCDF	ND	0.333		-	0.0418	Total HxCDF	ND	0.220	
OCDF	ND	0.646		-	0.105	Total HpCDF	ND	0.333	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	68.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	60.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	70.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	74.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	83.1	23.0 - 140	
13C-OCDD	57.5	17.0 - 157	
13C-2,3,7,8-TCDF	75.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	71.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	70.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	76.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	76.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	74.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	77.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	81.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	98.4	26.0 - 138	
13C-OCDF	65.0	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	61.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/21/11

Reviewed By: DN
Date: 4/21/11

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6701-010-SA
Client ID: LL-SED1-0-15-032911-ER
Matrix: Aqueous
Batch No: X2265

Date Extracted: 04-07-2011
Date Received: 03-31-2011
Amount: 1.035 L

ICal: PCDDFAL3-3-7-11
GC Column: DB5
Units: pg/L

Acquired: 04-09-2011
2005 WHO TEQ: 0.00459

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.56		-	0.215				
1,2,3,7,8-PeCDD	ND	1.53		-	0.317				
1,2,3,4,7,8-HxCDD	ND	1.44		-	0.326				
1,2,3,6,7,8-HxCDD	ND	1.80		-	0.424	Total TCDD	ND	1.56	
1,2,3,7,8,9-HxCDD	ND	1.60		-	0.367	Total PeCDD	ND	1.53	
1,2,3,4,6,7,8-HpCDD	ND	2.72		-	0.497	Total HxCDD	ND	1.80	
OCDD	15.3	-	J	0.00459	1.41	Total HpCDD	ND	2.72	
2,3,7,8-TCDF	ND	1.13		-	0.209				
1,2,3,7,8-PeCDF	ND	1.43		-	0.235				
2,3,4,7,8-PeCDF	ND	1.43		-	0.243				
1,2,3,4,7,8-HxCDF	ND	1.14		-	0.255				
1,2,3,6,7,8-HxCDF	ND	1.12		-	0.248				
2,3,4,6,7,8-HxCDF	ND	1.10		-	0.262				
1,2,3,7,8,9-HxCDF	ND	1.22		-	0.258	Total TCDF	ND	1.13	
1,2,3,4,6,7,8-HpCDF	ND	1.58		-	0.324	Total PeCDF	ND	1.43	
1,2,3,4,7,8,9-HpCDF	ND	2.48		-	0.490	Total HxCDF	ND	1.22	
OCDF	ND	4.82		-	0.805	Total HpCDF	ND	2.48	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	67.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	62.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	58.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	70.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	76.5	23.0 - 140	
13C-OCDD	63.9	17.0 - 157	
13C-2,3,7,8-TCDF	71.1	24.0 - 169	
13C-1,2,3,7,8-PeCDF	74.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	75.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	62.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	68.1	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	68.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	66.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	73.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	77.7	26.0 - 138	
13C-OCDF	65.3	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	63.0	35.0 - 197

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/11/11

Reviewed By: _____
Date: 4/11/11

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SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 03/30/11

ANALYTICAL RESOURCES INCORPORATED

ARI Project: SP34

Laboratory: Frontier Analytical Laboratory
Lab Contact: BRAD SILVERBUSH
Lab Address: 5172 Hillsdale Circle
El Dorado Hills, CA 95762
Phone: 916-934-0900
Fax: 916-934-0999

6701
DOC

ARI Client: Floyd Snider
Project ID: Lora Lake Surface Sediment Sampling
ARI PM: Sue Dunnihoo
Phone: 206-695-6207
Fax: 206-695-6201

Analytical Protocol: PSDDA
Special Instructions:

Requested Turn Around: **04/13/11**
Email 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 ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
11-6950-SP34A	LL-SED1-0-15-032911	03/29/11 14:05	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
11-6951-SP34B	LL-SED2-0-15-032911	03/29/11 12:00	Sediment	~~1~~ 2	Dioxin/Furans 1613(Sub)
Special Instructions: None				MS/MSD per Sue.	
11-6952-SP34C	LL-SED3-0-15-032911	03/29/11 11:10	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
11-6953-SP34D	LL-SED4-0-15-032911	03/29/11 13:10	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
11-6954-SP34E	LL-SED1-0-15-032911-D	03/29/11 14:05	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
11-6955-SP34F	LL-SED5-0-15-032911	03/29/11 15:10	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
11-6956-SP34G	MC-SED1-0-10-032911	03/29/11 16:50	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					

Carrier UPS	Airbill 1Z832695015155 3499		Date 3/30/11
Relinquished by	Company ARI	Date 3/30/11	Time 1520
Received by	Company Frontier	Date 3-31-11	Time 1015

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 03/30/11

ANALYTICAL RESOURCES INCORPORATED

ARI Project: SP34

6701
DOC

Laboratory: Frontier Analytical Laboratory
Lab Contact: BRAD SILVERBUSH

ARI Client: Floyd Snider
Project ID: POS-LL

ARI Sample ID	Client Sample ID/ Add'l Sample ID	Sampled	Matrix	Bottles	Analyses
11-6957-SP34H	MC-SED2-0-10-032911	03/29/11 16:35	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
11-6958-SP34I	MC-SED3-0-10-032911	03/29/11 16:15	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
11-6959-SP34J	LL-SED1-0-15-032911-ER	03/29/11 15:50	Water	2	Dioxin/Furans 1613(Sub)
Special Instructions: None					

Carrier UPS	Airbill 1Z832695 01 5155 3499	Date 3/30/11	
Relinquished by	Company ARI	Date 3/30/11	Time 1520
Received by	Company Frontier	Date 3-31-11	Time 1015

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **6701**

Client:	Analytical Resources Inc. Sue Dunnihoo
Client Project ID:	SP34
Date Received:	03/31/2011
Time Received:	10:15 am
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	10
Duplicates:	1
Storage Location:	R1

Method of Delivery:	UPS
Tracking Number:	1Z8326950151553499
Shipping Container Received Intact	Yes
Custody seals(s) present?	Yes
Custody seals(s) intact?	Yes
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	Yes
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	03/28/2012
Adequate Sample Volume	Yes
pH Range	Between 4 and 9* 6701-010-0001-SA
Anomalies or additional comments: *Samples 1-9 are sediment samples pH = N/A. L4 DATA PACKAGE / EDD	

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