

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20100811.b

ARI Job No.: DIES Method: i/20100811.b/ftphfid3b.m Instrument: fid3b.i Date: 11-AUG-2010

Time Filename LabID ClientId DF Manually Integrated Compounds

1409	0811b004.d	DIESEL#1		1	o-terph,
1429	0811b005.d	MOIL#1		1	Triacon Surr,
1501	0811b006.d	RH84C		5	NO MANUAL INTEGRATION
1520	0811b007.d	RH84A	IT-RRM-SSI	1	o-terph, Triacon Surr,
1540	0811b008.d	RH84B	IT-RRM-SSI	1	o-terph, Triacon Surr,
1559	0811b009.d	RH56LCSS1	RH56LCSS1	1	o-terph,
1619	0811b010.d	RH84C	IT-RRM-SSI	1	o-terph, Triacon Surr,
1638	0811b011.d	RH56LCSDS1	RH56LCSDS1	1	o-terph,
1658	0811b012.d	RH56MBS1	RH56MBS1	1	NO MANUAL INTEGRATION
1717	0811b013.d	DIESEL#2		1	o-terph,
1737	0811b014.d	MOIL#2		1	Triacon Surr,
1756	0811b015.d	RH56A	HPT05-1008	1	NO MANUAL INTEGRATION
1816	0811b016.d	RH56B	HPT06-1008	1	NO MANUAL INTEGRATION
1835	0811b017.d	RH56C	HPT07-1008	1	NO MANUAL INTEGRATION
1854	0811b018.d	RH56D	HPT08-1008	1	NO MANUAL INTEGRATION
1913	0811b019.d	RH56E	HPT09-1008	1	Triacon Surr,
1933	0811b020.d	RH56F	HPT10-1008	1	NO MANUAL INTEGRATION
1952	0811b021.d	RH56G	HPT11-1008	1	Triacon Surr,
2011	0811b022.d	RH56GMS	HPT11-1008	1	o-terph,
2030	0811b023.d	RH56GMSD	HPT11-1008	1	o-terph,
2049	0811b024.d	RH56H	HPT12-1008	1	NO MANUAL INTEGRATION
2108	0811b025.d	RH56I	HPT13-1008	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20100811.b

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
2128	0811b026.d	RH56J	HPT14-1008	1	Triacon Surr,
2147	0811b027.d	RH56K	HPT15-1008	1	NO MANUAL INTEGRATION
2206	0811b028.d	RG58R	PSB24-14-1	1	NO MANUAL INTEGRATION
2224	0811b029.d	DIESEL#3		1	o-terph,
2243	0811b030.d	MOIL#3		1	Triacon Surr,

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100811.b/0811raw.b/0811b004.d ARI ID: DIESEL#1  
 Method: /chem3/fid3b.i/20100811.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 11-AUG-2010 14:09  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/12/2010  
 Macro: FID:3B073010

FID:3B RESULTS

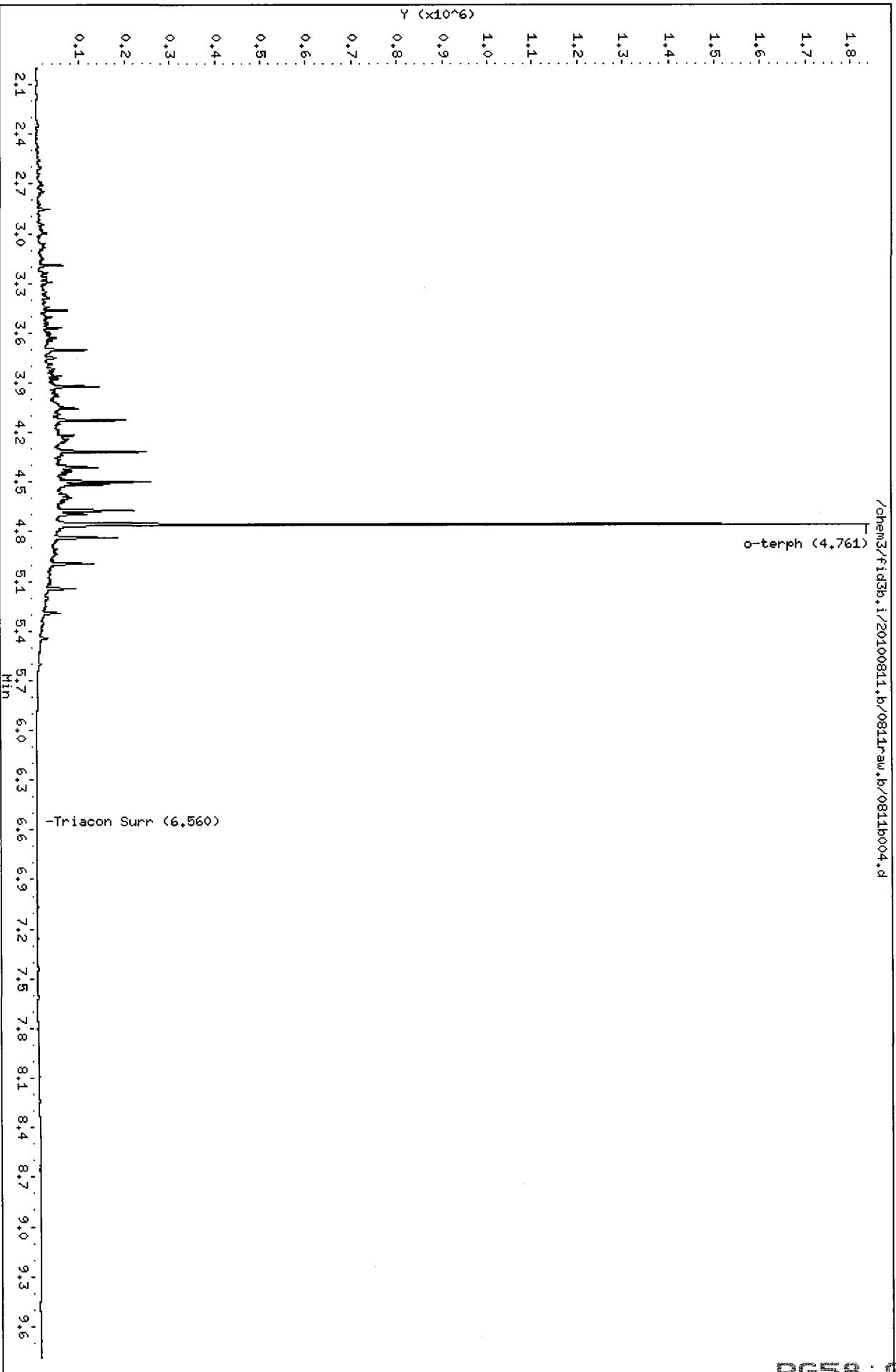
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	798844	29
C8	----				DIESEL (C12-C24)	5323983	249
C10	2.855	0.000	29617	20379	M.OIL (C24-C38)	87143	7
C12	3.465	0.001	71338	51670	AK-102 (C10-C25)	5982667	248
C14	3.923	0.000	141616	102659	AK-103 (C25-C36)	60607	7
C16	4.318	-0.001	246209	196088	OR.DIES (C10-C28)	6022717	286
C18	4.672	-0.001	220559	166789	OR.MOIL (C28-C40)	61838	5
C20	4.995	0.001	130879	101618			
C22	5.293	0.000	54045	50635	STODDARD (C8-C12)	798844	29
C24	5.604	0.002	10938	18173			
C25	5.763	0.002	3609	1681			
C26	5.922	0.001	1239	292			
C28	6.240	-0.001	214	141			
C32	6.842	-0.011	99	32			
C34	7.146	0.005	174	129	CREOSOT (C8-C22)	5935072	928
Filter Peak	----						
C36	7.412	0.000	606	129	BUNKERC (C10-C38)	6055895	701
o-terph	4.761	0.001	1839288	1136914	JET-A (C10-C18)	4550925	287
Triacon Surr	6.560	0.002	109	47	IT.MOIL (C24-C40)	115850	5

Range Times: NW Diesel(3.515 - 5.652) NW Gas(0.976 - 3.515) NW M.Oil(5.652 - 7.722)  
 AK102(2.805 - 5.711) AK103(5.711 - 7.462) Jet A(2.805 - 4.723)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1136914	57.0	126.7
Triacotane	47	0.0	0.0

*M 8/12/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100811.b/0811raw.b/0811b005.d ARI ID: MOIL#1  
 Method: /chem3/fid3b.i/20100811.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 11-AUG-2010 14:29  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/12/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	33873	1
C8	----				DIESEL (C12-C24)	682668	32
C10	2.858	0.003	858	1033	M.OIL (C24-C38)	5601151	464
C12	3.463	-0.002	548	216	AK-102 (C10-C25)	814296	34
C14	3.922	-0.001	347	100	AK-103 (C25-C36)	4896520	548
C16	4.324	0.005	186	32	OR.DIES (C10-C28)	2188735	104
C18	4.671	-0.001	514	127	OR.MOIL (C28-C40)	4504306	400
C20	4.995	0.001	4009	791			
C22	5.293	0.001	14669	2904	STODDARD (C8-C12)	33873	1
C24	5.601	-0.001	28719	17935			
C25	5.764	0.003	34056	9969			
C26	5.925	0.003	40336	17635			
C28	6.239	-0.002	47974	9387			
C32	6.852	-0.001	61486	38264			
C34	7.145	0.004	60446	20728	CREOSOT (C8-C22)	289082	45
Filter Peak	----						
C36	7.413	0.002	49260	42517	BUNKERC (C10-C38)	6307520	730
o-terph	4.761	0.000	1297	1356	JET-A (C10-C18)	51913	3
Triacon Surr	6.560	0.001	921560	837729	IT.MOIL (C24-C40)	6824401	318

Range Times: NW Diesel(3.515 - 5.652) NW Gas(0.976 - 3.515) NW M.Oil(5.652 - 7.722)  
 AK102(2.805 - 5.711) AK103(5.711 - 7.462) Jet A(2.805 - 4.723)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1356	0.1	0.2
Triacotane	837729	50.1	111.3

*MS 8/12/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

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Date: 11-AUG-2010 14:29

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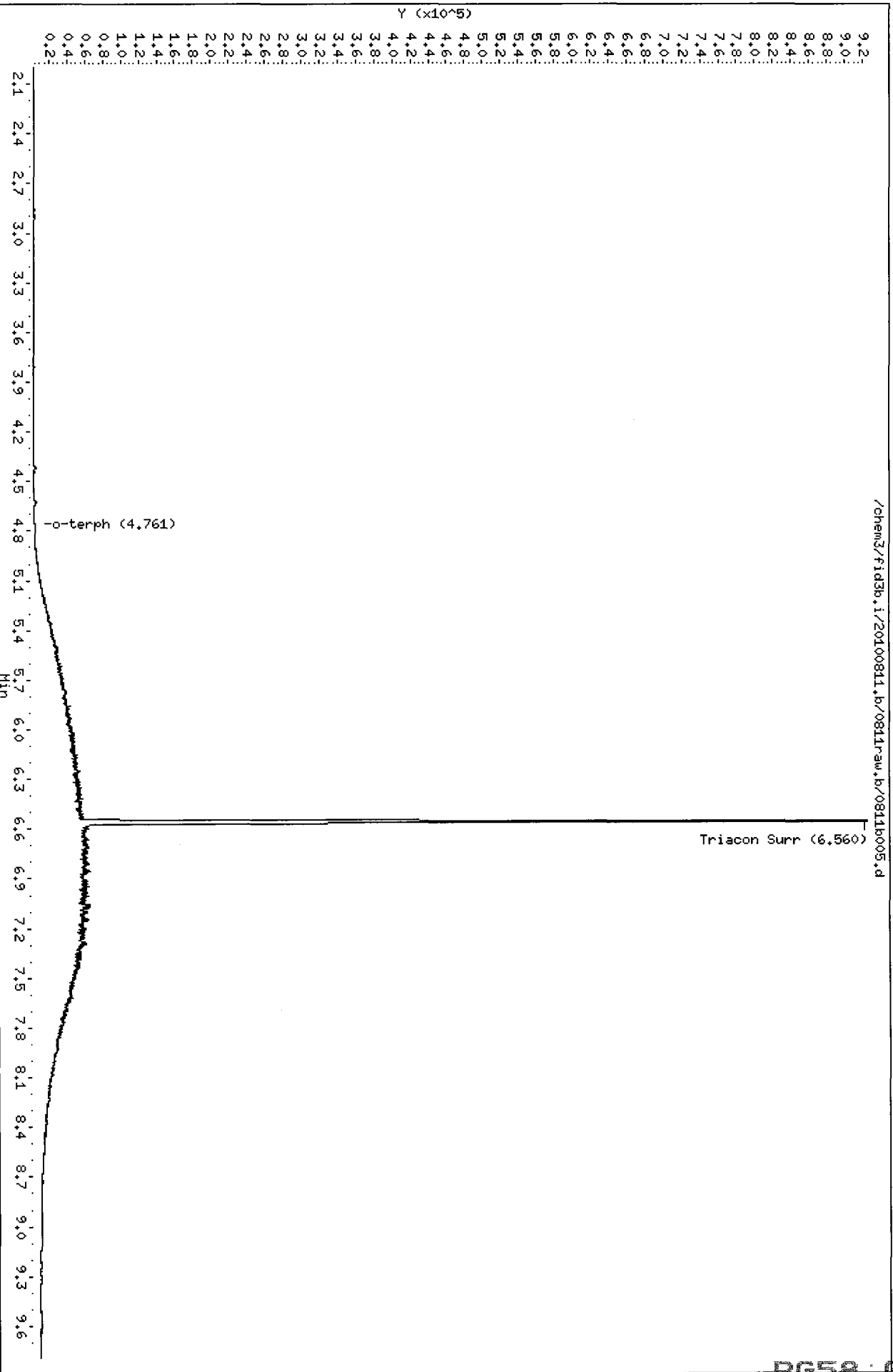
Sample Info: M01L#1

Column phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100811.b/0811raw.b/0811b013.d ARI ID: DIESEL#2  
 Method: /chem3/fid3b.i/20100811.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 11-AUG-2010 17:17  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/12/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	806111	29
C8	----				DIESEL (C12-C24)	5253138	246
C10	2.856	0.001	29475	20590	M.OIL (C24-C38)	80709	7
C12	3.465	0.000	67291	52520	AK-102 (C10-C25)	5913567	245
C14	3.924	0.000	143917	117358	AK-103 (C25-C36)	52093	6
C16	4.319	0.000	250050	202721	OR.DIES (C10-C28)	5951523	282
C18	4.673	0.001	220597	168814	OR.MOIL (C28-C40)	53025	5
C20	4.996	0.001	136192	119862			
C22	5.293	0.001	51703	55165	STODDARD (C8-C12)	806111	29
C24	5.603	0.001	10826	12577			
C25	5.772	0.011	3988	5765			
C26	5.918	-0.004	1265	836			
C28	6.248	0.006	193	106			
C32	6.850	-0.004	91	27			
C34	7.141	0.000	224	46	CREOSOT (C8-C22)	5877281	919
Filter Peak	----						
C36	7.412	0.000	646	215	BUNKERC (C10-C38)	5978153	692
o-terph	4.762	0.002	1670523	1102821	JET-A (C10-C18)	4483707	283
Triacon Surr	6.556	-0.002	101	38	IT.MOIL (C24-C40)	107142	5

Range Times: NW Diesel(3.515 - 5.652) NW Gas(0.976 - 3.515) NW M.Oil(5.652 - 7.722)  
 AK102(2.805 - 5.711) AK103(5.711 - 7.462) Jet A(2.805 - 4.723)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1102821	55.3	122.9
Triacontane	38	0.0	0.0

*MS 8/12/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100811.b/0811rsw.b/0811b013.d  
Date: 11-AUG-2010 17:17

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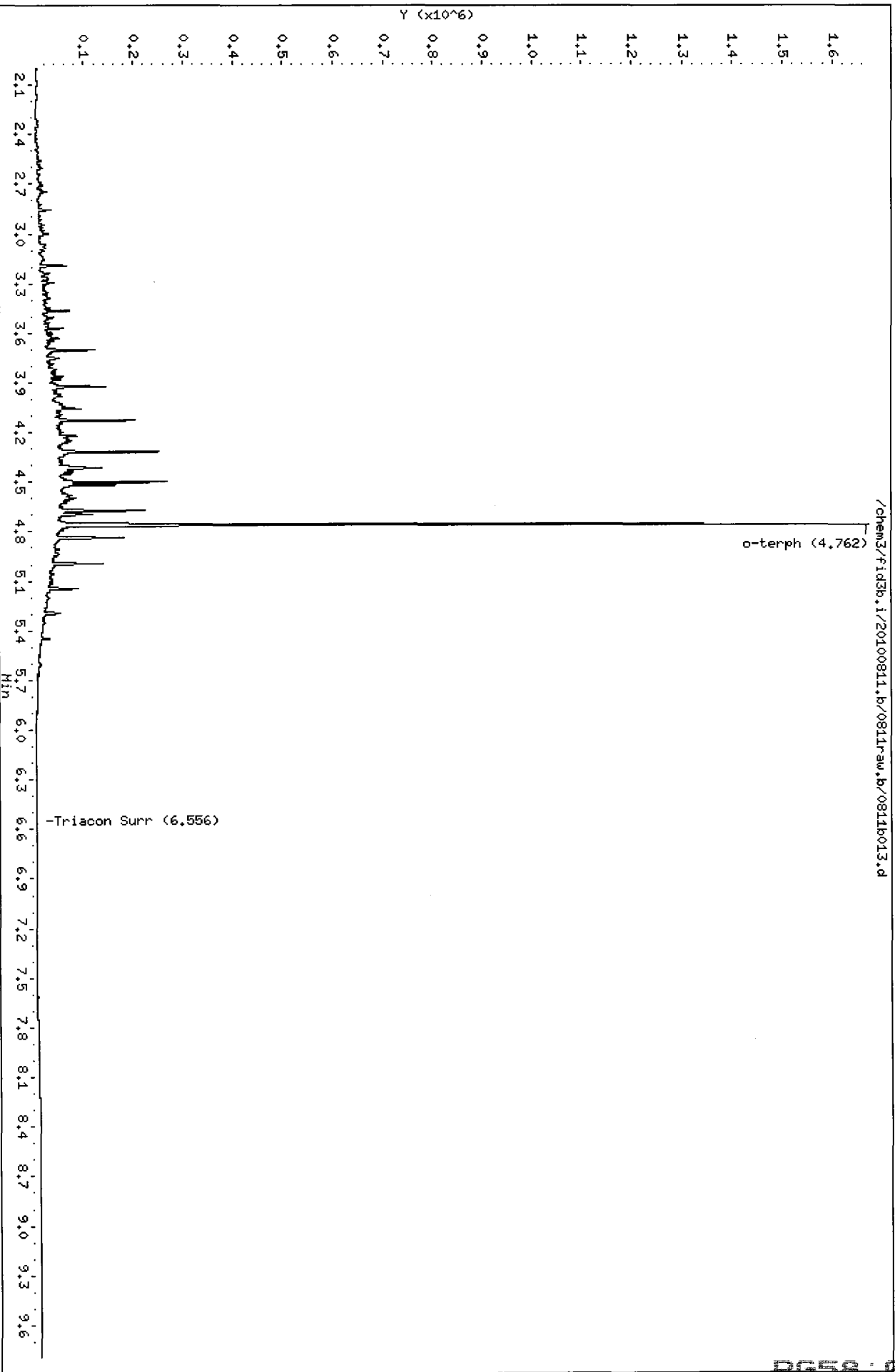
Sample Info: DIESEL#2

Column phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100811.b/0811raw.b/0811b014.d ARI ID: MOIL#2  
 Method: /chem3/fid3b.i/20100811.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 11-AUG-2010 17:37  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/12/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	38833	1
C8	----				DIESEL (C12-C24)	683522	32
C10	2.859	0.004	923	1143	M.OIL (C24-C38)	5454876	452
C12	3.470	0.005	598	176	AK-102 (C10-C25)	819069	34
C14	3.924	0.001	403	141	AK-103 (C25-C36)	4768576	534
C16	4.321	0.002	240	155	OR.DIES (C10-C28)	2170071	103
C18	4.670	-0.002	559	150	OR.MOIL (C28-C40)	4390442	389
C20	4.998	0.003	4180	810			
C22	5.287	-0.005	14748	7070	STODDARD (C8-C12)	38833	1
C24	5.598	-0.004	28816	17790			
C25	5.762	0.001	33909	6629			
C26	5.923	0.001	37897	8940			
C28	6.240	-0.002	49449	22396			
C32	6.850	-0.003	60149	27359			
C34	7.140	-0.001	58039	32481	CREOSOT (C8-C22)	295727	46
Filter Peak	----						
C36	7.413	0.002	46911	21608	BUNKERC (C10-C38)	6164496	713
o-terph	4.762	0.001	1400	1795	JET-A (C10-C18)	57949	4
Triacon Surr	6.559	0.001	920014	947808	IT.MOIL (C24-C40)	6798701	316

Range Times: NW Diesel(3.515 - 5.652) NW Gas(0.976 - 3.515) NW M.Oil(5.652 - 7.722)  
 AK102(2.805 - 5.711) AK103(5.711 - 7.462) Jet A(2.805 - 4.723)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1795	0.1	0.2
Triacantane	947808	56.7	125.9

*MS 8/12/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

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Date: 11-AUG-2010 17:37

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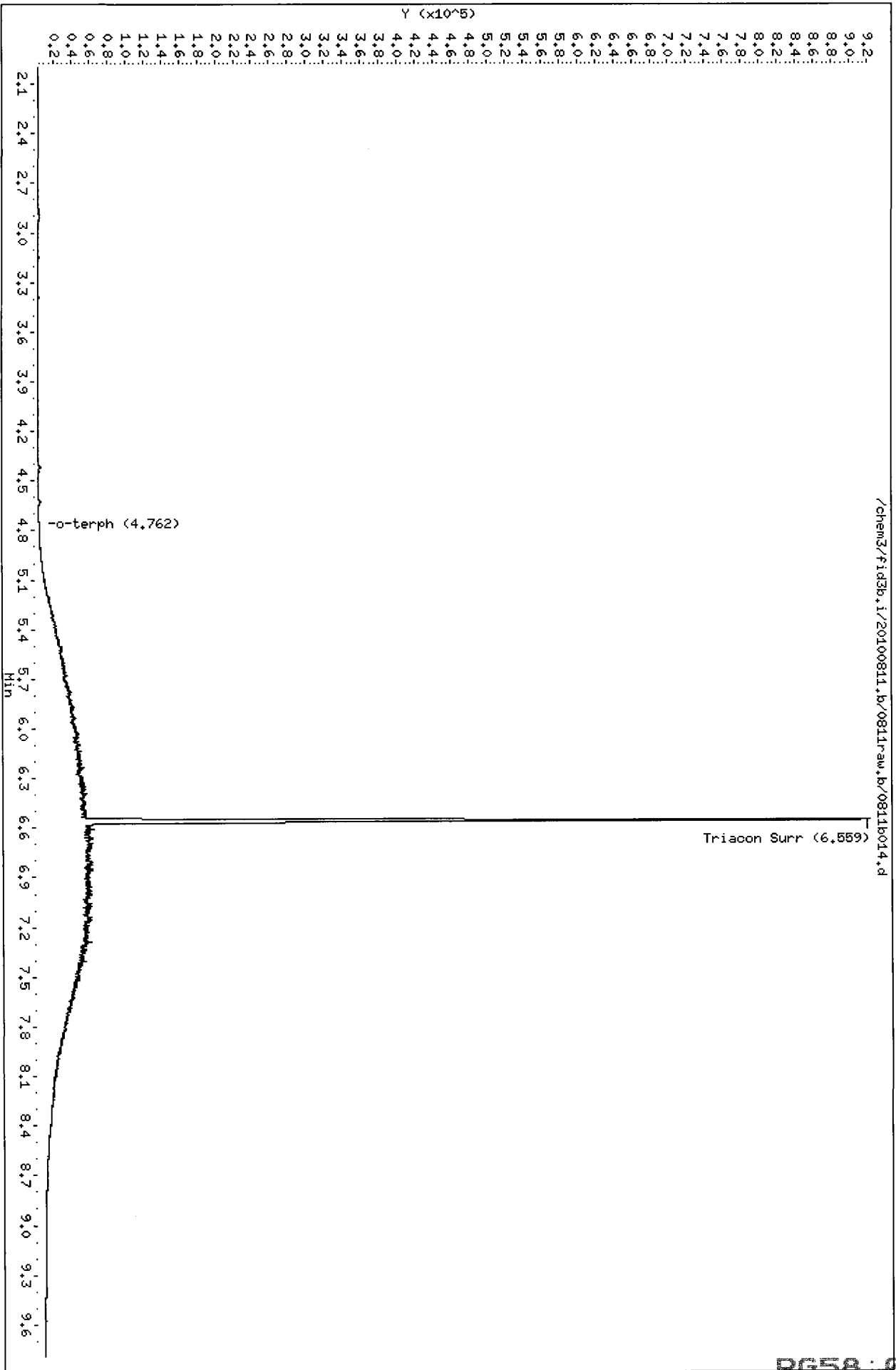
Sample Info: M01L#2

Column phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100811.b/0811raw.b/0811b009.d ARI ID: RH56LCSS1  
 Method: /chem3/fid3b.i/20100811.b/ftphfid3b.m Client ID: RH56LCSS1  
 Instrument: fid3b.i Injection: 11-AUG-2010 15:59  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/12/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	3763206	138
C8	----				DIESEL (C12-C24)	26575434	1242
C10	2.857	0.002	141748	96964	M.OIL (C24-C38)	372258	31
C12	3.466	0.002	366452	264012	AK-102 (C10-C25)	29743775	1234
C14	3.925	0.002	675179	614810	AK-103 (C25-C36)	279628	31
C16	4.322	0.003	1227520	1056483	OR.DIES (C10-C28)	29969700	1421
C18	4.678	0.006	1089531	864874	OR.MOIL (C28-C40)	98010	9
C20	4.997	0.003	756666	594345			
C22	5.294	0.001	325555	285650	STODDARD (C8-C12)	3763206	136
C24	5.600	-0.001	83519	95473			
C25	5.760	-0.001	36961	49547			
C26	5.922	0.001	13530	22111			
C28	6.241	0.000	3317	3039			
C32	6.849	-0.004	684	177			
C34	7.139	-0.002	987	1312	CREOSOT (C8-C22)	29364888	4591
Filter Peak	----						
C36	7.413	0.001	794	314	BUNKERC (C10-C38)	30040410	3476
o-terph	4.764	0.004	1849816	1541311	JET-A (C10-C18)	22174743	1399
Triacon Surr	6.557	-0.001	797698	718448	IT.MOIL (C24-C40)	1118005	52

Range Times: NW Diesel(3.515 - 5.652) NW Gas(0.976 - 3.515) NW M.Oil(5.652 - 7.722)  
 AK102(2.805 - 5.711) AK103(5.711 - 7.462) Jet A(2.805 - 4.723)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1541311	77.3	171.8
Triacantane	718448	43.0	95.5

*MS 8/12/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100811.b/0811rsw.b/0811b009.d  
Date: 11-AUG-2010 15:59

Client ID: RH56LCSS1

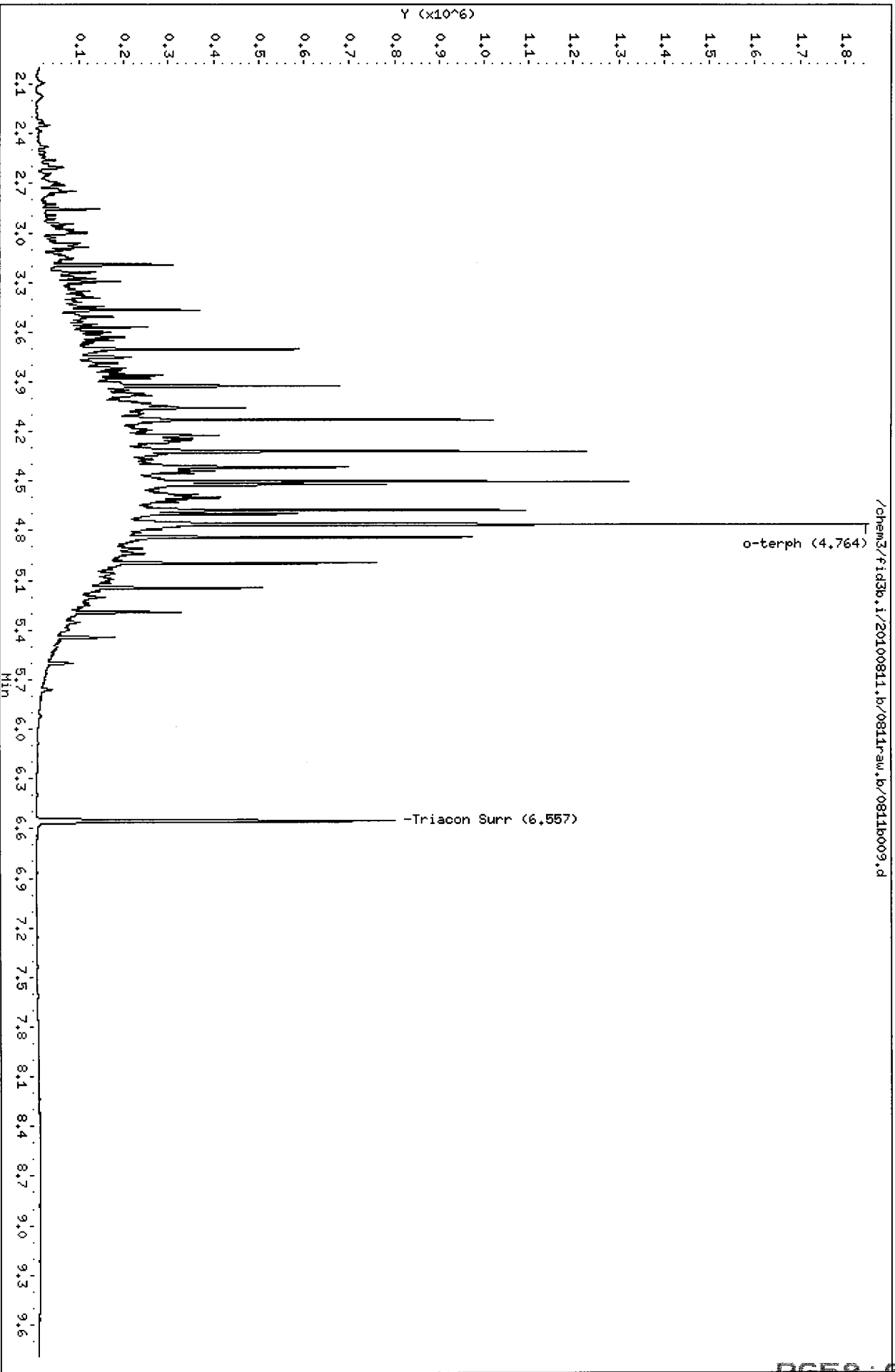
Sample Info: RH56LCSS1

Column phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100811.b/0811raw.b/0811b011.d ARI ID: RH56LCSDS1  
 Method: /chem3/fid3b.i/20100811.b/ftphfid3b.m Client ID: RH56LCSDS1  
 Instrument: fid3b.i Injection: 11-AUG-2010 16:38  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/12/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	3769366	138
C8	----				DIESEL (C12-C24)	26551360	1241
C10	2.856	0.002	137266	93584	M.OIL (C24-C38)	445976	37
C12	3.466	0.002	376650	262695	AK-102 (C10-C25)	29718273	1233
C14	3.926	0.003	699297	484922	AK-103 (C25-C36)	326361	37
C16	4.323	0.004	1183819	1015541	OR.DIES (C10-C28)	29956457	1420
C18	4.677	0.004	1141490	843835	OR.MOIL (C28-C40)	186346	17
C20	4.997	0.003	714295	552633			
C22	5.294	0.002	326906	287447	STODDARD (C8-C12)	3769366	136
C24	5.601	0.000	86174	85763			
C25	5.760	-0.001	37268	45679			
C26	5.921	0.000	14032	22016			
C28	6.240	-0.002	3024	1994			
C32	6.845	-0.008	1083	424			
C34	7.136	-0.005	1992	1717	CREOSOT (C8-C22)	29328968	4586
Filter Peak	----						
C36	7.407	-0.005	2066	2594	BUNKERC (C10-C38)	30084444	3481
o-terph	4.763	0.003	1831988	1631927	JET-A (C10-C18)	22306653	1408
Triacon Surr	6.558	0.000	795953	719754	IT.MOIL (C24-C40)	1224089	57

Range Times: NW Diesel(3.515 - 5.652) NW Gas(0.976 - 3.515) NW M.Oil(5.652 - 7.722)  
 AK102(2.805 - 5.711) AK103(5.711 - 7.462) Jet A(2.805 - 4.723)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1631927	81.9	181.9
Triacantane	719754	43.0	95.6

*MS 8/12/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100811.b/0811rsw.b/0811b011.d  
Date: 11-AUG-2010 16:38

Client ID: RH56LCSDS1

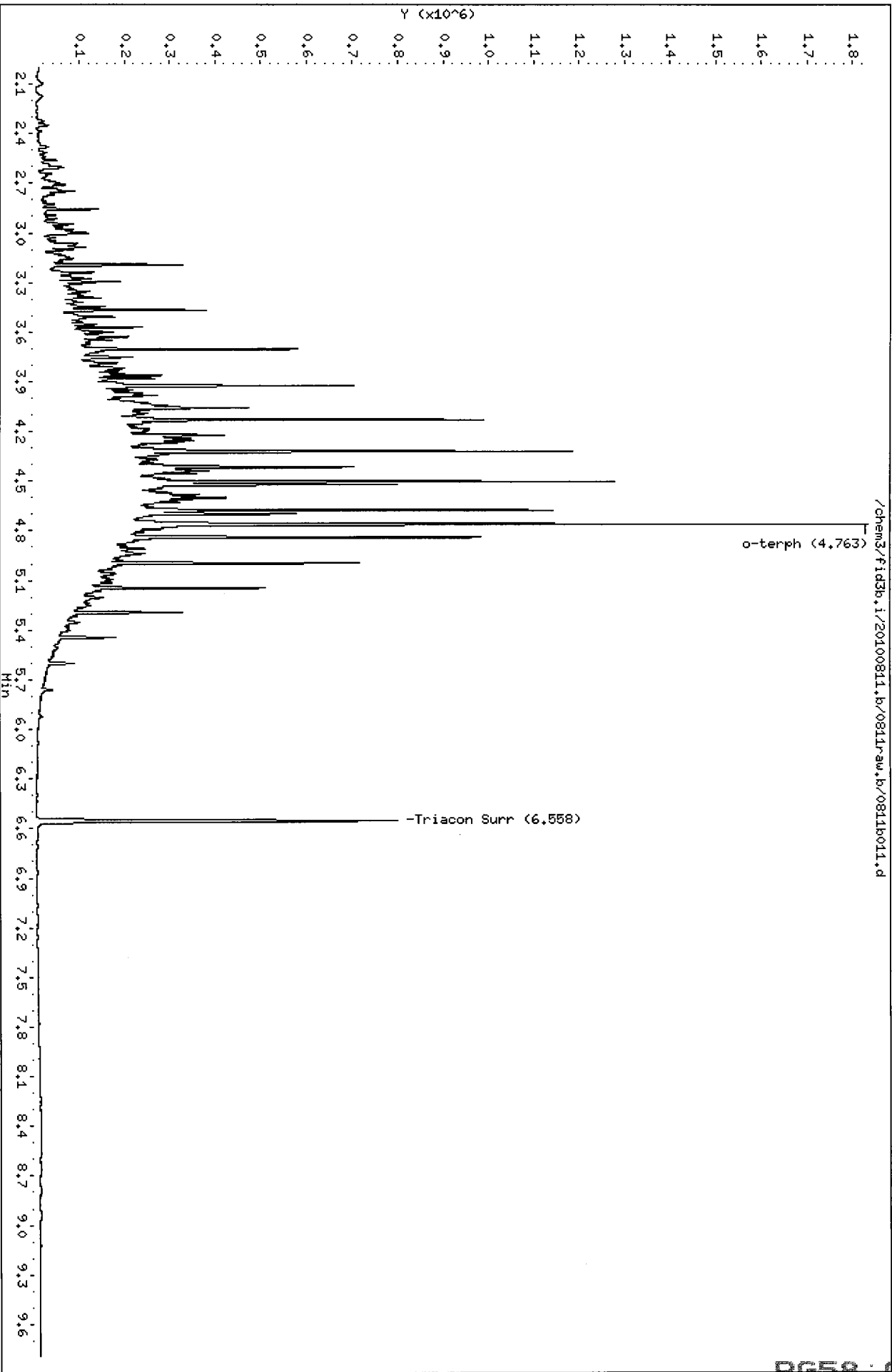
Sample Info: RH56LCSDS1

Column phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100811.b/0811raw.b/0811b029.d ARI ID: DIESEL#3  
 Method: /chem3/fid3b.i/20100811.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 11-AUG-2010 22:24  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/12/2010  
 Macro: FID:3B073010

FID:3B RESULTS

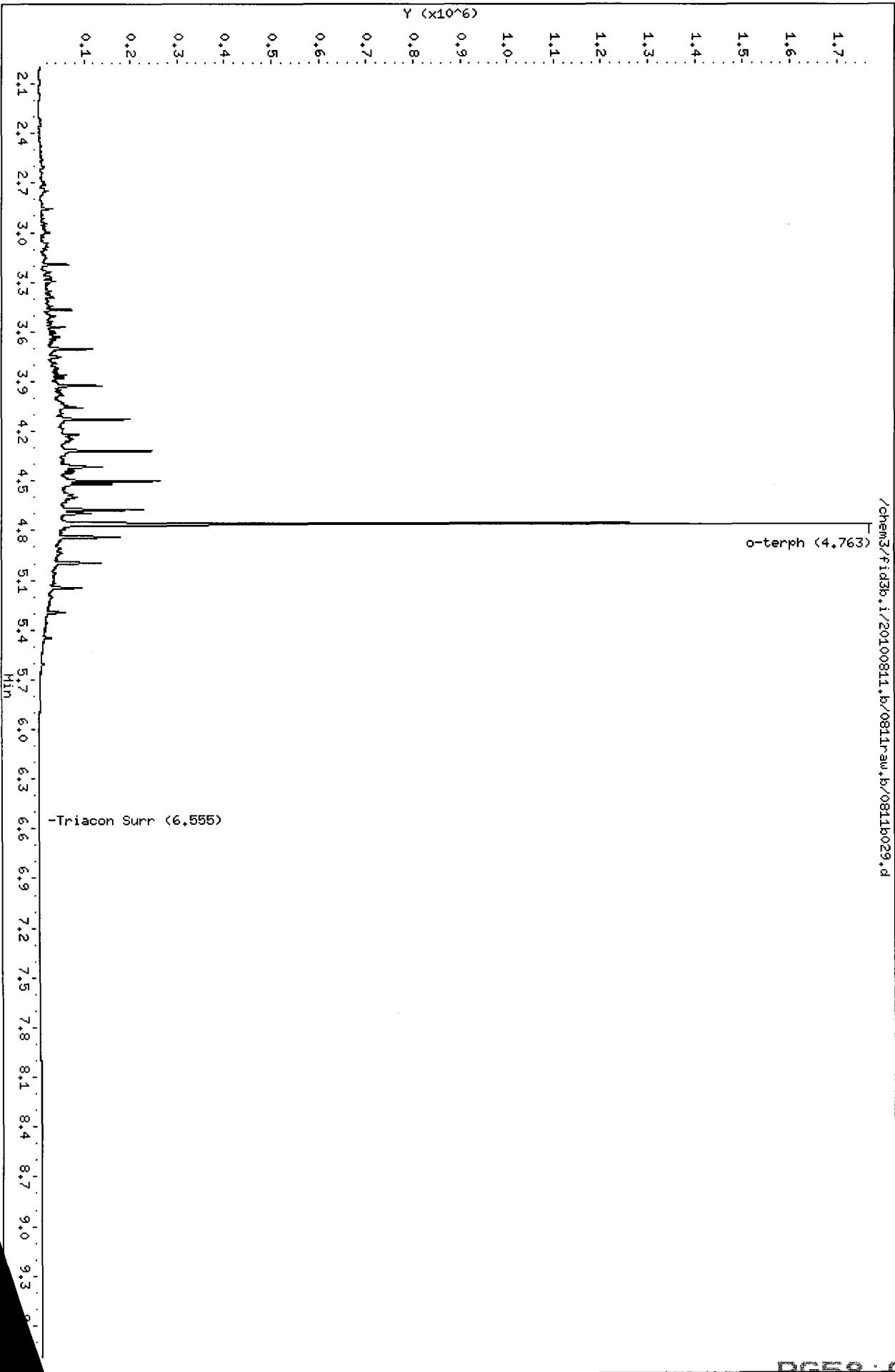
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	839878	31
C8	----				DIESEL (C12-C24)	5358871	250
C10	2.856	0.001	29918	21007	M.OIL (C24-C38)	74473	6
C12	3.465	0.000	71274	50229	AK-102 (C10-C25)	6042465	251
C14	3.923	0.000	137317	123398	AK-103 (C25-C36)	51926	6
C16	4.318	-0.001	245249	199098	OR.DIES (C10-C28)	6086001	289
C18	4.674	0.001	226471	181144	OR.MOIL (C28-C40)	31255	3
C20	4.996	0.002	134978	124096			
C22	5.294	0.001	57650	53919	STODDARD (C8-C12)	839878	30
C24	5.603	0.002	11060	10863			
C25	5.758	-0.003	3020	713			
C26	5.927	0.005	1311	587			
C28	6.242	0.000	255	53			
C32	6.851	-0.002	41	8			
C34	7.136	-0.005	125	42	CREOSOT (C8-C22)	6010781	940
Filter Peak	----						
C36	7.414	0.002	349	117	BUNKERC (C10-C38)	6102348	706
o-terph	4.763	0.002	1772186	1053810	JET-A (C10-C18)	4512268	285
Triacon Surr	6.555	-0.003	79	15	IT.MOIL (C24-C40)	89396	4

Range Times: NW Diesel(3.515 - 5.652) NW Gas(0.976 - 3.515) NW M.Oil(5.652 - 7.722)  
 AK102(2.805 - 5.711) AK103(5.711 - 7.462) Jet A(2.805 - 4.723)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1053810	52.9	117.5
Triacotane	15	0.0	0.0

*M 08/12/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100811.b/0811raw.b/0811b030.d ARI ID: MOIL#3  
 Method: /chem3/fid3b.i/20100811.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 11-AUG-2010 22:43  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/12/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	46047	2
C8	----				DIESEL (C12-C24)	706687	33
C10	2.858	0.003	1021	1116	M.OIL (C24-C38)	5618866	465
C12	3.467	0.002	691	299	AK-102 (C10-C25)	843235	35
C14	3.923	0.000	458	189	AK-103 (C25-C36)	4943891	553
C16	4.317	-0.002	282	110	OR.DIES (C10-C28)	2248769	107
C18	4.674	0.001	641	270	OR.MOIL (C28-C40)	4494399	399
C20	4.993	-0.002	4159	1212			
C22	5.293	0.001	15281	7339	STODDARD (C8-C12)	46047	2
C24	5.599	-0.003	27126	6469			
C25	5.759	-0.003	34434	8733			
C26	5.922	0.000	40247	31180			
C28	6.241	-0.001	47273	11159			
C32	6.854	0.000	58375	17132			
C34	7.141	0.000	61882	40264	CREOSOT (C8-C22)	315019	49
Filter Peak	----						
C36	7.413	0.002	47075	23857	BUNKERC (C10-C38)	6356658	735
o-terph	4.762	0.001	1385	1499	JET-A (C10-C18)	66706	4
Triacon Surr	6.559	0.000	958719	859590	IT.MOIL (C24-C40)	6864967	319

Range Times: NW Diesel(3.515 - 5.652) NW Gas(0.976 - 3.515) NW M.Oil(5.652 - 7.722)  
 AK102(2.805 - 5.711) AK103(5.711 - 7.462) Jet A(2.805 - 4.723)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1499	0.1	0.2
Triacontane	859590	51.4	114.2

*MS 8/12/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100811.b/0811raw.b/0811b030.d  
Date: 11-AUG-2010 22:43

Client ID:

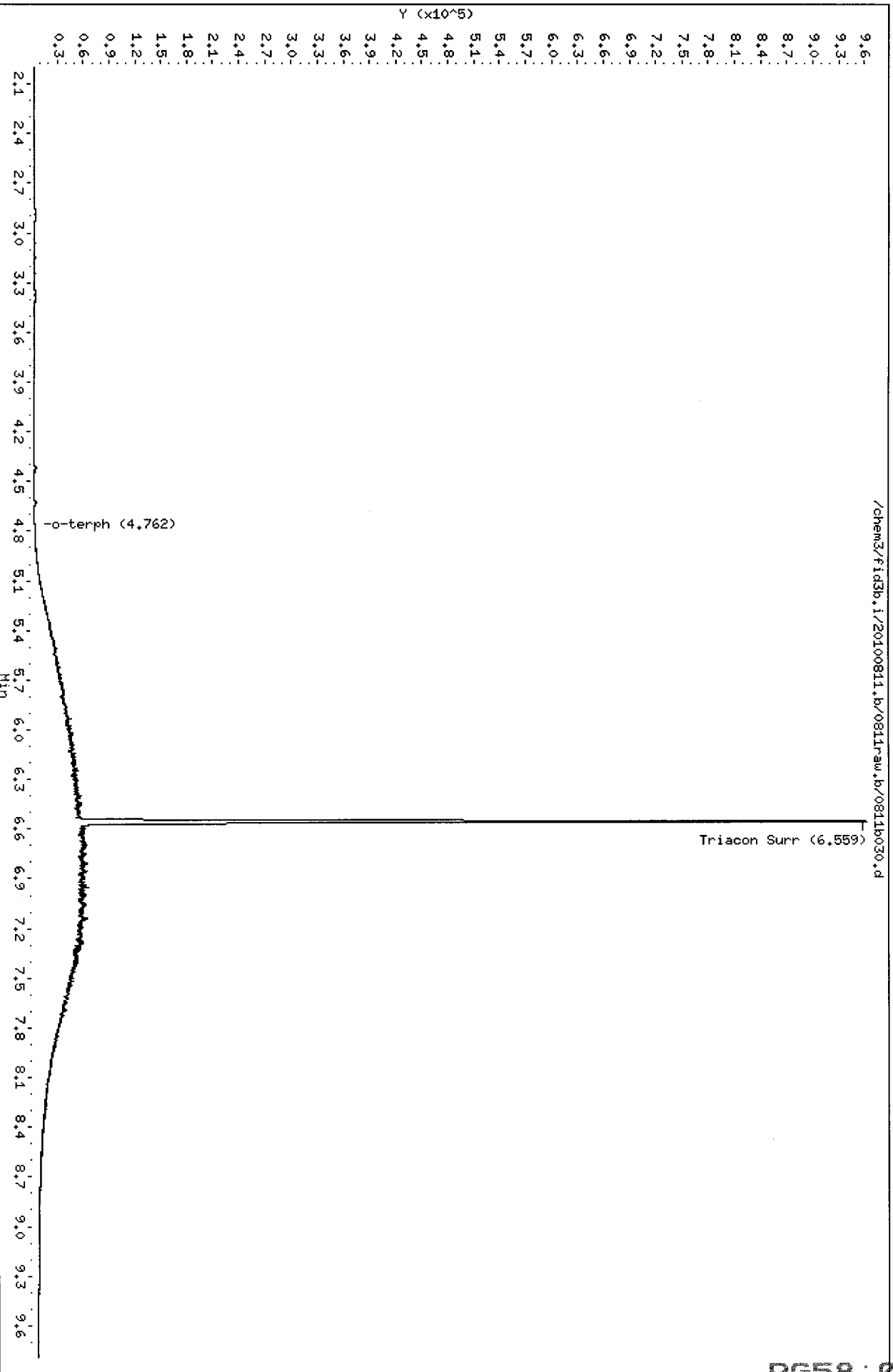
Sample Info: M01L#3

Column phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00



**TPHG/BETX Raw Data  
Preparation Log**

**ARI Job ID: RG58**



Analytical Resources, Incorporated  
Analytical Chemists and Consultants

# Volatile Organics Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.

Client ID/Project

1<sup>st</sup> Extraction: 8/6/09

Extraction Date

MeOH Lot No.

Analyst

MH

2<sup>nd</sup> Extraction:

Lab ID	Vial No.	Preservative		Method 5035 Sample Weight				MeOH Spill Volume	Comments
		NaHSO <sub>3</sub>	CH <sub>3</sub> OH	Vial Weight	Tare (from vial)	Sample Weight	Extract Volume		
1	R658E 4		X	35.98	28.110	7.87	S	900	
2	F 7		X	38.51	28.158	10.352			
3	K 5		X	39.00	27.673	11.327			
4	L 5		X	37.14	27.696	9.444			
5	R 3		X	37.70	27.828	9.872			
6	S 5		X	40.01	28.185	11.825			
7									
8									
9	R678A 4		X	36.56	27.601	8.959	S	900	
10	B 4		X	37.37	27.847	9.523			
11	D 5		X	33.79	27.734	6.059			
12	F 1		X	37.66	28.074	9.586			
13	H 3		X	38.33	28.100	10.23			
14	I 1		X	37.95	28.111	9.839			
15	J 2		X	37.39	27.672	9.718			
16	K 3		X	38.23	28.045	10.185			
17	L 4		X	37.90	28.132	9.768			
18									
19									
20									
Balance ID:									

Solution ID

Concentration

Amount Spiked

Analyst

Witness

Surrogate:

Spike:



BETX/TPHG Total Solids-betxts  
Data By: Monica Herbert  
Created: 8/11/10

Worklist: 1905  
Analyst: MH  
Comments:

Oven ID: \_\_\_\_\_

Balance ID: \_\_\_\_\_

Samples In:            Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

Samples Out:           Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
1. RG58E 10-18240	_____	_____	_____	* 87.1
2. RG58F 10-18241	_____	_____	_____	* 83.2
3. RG58K 10-18246	_____	_____	_____	* 89.6
4. RG58L 10-18247	_____	_____	_____	* 86.2
5. RG58R 10-18253	_____	_____	_____	* 89.2
6. RG58S 10-18254	_____	_____	_____	* 87.3

**TPHG/BETX Raw Data  
Initial Calibration Notes and Raw Data**

**ARI Job ID: RG58**



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: Gas/BTEX CURR Client ID: \_\_\_\_\_

ARI SOP: ~~404S(Gas)~~ ~~410S(BTEX)~~ 430S(VPH) 700S(8260C) 703S(SIM) 706S(524.2) 710S(RSK-175)

Parameter(s): Gas/BTEX

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 7/28/10 Analysis Start Date: 7/28/10

pH ≤ 2.0	YES / NO / <u>NA</u>	Method Blank In Control?	<u>YES</u> / NO
BFB Tune Meets Criteria?	YES / NO / <u>NA</u>	LCS / LCSD Recovery In Control?	<u>YES</u> / NO
Internal Standard Meets Criteria?	YES / NO / <u>NA</u>	Surrogate Recovery In Control?	<u>YES</u> / NO
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	YES / NO / <u>NA</u>	Q flag applied?	YES / NO / <u>NA</u>
Manual Integrations for ICal?	<u>YES</u> / NO	Manual Integrations for Samples?	<u>Yes</u> / NO
Special Analysis Criteria Met?	YES / NO / <u>NA</u>		

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Gas ICU Targeted 2.5  
BTEX ICU Targeted 25

Additional Details on Reverse: Yes / No

Analyst: [Signature] ult Date: 7/30/10

Reviewer: [Signature] Date: 7/30/10

# Analytical Resources Inc.: Organics Instrument Log

PID-2 Serial No.: 33033A-33620

Date: 7/28/10 Analysis: NWTP4E/BETX Analyst: MH  
 GC Program: BETX1 Column No: 832217 Column Type: RTX502-2  
 Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_  
 Calibration File: \_\_\_\_\_ Curve Date: 7/28/10

IS/SS	Ical/Ccal	LCS/ICV
VW632-3	VW635-1	VW618-1
	VW644-3	VW631-3
	VW647-2	

Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0604	0728a001.d	RINSE			1
2	0629	0728a002.d	RT-BCAL 1			1
3	0655	0728a003.d	GCAL 1			1
4	0904	0728a004.d	RINSE			1
5	0930	0728a005.d	BETX .25			1
6	0956	0728a006.d	BETX .5			1
7	1022	0728a007.d	BETX 5			1
8	1048	0728a008.d	BETX 25			1
9	1114	0728a009.d	BETX 50			1
10	1140	0728a010.d	BETX 100			1
11	1206	0728a011.d	BETX 200			1
12	1232	0728a012.d	BETX ICV			1
13	1258	0728a013.d	RINSE			1
14	1324	0728a014.d	GAS .1			1
15	1350	0728a015.d	GAS .25			1
16	1416	0728a016.d	GAS 1			1
17	1442	0728a017.d	GAS 2.5			1
18	1508	0728a018.d	GAS 5			1
19	1534	0728a019.d	GAS 20			1
20	1600	0728a020.d	RINSE			1
21	1626	0728a021.d	GAS ICV			1

MH 7/30/10

## Maintenance / Comments

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):  
 Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

6a  
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.  
Instrument/Det: PID2.I/RTX 502-2 FID  
Calibration Date: 28-JUL-2010

Client: 072810-1  
Project:  
SDG No.: 072810-1

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 20	Ave RF	%RSD
WA Gas	645285	580360	562860	559889	570101	542758	576875	6.2
AK Gas	1005780	915314	886524	857728	869699	800065	889185	7.7
NW Gas	689685	605684	586542	582439	591310	556137	601966	7.6
8015Gas	1455915	1351382	1309436	1264474	1268273	1179446	1304821	7.2

Surrogates Rel. Rec.	RF1 22	RF2 44	RF3 67	RF4 100	RF5 133	RF6 178	Ave RF	%RSD

<- Indicates %RSD outside limits  
Surrogate areas are not included in RF calculation.

Quant Ranges :   WA Gas   Toluene - nC12  
                  AK Gas   nC6 - nC10  
                  NW Gas   Toluene - Naphthalene  
                  8015 Gas  2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
0728a014.d	28-JUL-2010 13:24
0728a015.d	28-JUL-2010 13:50
0728a016.d	28-JUL-2010 14:16
0728a017.d	28-JUL-2010 14:42
0728a018.d	28-JUL-2010 15:08
0728a019.d	28-JUL-2010 15:34

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a014.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a014.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS .1  
 Client ID:  
 Injection Date: 28-JUL-2010 13:24  
 Matrix: WATER  
 Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.176	-0.001	3976	66213	95.8	TFT(Surr)
14.798	0.000	2842	25946	94.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	64528	0.112
8015B (2MP-TMB)	145592	0.112
AKGas (nC6-nC10)	100578	0.113
NWGas (Tol-Nap)	68968	0.115

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.223	-0.002	1416	98.5	TFT(Surr)
14.824	-0.001	5581	96.0	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
10.091	-0.003	285	2.75	Toluene
ND	---	---	---	Ethylbenzene
12.797	-0.005	318	3.28	M/P-Xylene
ND	---	---	---	O-Xylene
5.094	-0.006	398	9.48	MTBE

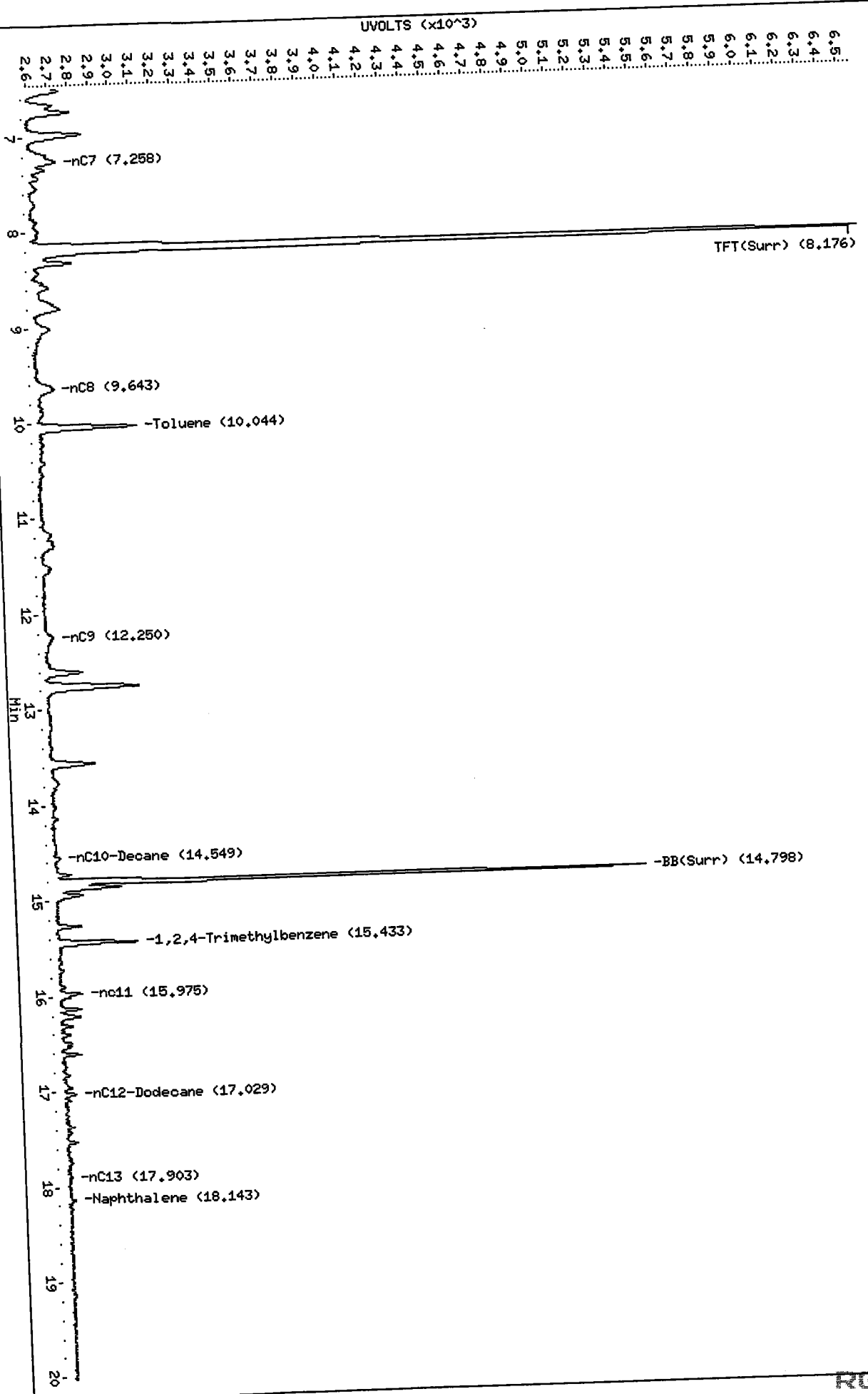
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a014.d  
Date: 28-JUL-2010 13:24  
Client ID:  
Sample Info: GAS .1

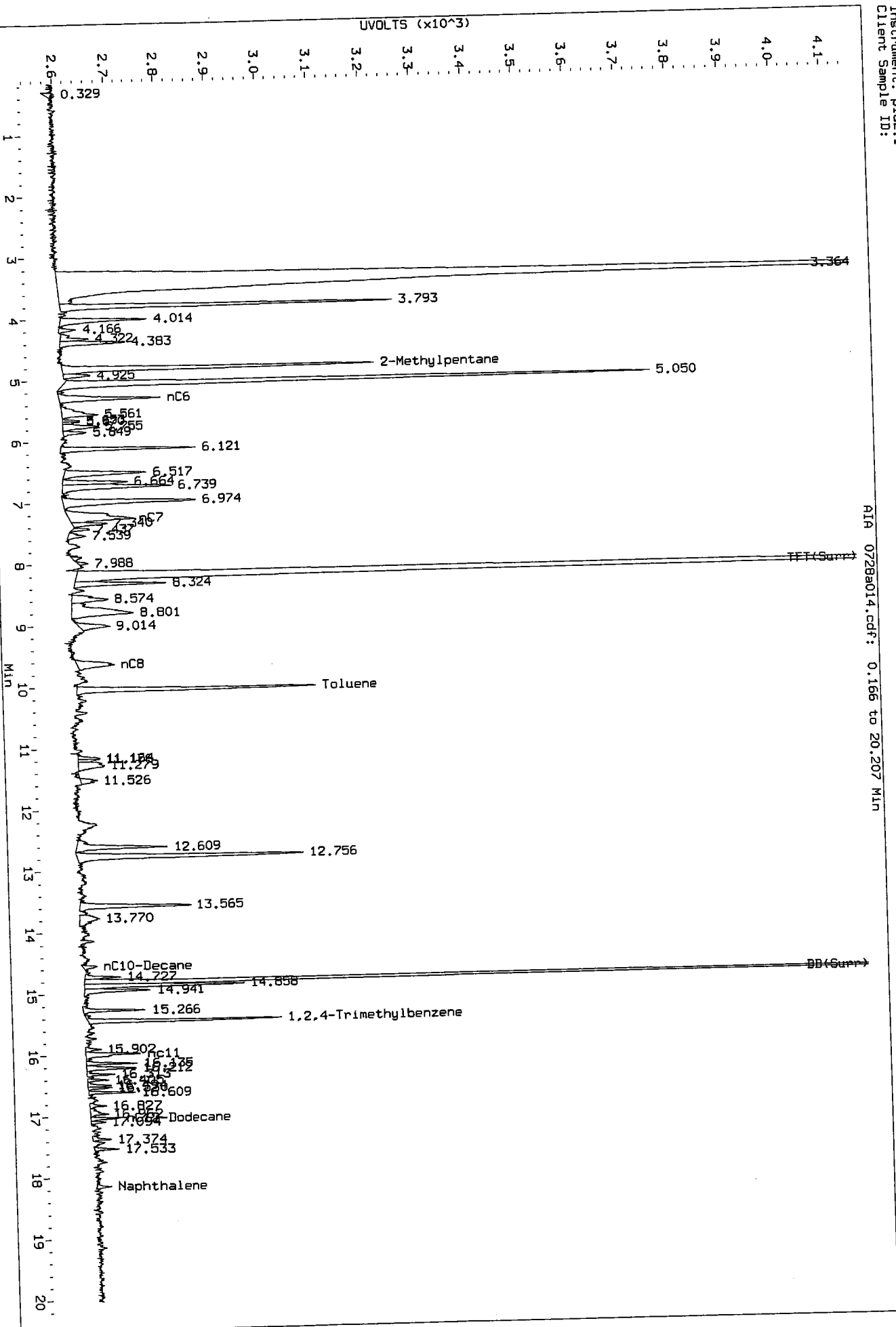
Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a014.d/0728a014.caf



Data File: /chem3/pid2.1/072810-1.b/0728a014.d/0728a014.cdf  
Injection Date: 28-JUL-2010 13:24  
Instrument: pid2.1  
Client Sample ID:



AIA 0728a014.cdf: 0.166 to 20.207 Min



Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a015.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a015.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS .25  
 Client ID:  
 Injection Date: 28-JUL-2010 13:50  
 Matrix: WATER  
 Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	----	-----
8.176	-0.001	4158	69618	100.2	TFT (Surr)
14.798	0.001	2982	27495	98.8	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	145090	0.252
8015B (2MP-TMB)	337846	0.259
AKGas (nC6-nC10)	228828	0.257
NWGas (Tol-Nap)	151421	0.252

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.224	-0.002	1455	101.2	TFT (Surr)
14.824	-0.001	5909	101.6	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
10.090	-0.004	713	6.87	Toluene
12.650	-0.006	237	2.07	Ethylbenzene
12.798	-0.005	806	8.32	M/P-Xylene
13.601	-0.004	359	3.54	O-Xylene
5.096	-0.004	968	23.06	MTBE

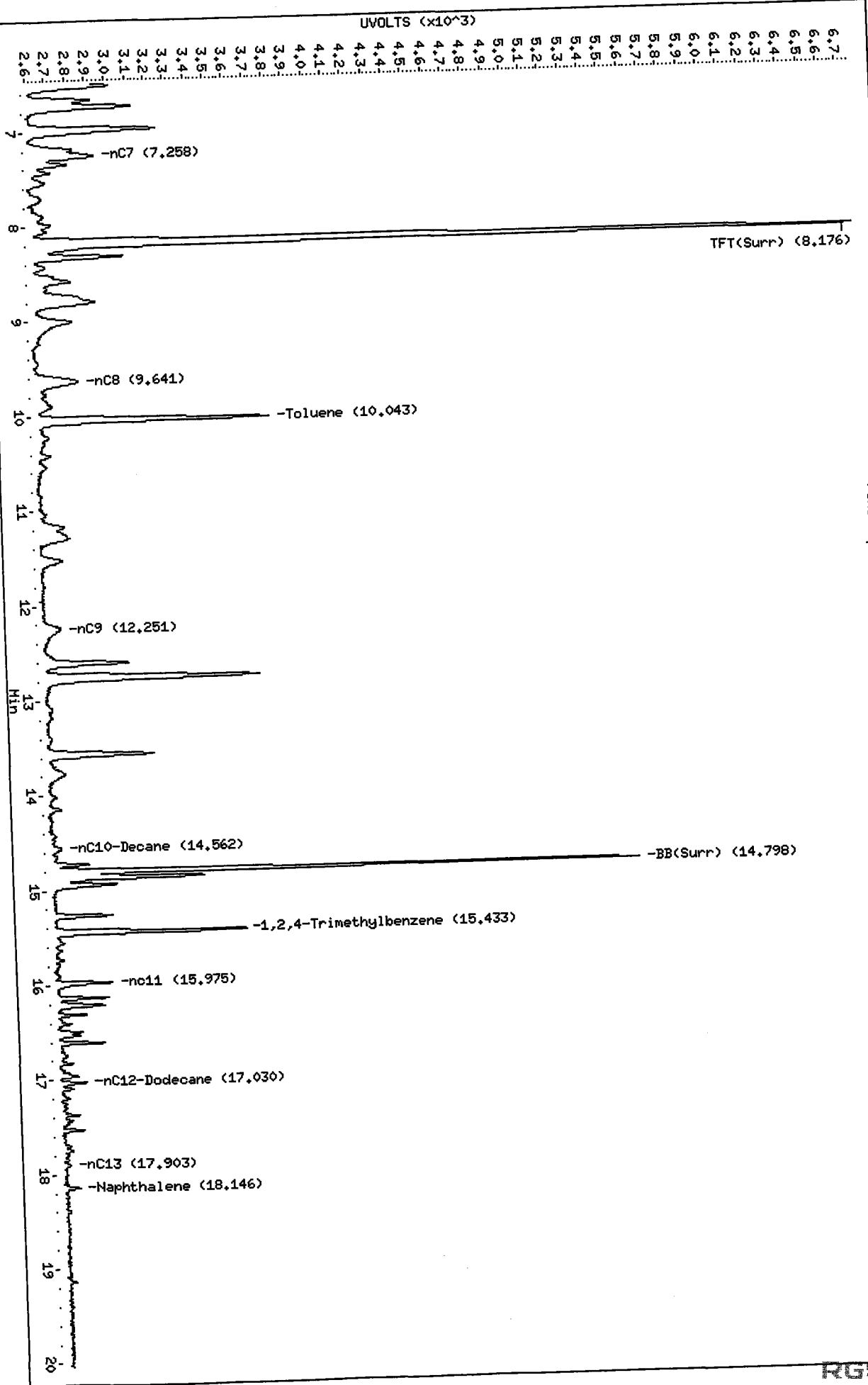
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a015.d  
Date: 28-JUL-2010 13:50  
Client ID:  
Sample Infor: GAS .25

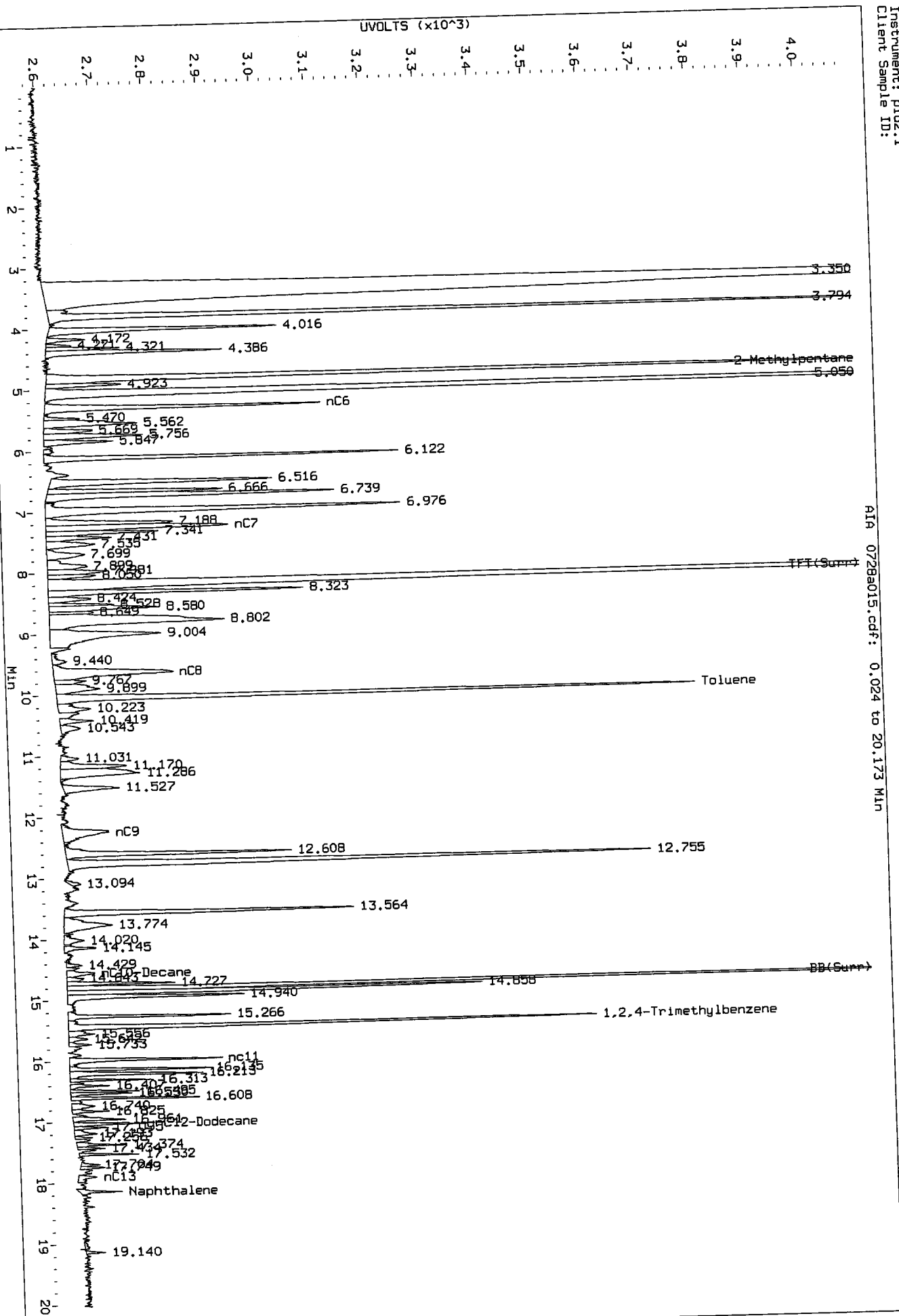
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/072810-1.b/0728a015.d/0728a015.cdf



Data File: /chem3/pid2.1/072810-1.b/0728a015.d/0728a015.cdf  
Injection Date: 28-JUL-2010 13:50  
Instrument: pid2.1  
Client Sample ID:



AIA 0728a015.cdf: 0.024 to 20.173 MIN

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a016.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a016.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS 1  
 Client ID:  
 Injection Date: 28-JUL-2010 14:16  
 Matrix: WATER  
 Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	----	-----
8.175	-0.001	3997	66136	96.3	TFT (Surr)
14.798	0.001	2850	26572	94.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	562860	0.976
8015B (2MP-TMB)	1309436	1.004
AKGas (nC6-nC10)	886524	0.997
NWGas (Tol-Nap)	586542	0.974

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.223	-0.003	1399	97.3	TFT (Surr)
14.824	0.000	5508	94.7	BB (Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.478	-0.005	202	1.73	Benzene
10.089	-0.004	2948	28.42	Toluene
12.650	-0.006	993	8.66	Ethylbenzene
12.798	-0.005	3241	33.45	M/P-Xylene
13.602	-0.003	1404	13.83	O-Xylene
5.096	-0.004	3894	92.75	MTBE

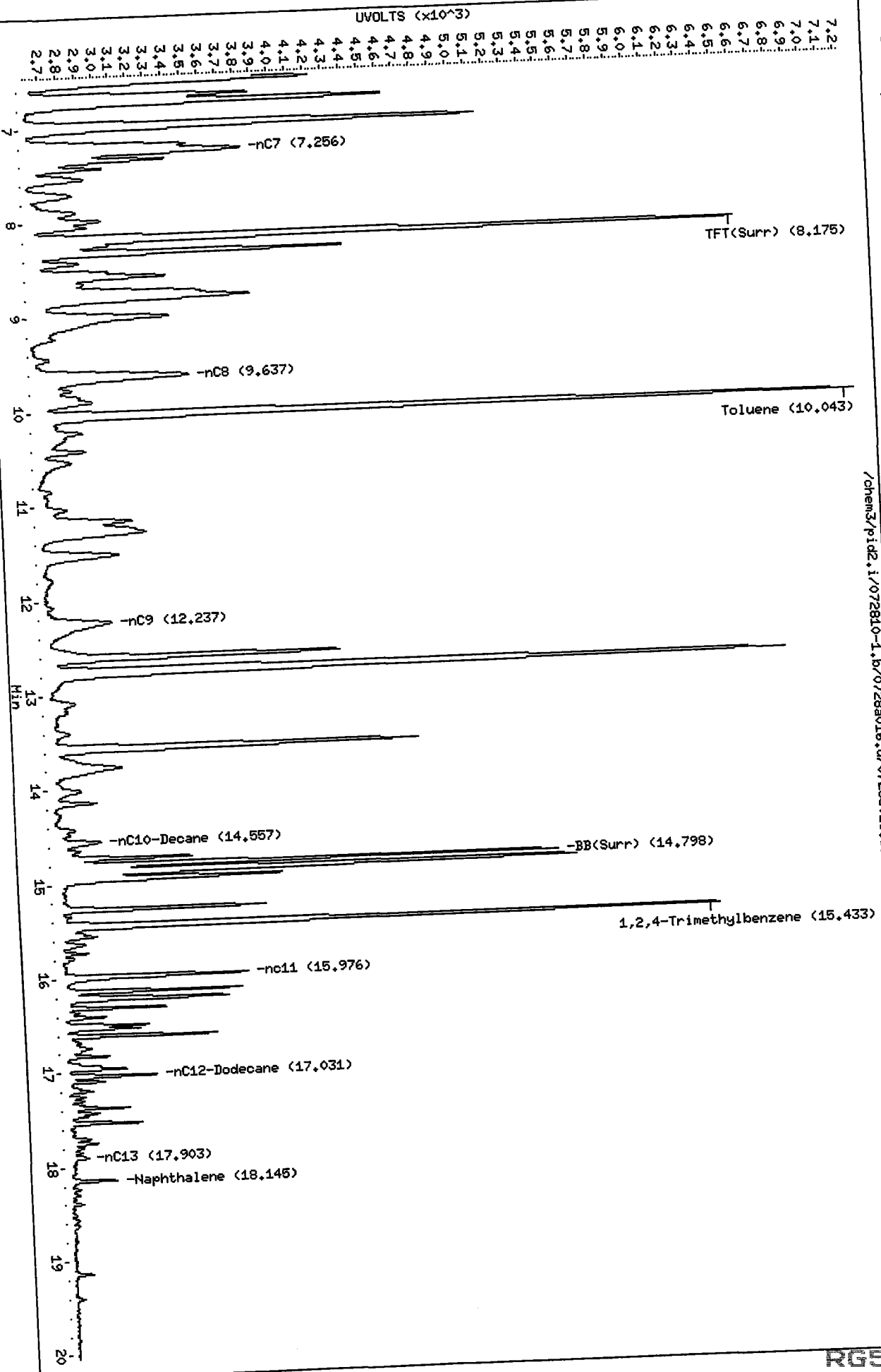
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a016.d  
Date : 28-JUL-2010 14:16  
Client ID:  
Sample Info: Gas 1

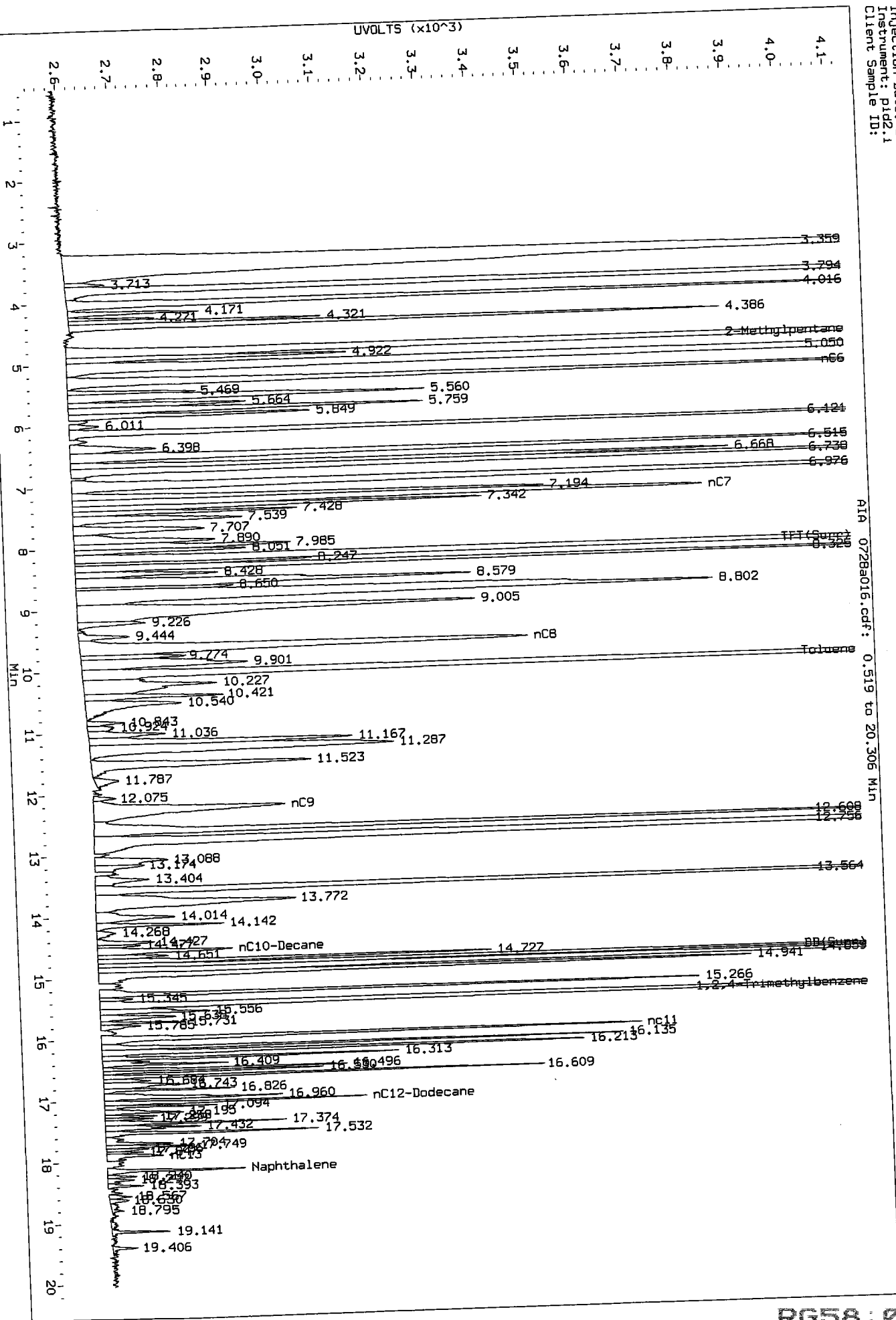
Instrument: pid2.i  
Operator: NH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a016.d/0728a016.cdf



Data File: /chem3/pid2.1/072810-1.b/0728a016.d/0728a016.cdf  
Injection Date: 28-JUL-2010 14:16  
Instrument: pid2.1  
Client Sample ID:



AIA 0728a016.cdf: 0.519 to 20.306 Min

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a017.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a017.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS 2.5  
 Client ID:  
 Injection Date: 28-JUL-2010 14:42  
 Matrix: WATER  
 Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.176	-0.001	4302	70595	103.6	TFT (Surr)
14.798	0.000	3065	29826	101.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	1399722	2.426
8015B (2MP-TMB)	3161184	2.423
AKGas (nC6-nC10)	2144321	2.412
NWGas (Tol-Nap)	1456098	2.419

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.224	-0.002	1473	102.5	TFT (Surr)
14.824	-0.001	5786	99.5	BB (Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.480	-0.003	578	4.96	Benzene
10.090	-0.004	7110	68.55	Toluene
12.650	-0.006	2425	21.16	Ethylbenzene
12.798	-0.005	7837	80.88	M/P-Xylene
13.601	-0.004	3439	33.87	O-Xylene
5.099	0.000	9262	220.60	MTBE

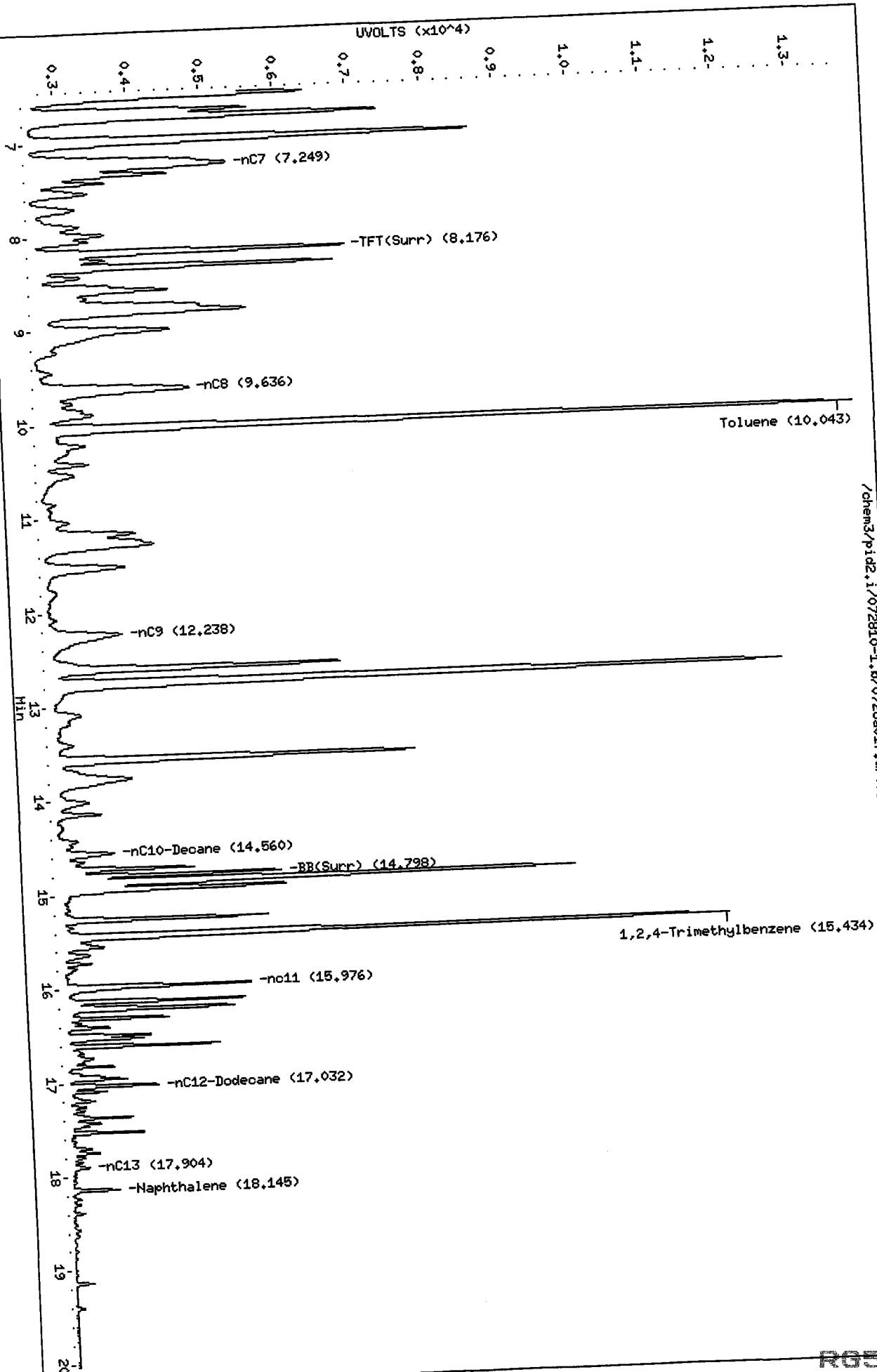
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.k/0728a017.d  
Date: 28-JUL-2010 14:42  
Client ID:  
Sample Info: GAS 2.5

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

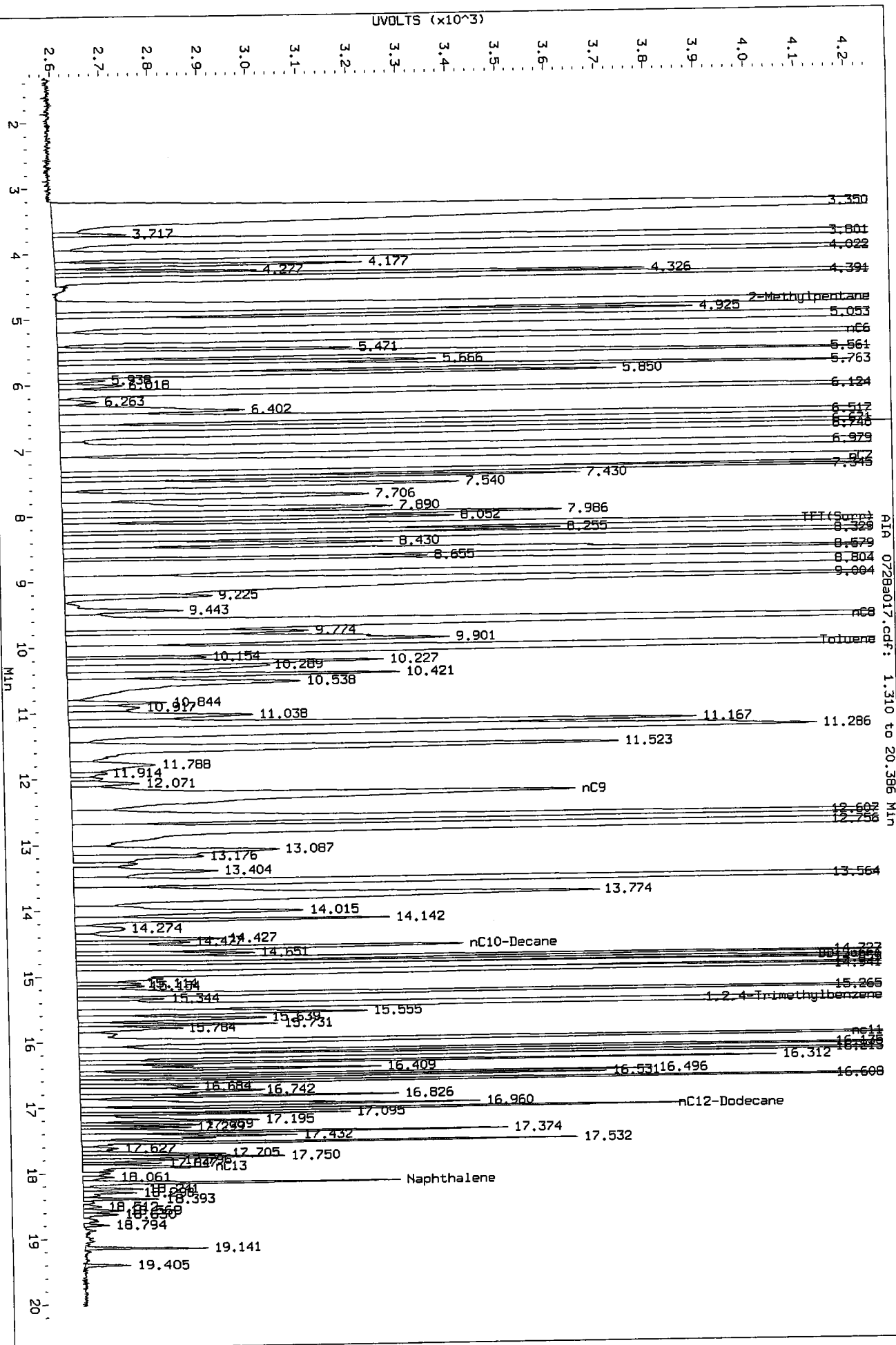
Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.k/0728a017.d/0728a017.cdf





Data File: /chem3/pid2.1/072810-1.b/0728a017.d/0728a017.cdf  
 Injection Date: 28-JUL-2010 14:42  
 Instrument: pid2.1  
 Client Sample ID:



Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a018.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a018.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS 5  
 Client ID:  
 Injection Date: 28-JUL-2010 15:08  
 Matrix: WATER  
 Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
8.178	0.001	4573	75790	110.1	TFT(Surr)
14.798	0.001	3308	33380	109.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	2850504	4.941
8015B (2MP-TMB)	6341363	4.860
AKGas (nC6-nC10)	4348496	4.890
NWGas (Tol-Nap)	2956550	4.911

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
8.226	0.000	1514	105.4	TFT(Surr)
14.824	0.000	5973	102.7	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.483	0.000	1108	9.51	Benzene
10.092	-0.002	14105	135.99	Toluene
12.652	-0.004	4779	41.70	Ethylbenzene
12.800	-0.003	15512	160.08	M/P-Xylene
13.603	-0.002	6714	66.13	O-Xylene
5.105	0.005	17292	411.85	MTBE

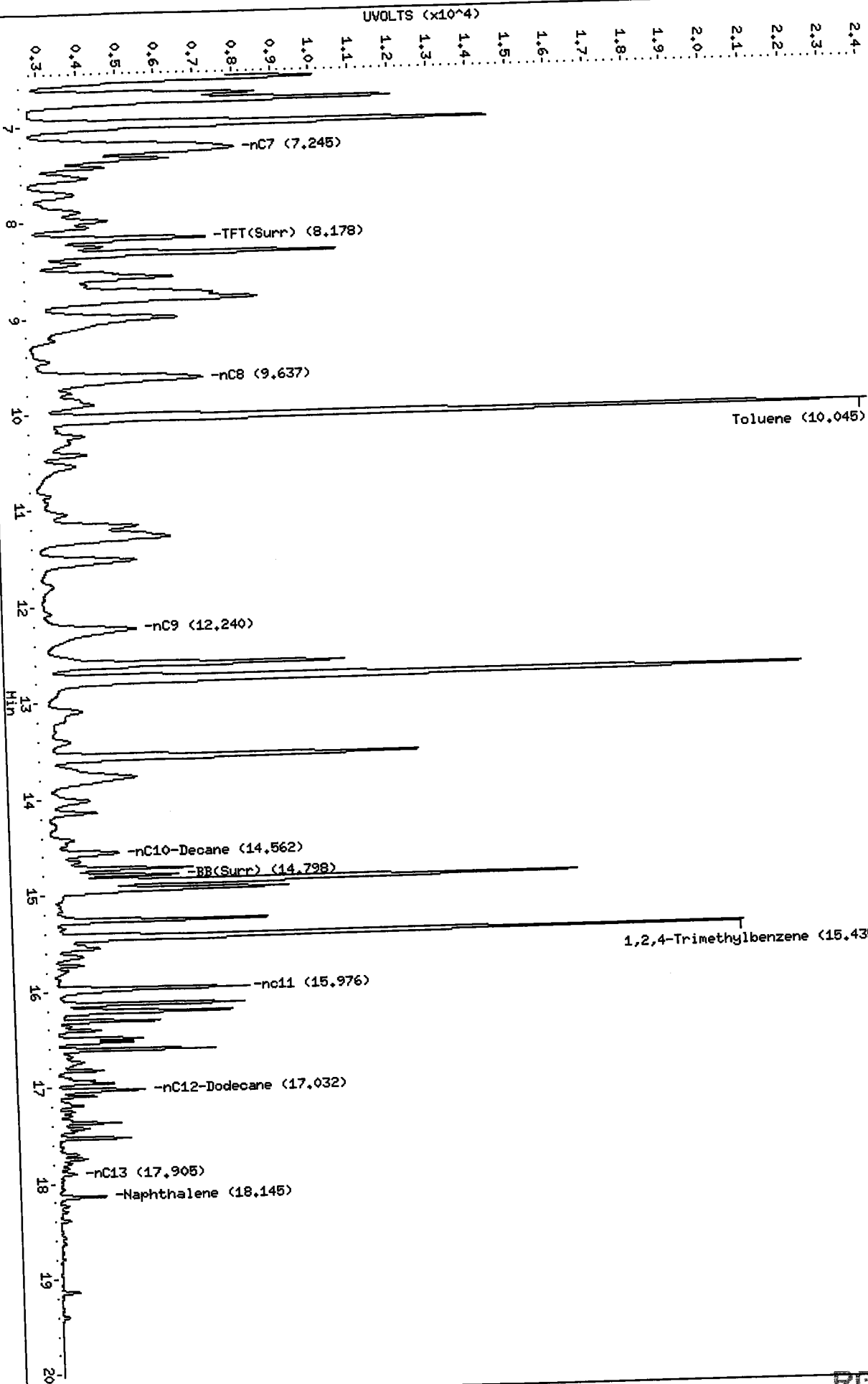
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a018.d  
Date: 28-JUL-2010 15:08  
Client ID:  
Sample Info: GAS 5

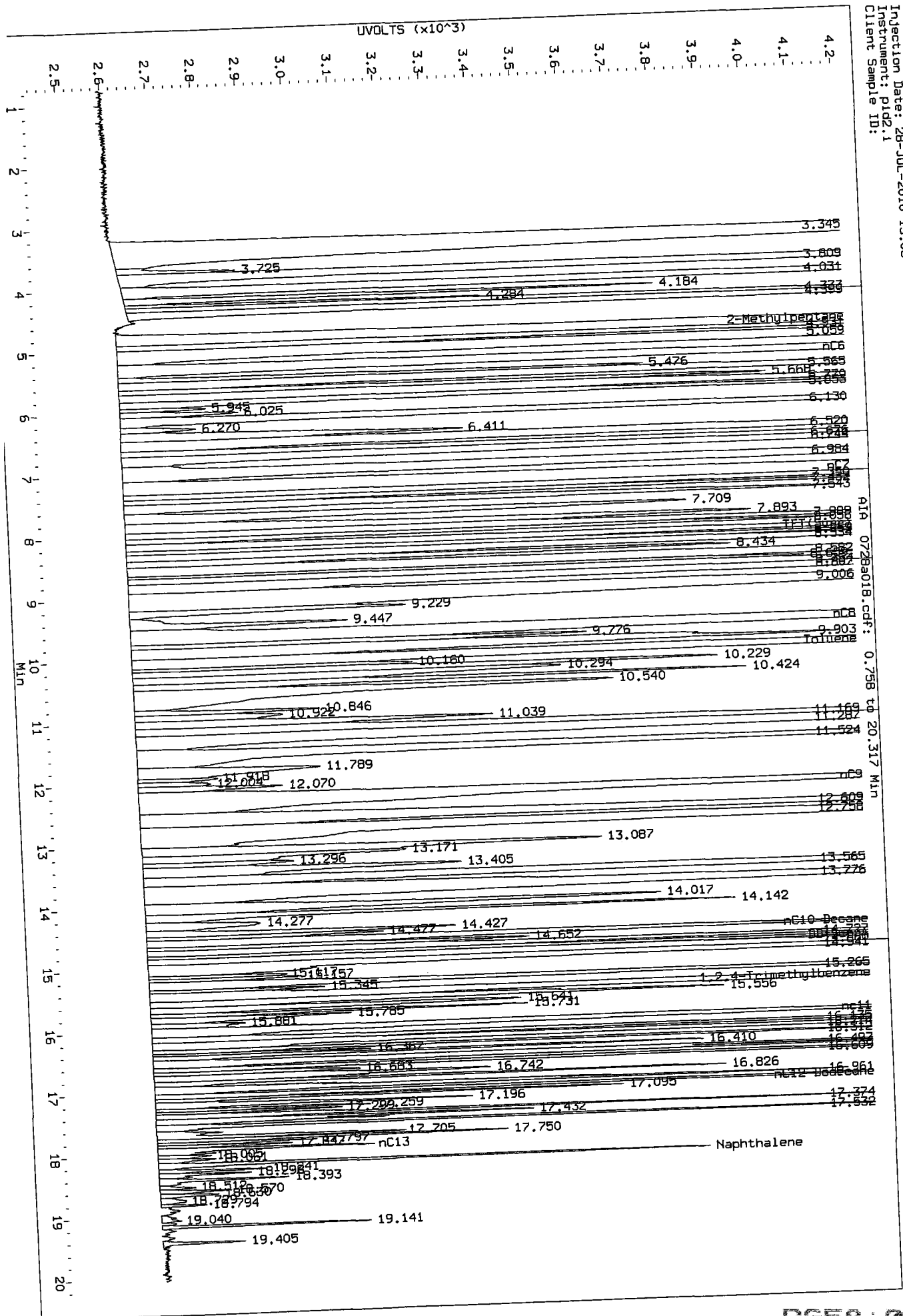
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a018.d/0728a018.cdf



Data File: /chem3/pid2.1/072810-1.b/0728a018.d/0728a018.cdf  
 Injection Date: 28-JUL-2010 15:08  
 Instrument: pid2.1  
 Client Sample ID:



Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a019.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a019.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS 20  
 Client ID:  
 Injection Date: 28-JUL-2010 15:34  
 Matrix: WATER  
 Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.178	0.001	5733	96643	138.1	TFT (Surr)
14.798	0.001	4453	52847	147.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	10855160	18.817
8015B (2MP-TMB)	23588919	18.078
AKGas (nC6-nC10)	16001306	17.995
NWGas (Tol-Nap)	11122738	18.477

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.225	-0.001	1790	124.6	TFT (Surr)
14.826	0.002	6439	110.7	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.486	0.002	4617	39.65	Benzene
10.096	0.003	60197	580.37	Toluene
12.657	0.001	19280	168.21	Ethylbenzene
12.809	0.006	65293	673.82	M/P-Xylene
13.608	0.003	28202	277.77	O-Xylene
5.122	0.022	65267	1554.50	MTBE

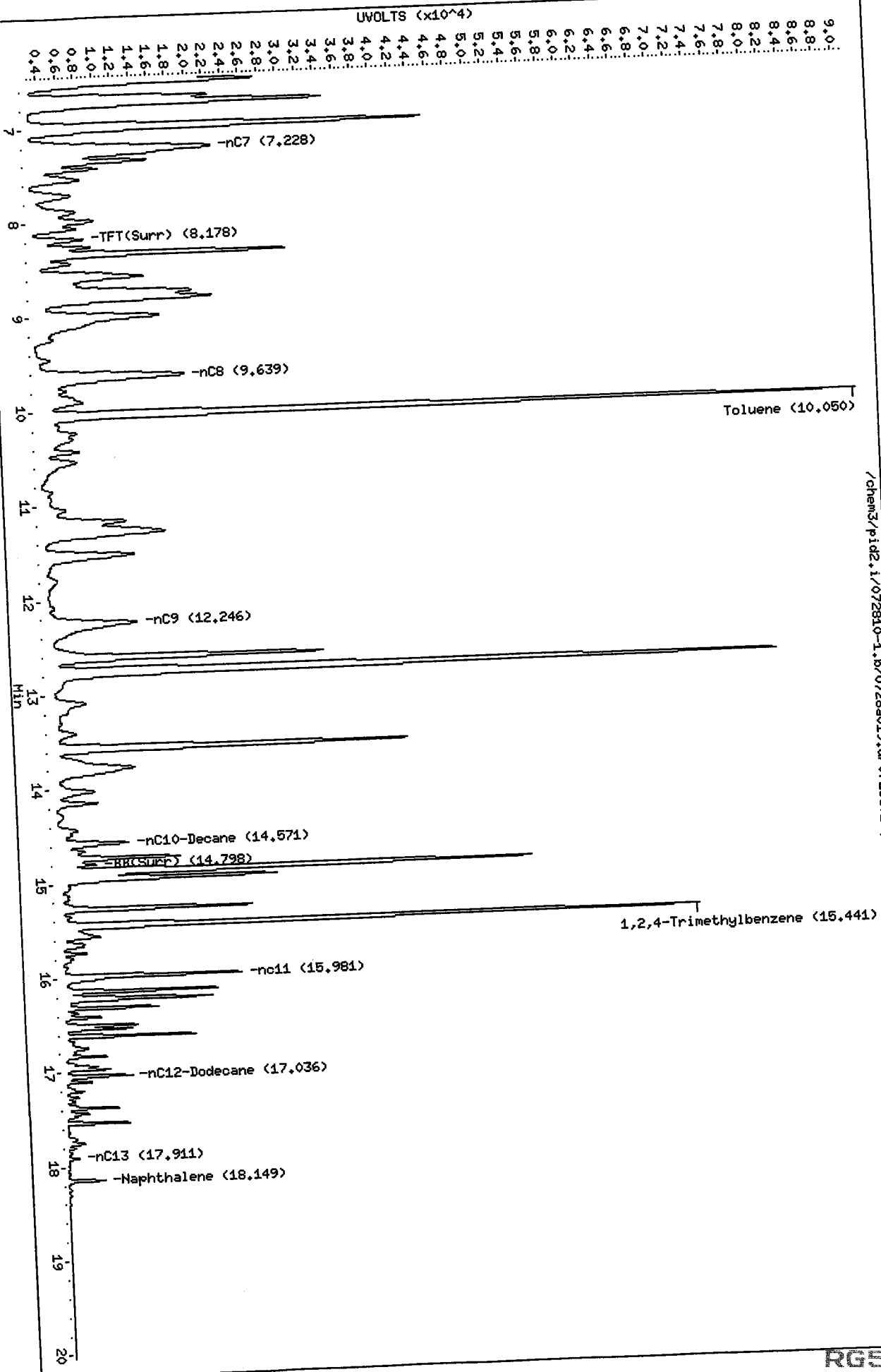
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a019.d  
Date: 28-JUL-2010 15:34  
Client ID:  
Sample Info: GAS 20

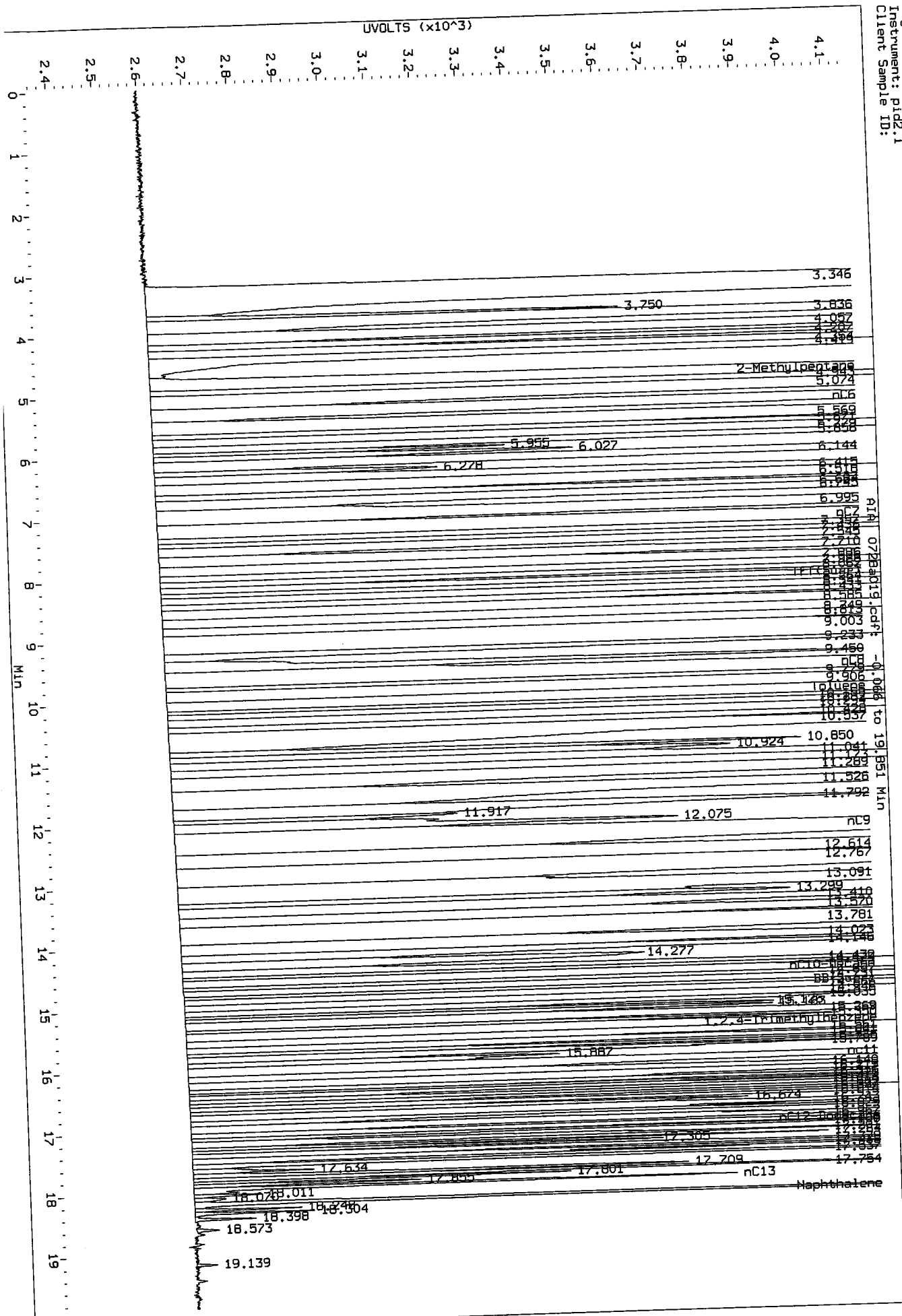
Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a019.d/0728a019.cdf



Data File: /chem3/pid2.i/072810-1.b/0728a019.d/0728a019.cdf  
 Injection Date: 28-JUL-2010 15:34  
 Instrument: pid2.1  
 Client Sample ID:



Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a021.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a021.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS ICV  
 Client ID:  
 Injection Date: 28-JUL-2010 16:26  
 Matrix: WATER  
 Dilution Factor: 1.000

=====  
 FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.183	0.006	4084	68079	98.4	TFT (Surr)
14.800	0.002	2936	26233	97.3	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	1723268	2.987
8015B (2MP-TMB)	2869302	2.199
AKGas (nC6-nC10)	2201780	2.476
NWGas (Tol-Nap)	1751023	2.909

\* Surrogate areas are subtracted from Total Area  
 =====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.230	0.005	1416	98.5	TFT (Surr)
14.826	0.002	5739	98.7	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.487	0.004	3113	26.73	Benzene
10.097	0.004	21465	206.95	Toluene
12.656	0.000	4672	40.76	Ethylbenzene
12.804	0.001	15816	163.22	M/P-Xylene
13.606	0.001	6750	66.48	O-Xylene
ND	---	---	---	MTBE

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

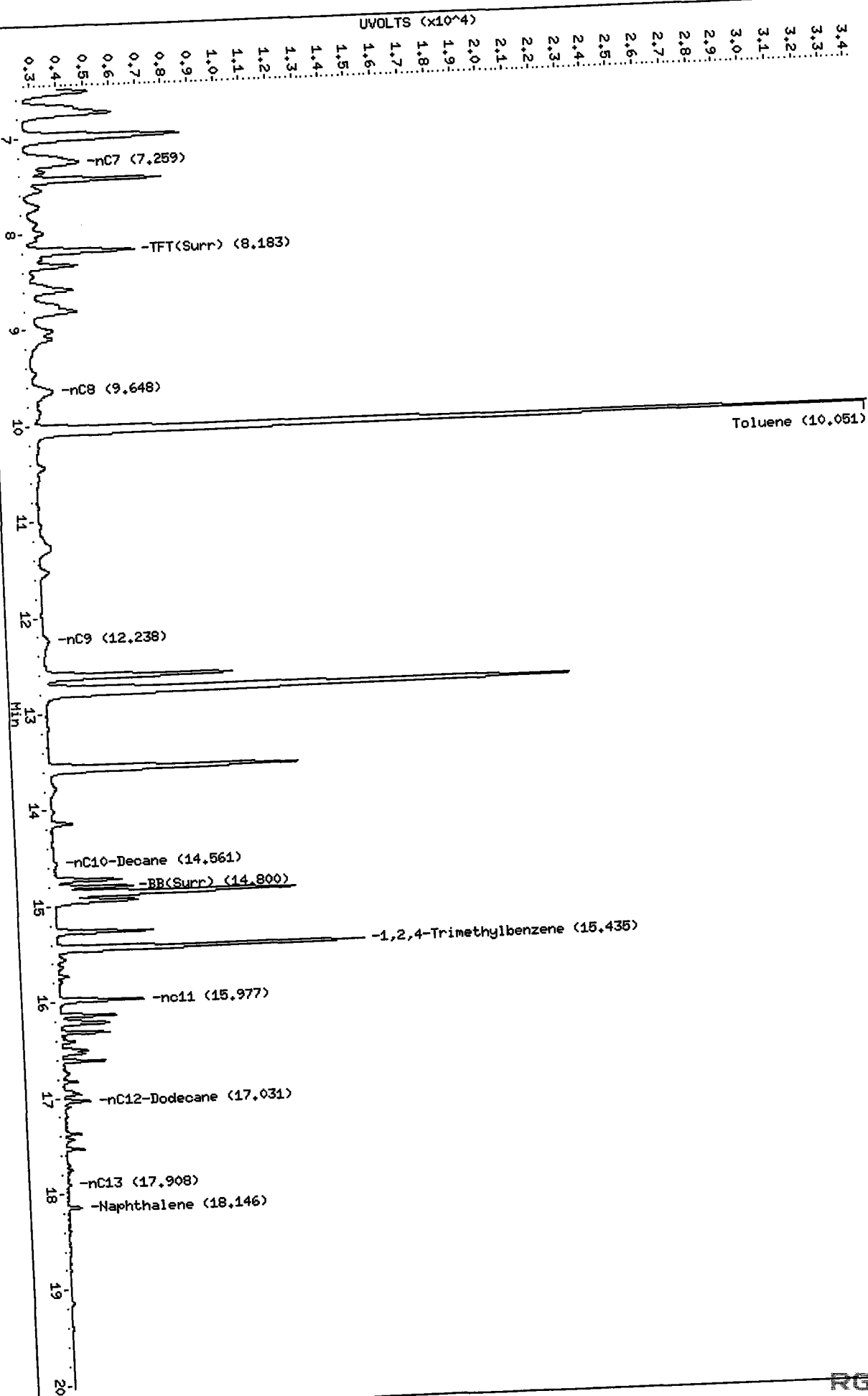


Data File: /chem3/pid2.i/072810-1.b/0728a021.d  
Date: 28-JUL-2010 16:26  
Client ID:  
Sample Info: GRS ICV

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a021.d/0728a021.cdf



Report Date : 29-Jul-2010 11:34

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-1.b/FID.m  
Batch File: /chem3/pid2.i/072810-1.b  
Inst ID: pid2.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0728a014	0728a015	0728a016	0728a017	0728a018	0728a019
INJ. DATE:	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010
INJ. TIME:	13:24	13:50	14:16	14:42	15:08	15:34

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 NMTPHG	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
20 MAGAS	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
19 AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
21 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
1 2-Methylpentane	4.813	4.816	4.815	4.818	4.823	4.832	4.834	4.764-4.904	4.819	0.007
2 nc6	5.300	5.301	5.305	5.311	5.315	5.316	5.321	5.251-5.391	5.308	0.007
3 nc7	7.258	7.258	7.256	7.249	7.245	7.228	7.254	7.184-7.324	7.249	0.012
4 TPT (Surr)	8.176	8.176	8.175	8.176	8.178	8.178	8.177	8.107-8.247	8.177	0.001
5 nc8	9.643	9.641	9.637	9.636	9.637	9.639	9.659	9.589-9.729	9.639	0.003
6 Toluene	10.044	10.043	10.043	10.043	10.045	10.050	10.046	9.976-10.116	10.045	0.003
7 nc9	12.250	12.251	12.237	12.238	12.240	12.246	12.245	12.175-12.315	12.244	0.006
22 BFB (Surr)	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
8 nc10-Decane	14.549	14.562	14.557	14.560	14.562	14.571	14.563	14.493-14.633	14.560	0.007
9 BB (Surr)	14.798	14.798	14.798	14.798	14.798	14.798	14.797	14.727-14.867	14.798	0.000
10 1,2,4-Trimethylbenzene	15.433	15.433	15.433	15.434	15.435	15.441	15.438	15.368-15.508	15.435	0.003
11 nc11	15.975	15.975	15.976	15.976	15.976	15.981	16.014	15.944-16.084	15.977	0.002
12 nc12-Dodecane	17.029	17.030	17.031	17.032	17.032	17.036	17.048	16.978-17.118	17.032	0.002

Reviewer 1  
Reviewer 2

Date: 7/29/10  
Date: 7/30/10

Report Date : 29-Jul-2010 11:34

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-1.b/FID.m  
Batch File: /chem3/pid2.i/072810-1.b  
Inst ID: pid2.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 nC13	17.903	17.903	17.903	17.904	17.905	17.911	17.890	17.820-17.960	17.905	0.003
14 Naphthalene	18.143	18.146	18.145	18.145	18.145	18.149	18.148	18.078-18.218	18.145	0.002

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUL-2010 09:30  
 End Cal Date : 28-JUL-2010 12:06  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid2.i/072810-2.b/PIDB.m  
 Cal Date : 29-Jul-2010 10:17 monicah  
 Curve Type : Average

Calibration File Names:

- Level 1: /chem3/pid2.i/072810-2.b/0728a005.d/0728a005.cdf
- Level 2: /chem3/pid2.i/072810-2.b/0728a006.d/0728a006.cdf
- Level 3: /chem3/pid2.i/072810-2.b/0728a007.d/0728a007.cdf
- Level 4: /chem3/pid2.i/072810-2.b/0728a008.d/0728a008.cdf
- Level 5: /chem3/pid2.i/072810-2.b/0728a009.d/0728a009.cdf
- Level 6: /chem3/pid2.i/072810-2.b/0728a010.d/0728a010.cdf
- Level 7: /chem3/pid2.i/072810-2.b/0728a011.d/0728a011.cdf

Compound	0.25000	0.50000	5.000	25.000	50.000	100.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	200.000							
	Level 7							
1 MTBE	44.00000 41.03000	44.00000	42.20000	41.80000	41.32000	39.55000	41.98571	3.826
2 Benzene	124 115	116	118	115	116	111	116	3.402
4 Toluene	120 106	96.00000	102	102	101	100	104	7.490
15 Chlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++
5 Ethylbenzene	136 109	128	110	108	107	105	115	10.663
6 M/P-Xylene	84.00000 104	95.00000	101	99	97.50000	97.81000	96.89964	6.533

Report Date : 29-Jul-2010 10:30

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUL-2010 09:30  
 End Cal Date : 28-JUL-2010 12:06  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid2.i/072810-2.b/PIDB.m  
 Cal Date : 29-Jul-2010 10:17 monicah  
 Curve Type : Average

Compound	0.25000	0.50000	5.000	25.000	50.000	100.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	200.000							
	Level 7							
7 O-Xylene	80.00000 106	110	106	105	102	102	102	9.740
13 1,3,5 Trimethyl Benzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
14 1,2,4 Trimethyl Benzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
16 1,3 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
17 1,4 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
18 1,2 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
\$ 3 TFT(Surr)	15.31818 14.22500	14.15909	14.31343	14.24000	14.21805	14.12360	14.37105	2.936
\$ 19 BFB(Surr)	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
\$ 8 BB(Surr)	62.00000 55.53000	58.52273	58.86567	57.65000	57.45865	57.10112	58.16117	3.451

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUL-2010 09:30  
 End Cal Date : 28-JUL-2010 12:06  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid2.i/072810-1.b/FID.m  
 Cal Date : 28-Jul-2010 15:04 monicah  
 Curve Type : Average

Compound	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	0.000e+00							
	Level 7							
14 Naphthalene	++++	++++	++++	++++	++++	++++	++++	++++
	++++							
\$ 4 TFT(Surr)	45.63636 39.29000	42.52273	41.85075	40.65000	40.39098	40.27528	41.51659	5.073
\$ 22 BFB(Surr)	++++	++++	++++	++++	++++	++++	++++	++++
	++++							
\$ 9 BB(Surr)	33.22727 28.20000	31.04545	30.40299	29.69000	29.64662	29.08989	30.18603	5.362

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a002.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a002.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: RT+BCAL 1  
Client ID:  
Injection Date: 28-JUL-2010 06:29  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.187	0.010	4132	68784	99.5	TFT (Surr)
14.805	0.007	3016	27442	99.9	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	754578	1.308
8015B (2MP-TMB)	1059107	0.812
AKGas (nC6-nC10)	754838	0.849
NWGas (Tol-Nap)	805197	1.338

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.235	0.009	1481	103.1	TFT (Surr)
14.831	0.006	5941	102.1	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.493	0.010	2893	24.84	Benzene
10.101	0.007	2542	24.51	Toluene
12.661	0.005	2709	23.64	Ethylbenzene
12.806	0.003	5087	52.50	M/P-Xylene
13.610	0.005	2678	26.38	O-Xylene
5.108	0.008	1047	24.94	MTBE

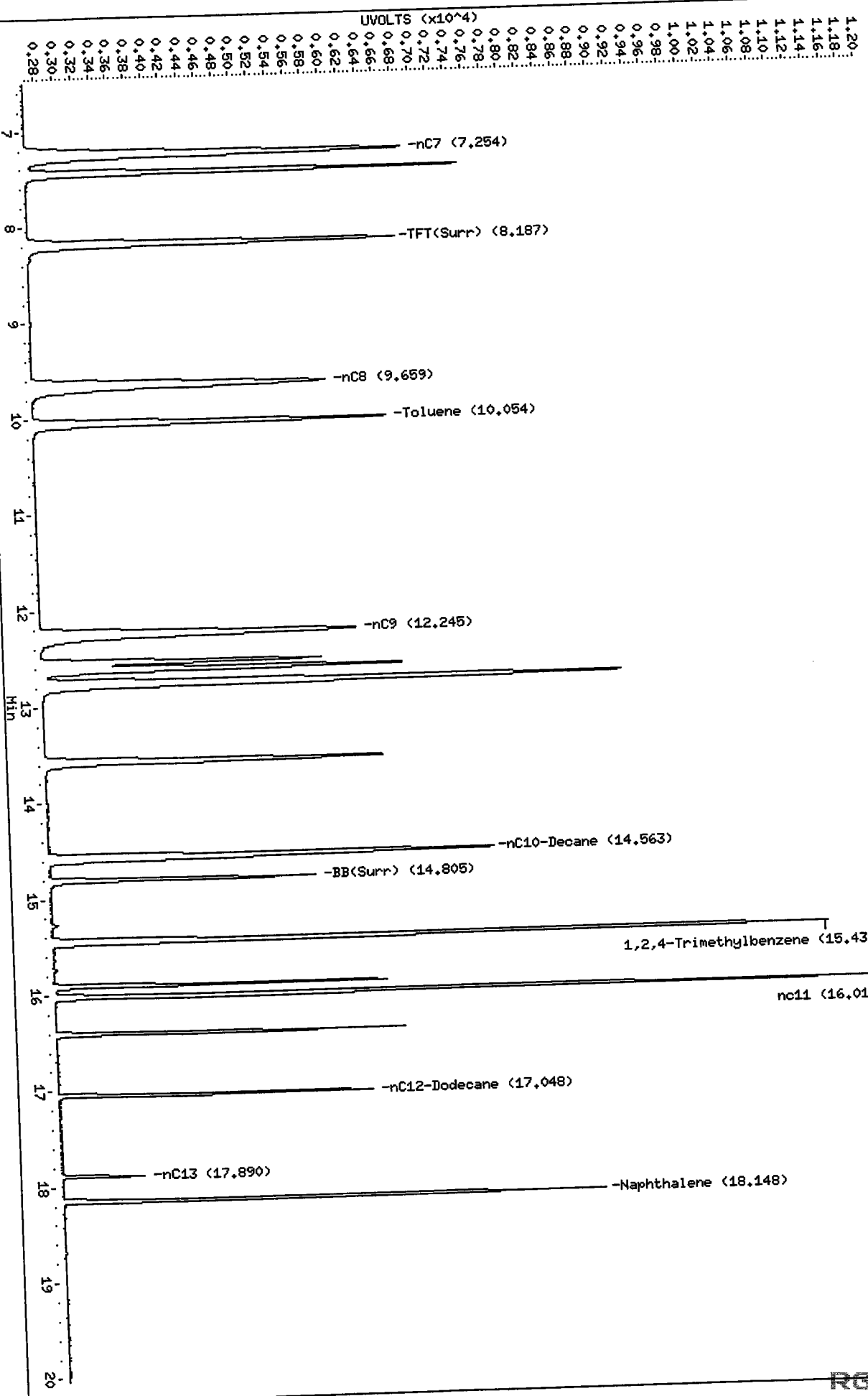
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.1/072810-1.b/0728a002.d  
Date: 28-JUL-2010 06:29  
Client ID:  
Sample Info: RT+BOCAL 1

Instrument: pid2.1  
Operator: HH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.1/072810-1.b/0728a002.d/0728a002.cdf



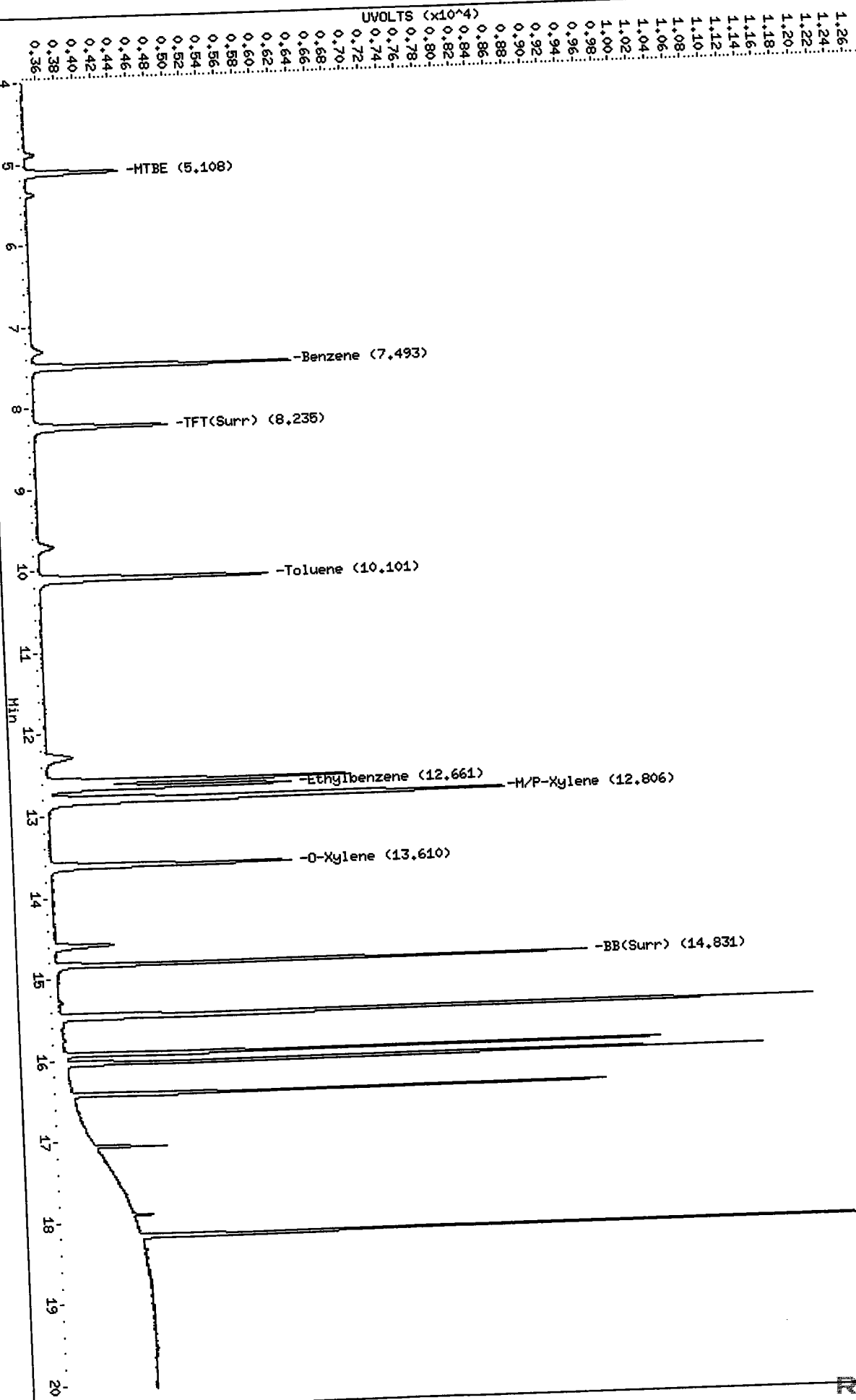


Data File: /chem3/pid2.i/072810-2.b/0728s002.d  
Date: 28-JUL-2010 06:29  
Client ID:  
Sample Info: RT+BCAL 1

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid2.i/072810-2.b/0728s002.d/0728s002.cdf



MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a005.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a005.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX .25  
Client ID:  
Injection Date: 28-JUL-2010 09:30  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.186	0.009	1004	17704	24.2	TFT (Surr)
14.805	0.007	731	6984	24.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	7288	0.013
8015B (2MP-TMB)	7236	0.006
AKGas (nC6-nC10)	6650	0.007
NWGas (Tol-Nap)	7288	0.012

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.237	0.011	337	23.4	TFT (Surr)
14.830	0.005	1364	23.5	BB (Surr)

AROMATIC (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.490	0.007	31	0.27N	Benzene
10.093	0.000	30	0.29N	Toluene
12.660	0.004	34	0.30N	Ethylbenzene
12.813	0.011	42	0.43N	M/P-Xylene
13.617	0.012	20	0.20N	O-Xylene
5.117	0.017	11	0.26N	MTBE

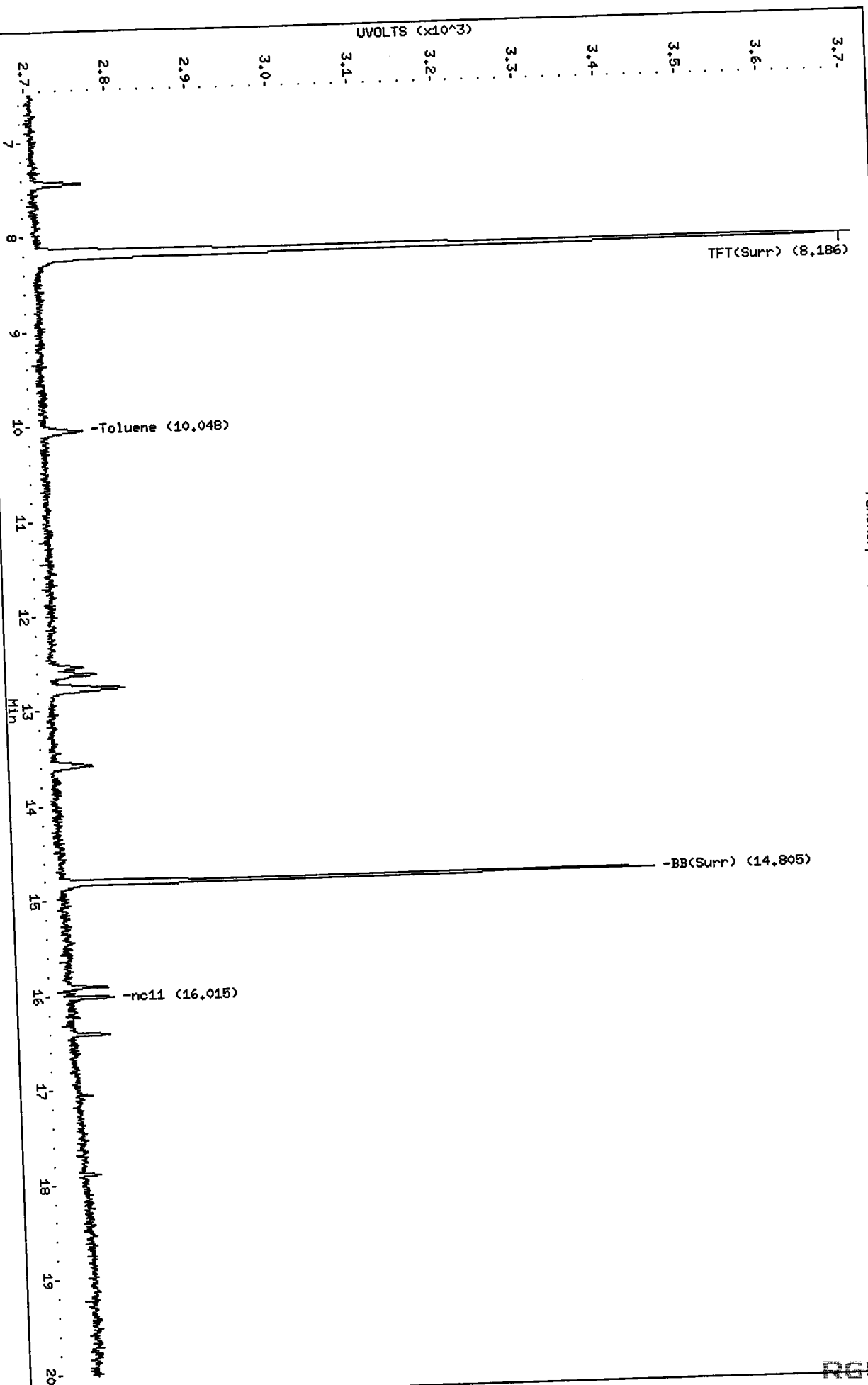
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a005.d  
Date: 28-JUL-2010 09:30  
Client ID:  
Sample Info: BETX .25

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a005.d/0728a005.cdf

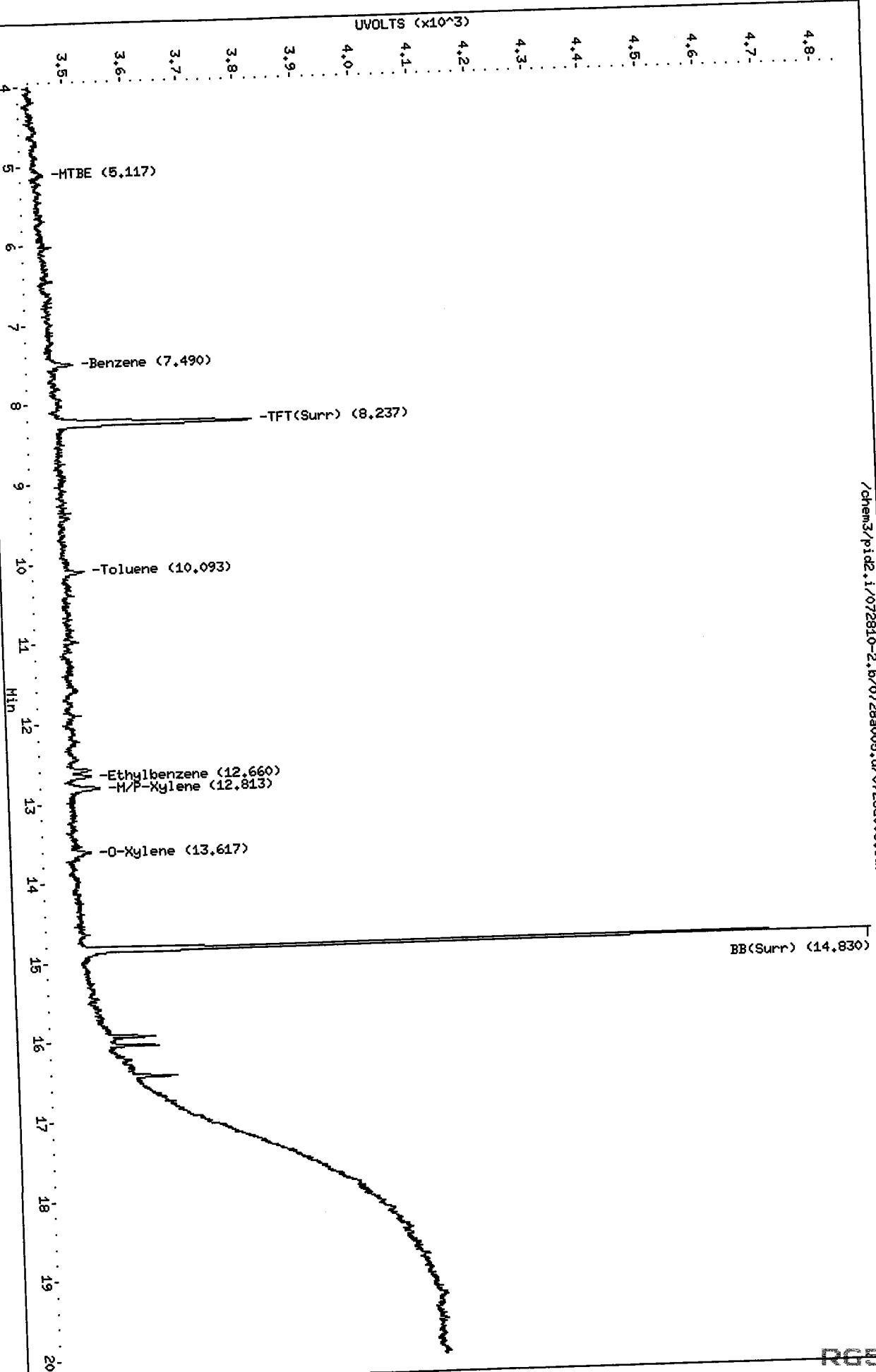


Data File: /chem3/pid2.i/072810-2.b/0728a005.d  
Date: 28-JUL-2010 09:30  
Client ID:  
Sample Info: BETX .25

Instrument: pid2.i  
Operator: NH  
Column diameter: 0.18

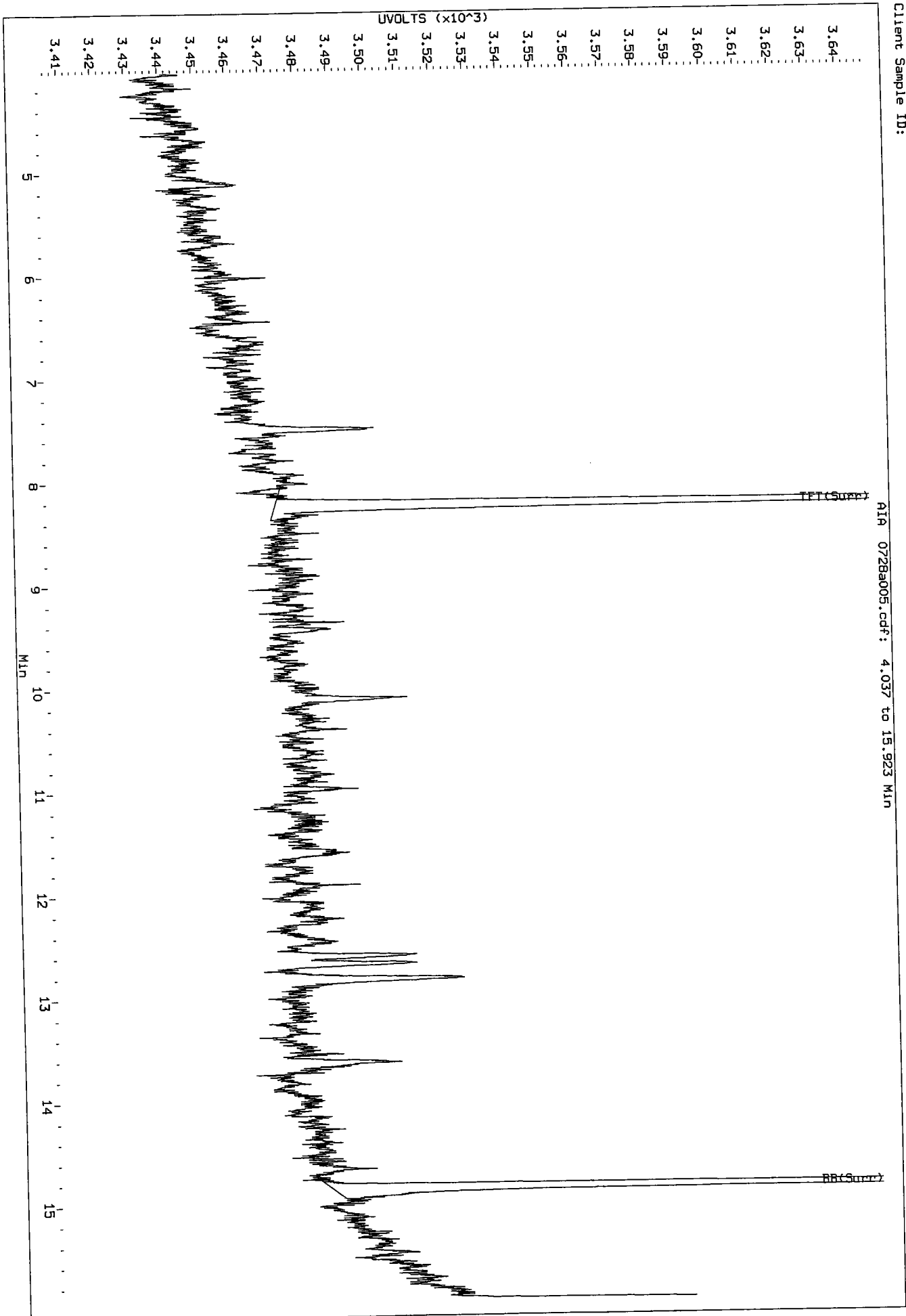
Column phase: RTX 502-2 PID

/chem3/pid2.i/072810-2.b/0728a005.d/0728a005.cdf

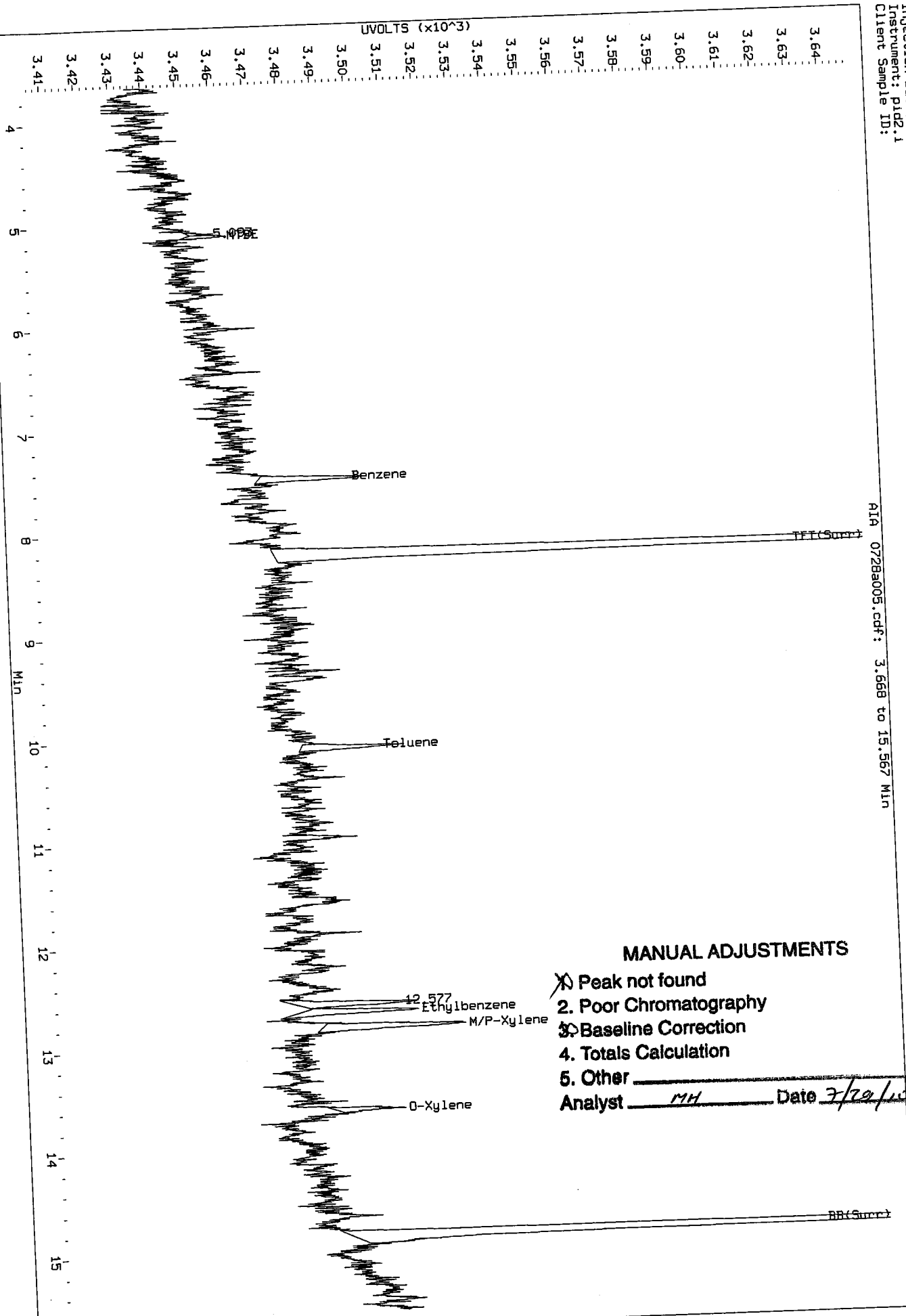


MT  
7/29/10

Data File: /chem3/p1d2.1/072810-2.b/0728a005.d/0728a005.cdf  
Injection Date: 28-JUL-2010 09:30  
Instrument: p1d2.1  
Client Sample ID:



Data File: /chem3/pld2.1/072810-2.b/0728a005.d/0728a005.cdf  
 Injection Date: 28-JUL-2010 09:30  
 Instrument: pld2.1  
 Client Sample ID:



AIA 0728a005.cdf: 3.668 to 15.567 MIN

**MANUAL ADJUSTMENTS**

- Peak not found
- 2. Poor Chromatography
- Baseline Correction
- 4. Totals Calculation
- 5. Other \_\_\_\_\_

Analyst MH Date 7/29/10

MH  
7/21/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a006.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a006.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX .5  
Client ID:  
Injection Date: 28-JUL-2010 09:56  
Matrix: WATER  
Dilution Factor: 1.000

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.183	0.007	1871	31844	45.1	TFT (Surr)
14.803	0.006	1366	12485	45.3	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	10591	0.018
8015B (2MP-TMB)	11287	0.009
AKGas (nC6-nC10)	10286	0.012
NWGas (Tol-Nap)	10591	0.018

\* Surrogate areas are subtracted from Total Area  
=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.230	0.004	623	43.4	TFT (Surr)
14.830	0.005	2575	44.3	BB (Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
7.483	0.000	58	0.50N	Benzene
10.090	-0.003	48	0.46N	Toluene
12.660	0.004	64	0.56N	Ethylbenzene
12.810	0.007	95	0.98N	M/P-Xylene
13.603	-0.002	55	0.54N	O-Xylene
5.110	0.010	22	0.52N	MTBE

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

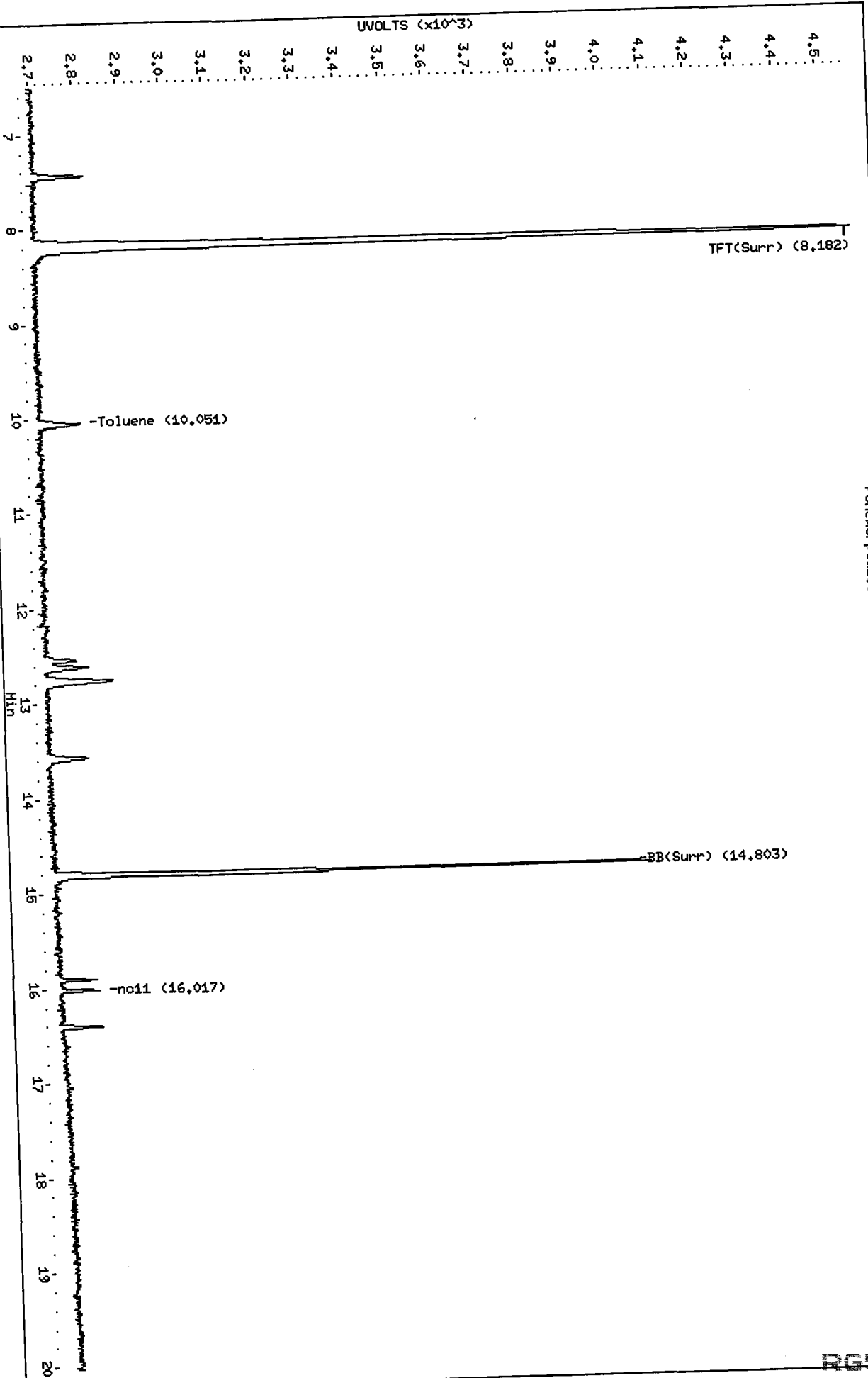
RG58: 01287

Data File: /chem3/pid2.i/072810-1.b/0728a006.d  
Date : 28-JUL-2010 09:56  
Client ID:  
Sample Info: BETX .5

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

Column phases: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a006.d/0728a006.cdf



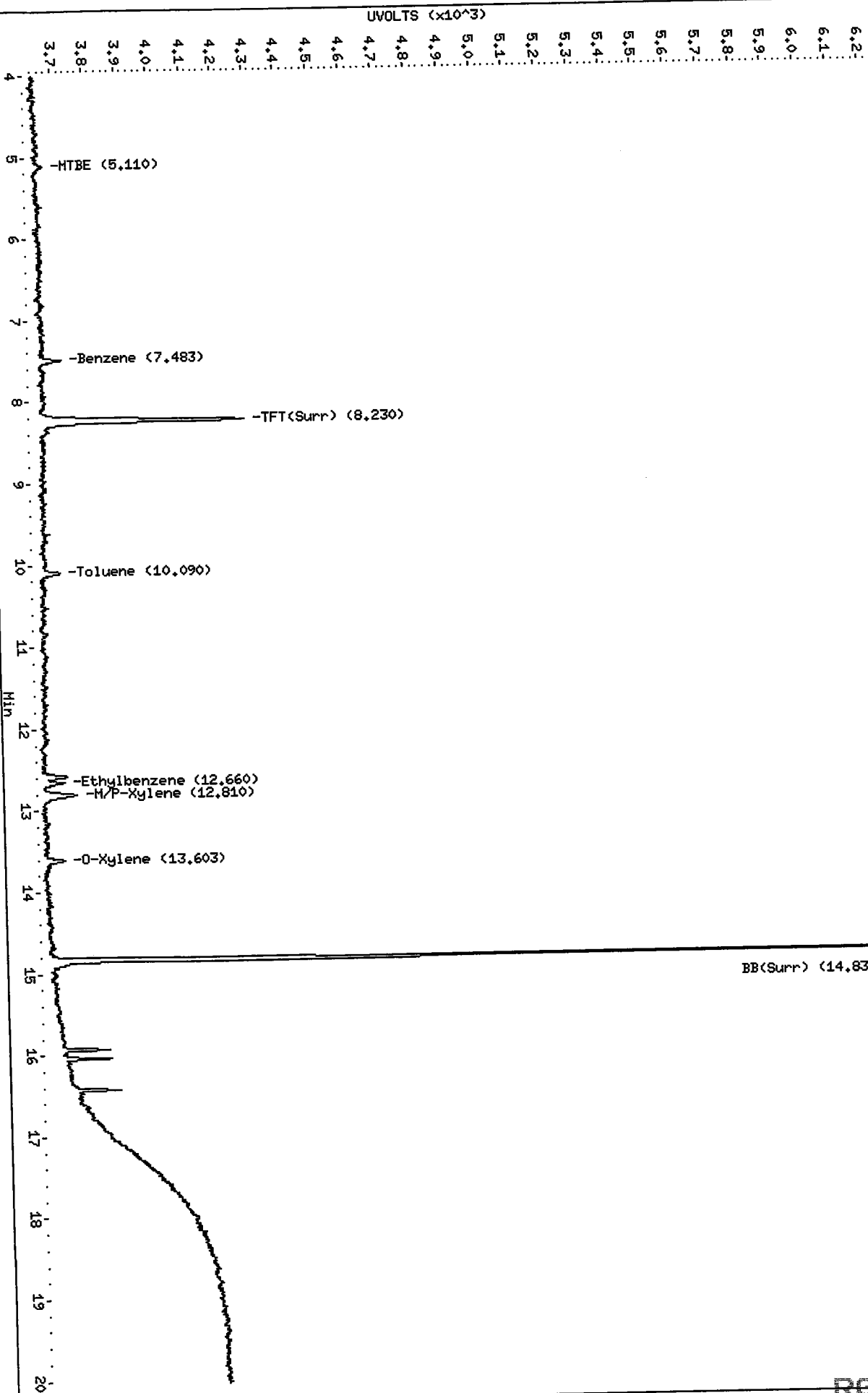


Data File: /chem3/pid2.i/072810-2.b/0728a006.d  
Date : 28-JUL-2010 09:56  
Client ID:  
Sample Info: BETX .5

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

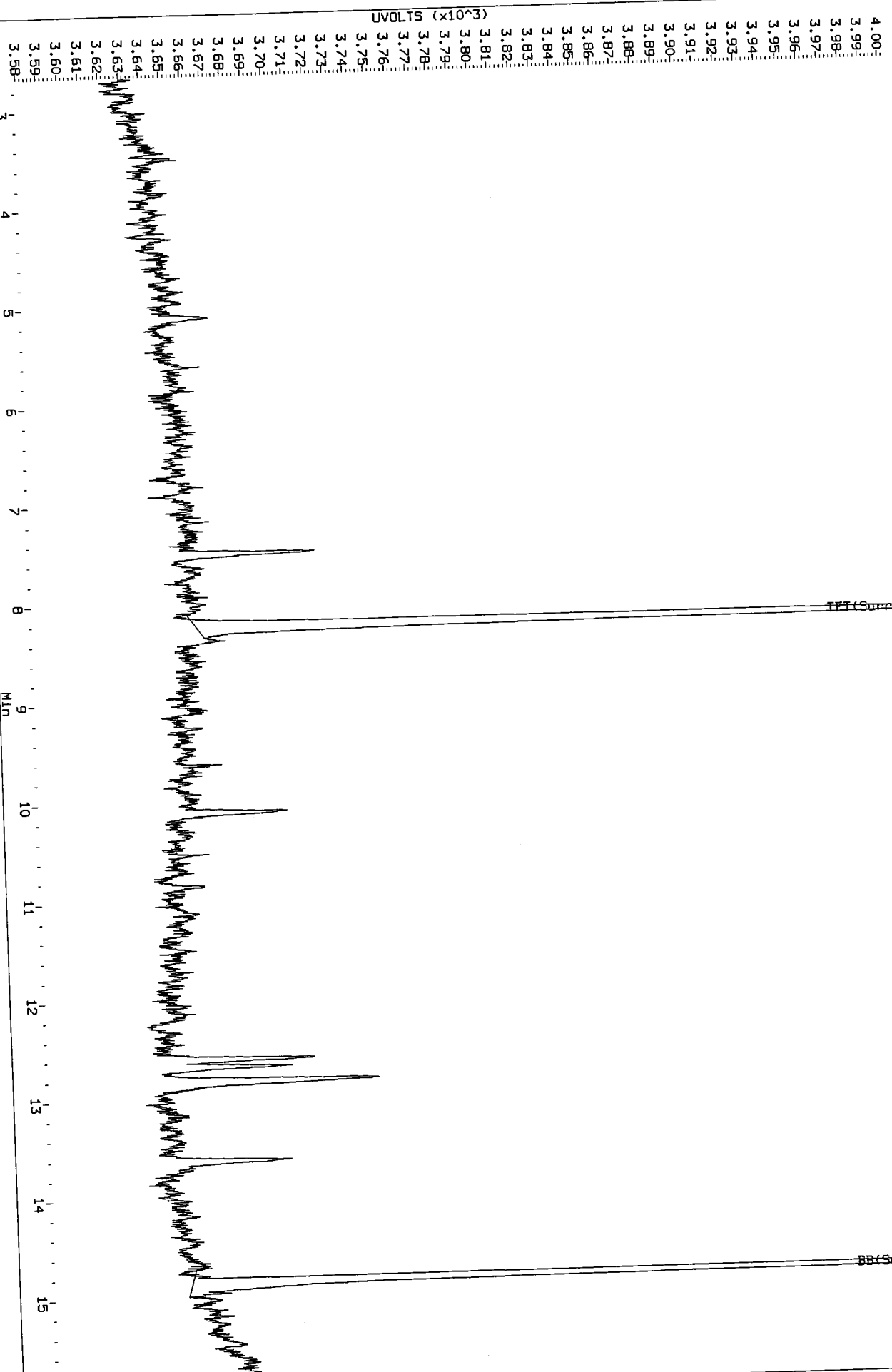
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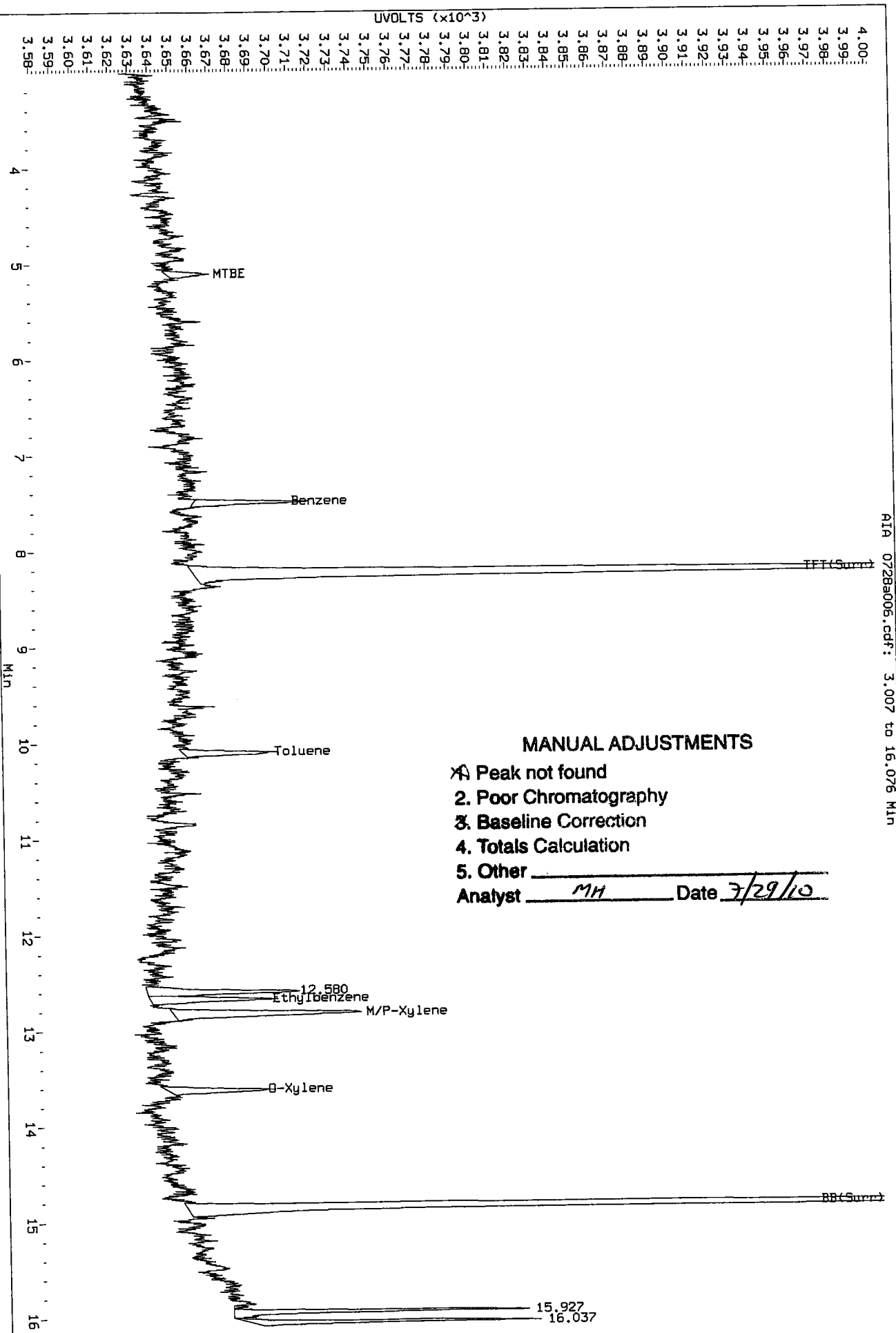
MR  
7/16/10

Data File: /chem3/pid2.1/072810-2.b/0728a006.d/0728a006.cdf  
Injection Date: 28-JUL-2010 09:56  
Instrument: pid2.1  
Client Sample ID:

AIA 0728a006.cdf: 2.681 to 15.749 Min



Data File: /chem3/pid2.1/072810-2.b/0728a006.d/0728a006.cdf  
 Injection Date: 28-JUL-2010 09:56  
 Instrument: pid2.1  
 Client Sample ID:



AIA 0728a006.cdf: 3.007 to 16.076 Min

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a007.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a007.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 5  
Client ID:  
Injection Date: 28-JUL-2010 10:22  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
---	-----	-----	-----	-----	-----
8.183	0.006	2804	47731	67.5	TFT (Surr)
14.802	0.004	2037	19317	67.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	91696	0.159
8015B (2MP-TMB)	94785	0.073
AKGas (nC6-nC10)	86610	0.097
NWGas (Tol-Nap)	91696	0.152

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
---	-----	-----	-----	-----
8.233	0.008	959	66.7	TFT (Surr)
14.830	0.005	3944	67.8	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
---	-----	-----	-----	-----
7.490	0.007	591	5.08N	Benzene
10.097	0.003	509	4.91N	Toluene
12.658	0.002	551	4.81	Ethylbenzene
12.803	0.001	1008	10.40N	M/P-Xylene
13.610	0.005	529	5.21N	O-Xylene
5.103	0.003	211	5.03N	MTBE

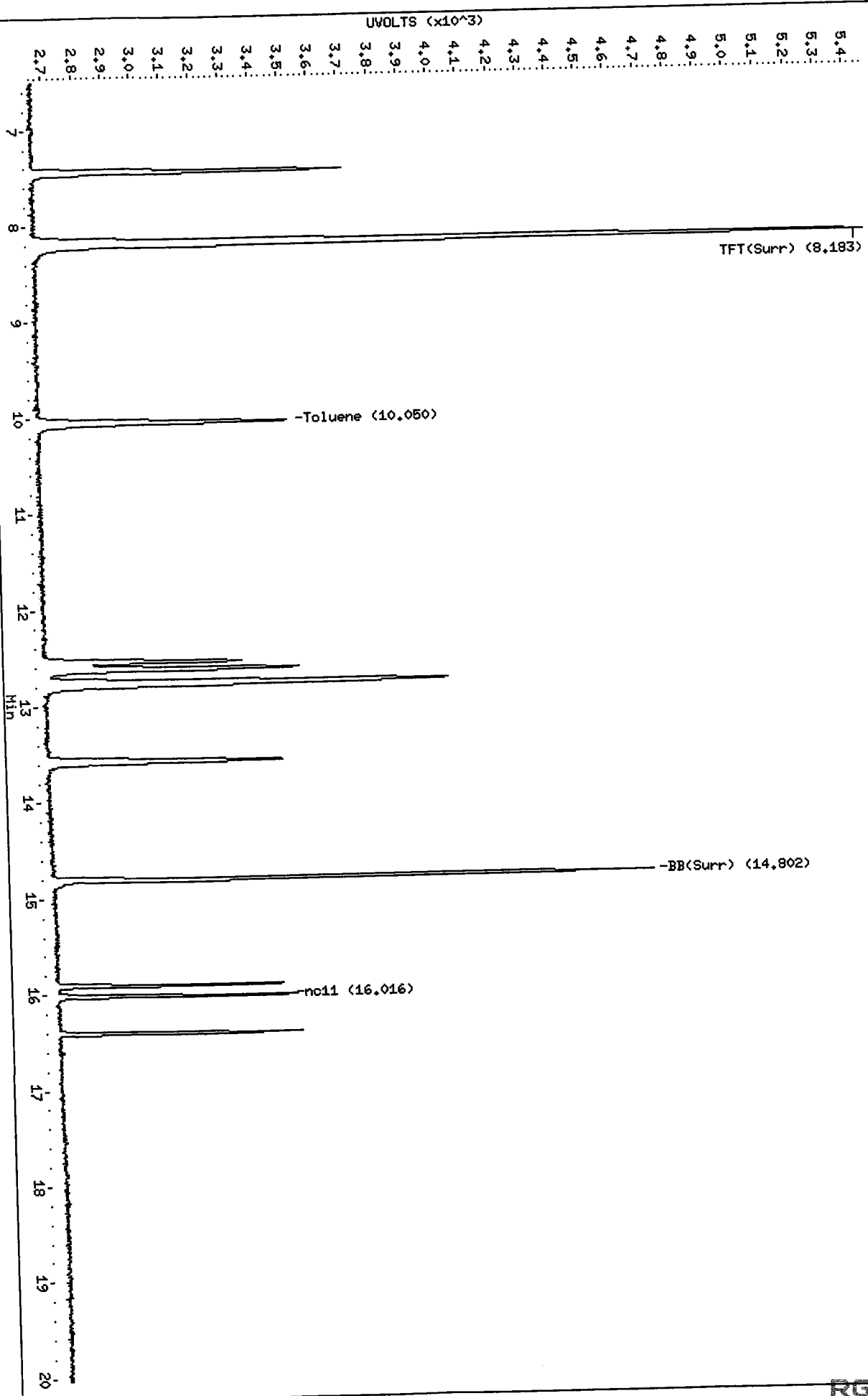
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a007.d  
Date: 28-JUL-2010 10:22  
Client ID:  
Sample Info: BETX 5

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a007.d/0728a007.cdf



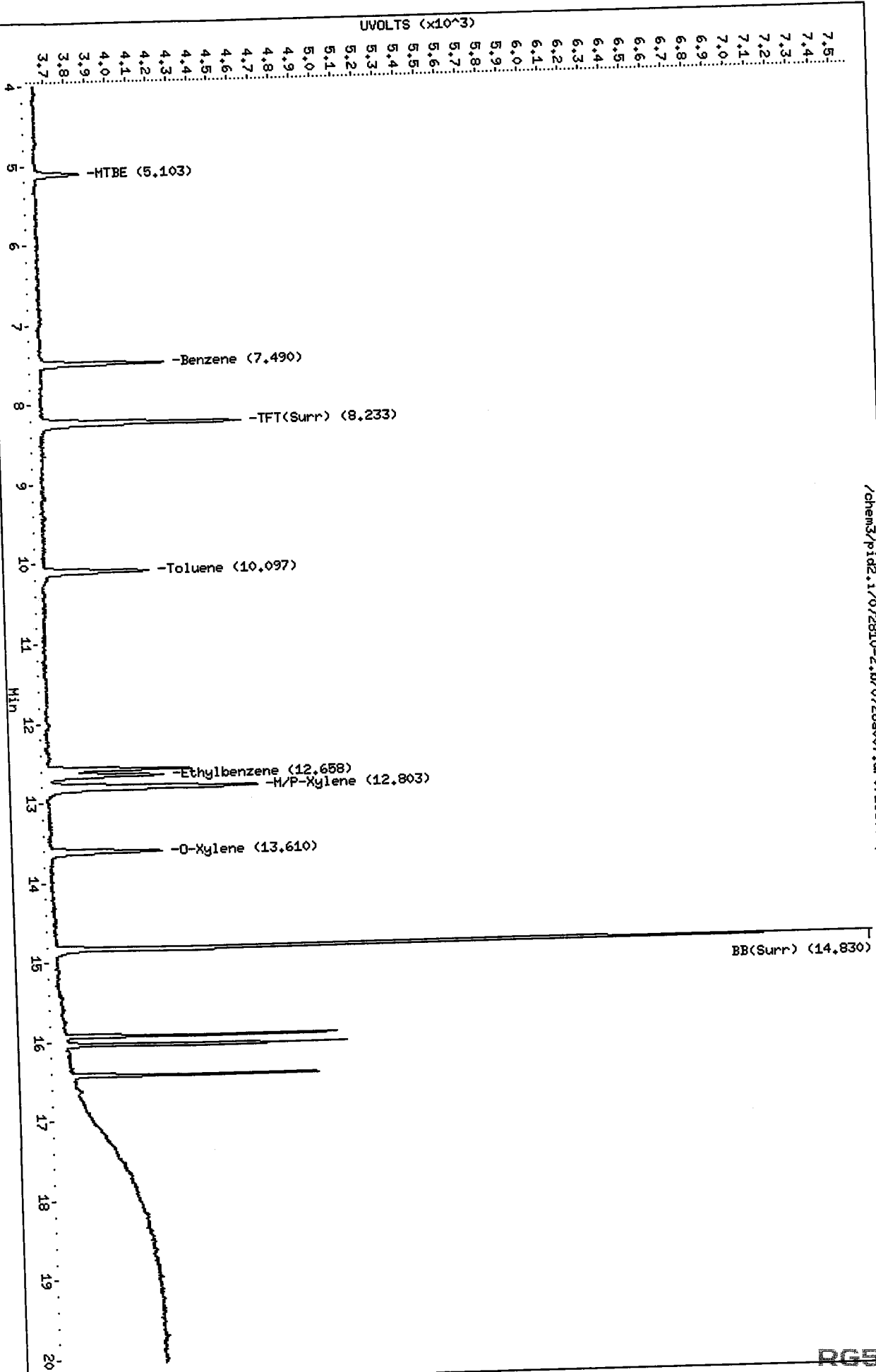
M4  
7/27/04

Data File: /chem3/pid2.i/072810-2.b/0728a007.d  
Date: 28-JUL-2010 10:22  
Client ID:  
Sample Info: BETX 5

Column phase: RTX 502-2 PID

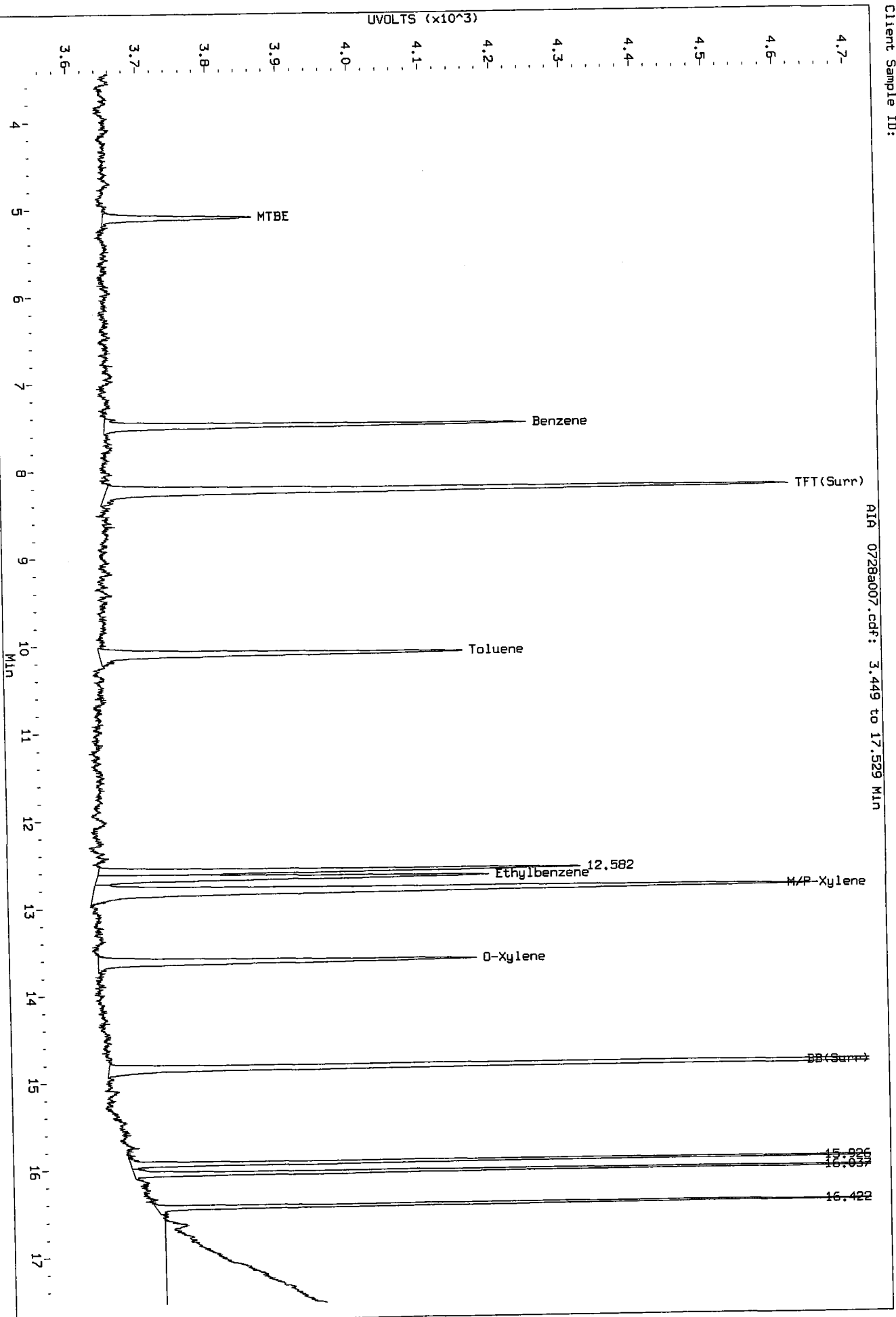
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/072810-2.b/0728a007.d/0728a007.cdf



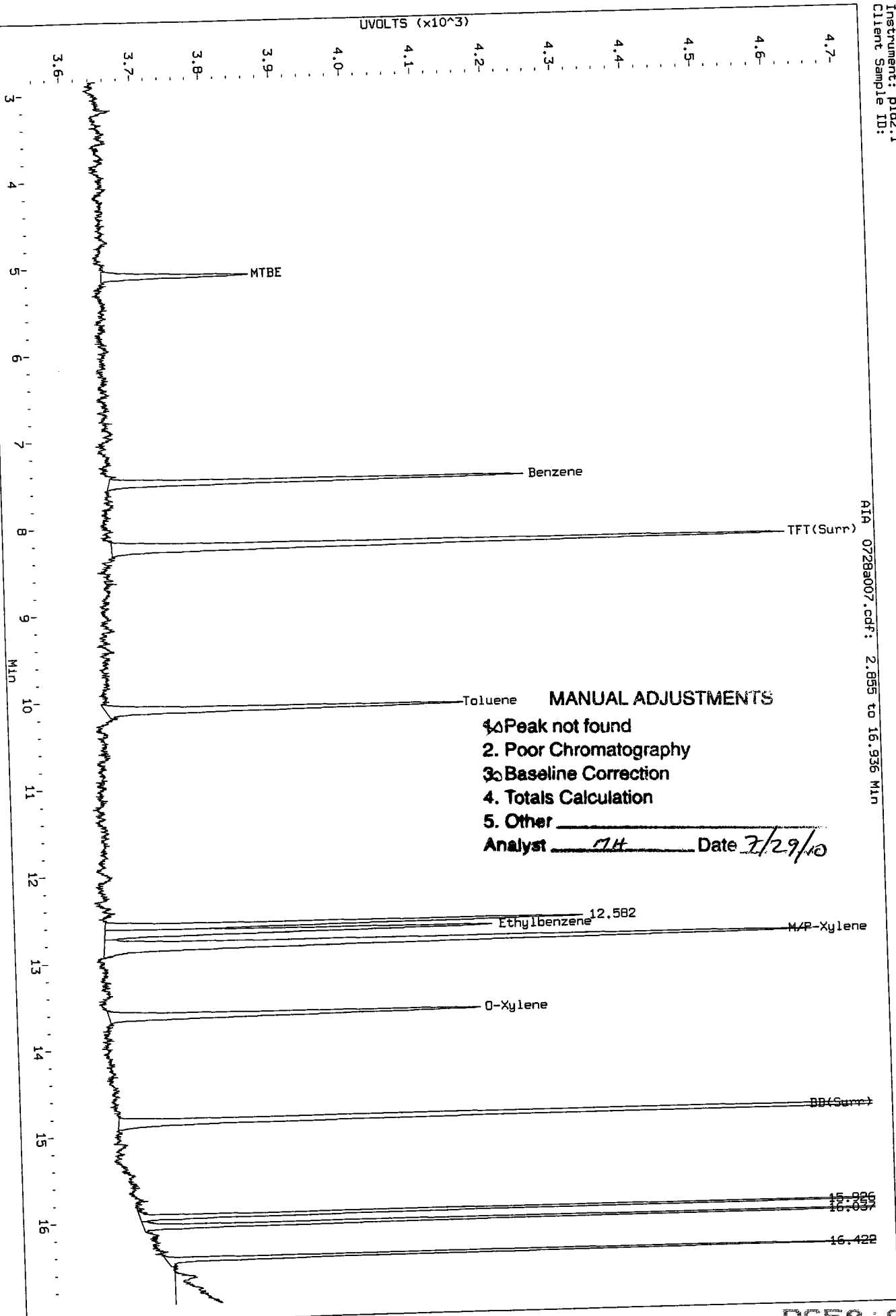
MH  
7/29/10

Data File: /chem3/pid2.1/072810-2.b/0728a007.d/0728a007.cdf  
Injection Date: 28-JUL-2010 10:22  
Instrument: pid2.1  
Client Sample ID:



Data File: /chem3/pid2.1/072810-2.b/0728a007.d/0728a007.cdf  
Injection Date: 28-JUL-2010 10:22  
Instrument: pid2.1  
Client Sample ID:

AIA 0728a007.cdf: 2.895 to 16.936 Min





mt  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a008.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a008.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 25  
Client ID:  
Injection Date: 28-JUL-2010 10:48  
Matrix: WATER  
Dilution Factor: 1.000

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.180	0.003	4065	67933	97.9	TFT (Surr)
14.801	0.004	2969	27339	98.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----  
-----

Range	Total Area*	Amount
WAGas (Tol-C12)	427992	0.742
8015B (2MP-TMB)	442018	0.339
AKGas (nC6-nC10)	405644	0.456
NWGas (Tol-Nap)	427992	0.711

\* Surrogate areas are subtracted from Total Area  
=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.230	0.004	1424	99.1	TFT (Surr)
14.827	0.002	5765	99.1	BB (Surr)

AROMATICS (PID)

-----  
-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.487	0.003	2869	24.64N	Benzene
10.093	0.000	2541	24.50N	Toluene
12.656	0.000	2692	23.49	Ethylbenzene
12.800	-0.003	4968	51.27N	M/P-Xylene
13.607	0.001	2617	25.78	O-Xylene
5.103	0.003	1045	24.89N	MTBE

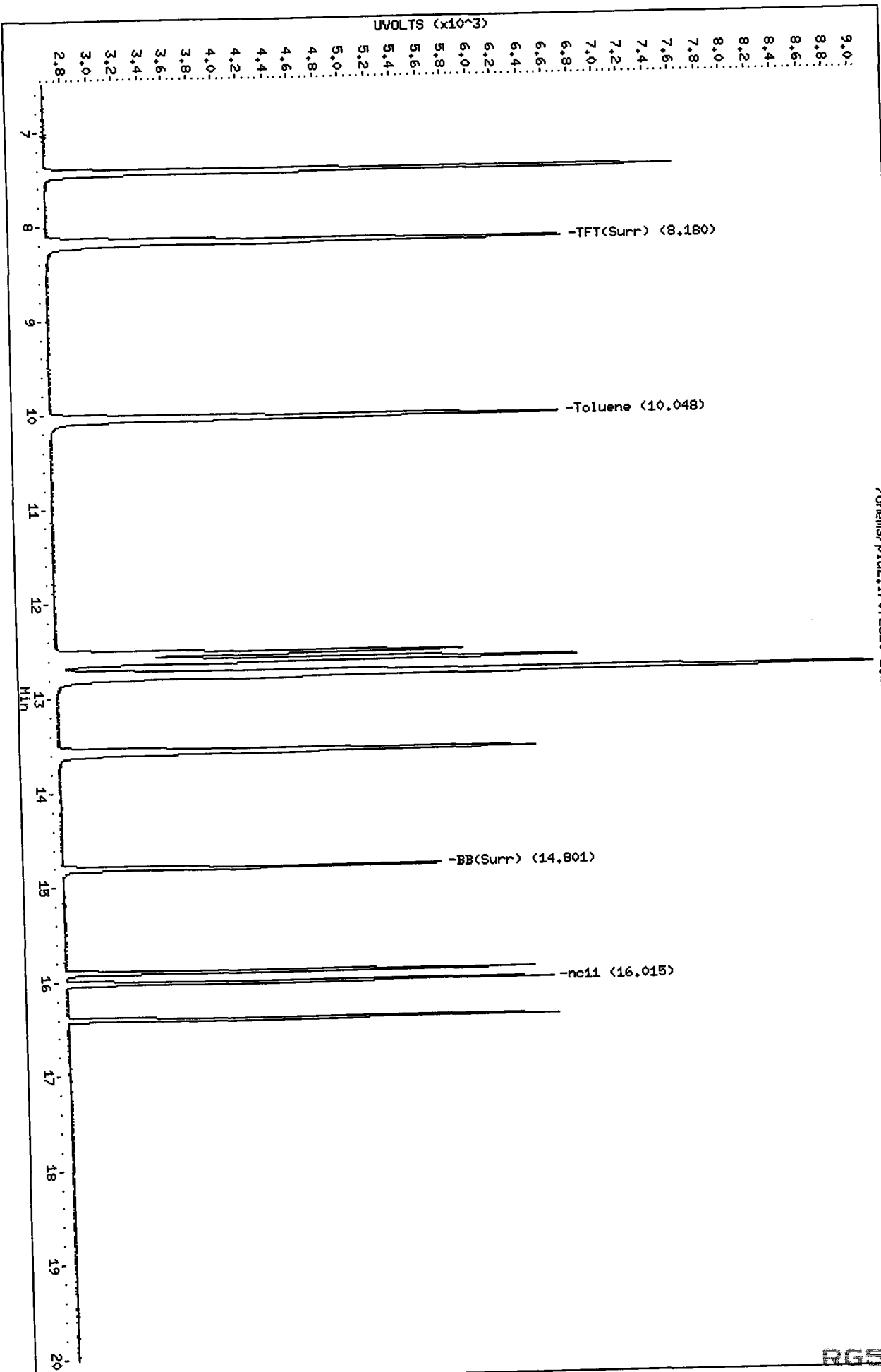
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a008.d  
Date: 28-JUL-2010 10:48  
Client ID:  
Sample Info: BETX 25

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a008.d/0728a008.cdf

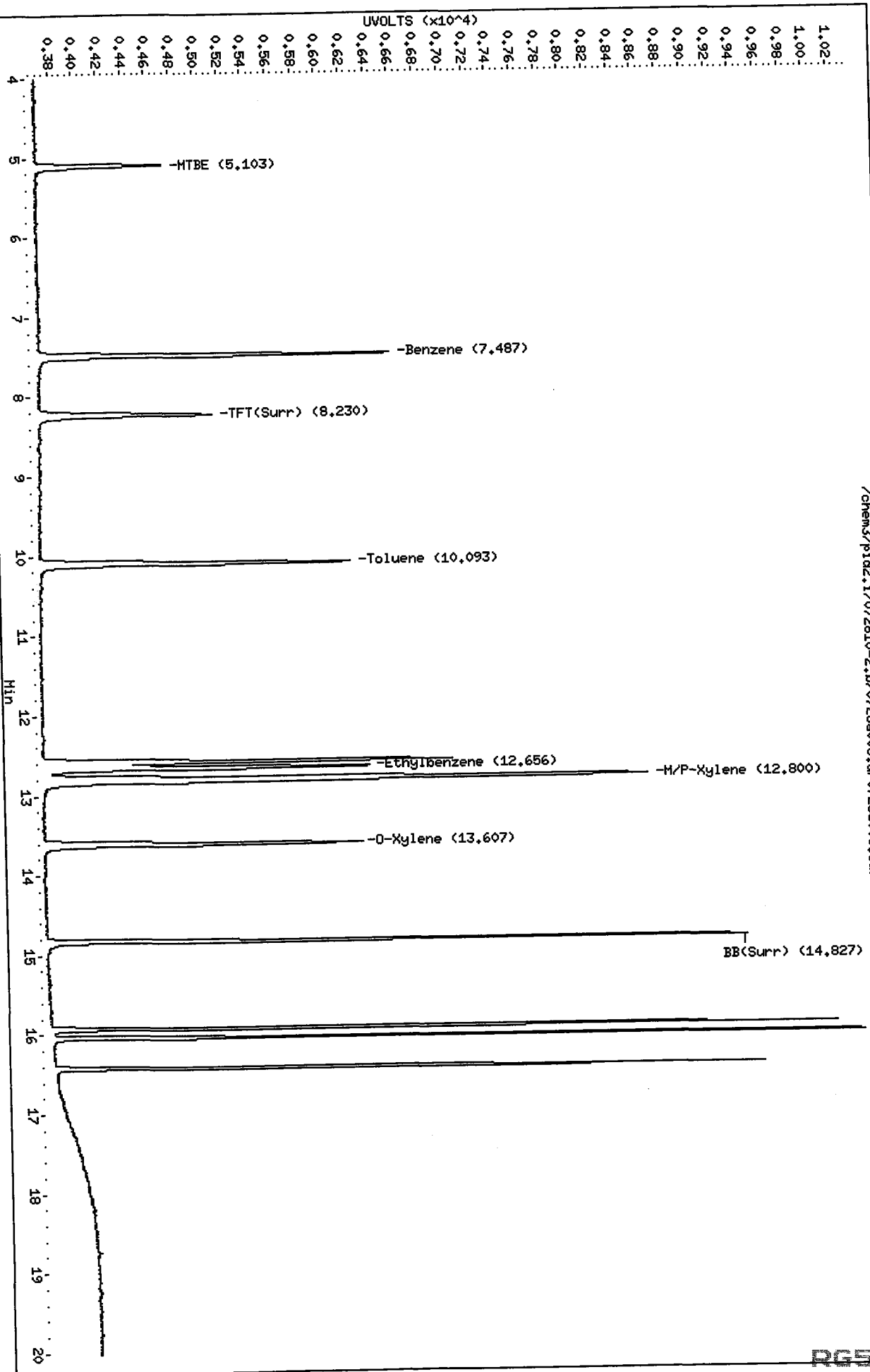


Data File: /chem3/pid2.i/072810-2.b/0728a008.d  
Date : 28-JUL-2010 10:48  
Client ID:  
Sample Info: BETX 25

Column phase: RTX 502-2 PID

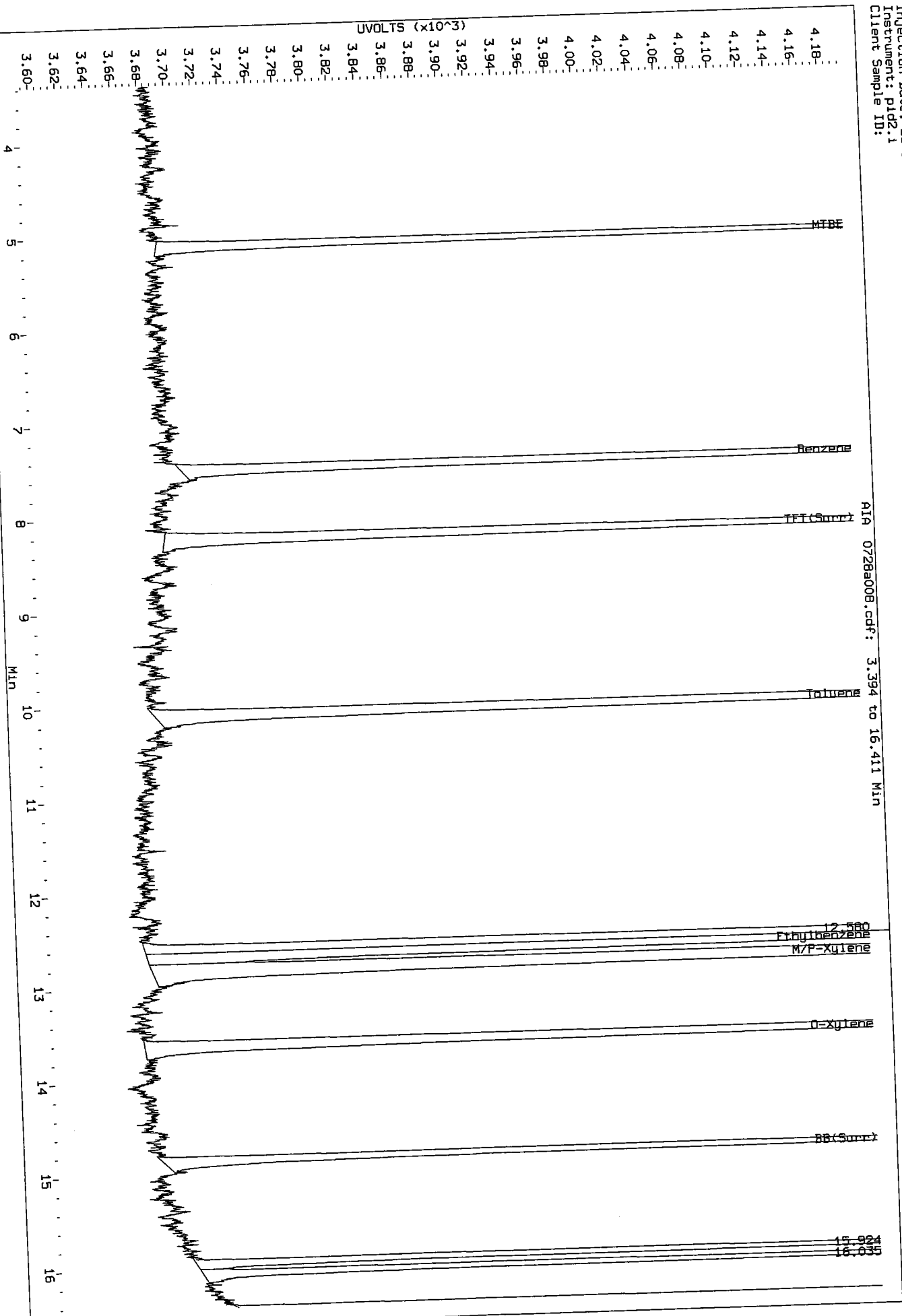
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/072810-2.b/0728a008.d/0728a008.cdf

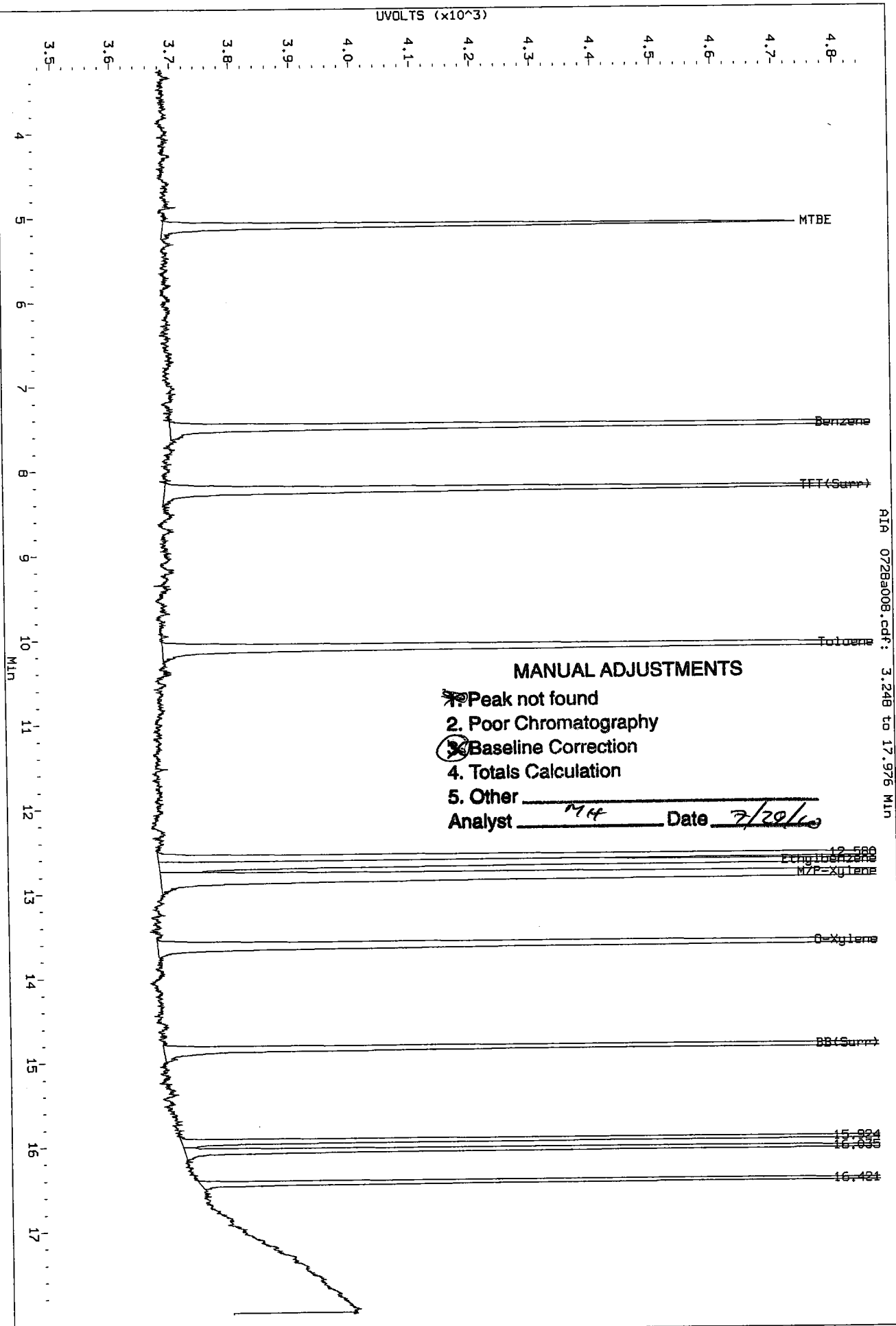


MR  
7/29/10

Data File: /chem3/pid2.1/072810-2.b/0728a008.d/0728a008.cdf  
Injection Date: 28-JUL-2010 10:48  
Instrument: pid2.1  
Client Sample ID:



Data File: /chem3/pid2.1/072810-2.b/0728a008.d/0728a008.cdf  
 Injection Date: 28-JUL-2010 10:48  
 Instrument: pid2.1  
 Client Sample ID:



AIA 0728a008.cdf: 3.248 to 17.976 MIN

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a009.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a009.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 50  
Client ID:  
Injection Date: 28-JUL-2010 11:14  
Matrix: WATER  
Dilution Factor: 1.000

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.180	0.004	5372	89588	129.4	TFT (Surr)
14.801	0.004	3943	36392	130.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	831925	1.442
8015B (2MP-TMB)	861504	0.660
AKGas (nC6-nC10)	790482	0.889
NWGas (Tol-Nap)	831925	1.382

\* Surrogate areas are subtracted from Total Area  
=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.230	0.004	1891	131.6	TFT (Surr)
14.827	0.002	7642	131.4	BB (Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
-----	-----	-----	-----	-----
7.487	0.003	5787	49.70N	Benzene
10.097	0.003	5047	48.66N	Toluene
12.656	0.000	5333	46.53	Ethylbenzene
12.803	0.001	9750	100.62N	M/P-Xylene
13.607	0.002	5118	50.41N	O-Xylene
5.100	0.000	2066	49.21N	MTBE

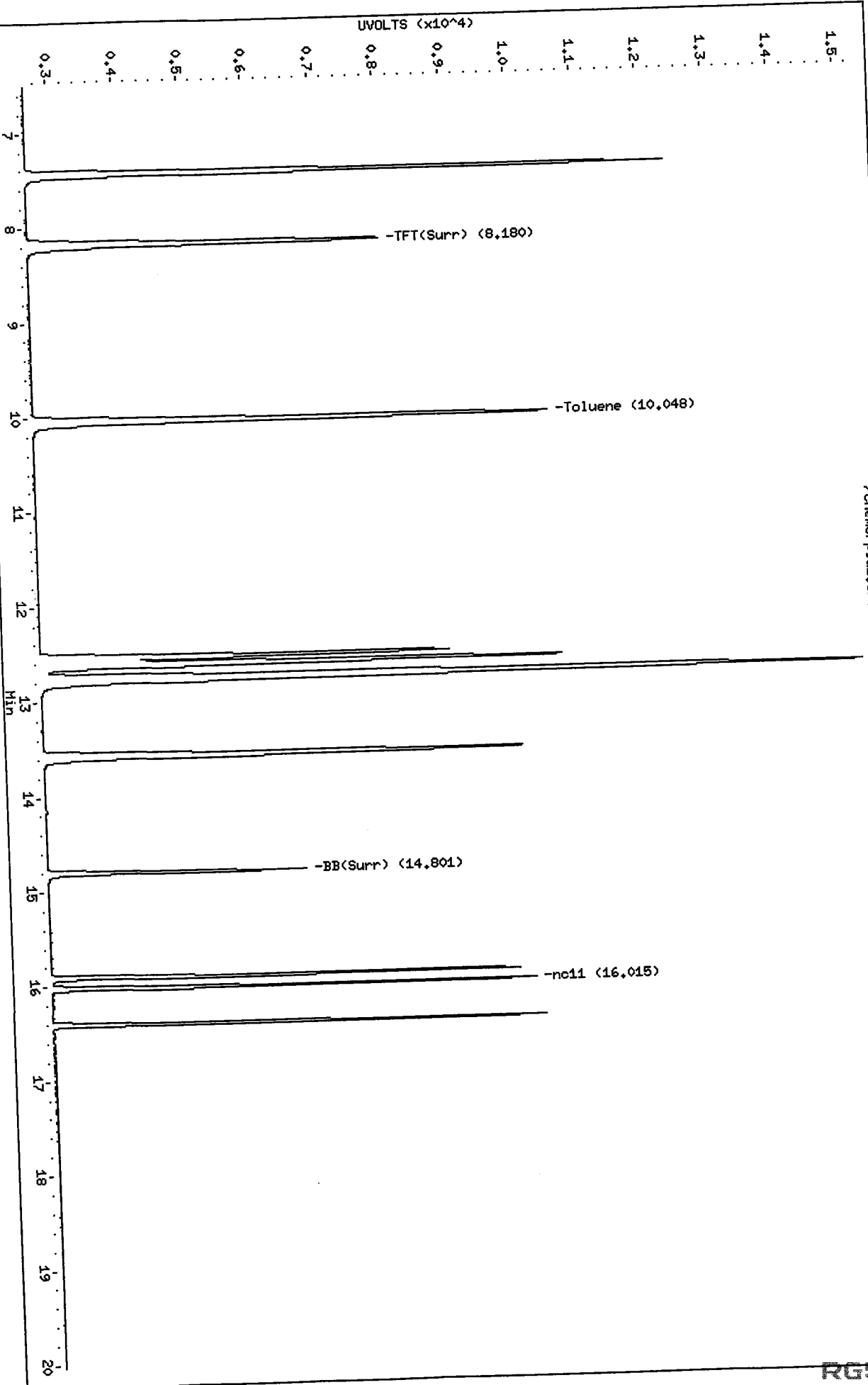
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728s009.d  
Date : 28-JUL-2010 11:14  
Client ID:  
Sample Info: BETX 50

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728s009.d/0728s009.cdf

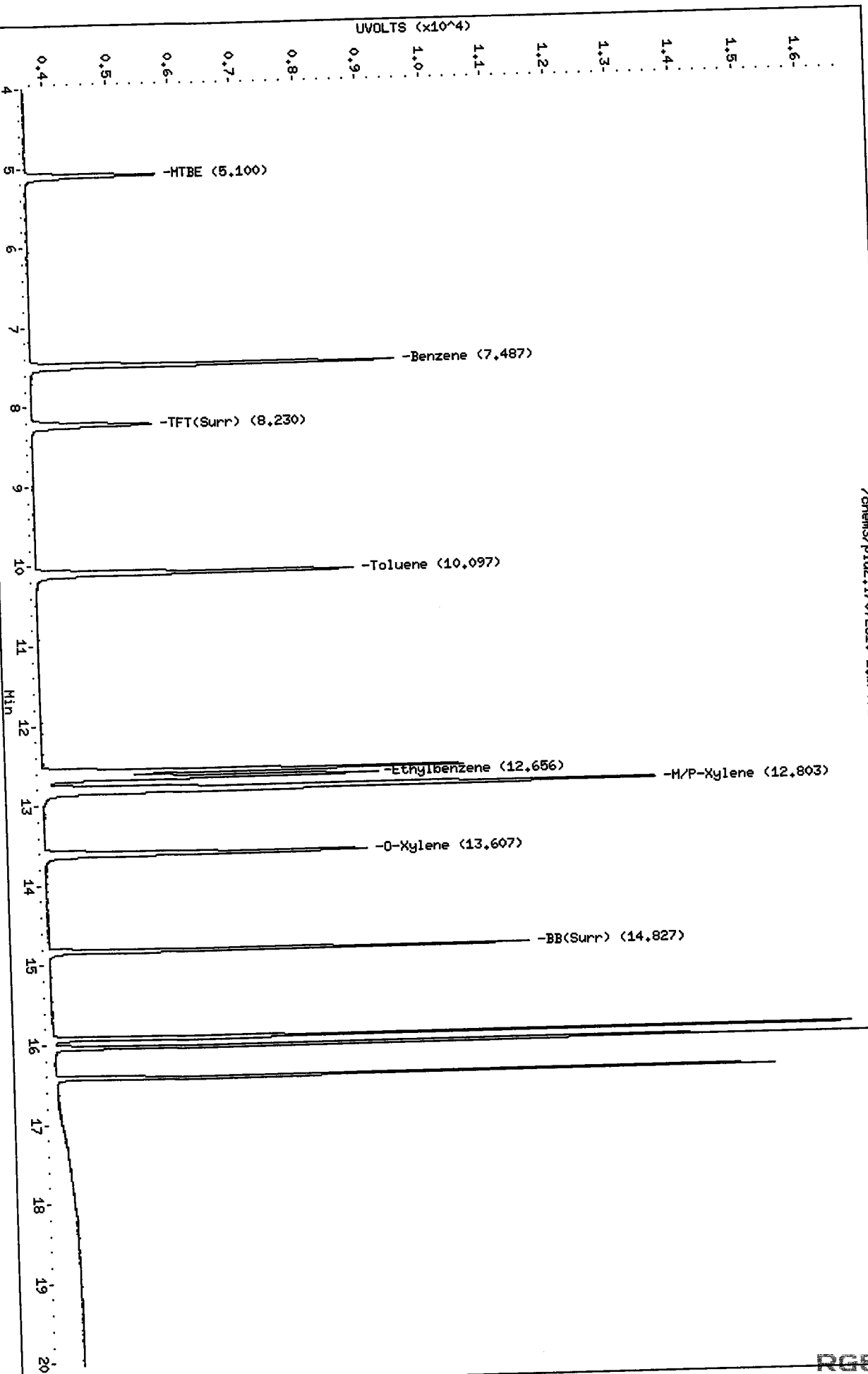


Data File: /chem3/pid2.i/072810-2.b/0728a009.d  
Date : 28-JUL-2010 11:14  
Client ID:  
Sample Info: BETX 50

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

Column phase: RTX 502-2 PID

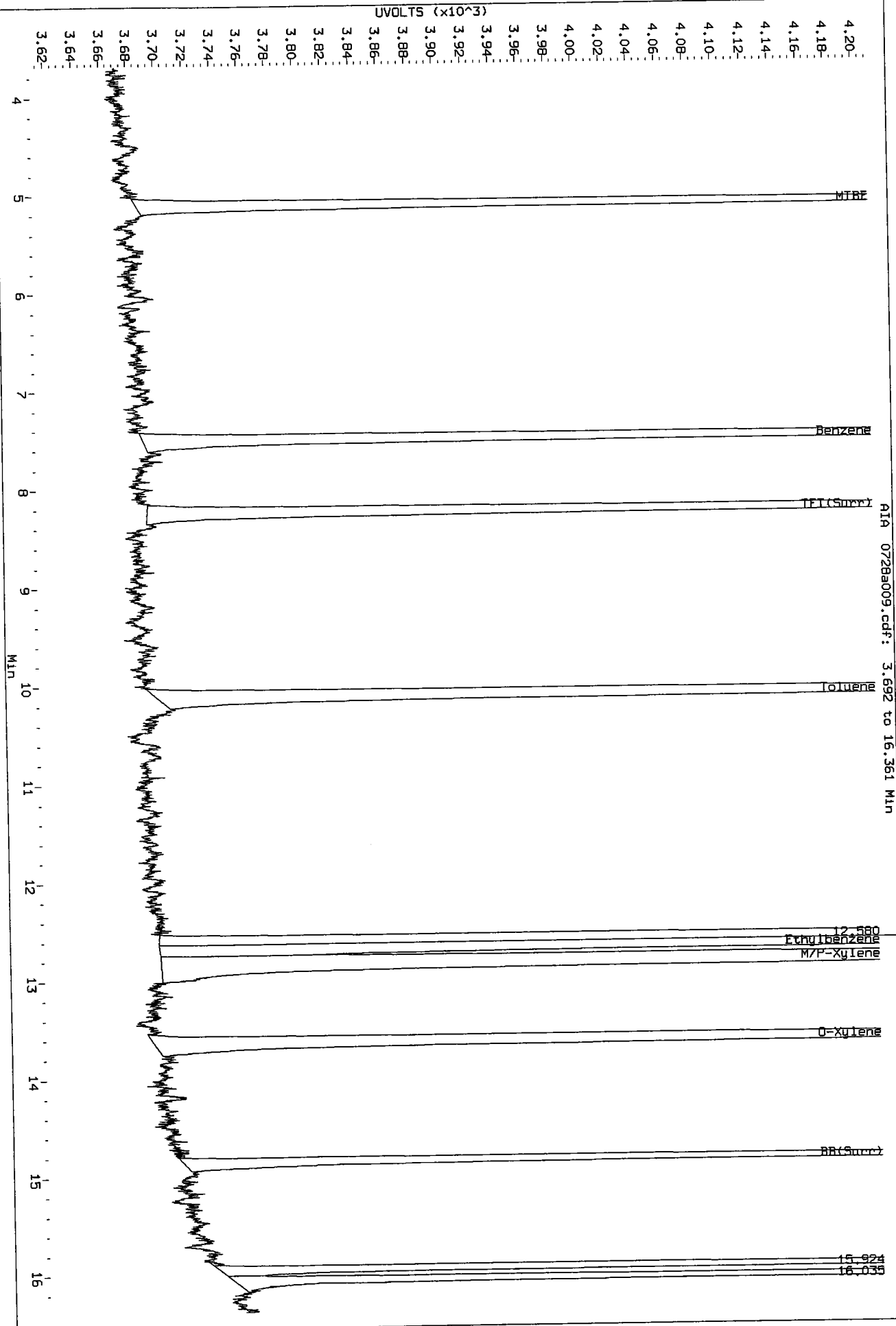
/chem3/pid2.i/072810-2.b/0728a009.d/0728a009.pdf





01/29/10  
HM

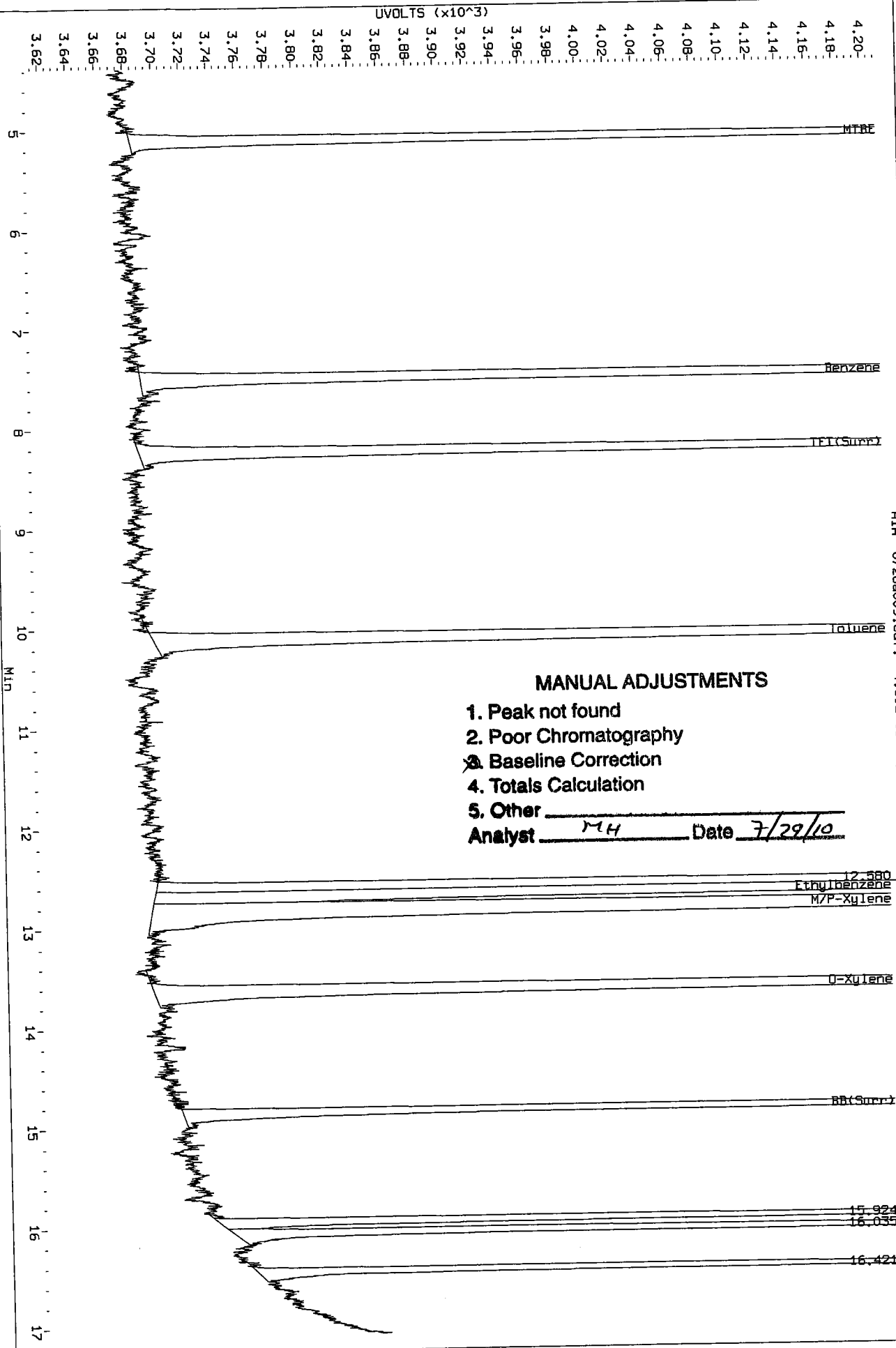
Data File: /chem3/pid2.1/072810-2.b/0728a009.d/0728a009.cdf  
Injection Date: 28-JUL-2010 11:14  
Instrument: pid2.1  
Client Sample ID:



Data File: /chem3/pid2.1/072810-2.b/0728a009.d/0728a009.cdf  
Injection Date: 28-JUL-2010 11:14  
Instrument: pid2.1  
Client Sample ID:

AIA 0728a009.cdf: 4.392 to 17.059 Min

UVOLTS (x10<sup>3</sup>)



MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a010.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a010.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 100  
Client ID:  
Injection Date: 28-JUL-2010 11:40  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
8.177	0.000	7169	115611	172.7	TFT(Surr)
14.799	0.001	5178	46881	171.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	1573798	2.728
8015B (2MP-TMB)	1626264	1.246
AKGas (nC6-nC10)	1492490	1.678
NWGas (Tol-Nap)	1573798	2.614

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	-----	-----
8.223	-0.002	2514	174.9	TFT(Surr)
14.825	0.000	10164	174.8	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.483	0.000	11102	95.34N	Benzene
10.093	0.000	9966	96.08N	Toluene
12.654	-0.002	10471	91.36	Ethylbenzene
12.799	-0.003	19562	201.88	M/P-Xylene
13.603	-0.002	10159	100.06N	O-Xylene
5.100	0.000	3955	94.20N	MTBE

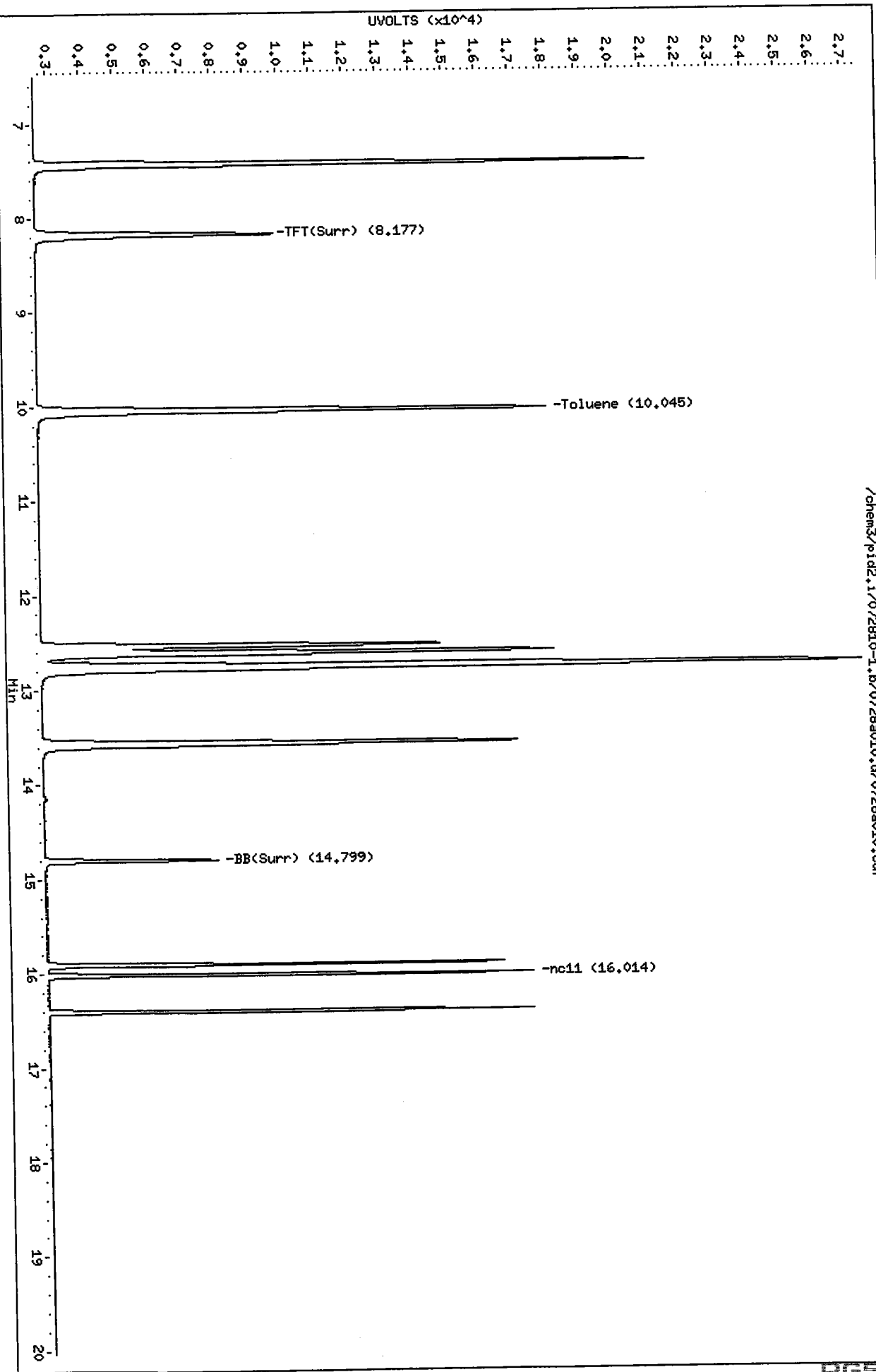
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a010.d  
Date : 28-JUL-2010 11:40  
Client ID:  
Sample Info: BETX 100

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/072810-1.b/0728a010.d/0728a010.cdf

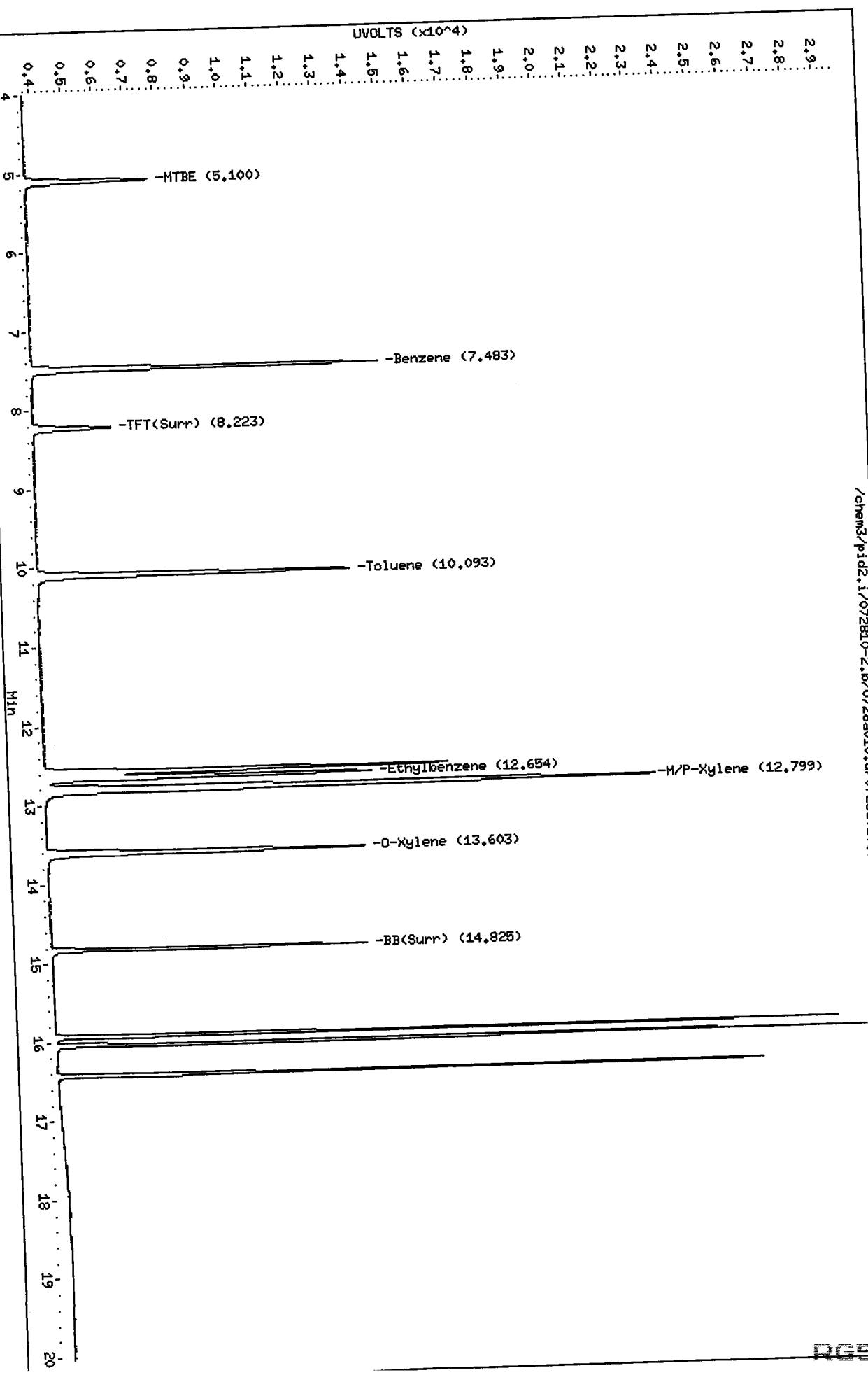


Data File: /chem3/pid2.i/072810-2.b/0728a010.d  
Date : 28-JUL-2010 11:40  
Client ID:  
Sample Info: BETX 100

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

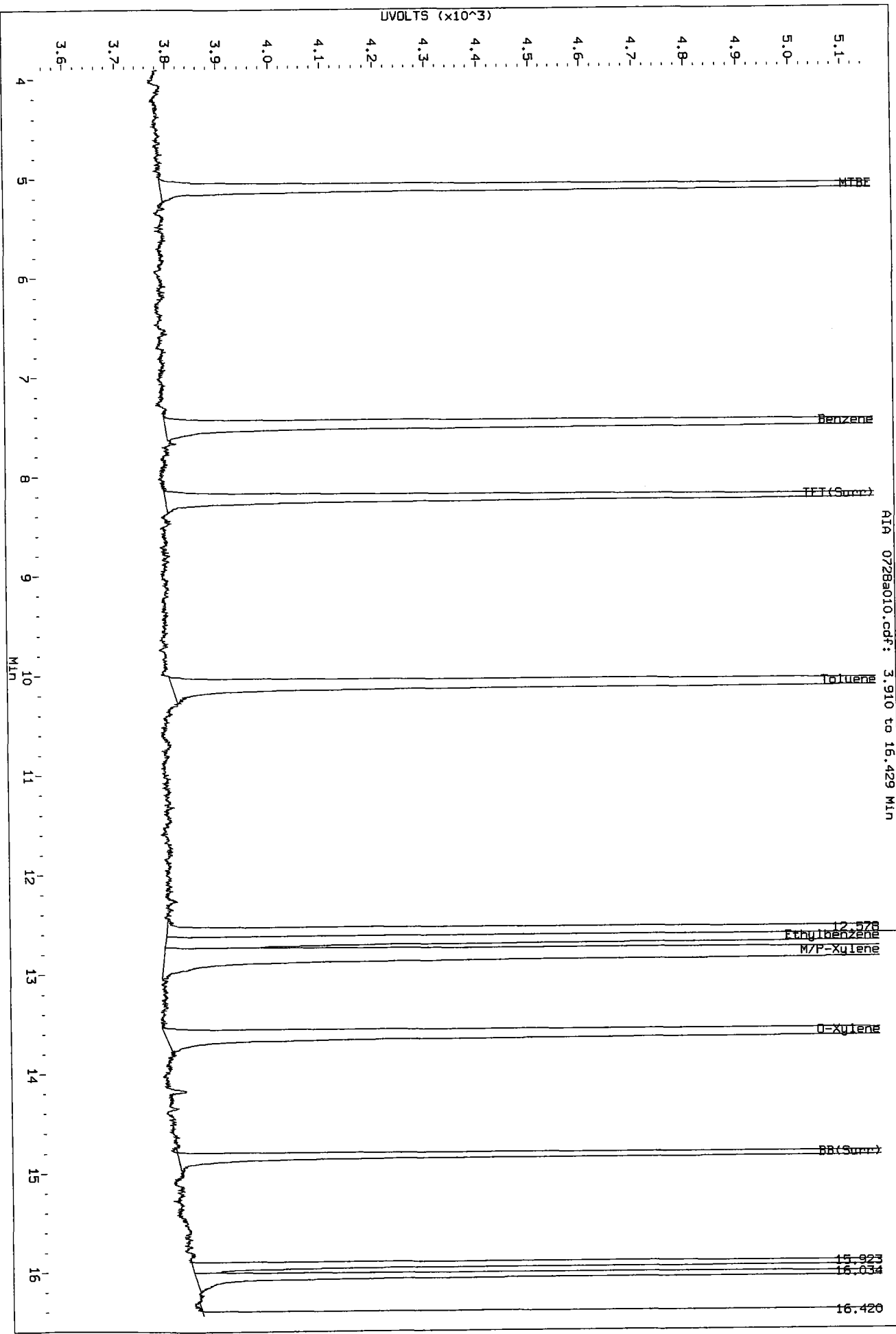
Column phase: RTX 502-2 PID

/chem3/pid2.i/072810-2.b/0728a010.d/0728a010.cdf



PH  
7/28/10

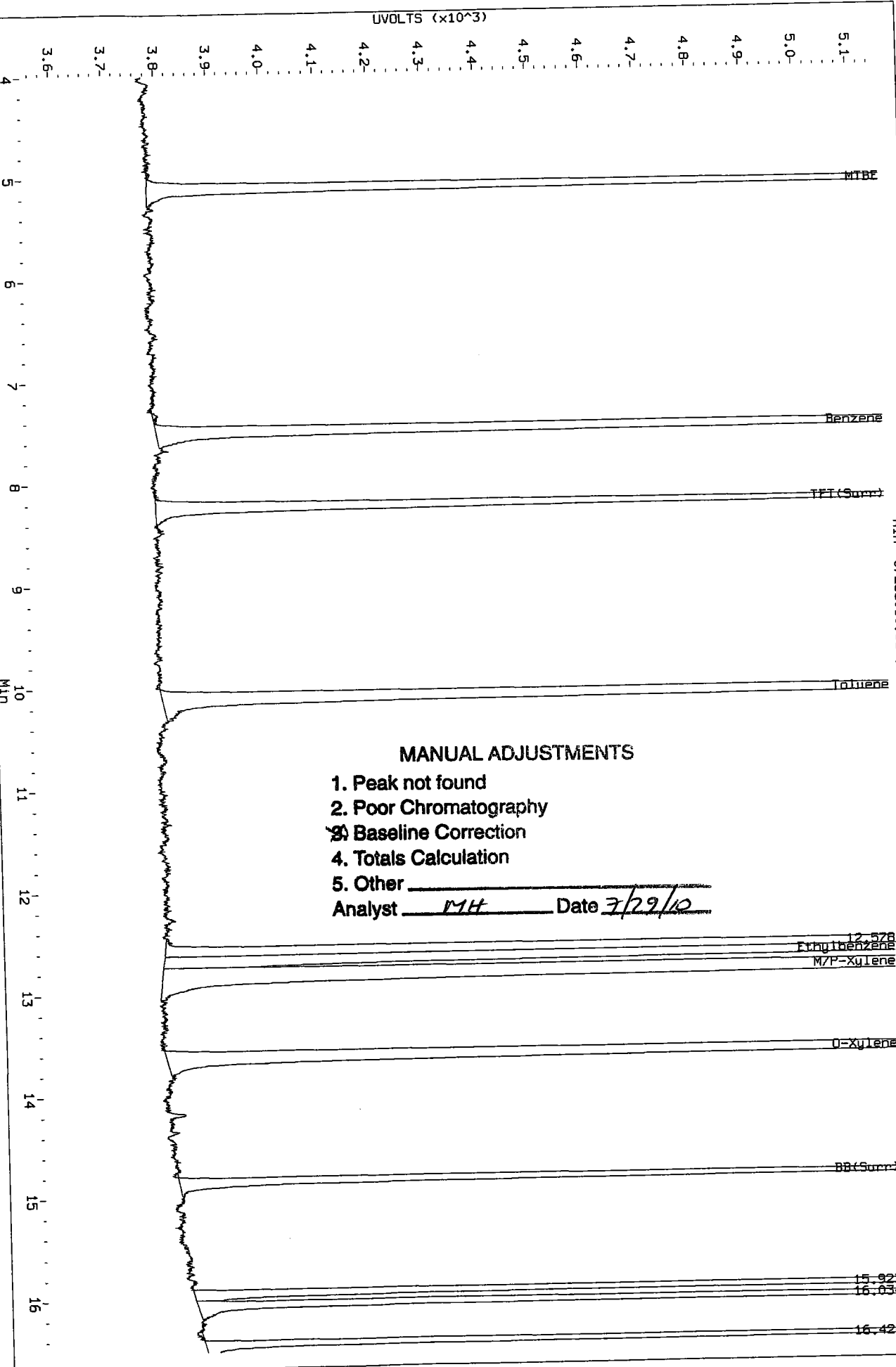
Data File: /chem3/pid2.1/072810-2.b/0728a010.d/0728a010.cdf  
Injection Date: 28-JUL-2010 11:40  
Instrument: pid2.1  
Client Sample ID:



AIA 0728a010.cdf: 3.910 to 16.429 Min

Data File: /chem3/pid2.i/072810-2.b/0728a010.d/0728a010.cdf  
Injection Date: 28-JUL-2010 11:40  
Instrument: pid2.1  
Client Sample ID:

AIA 0728a010.cdf: 3.995 to 16.500 Min



**MANUAL ADJUSTMENTS**

- 1. Peak not found
  - 2. Poor Chromatography
  - 3. Baseline Correction
  - 4. Totals Calculation
  - 5. Other \_\_\_\_\_
- Analyst MH Date 7/29/10

12.578  
Ethylbenzene  
M/P-Xylene

O-Xylene

BB (Sum)

15.923  
16.034

16.420

MH  
7/28/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a011.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a011.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 200  
Client ID:  
Injection Date: 28-JUL-2010 12:06  
Matrix: WATER  
Dilution Factor: 1.000

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.177	0.000	7858	125529	189.3	TFT (Surr)
14.797	0.000	5640	51262	186.8	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	3212803	5.569
8015B (2MP-TMB)	3316294	2.542
AKGas (nC6-nC10)	3042318	3.421
NWGas (Tol-Nap)	3212803	5.337

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.226	0.000	2845	198.0	TFT (Surr)
14.825	0.000	11106	191.0	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.483	0.000	23086	198.25N	Benzene
10.093	0.000	21202	204.41N	Toluene
12.656	0.000	21813	190.31	Ethylbenzene
12.803	0.000	41531	428.60	M/P-Xylene
13.605	0.000	21257	209.37	O-Xylene
5.100	0.000	8206	195.45N	MTBE

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

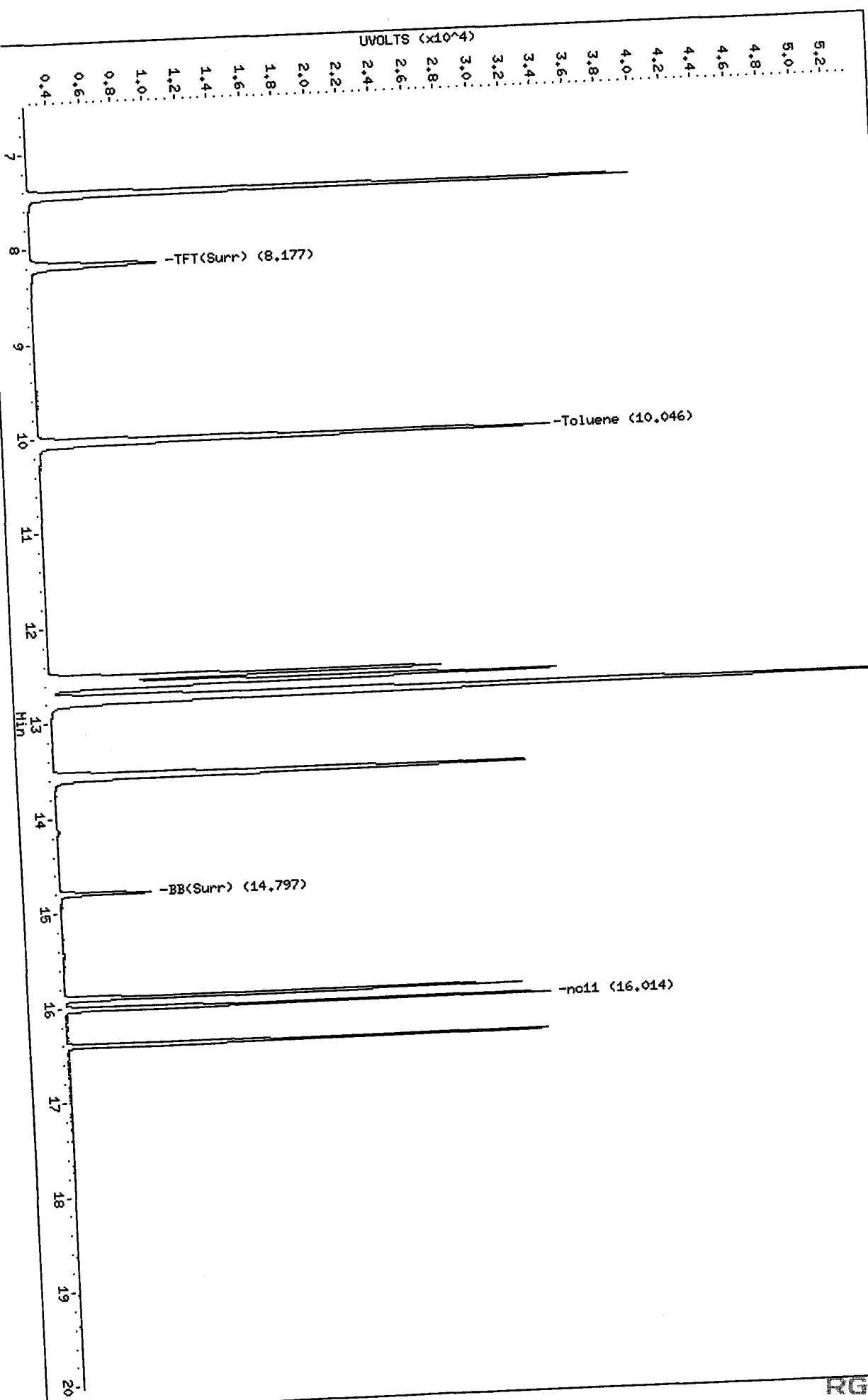


Data File: /chem3/pid2.1/072810-1.b/0728a011.d  
Date: 28-JUL-2010 12:06  
Client ID:  
Sample Info: BETX 200

Instrument: pid2.1  
Operator: NH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.1/072810-1.b/0728a011.d/0728a011.cdf

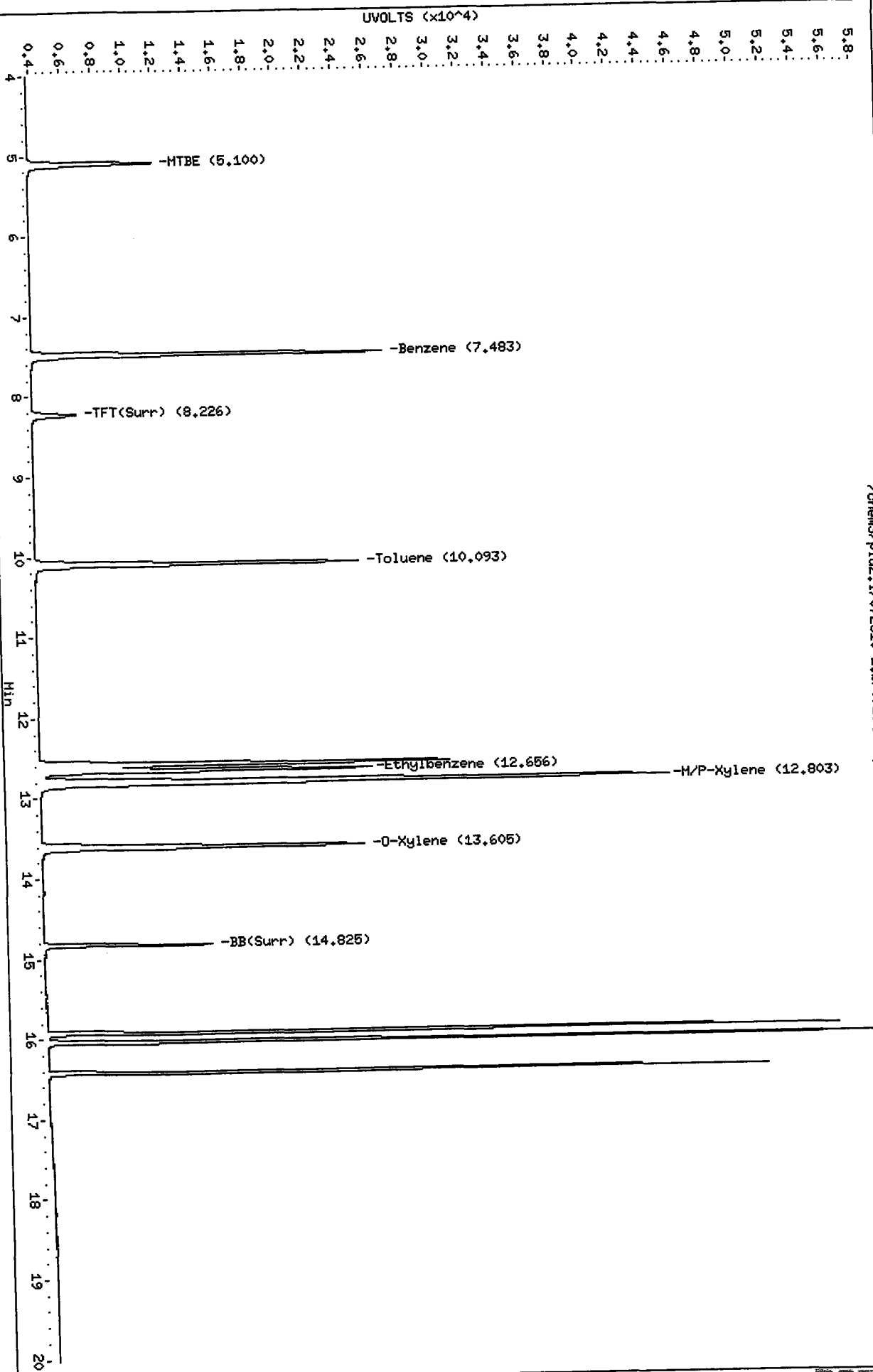


Data File: /chem3/pid2.i/072810-2.b/0728a011.d  
Date: 28-JUL-2010 12:06  
Client ID:  
Sample Info: BETX 200

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: NH  
Column diameter: 0.18

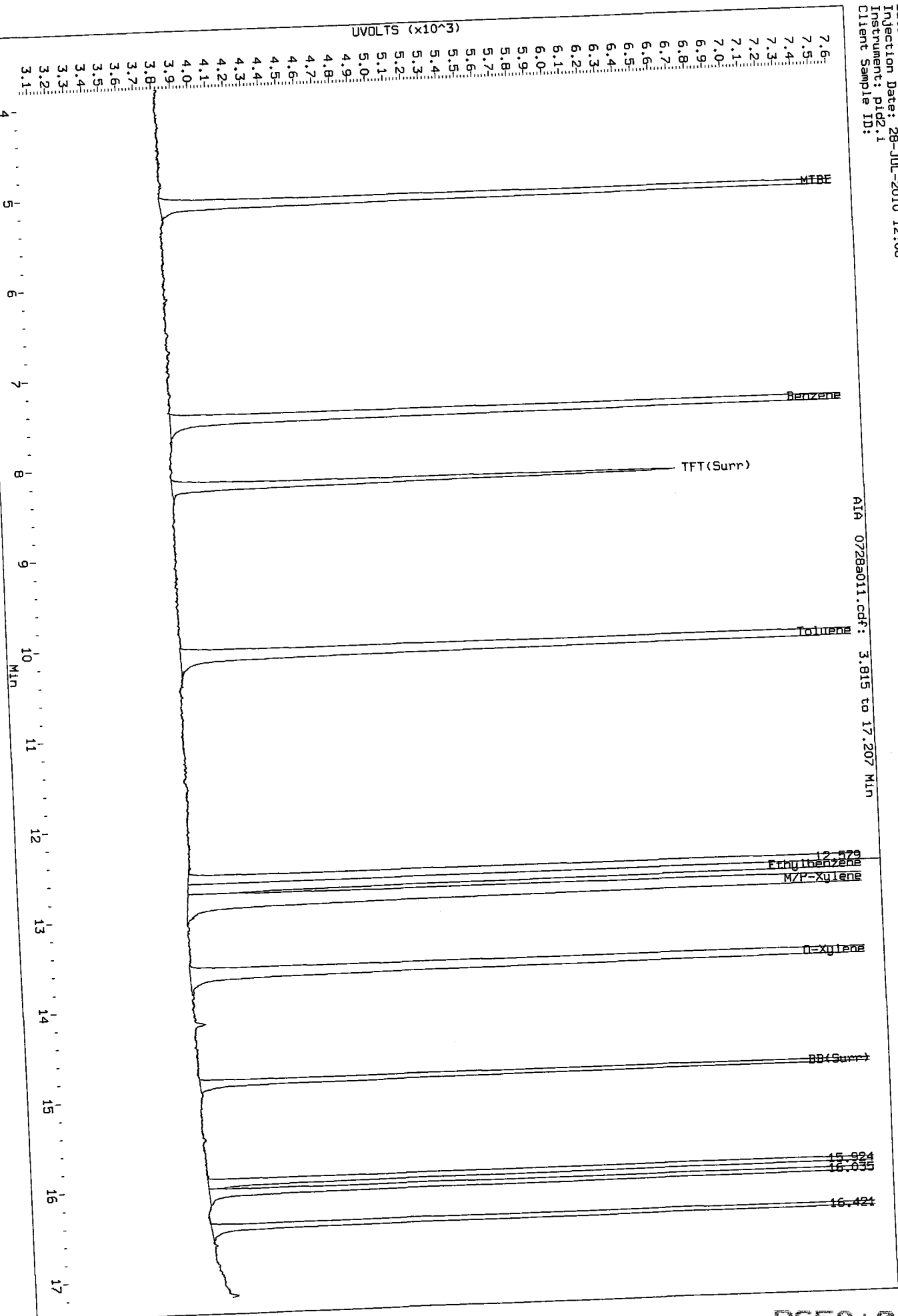
/chem3/pid2.i/072810-2.b/0728a011.d/0728a011.cdf



MH  
11/16/10

Data File: /chem3/pid2.1/072810-2.b/0728a011.d/0728a011.cdf  
Injection Date: 28-JUL-2010 12:06  
Instrument: pid2.1  
Client Sample ID:

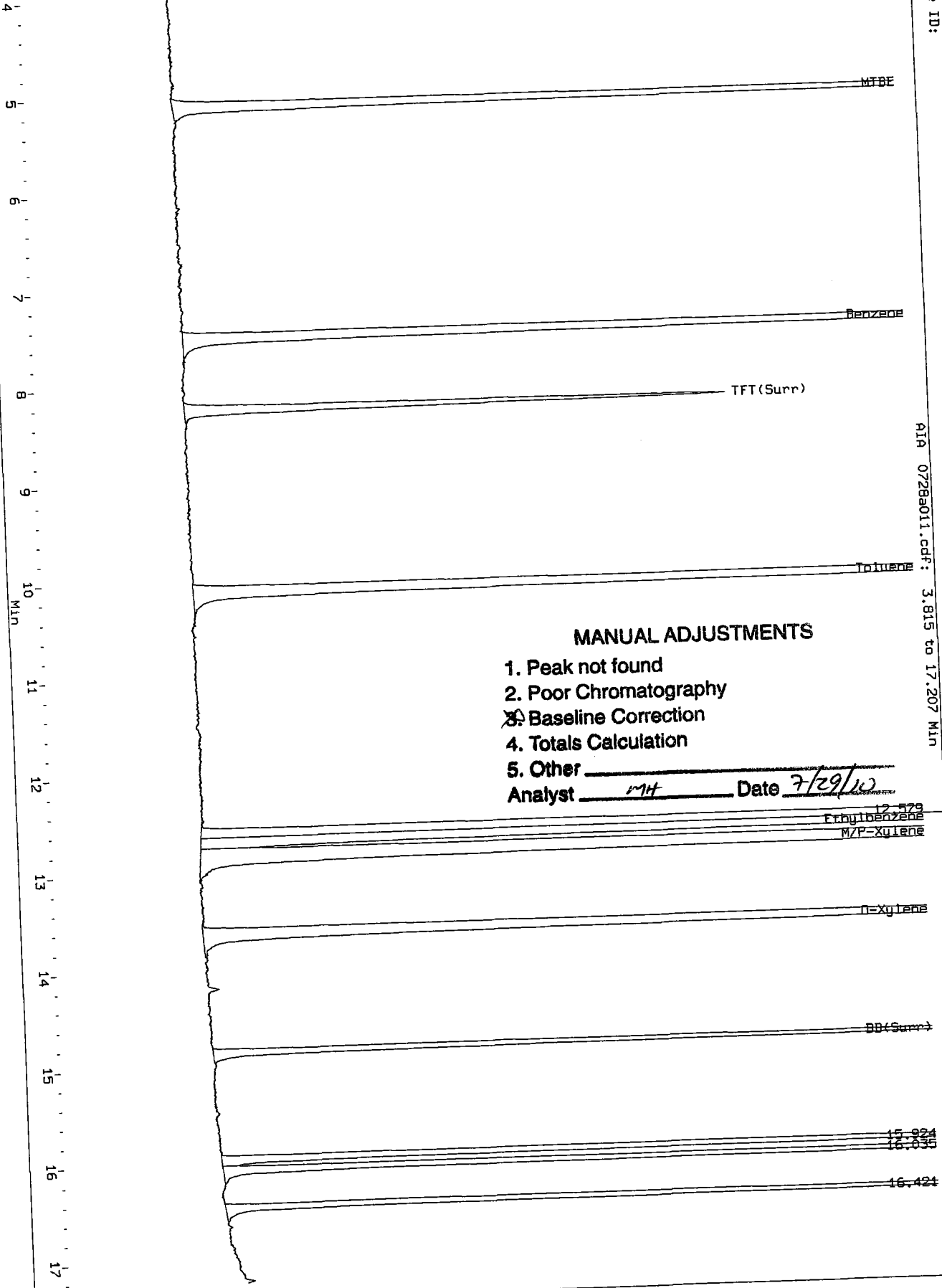
AIA 0728a011.cdf: 3.815 to 17.207 Min



Data File: /chem3/pid2.1/072810-2.b/0728a011.d/0728a011.cdf  
Injection Date: 28-JUL-2010 12:06  
Instrument: pid2.1  
Client Sample ID:

AIA 0728a011.cdf: 3.815 to 17.207 Min

UVOLTS (x10<sup>3</sup>)



MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

Analyst MH Date 7/29/10

12.579  
m-xylene  
M/P-xylene

p-xylene

BB (Surr)

15.824  
16.095

16.424

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a012.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a012.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX ICV  
Client ID:  
Injection Date: 28-JUL-2010 12:32  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	----	-----
8.174	-0.003	3960	64107	95.4	TFT (Surr)
14.797	-0.001	2909	26209	96.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	401291	0.696
8015B (2MP-TMB)	412324	0.316
AKGas (nC6-nC10)	378602	0.426
NWGas (Tol-Nap)	401291	0.667

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.222	-0.003	1379	96.0	TFT (Surr)
14.823	-0.002	5651	97.2	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.478	-0.005	2772	23.80	Benzene
10.088	-0.005	2468	23.79	Toluene
12.649	-0.007	2598	22.67	Ethylbenzene
12.795	-0.008	4827	49.81	M/P-Xylene
13.600	-0.005	2498	24.60	O-Xylene
5.094	-0.006	1016	24.20	MTBE

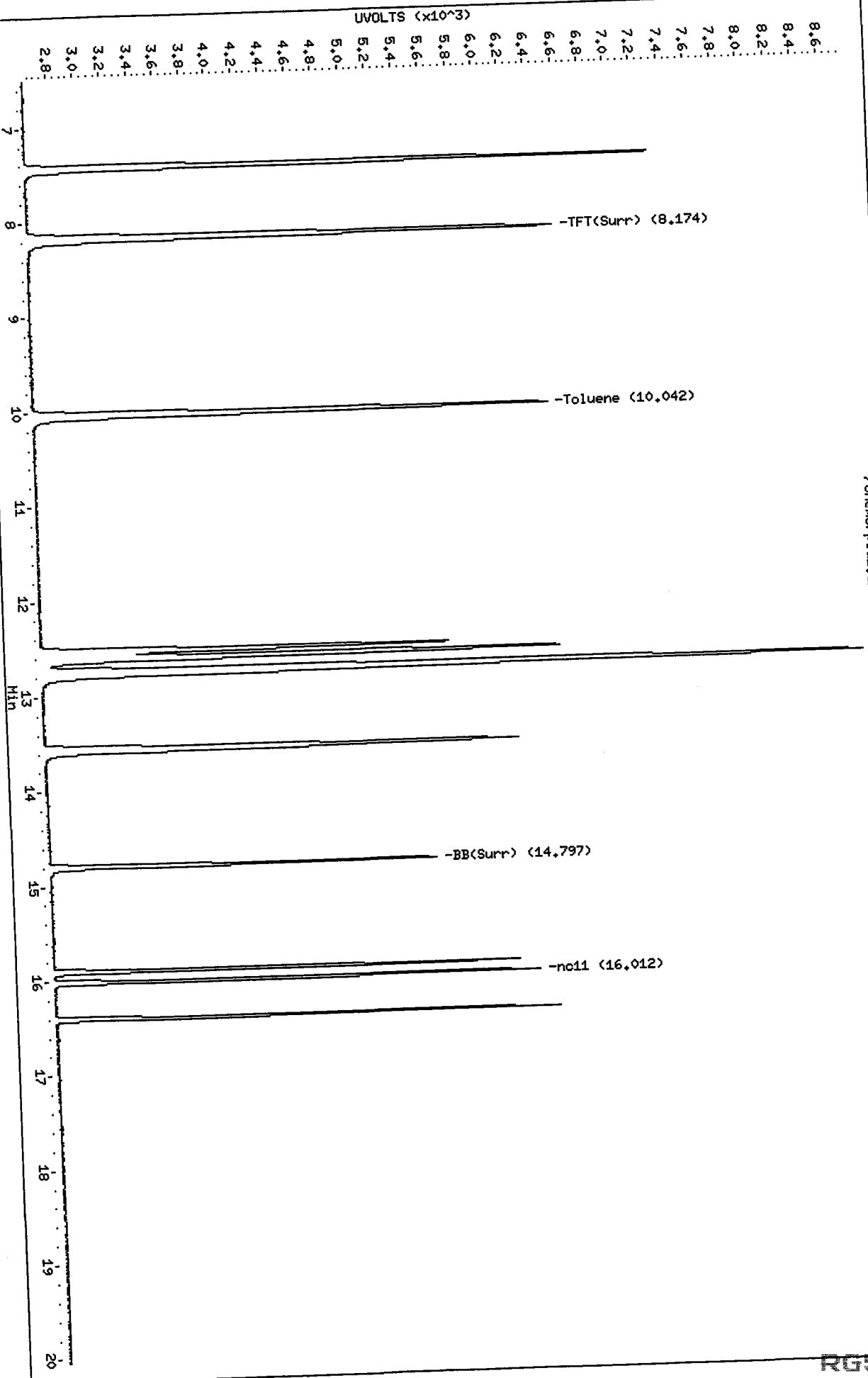
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a012.d  
Date: 28-JUL-2010 12:32  
Client ID:  
Sample Info: BETX ICV

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid2.i/072810-1.b/0728a012.d/0728a012.pdf



Data File: /chem3/pid2.i/072810-2.b/0728a012.d  
Date: 28-JUL-2010 12:32

Client ID:

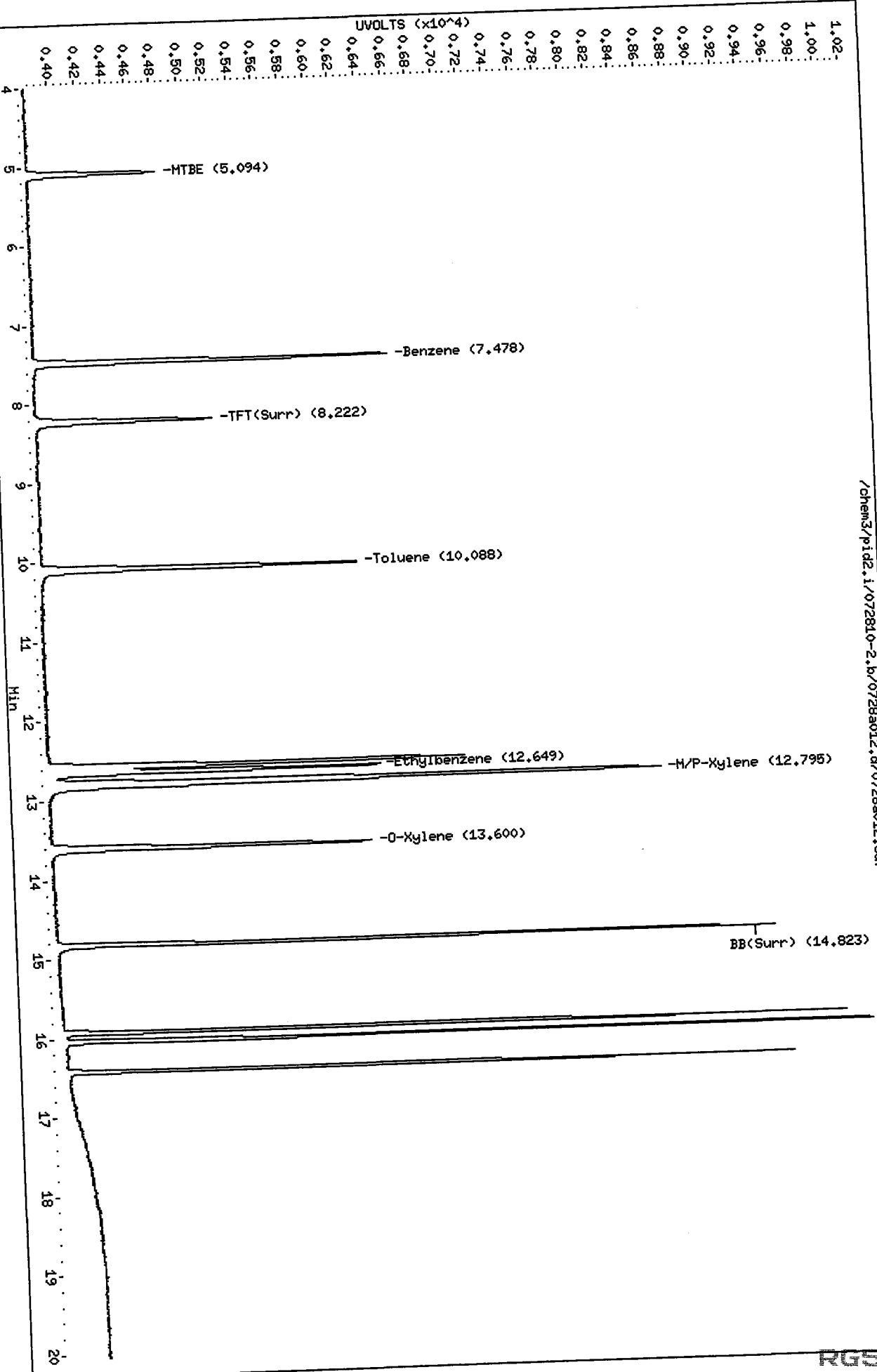
Sample Info: BETX ICV

Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/072810-2.b/0728a012.d/0728a012.cdf



Report Date : 29-Jul-2010 11:33

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-1.b/FID.m  
Batch File: /chem3/pid2.i/072810-1.b  
Inst ID: pid2.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 NWPBHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
20 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
19 AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
21 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
1 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.834	4.764-4.904	+++++	+++++
2 nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.321	5.251-5.391	+++++	+++++
3 nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.254	7.184-7.324	+++++	+++++
4 TFT (Surr)	8.186	8.182	8.183	8.180	8.180	8.177	8.177	8.186	8.116-8.256	8.181	0.003
5 nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.659	9.589-9.729	+++++	+++++
6 Toluene	10.048	10.051	10.050	10.048	10.048	10.045	10.046	10.048	9.978-10.118	10.048	0.002
7 nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.245	12.175-12.315	+++++	+++++
22 BB (Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
8 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.563	14.493-14.633	+++++	+++++
9 BB (Surr)	14.805	14.803	14.802	14.801	14.801	14.799	14.797	14.805	14.735-14.875	14.801	0.003
10 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.438	15.368-15.508	+++++	+++++
11 nC11	16.015	16.017	16.016	16.015	16.015	16.014	16.014	16.015	15.945-16.085	16.015	0.001
12 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.048	16.978-17.118	+++++	+++++

Reviewer 1 MM Date: 7/29/10  
 Reviewer 2 [Signature] Date: 7/30/10



Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-1.1.b/FID.m  
 Batch File: /chem3/pid2.i/072810-1.1.b  
 Inst ID: pid2.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.890	17.820-17.960	+++++	+++++
14 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.148	18.078-18.218	+++++	+++++

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-2.b/PIDB.m  
Batch File: /chem3/pid2.i/072810-2.b  
Inst ID: pid2.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	0728a005	0728a006	0728a007	0728a008	0728a009	0728a010	0728a010	0728a011				
INJ. DATE:	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010				
INJ. TIME:	09:56	10:22	10:48	11:14	11:40	12:06						
Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV	
1 MTBE	5.117	5.110	5.103	5.103	5.100	5.100	5.100	5.117	5.067-5.167	5.105	0.006	
2 Benzene	7.490	7.483	7.490	7.487	7.487	7.483	7.483	7.490	7.440-7.540	7.486	0.003	
3 TPT(Surr)	8.237	8.230	8.233	8.230	8.230	8.223	8.226	8.237	8.187-8.287	8.230	0.004	
4 Toluene	10.093	10.090	10.097	10.093	10.097	10.093	10.093	10.093	10.043-10.143	10.094	0.002	
15 Chlorobenzene	12.660	12.660	12.658	12.656	12.656	12.654	12.656	12.660	12.610-12.710	12.657	0.002	
5 Ethylbenzene	12.813	12.810	12.803	12.800	12.803	12.799	12.803	12.813	12.763-12.863	12.805	0.005	
6 M/P-Xylene	13.617	13.603	13.610	13.607	13.607	13.603	13.605	13.617	13.587-13.647	13.607	0.005	
7 O-Xylene	14.830	14.830	14.830	14.827	14.827	14.825	14.825	14.830	14.780-14.880	14.828	0.002	
19 BFB(Surr)	16.433	16.433	16.433	16.433	16.433	16.433	16.433	16.433	16.403-16.463	16.433	0.004	
8 BB(Surr)	16.905	16.905	16.905	16.905	16.905	16.905	16.905	16.905	16.875-16.935	16.905	0.004	
13 1,3,5 Trimethyl Benzen	16.863	16.863	16.863	16.863	16.863	16.863	16.863	16.863	16.833-16.893	16.863	0.004	
14 1,2,4 Trimethyl Benzen	16.979	16.979	16.979	16.979	16.979	16.979	16.979	16.979	16.949-17.009	16.979	0.004	
16 1,3 Dichlorobenzene	17.371	17.371	17.371	17.371	17.371	17.371	17.371	17.371	17.341-17.401	17.371	0.004	
17 1,4 Dichlorobenzene												
18 1,2 Dichlorobenzene												

Reviewer 1 MH Date: 7/29/10  
Reviewer 2 RS Date: 7/30/10

7458 : 01022

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid2.i/072810-1.b

ARI Job No.: RINS Method: FID.m Instrument: pid2.i Date: 28-JUL-2010

Time	Filename	LabID	ClientID	DF	Manually Integrated	Compounds
0604	0728a001.d	RINSE		1	NO MANUAL INTEGRATION	
0629	0728a002.d	RT+BCAL 1		1	NO MANUAL INTEGRATION	
0655	0728a003.d	GCAL 1		1	NO MANUAL INTEGRATION	
0904	0728a004.d	RINSE		1	NO MANUAL INTEGRATION	
0930	0728a005.d	BETX .25		1	NO MANUAL INTEGRATION	
0956	0728a006.d	BETX .5		1	Toluene, TPT(Surr),	
1022	0728a007.d	BETX 5		1	NO MANUAL INTEGRATION	
1048	0728a008.d	BETX 25		1	NO MANUAL INTEGRATION	
1114	0728a009.d	BETX 50		1	NO MANUAL INTEGRATION	
1140	0728a010.d	BETX 100		1	NO MANUAL INTEGRATION	
1206	0728a011.d	BETX 200		1	NO MANUAL INTEGRATION	
1232	0728a012.d	BETX ICV		1	NO MANUAL INTEGRATION	
1258	0728a013.d	RINSE		1	NO MANUAL INTEGRATION	
1324	0728a014.d	GAS .1		1	nC9, Naphthalene, nC13,	
1350	0728a015.d	GAS .25		1	nC13,	
1416	0728a016.d	GAS 1		1	NO MANUAL INTEGRATION	
1442	0728a017.d	GAS 2.5		1	NO MANUAL INTEGRATION	
1508	0728a018.d	GAS 5		1	NO MANUAL INTEGRATION	
1534	0728a019.d	GAS 20		1	NO MANUAL INTEGRATION	
1600	0728a020.d	RINSE		1	NO MANUAL INTEGRATION	
1626	0728a021.d	GAS ICV		1	NO MANUAL INTEGRATION	

7058 01020

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid2.i/072810-2.b

ARI Job No.: RINS Method: PIDB.m Instrument: pid2.i Date: 28-JUL-2010

Time	Filename	LabID	Clientid	DF	Manually Integrated Compounds
0604	0728a001.d	RINSE		1	NO MANUAL INTEGRATION
0629	0728a002.d	RT+BCAL 1		1	NO MANUAL INTEGRATION
0655	0728a003.d	GCAL 1		1	NO MANUAL INTEGRATION
0904	0728a004.d	RINSE		1	NO MANUAL INTEGRATION
0930	0728a005.d	BETX .25		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
0956	0728a006.d	BETX .5		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1022	0728a007.d	BETX 5		1	Benzene, Toluene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1048	0728a008.d	BETX 25		1	Benzene, Toluene, M/P-Xylene, MTBE, TFT(Surr), BB(Surr),
1114	0728a009.d	BETX 50		1	Benzene, Toluene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1140	0728a010.d	BETX 100		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr),
1206	0728a011.d	BETX 200		1	Benzene, Toluene, MTBE,
1232	0728a012.d	BETX ICV		1	NO MANUAL INTEGRATION
1258	0728a013.d	RINSE		1	NO MANUAL INTEGRATION
1324	0728a014.d	GAS .1		1	NO MANUAL INTEGRATION
1350	0728a015.d	GAS .25		1	NO MANUAL INTEGRATION
1416	0728a016.d	GAS 1		1	NO MANUAL INTEGRATION
1442	0728a017.d	GAS 2.5		1	NO MANUAL INTEGRATION
1508	0728a018.d	GAS 5		1	NO MANUAL INTEGRATION
1534	0728a019.d	GAS 20		1	NO MANUAL INTEGRATION

072810-2.b

1600 0728a020.d RINSE

1

NO MANUAL INTEGRATION

1626 0728a021.d GAS ICV

1

NO MANUAL INTEGRATION



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: Gas Curve Client ID: \_\_\_\_\_

ARI SOP: ~~404S(Gas)~~ 410S(BTEX) 430S(VPH) 700S(8260C) 703S(SIM) 706S(524.2) 710S(RSK-175)

Parameter(s): Gas

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 7/28/10 Analysis Start Date: 7/28/10

pH ≤ 2.0	YES / NO <u>NA</u>	Method Blank In Control?	<u>YES</u> / NO
BFB Tune Meets Criteria?	YES / NO <u>NA</u>	LCS / LCSD Recovery In Control?	<u>YES</u> / NO
Internal Standard Meets Criteria?	YES / NO <u>NA</u>	Surrogate Recovery In Control?	<u>YES</u> / NO
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	YES / NO <u>NA</u>	Q flag applied?	YES / NO <u>NA</u>
Manual Integrations for ICal?	<u>YES</u> / NO	Manual Integrations for Samples?	<u>Yes</u> / NO
Special Analysis Criteria Met?	YES / NO <u>NA</u>		

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

Gas ICU Targeted 2.5

**Additional Details on Reverse: Yes / No**

Analyst: [Signature] Date: 7/29/10

Reviewer: [Signature] Date: 7/29/10

6a  
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20100728-2

Instrument/Det: PID3.I/RTX 502-2 FID

Project:

Calibration Date: 28-JUL-2010

SDG No.: 20100728-2

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 20	Ave RF	%RSD
WA Gas	1009250	772696	761867	782843	800745	839442	827807	11.2
AK Gas	1342560	1066876	1050254	1042480	1063396	1225137	1131784	10.9
NW Gas	1102210	829838	811111	828987	844316	875713	882029	12.5
8015Gas	1959390	1600162	1564234	1551602	1571254	1738000	1664107	9.6

Surrogates Rel. Rec.	RF1	RF2	RF3	RF4	RF5	RF6	Ave RF	%RSD
	22	44	67	100	133	178		

<- Indicates %RSD outside limits  
Surrogate areas are not included in RF calculation.

Quant Ranges :   WA Gas    Toluene - nC12  
                   AK Gas    nC6 - nC10  
                   NW Gas    Toluene - Naphthalene  
                   8015 Gas   2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files      Analysis Time

---

0728a012.d           28-JUL-2010 11:42  
 0728a004.d           28-JUL-2010 08:07  
 0728a005.d           28-JUL-2010 08:31  
 0728a006.d           28-JUL-2010 08:56  
 0728a007.d           28-JUL-2010 09:20  
 0728a008.d           28-JUL-2010 09:45

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a012.d      ARI ID: GAS .1  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a012.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 11:42  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.425	0.017	7873	93810	109.4	TFT(Surr)
14.901	0.013	4596	37219	106.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	100925	0.122 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	195939	0.118 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	134256	0.119 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	110221	0.125 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
8.424	0.017	23728	107.9	TFT(Surr)
14.900	0.013	47912	105.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.290	0.018	4229	3.20	Toluene
12.825	0.020	1325	1.07	Ethylbenzene
12.964	0.022	4623	3.43	M/P-Xylene
13.742	0.018	1960	1.53	O-Xylene
5.294	0.007	3815	10.72	MTBE

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



Data File: /chem3/pid3.i/20100728-2.b/0728a010.d

Date: 28-JUL-2010 10:34

Client ID:

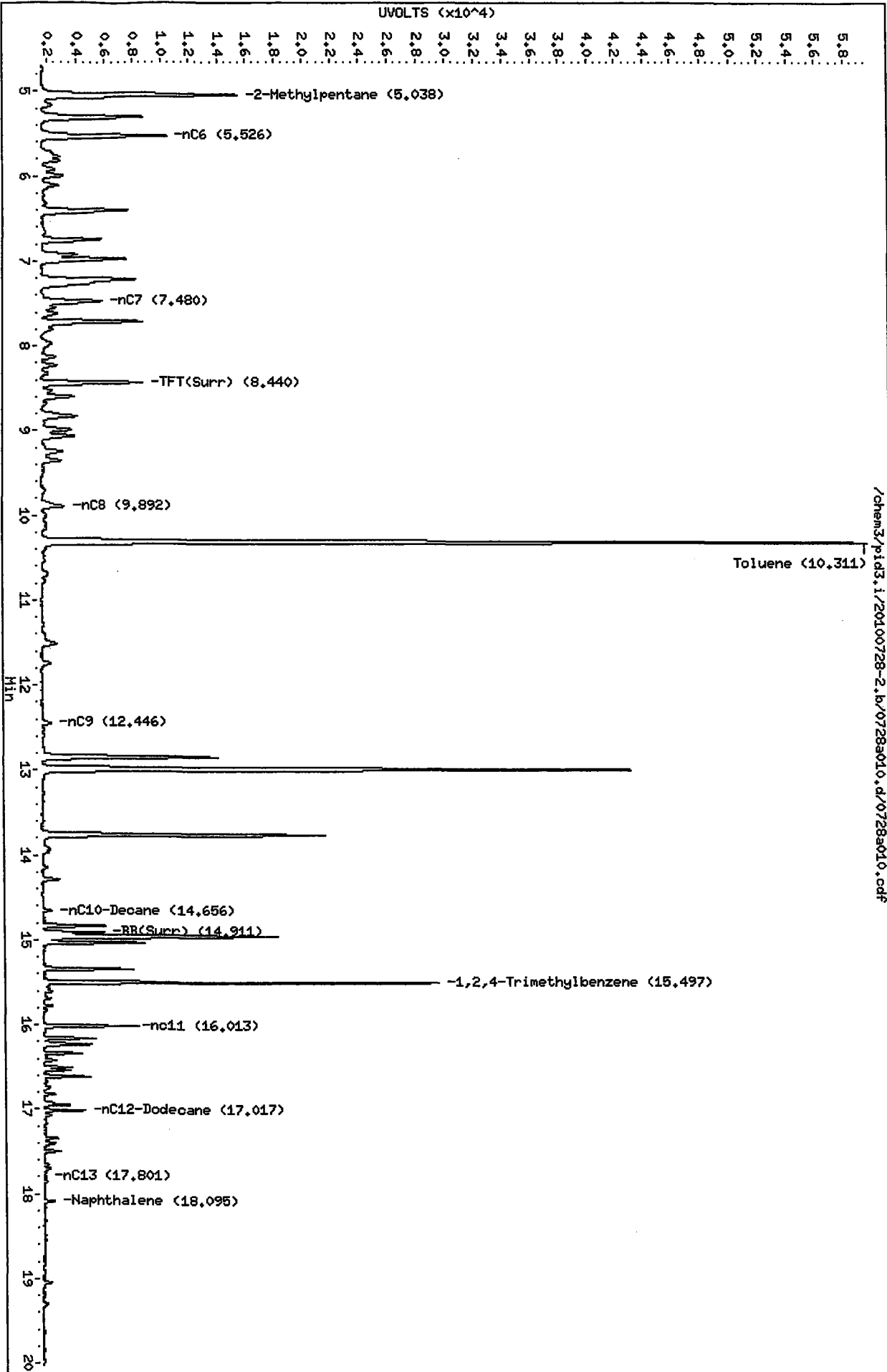
Sample Info: GAS ICV

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

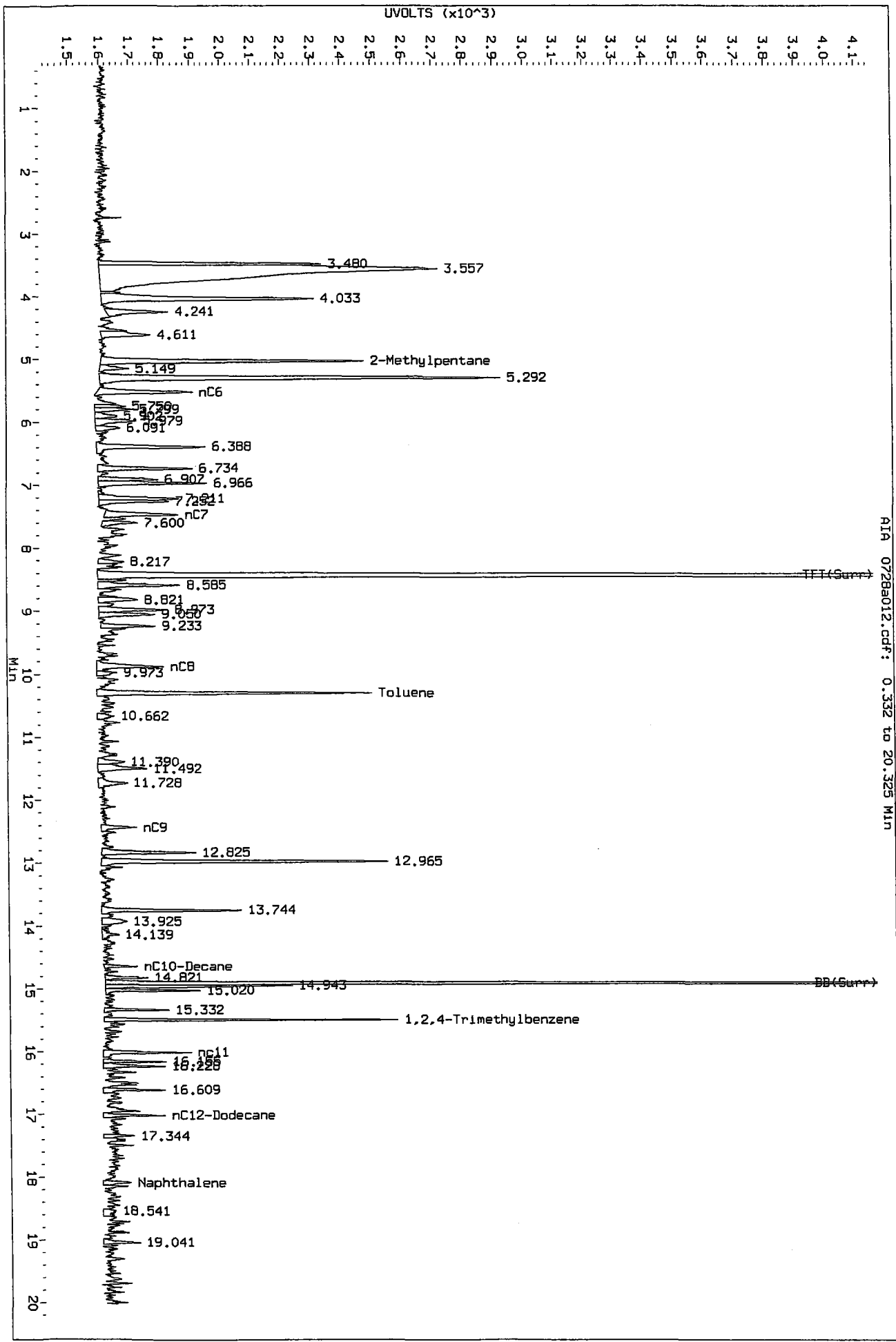
Column diameter: 0.18



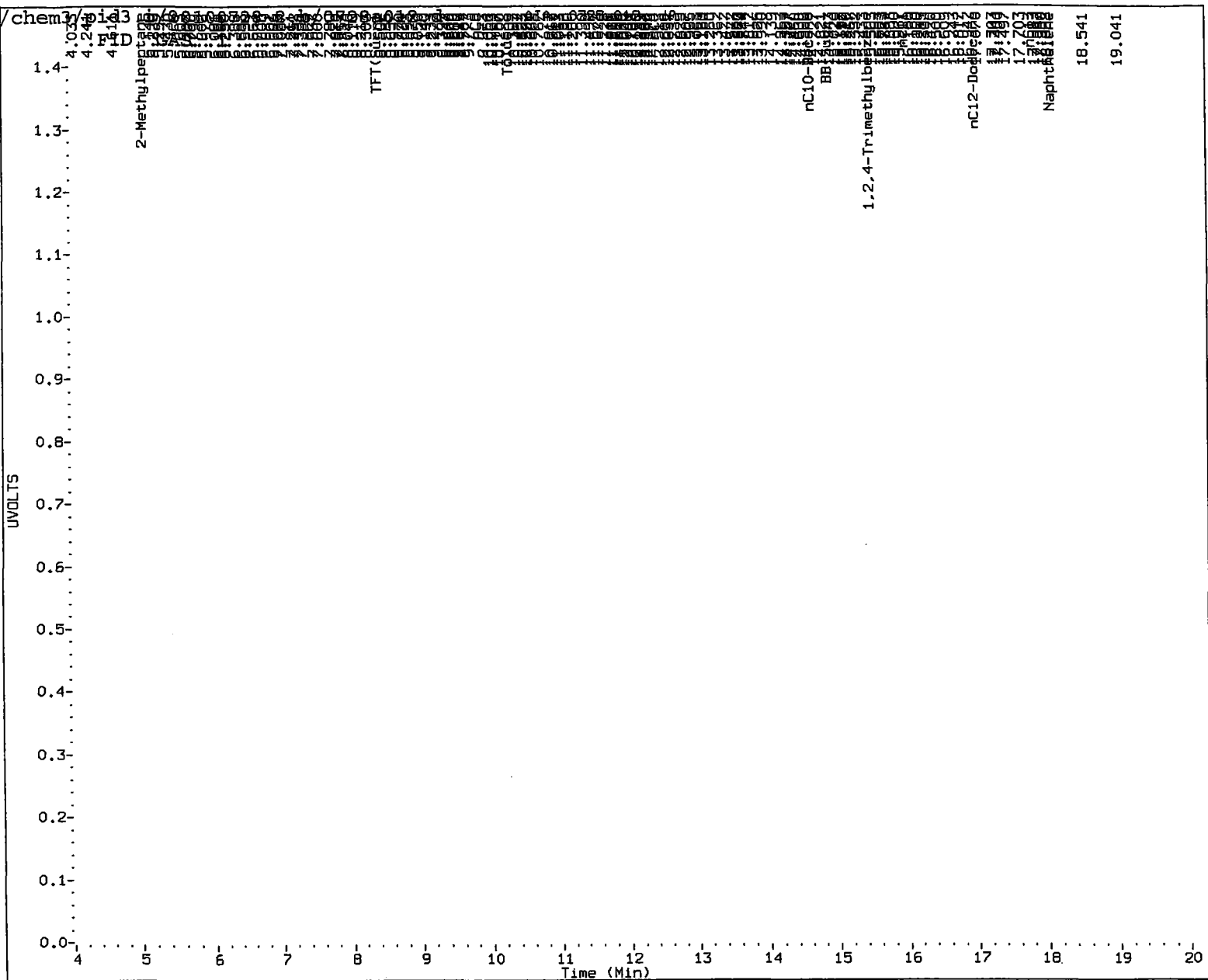
/chem3/pid3.i/20100728-2.b/0728a010.d/0728a010.cdf

MH  
01/16/10

Data File: /chem3/pid3.1/20100728-2.b/0728a012.d/0728a012.cdf  
Injection Date: 28-JUL-2010 11:42  
Instrument: pid3.1  
Client Sample ID:



AIA 0728a012.cdf: 0.332 to 20.325 Min



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH

Date: 7/29/10

MH  
7/6/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a004.d      ARI ID: GAS .25  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a004.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 08:07  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                   Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.435	0.027	7186	84666	99.8	TFT(Surr)
14.907	0.019	4308	34905	100.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	193174	0.233 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	400040	0.240 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	266719	0.236 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	207460	0.235 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
8.434	0.027	21029	95.7	TFT(Surr)
14.906	0.020	44130	96.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.711	0.024	617	0.47	Benzene
10.300	0.029	9631	7.30	Toluene
12.835	0.030	2739	2.20	Ethylbenzene
12.974	0.032	10740	7.98	M/P-Xylene
13.751	0.027	4547	3.54	O-Xylene
5.301	0.013	9271	26.06	MTBE

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

Data File: /chem3/pid3.i/20100728-2.b/0728a004.d

Date: 28-JUL-2010 08:07

Client ID:

Sample Info: GAS .25

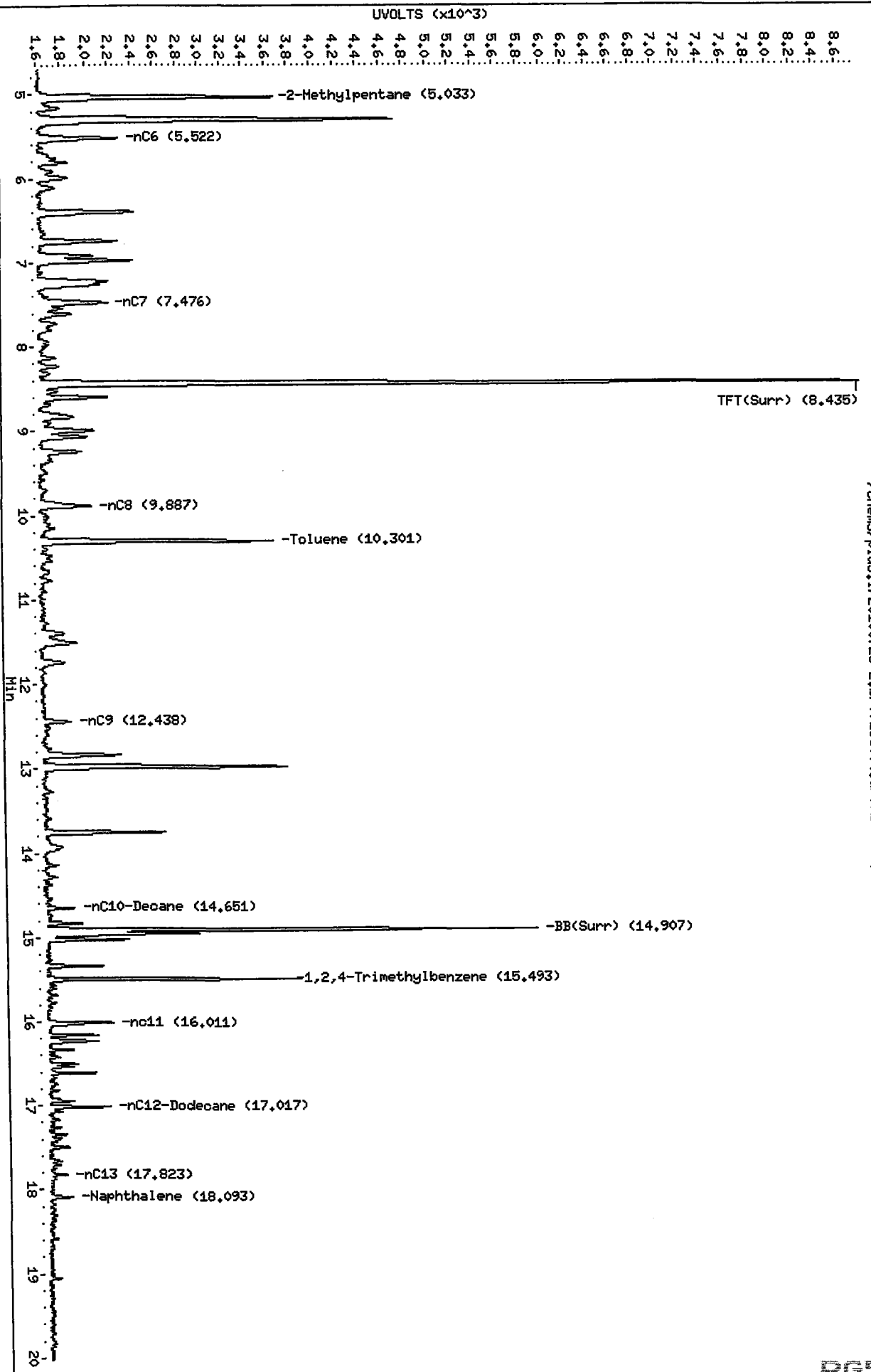
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

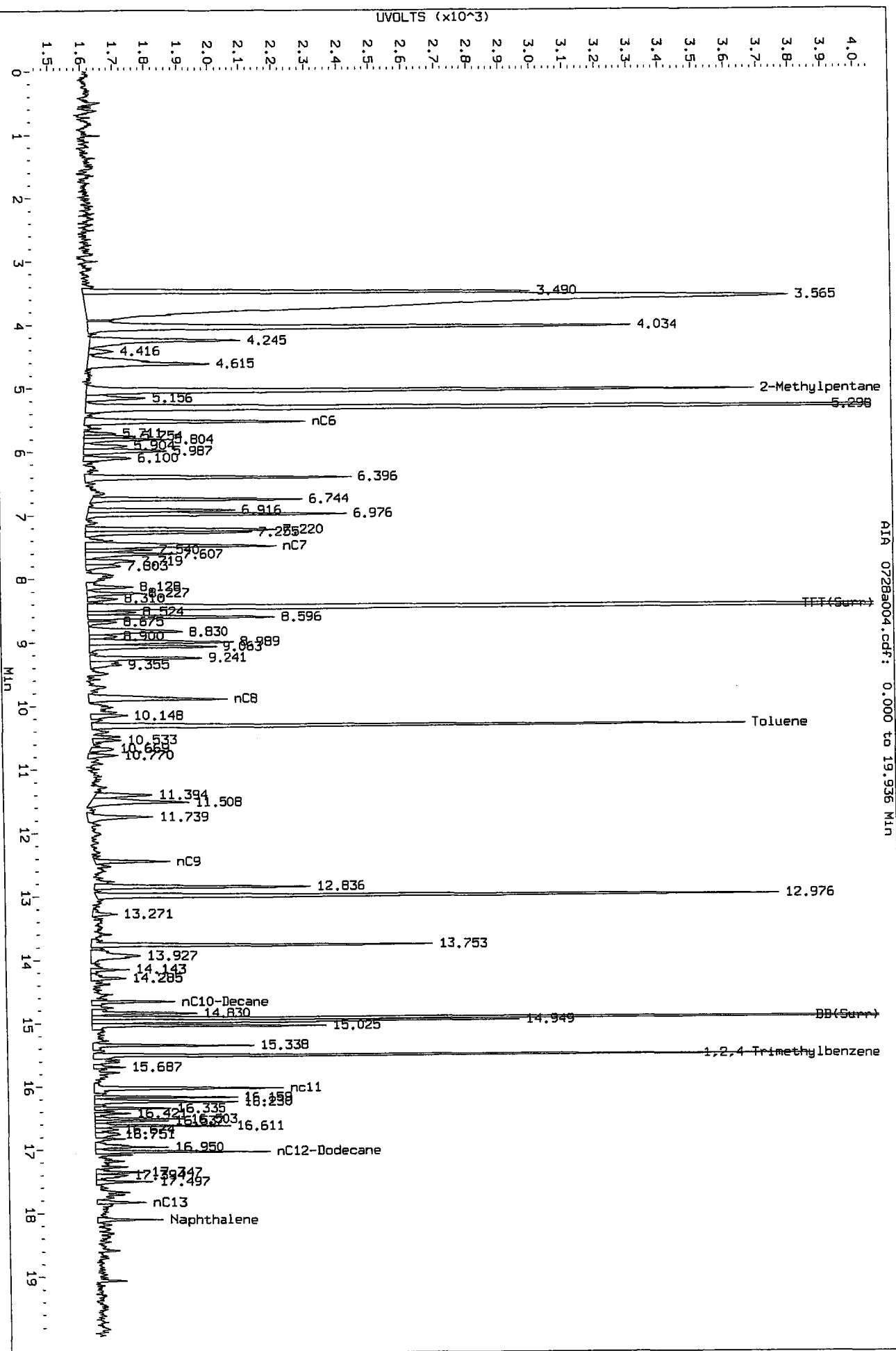
Column diameter: 0.18

/chem3/pid3.i/20100728-2.b/0728a004.d/0728a004.cdf

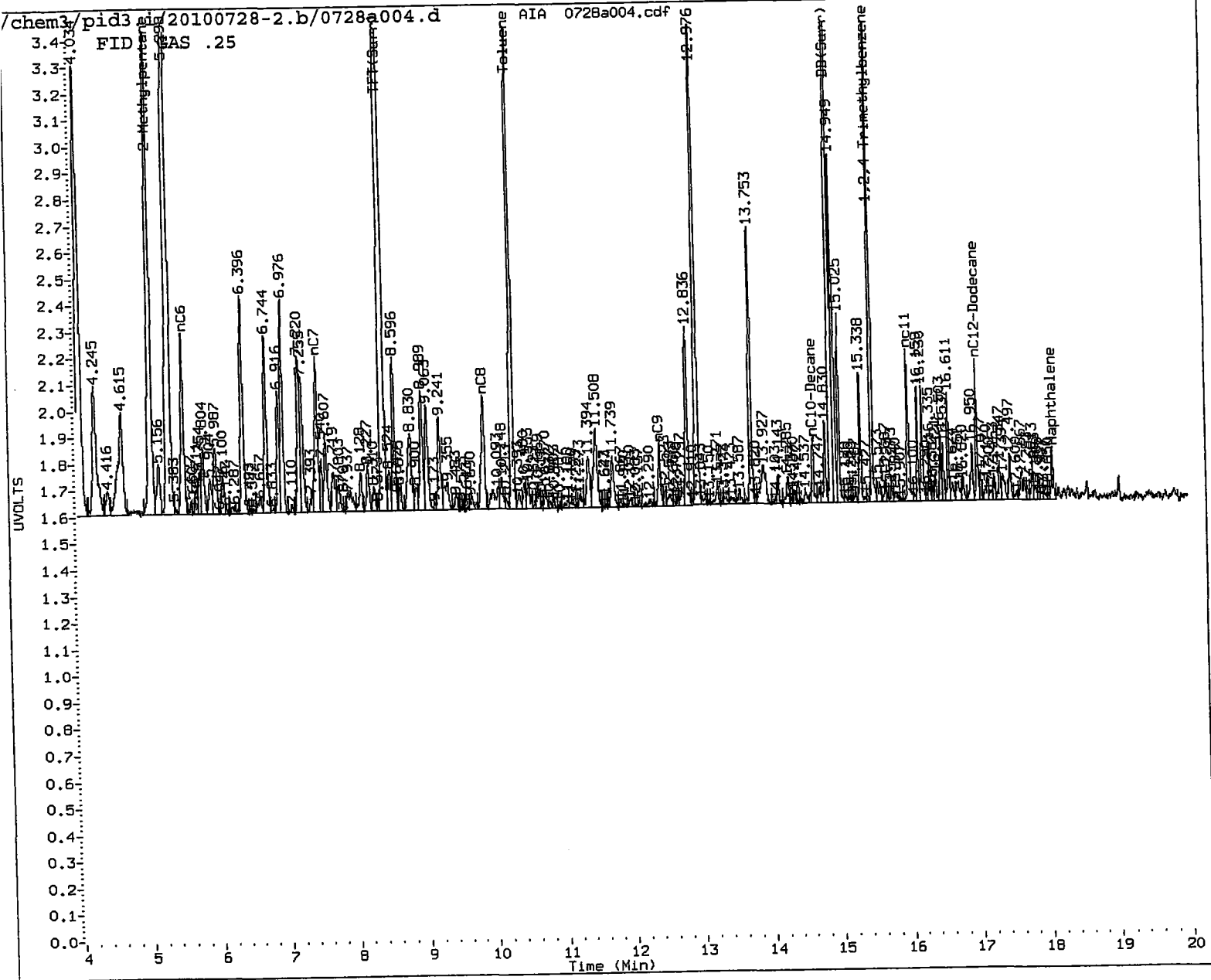


MH  
7/29/10

Data File: /chem3/p1d3.1/20100728-2.b/0728a004.d/0728a004.cdf  
Injection Date: 28-JUL-2010 08:07  
Instrument: p1d3.1  
Client Sample ID:



AIA 0728a004.cdf: 0.000 to 19.936 MIN



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH Date: 7/29/10

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a005.d      ARI ID: GAS 1  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a005.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 08:31  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                   Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.437	0.029	7240	85071	100.6	TFT(Surr)
14.910	0.022	4266	35061	99.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	761867	0.920 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1564234	0.940 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1050254	0.928 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	811111	0.920 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
8.436	0.029	21131	96.1	TFT(Surr)
14.908	0.022	43950	96.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.713	0.026	2868	2.17	Benzene
10.303	0.032	37994	28.79	Toluene
12.838	0.033	10898	8.77	Ethylbenzene
12.978	0.036	42543	31.59	M/P-Xylene
13.754	0.029	17526	13.64	O-Xylene
5.302	0.015	35267	99.12	MTBE

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

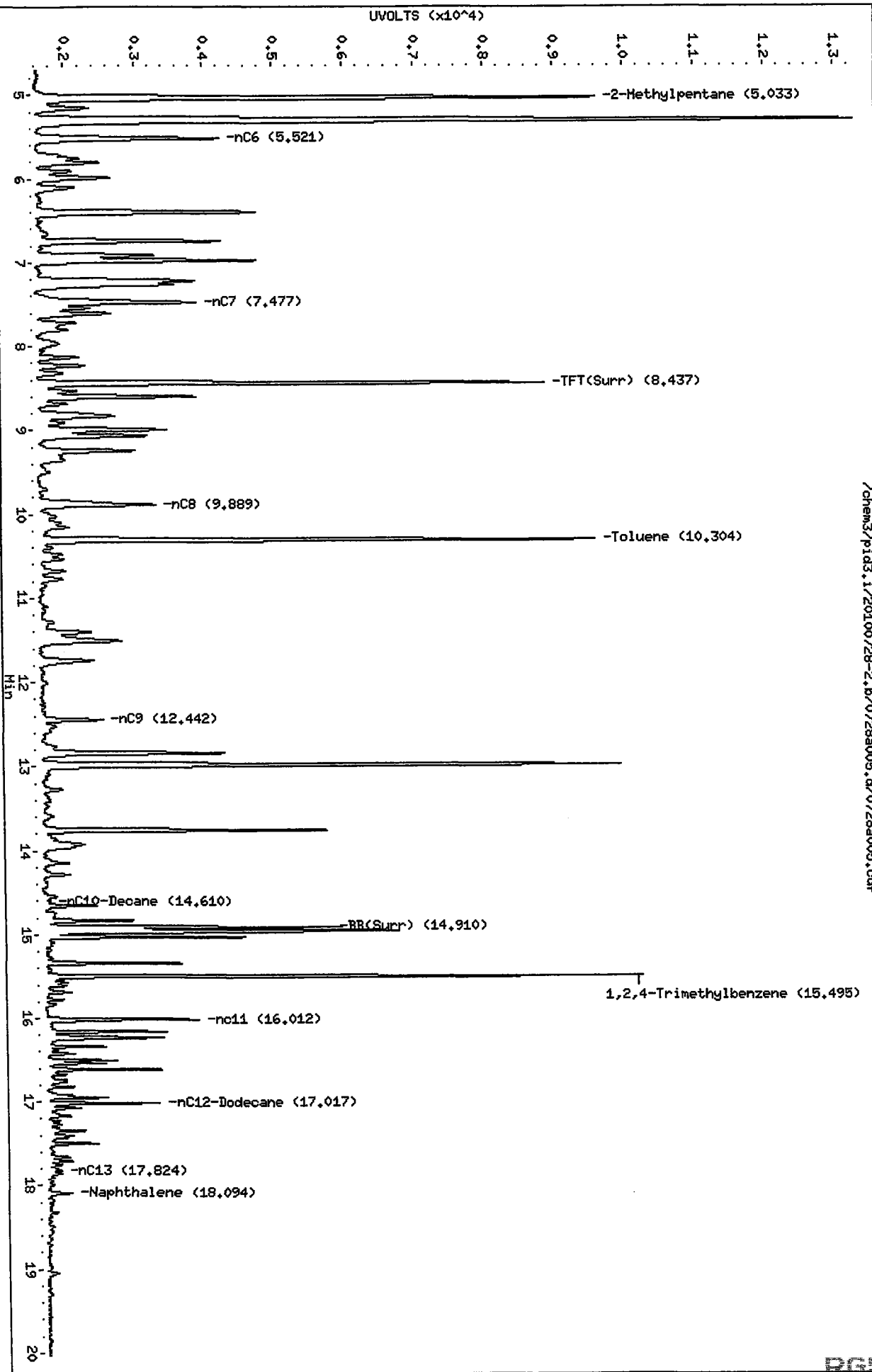


Data File: /chem3/pid3.i/20100728-2.b/0728a005.d  
Date: 28-JUL-2010 09:31  
Client ID:  
Sample Info: GAS 1

Column phase: RTX 502-2 FID

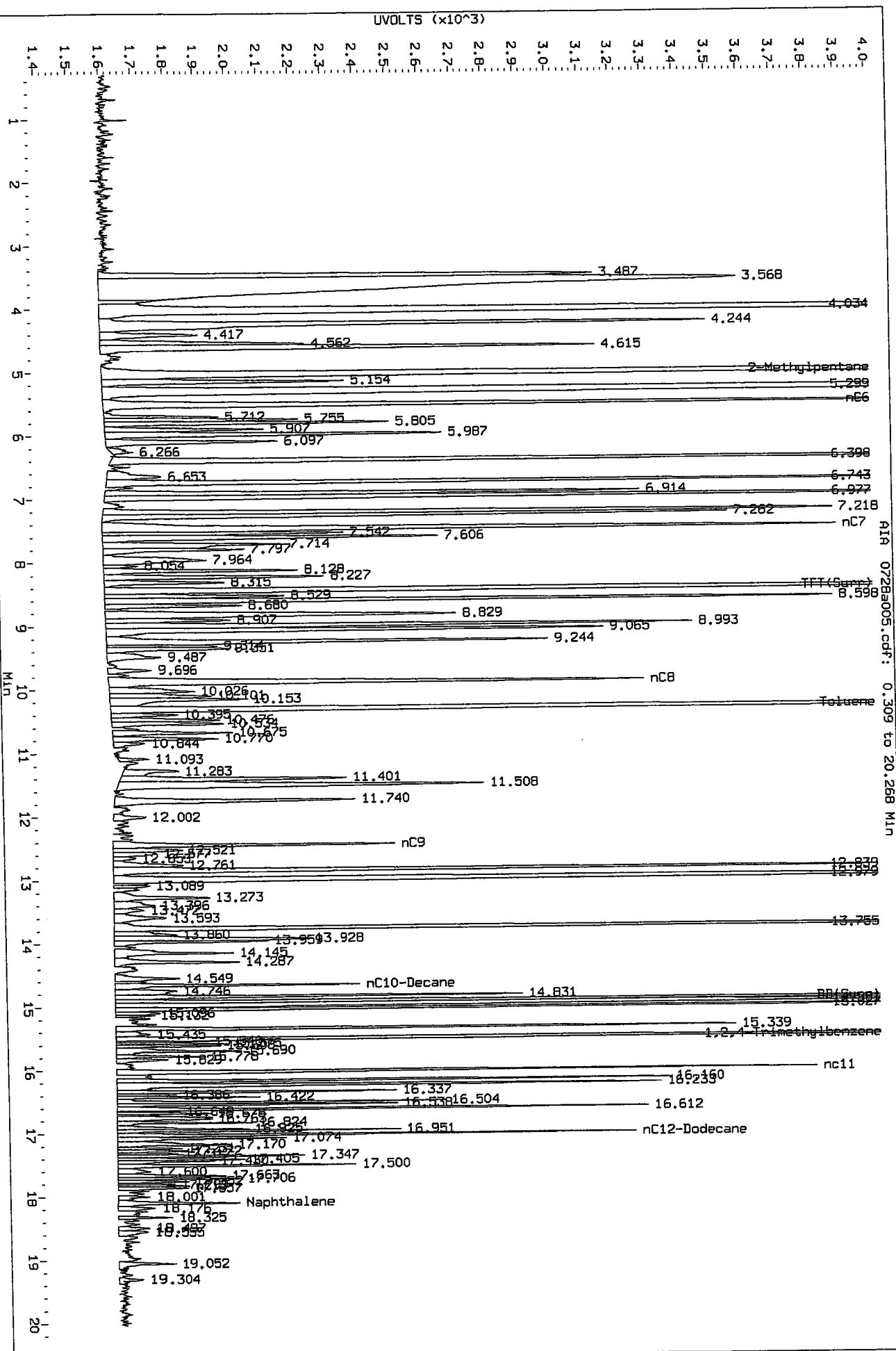
/chem3/pid3.i/20100728-2.b/0728a005.d/0728a005.cdf

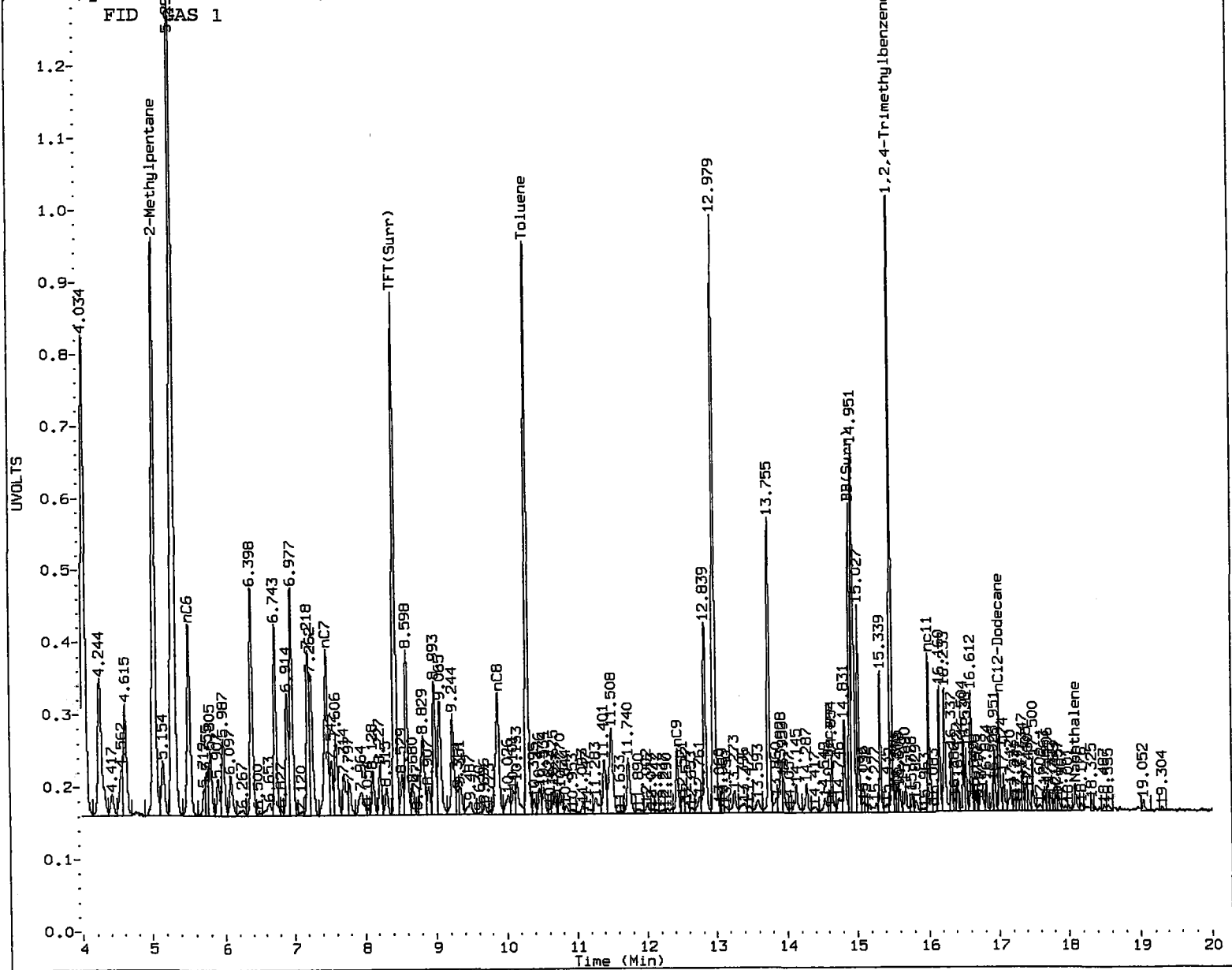
Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



MH  
7/29/10

Data File: /chem3/p1d3.1/20100728-2.h/0728a005.d/0728a005.cdf  
Injection Date: 28-JUL-2010 08:31  
Instrument: p1d3.1  
Client Sample ID:





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH

Date: 7/29/10

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a006.d      ARI ID: GAS 2.5  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a006.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 08:56  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.031	7507	89299	104.3	TFT(Surr)
14.911	0.023	4475	36770	103.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1957108	2.364 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	3879004	2.331 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2606200	2.303 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2072468	2.350 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
8.438	0.031	21902	99.6	TFT(Surr)
14.909	0.023	45851	100.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.715	0.028	7095	5.37	Benzene
10.306	0.034	94086	71.29	Toluene
12.840	0.036	27296	21.97	Ethylbenzene
12.981	0.039	105425	78.29	M/P-Xylene
13.756	0.032	43640	33.97	O-Xylene
5.306	0.019	82935	233.09	MTBE

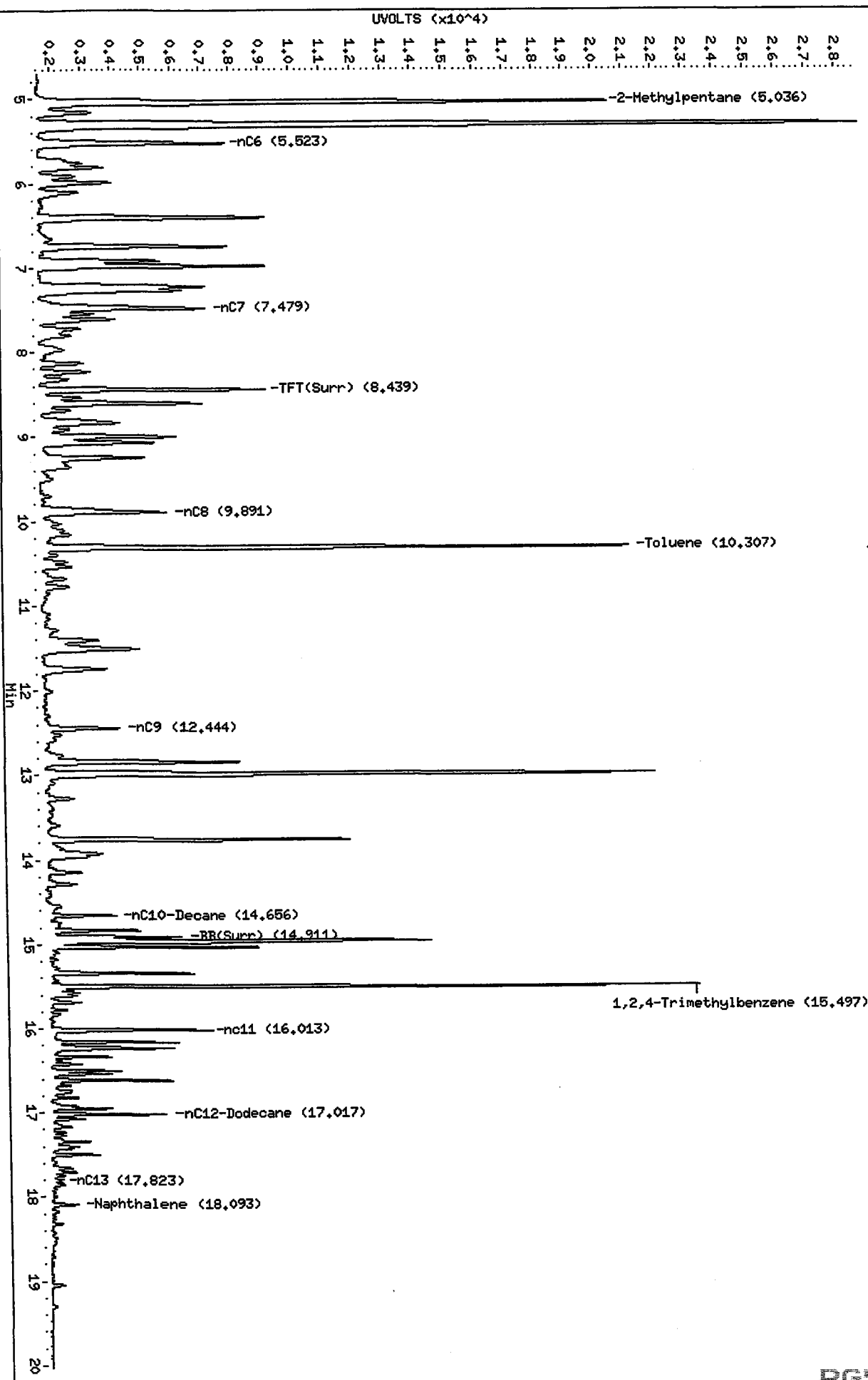
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100728-2.b/0728a006.d  
Date: 28-JUL-2010 08:56  
Client ID:  
Sample Info: GAS 2.5

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

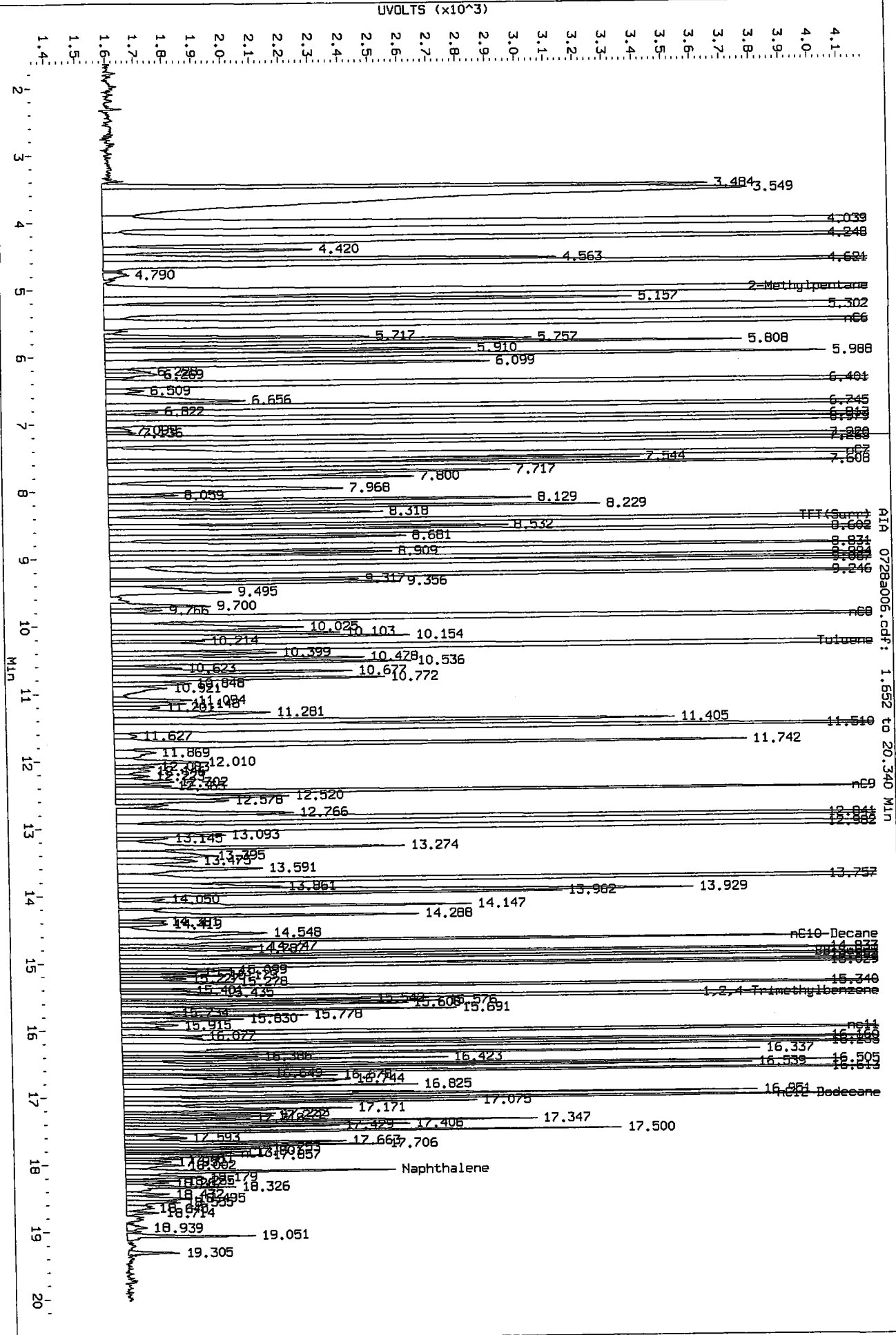
/chem3/pid3.i/20100728-2.b/0728a006.d/0728a006.cdf



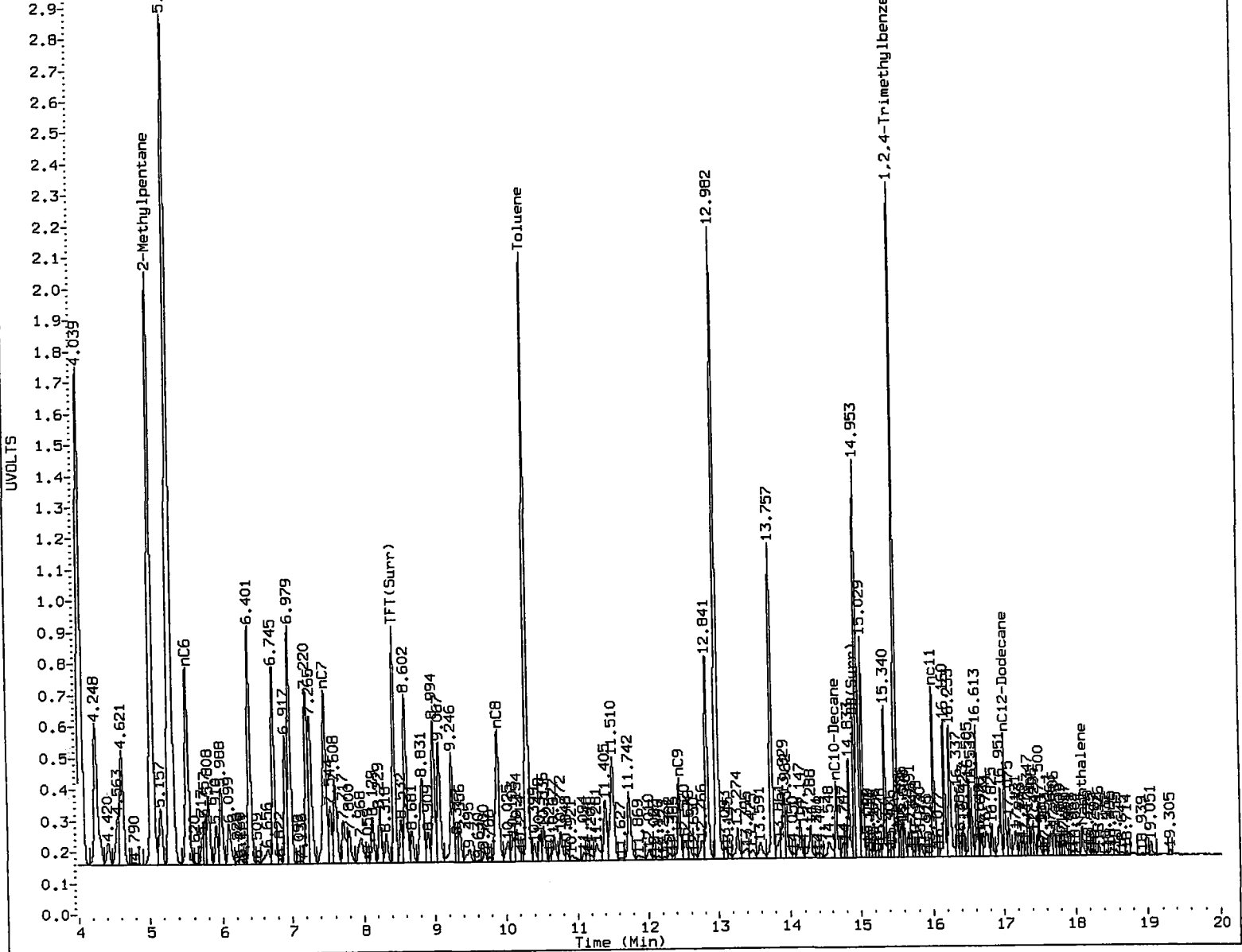
MH  
7/27/0

Data File: /chem3/pid3.1/20100728-2.b/0728a006.d/0728a006.cdf  
Injection Date: 28-JUL-2010 08:55  
Instrument: pid3.1  
Client Sample ID:

UVOLTS (x10^3)



FID GAS 2.5



MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH Date: 7/29/10

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a007.d      ARI ID: GAS 5  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a007.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 09:20  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.031	7878	94697	109.5	TFT (Surr)
14.912	0.024	4741	41421	110.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	4003725	4.837
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	7856270	4.721 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	5316980	4.698 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	4221581	4.786

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
8.438	0.031	23349	106.2	TFT (Surr)
14.910	0.023	47815	104.9	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.716	0.029	14610	11.05	Benzene
10.308	0.037	191522	145.11	Toluene
12.842	0.038	56084	45.13	Ethylbenzene
12.985	0.043	209817	155.81	M/P-Xylene
13.758	0.033	88195	68.64	O-Xylene
5.308	0.021	162558	456.88	MTBE

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

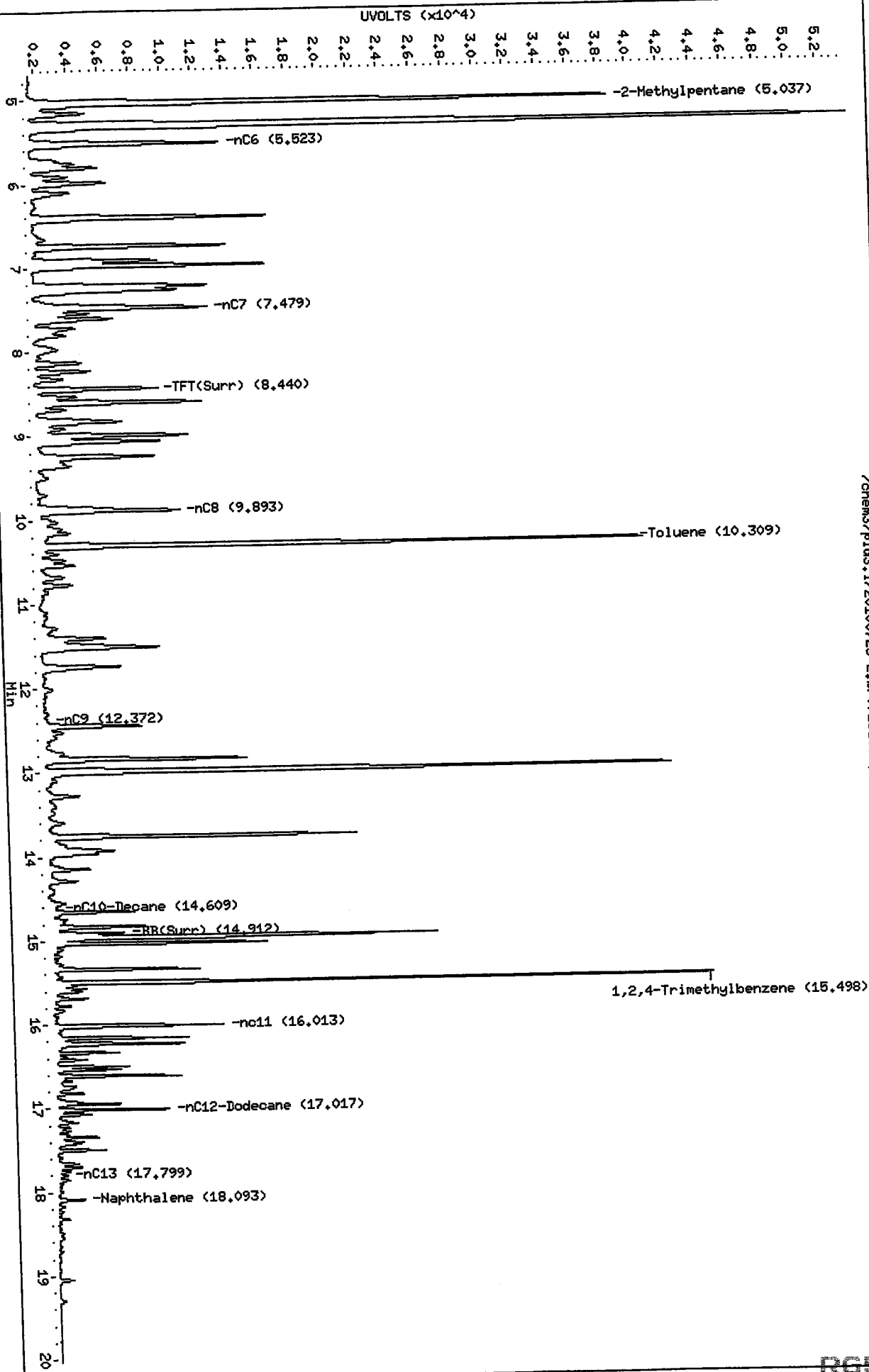


Data File: /chem3/pid3.i/20100728-2.b/0728a007.d  
Date: 28-JUL-2010 09:20  
Client ID:  
Sample Info: GAS 5

Column phase: RTX 802-2 FID

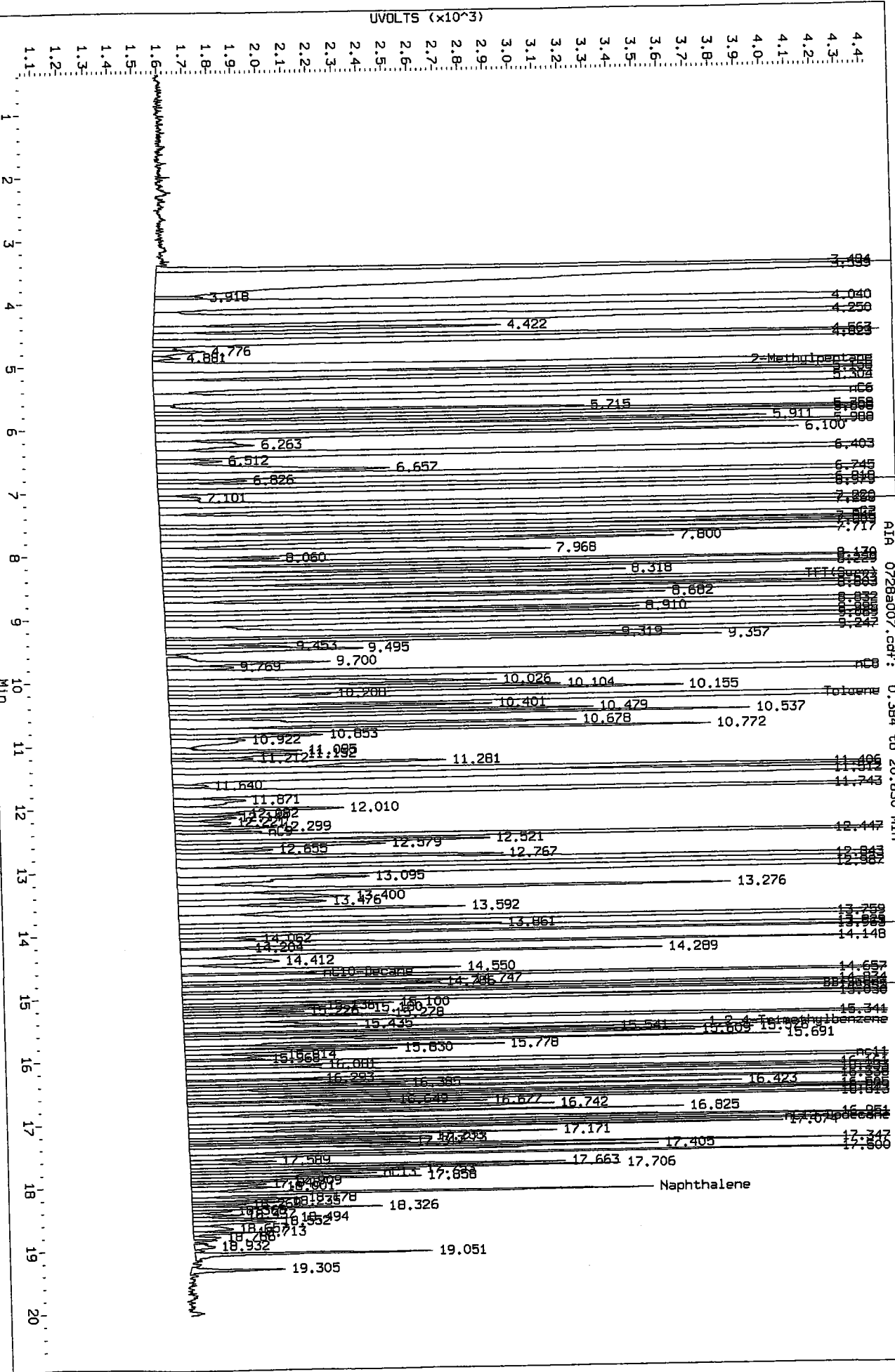
/chem3/pid3.i/20100728-2.b/0728a007.d/0728a007.cdf

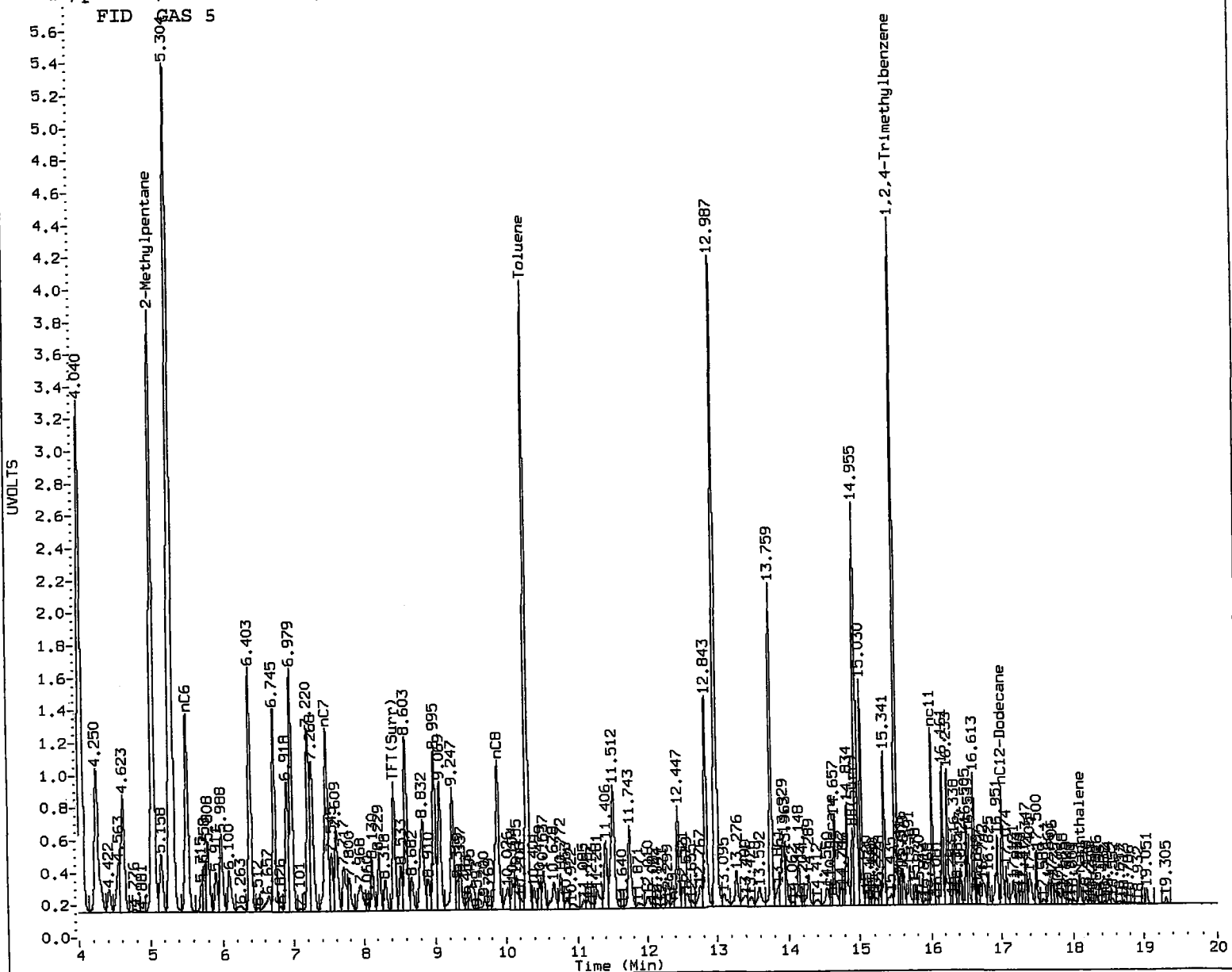
Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



01/16/2010  
MH

Data File: /chem3/pid3.1/20100728-2.b/0728a007.d/0728a007.cdf  
Injection Date: 28-JUL-2010 09:20  
Instrument: pid3.1  
Client Sample ID:





MANUAL INTEGRATION

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

5. Other \_\_\_\_\_

Analyst: MT Date: 7/29/10

HT  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a008.d  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a008.d  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m  
Instrument: pid3.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 29-JUN-2010

ARI ID: GAS 20  
Client ID:  
Injection Date: 28-JUL-2010 09:45  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.032	10794	142846	150.0	TFT (Surr)
14.914	0.026	6397	57315	148.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	16788832	20.281
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	34760005	20.888
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	24502732	21.650
NWTPHG Tol-Nap (10.17 to 18.18)	882029	17514258	19.857

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
8.439	0.032	28146	128.0	TFT(Surr)
14.834	-0.052	109465	240.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.719	0.032	57953	43.83	Benzene
10.317	0.046	742279	562.41	Toluene
12.772	-0.032	18288	14.72	Ethylbenzene
13.001	0.059	811732	602.78	M/P-Xylene
13.765	0.041	355553	276.74	O-Xylene
5.321	0.033	530538	1491.10	MTBE

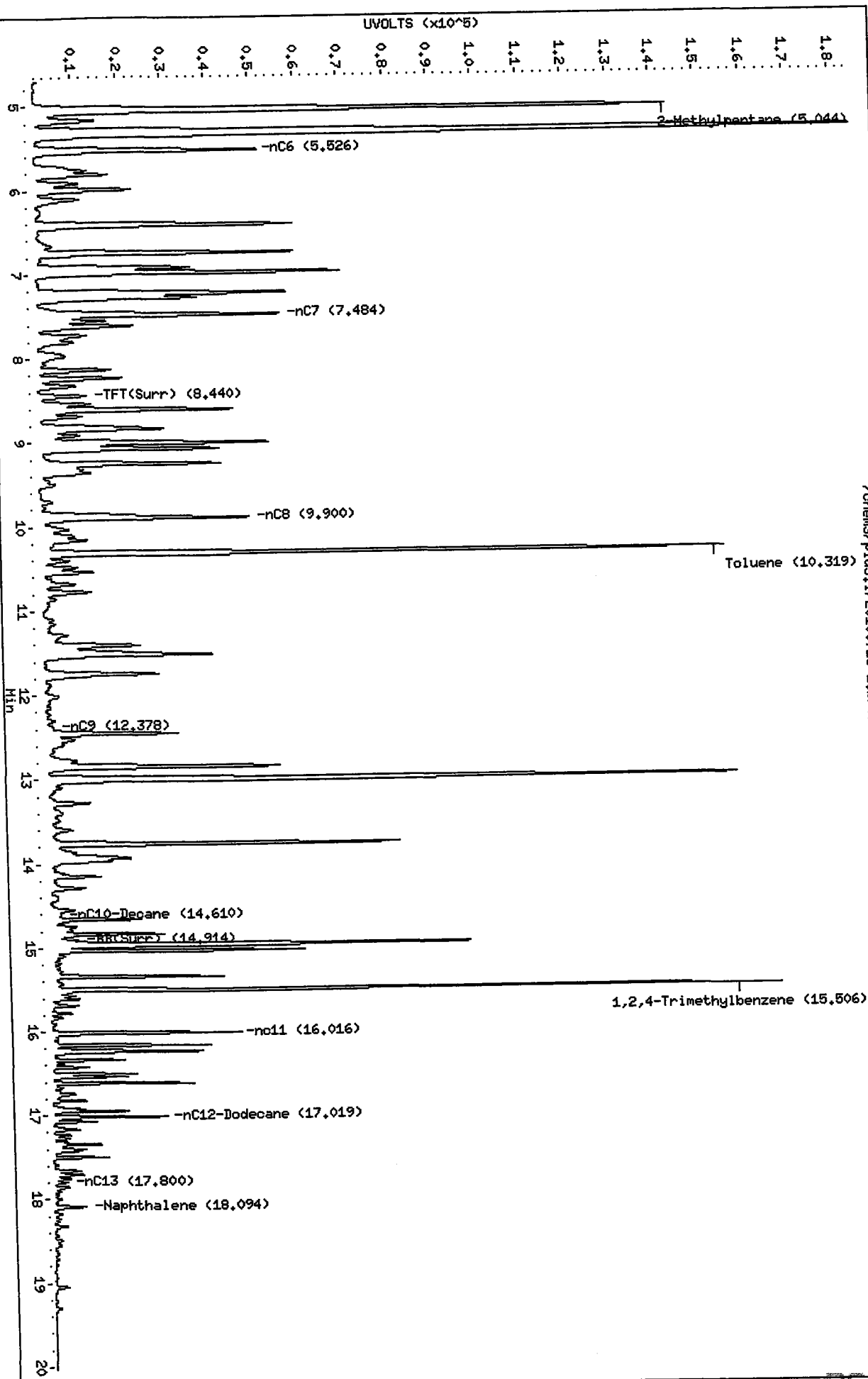
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100728-2.b/0728a008.d  
Date : 28-JUL-2010 09:45  
Client ID:  
Sample Info: GAS 20

Column phase: RTX 502-2 FID

/chem3/pid3.i/20100728-2.b/0728a008.d/0728a008.cdf

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a010.d      ARI ID: GAS ICV  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a010.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 10:34  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.032	7179	85915	99.7	TFT(Surr)
14.911	0.023	4354	33856	101.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	2492293	3.011 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	3736060	2.245 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2858584	2.526 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2556570	2.899 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
8.439	0.032	21749	98.9	TFT(Surr)
14.909	0.023	46674	102.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.715	0.029	38928	29.44	Benzene
10.309	0.037	288200	218.36	Toluene
12.842	0.037	55963	45.04	Ethylbenzene
12.983	0.041	219824	163.24	M/P-Xylene
13.757	0.033	89384	69.57	O-Xylene
5.294	0.007	2620	7.36	MTBE

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

Data File: /chem3/pid3.i/20100728-2.b/0728a010.d

Date : 28-JUL-2010 10:34

Client ID:

Sample Info: GAS ICV

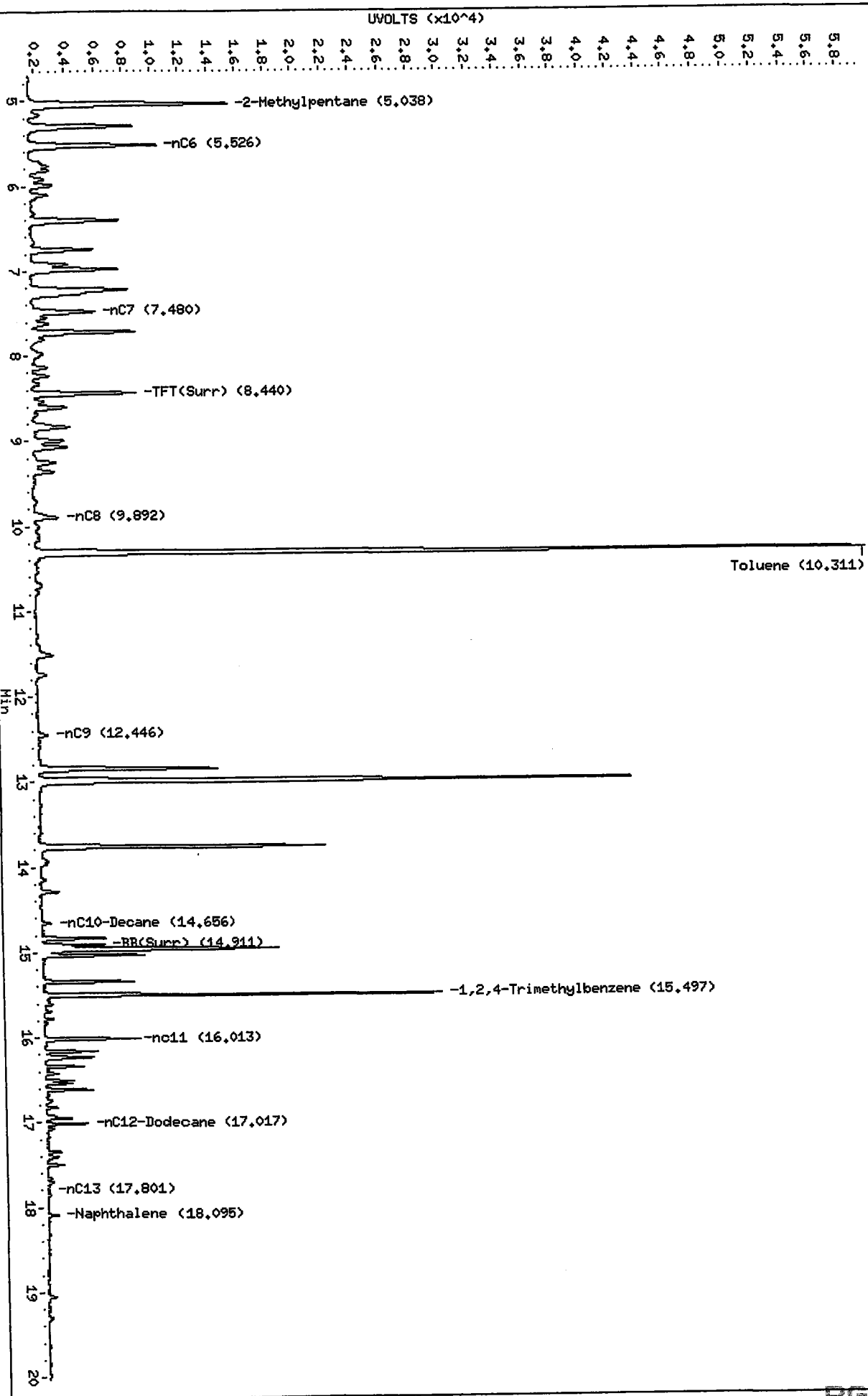
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

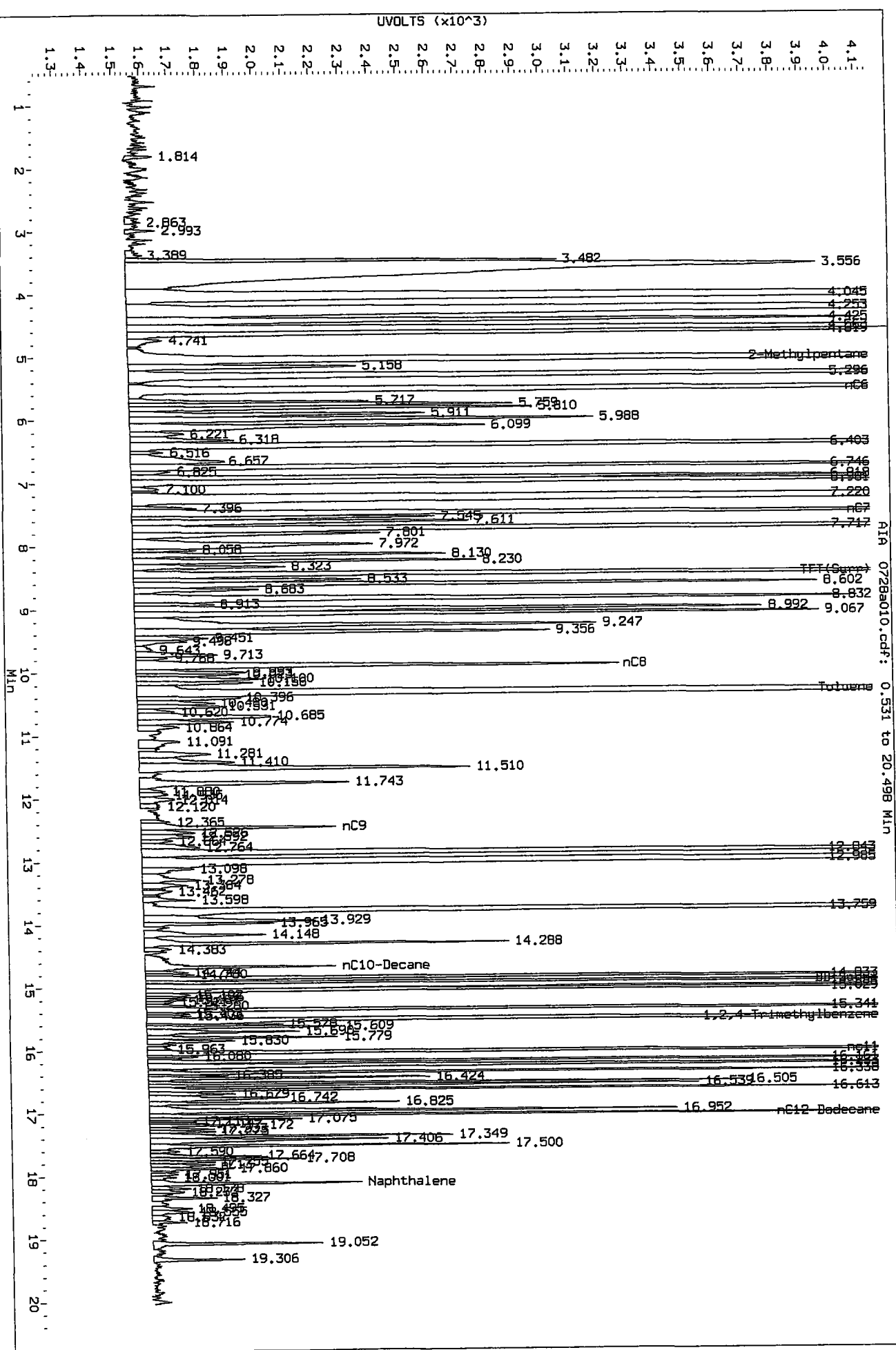
Column diameter: 0.18

/chem3/pid3.i/20100728-2.b/0728a010.d/0728a010.cdf



MH  
7/29/10

Data File: /chem3/pid3.1/20100729-2.b/0728a010.d/0728a010.cdf  
Injection Date: 28-JUL-2010 10:34  
Instrument: pid3.1  
Client Sample ID:



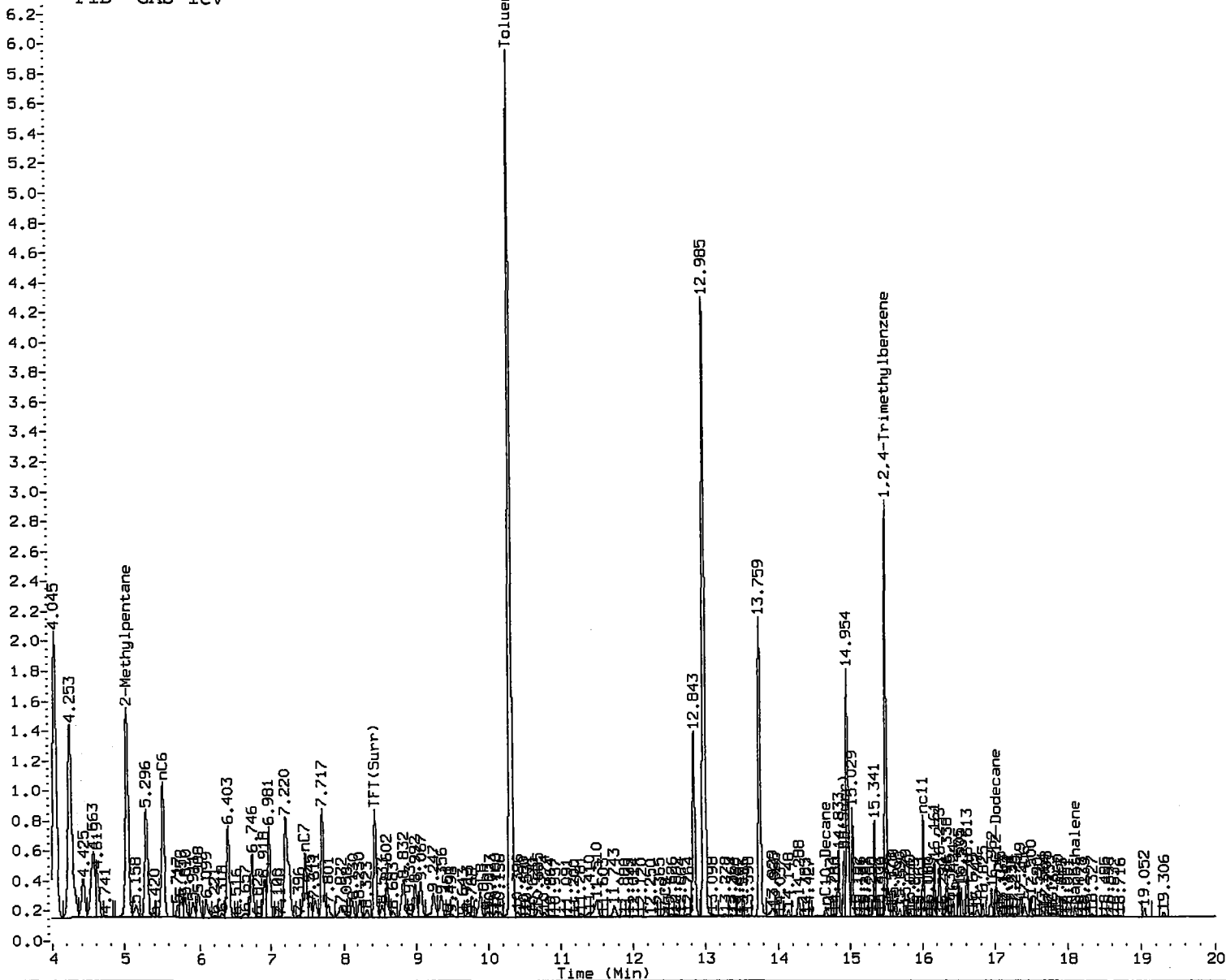
RIA 0728a010.cdf: 0.531 to 20.498 MIN



FID GAS ICV

UVOLTS

Toluene



MANUAL INTEGRATION

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

5. Other \_\_\_\_\_

Analyst: MH

Date: 7/29/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100728-2.b/FID.m  
Batch File: /chem3/pid3.i/20100728-2.b  
Inst ID: pid3.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 2-Methylpentane	5.033	5.033	5.036	5.037	5.044	5.028	5.022	4.952-5.092	5.035	0.005
18 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	1.097	1.027-1.167	+++++	+++++
19 8015B	+++++	+++++	+++++	+++++	+++++	+++++	0.833	0.763-0.903	+++++	+++++
20 AK101	+++++	+++++	+++++	+++++	+++++	+++++	0.989	0.919-1.059	+++++	+++++
21 NWGAS	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.930-1.070	+++++	+++++
2 nC6	5.522	5.521	5.523	5.523	5.526	5.520	5.507	5.437-5.577	5.523	0.002
3 nC7	7.476	7.477	7.479	7.479	7.484	7.469	7.454	7.384-7.524	7.477	0.005
4 TPT(Surr)	8.435	8.437	8.439	8.440	8.440	8.425	8.408	8.338-8.478	8.436	0.006
5 nC8	9.887	9.889	9.891	9.893	9.900	9.874	9.858	9.788-9.928	9.889	0.009
6 Toluene	10.301	10.304	10.307	10.309	10.319	10.292	10.273	10.203-10.343	10.306	0.009
7 nC9	12.438	12.442	12.444	12.447	12.456	12.430	12.409	12.339-12.479	12.443	0.009
8 nC10-Decane	14.651	14.610	14.656	14.609	14.663	14.644	14.632	14.562-14.702	14.639	0.024
9 BB(Surr)	14.907	14.910	14.911	14.912	14.914	14.901	14.888	14.818-14.958	14.909	0.005
10 1,2,4-Trimethylbenzene	15.493	15.495	15.497	15.498	15.506	15.488	15.477	15.407-15.547	15.496	0.006
11 nC11	16.011	16.012	16.013	16.013	16.016	16.007	16.020	15.950-16.090	16.012	0.003
12 nC12-Dodecane	17.017	17.017	17.017	17.017	17.019	17.014	17.008	16.938-17.078	17.017	0.002
13 nC13	17.823	17.824	17.823	17.799	17.860	17.823	17.814	17.744-17.884	17.825	0.019

Reviewer 1 MH Date: 7/29/10  
Reviewer 2 [Signature] Date: 7/29/10

Report Date : 29-Jul-2010 06:41

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100728-2.b/FID.m  
Batch File: /chem3/pid3.i/20100728-2.b  
Inst ID: pid3.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
14 Naphthalene	18.093	18.094	18.093	18.093	18.094	18.089	18.082	18.012-18.152	18.093	0.002



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: BETX Curve Client ID: \_\_\_\_\_

ARI SOP: ~~404S~~(Gas) ~~410S(BTEX)~~ ~~430S~~(VPH) ~~700S~~(8260C) ~~703S~~(SIM) ~~706S~~(524.2) ~~710S~~(RSK-175)

Parameter(s): BETX

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 6/29/10 Analysis Start Date: 6/29/10

pH ≤ 2.0	YES / NO <u>NA</u>	Method Blank In Control?	<u>YES</u> / NO
BFB Tune Meets Criteria?	YES / NO <u>NA</u>	LCS / LCSD Recovery In Control?	<u>YES</u> / NO
Internal Standard Meets Criteria?	YES / NO <u>NA</u>	Surrogate Recovery In Control?	<u>YES</u> / NO
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	YES / NO <u>NA</u>	Q flag applied?	YES / NO <u>NA</u>
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO
Special Analysis Criteria Met?	YES / NO / NA		

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

*BETX ICal Targeted 25*

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 7/10/10

Reviewer: [Signature] Date: 7-10-10

# Analytical Resources Inc.: Organics Instrument Log

PID-3 HP 5890 Series II - Serial No.: 2728A-13336

Date: 6/29/10 <sup>MH 7/1/10</sup> Analysis: NWTPHG/BETX Analyst: MH

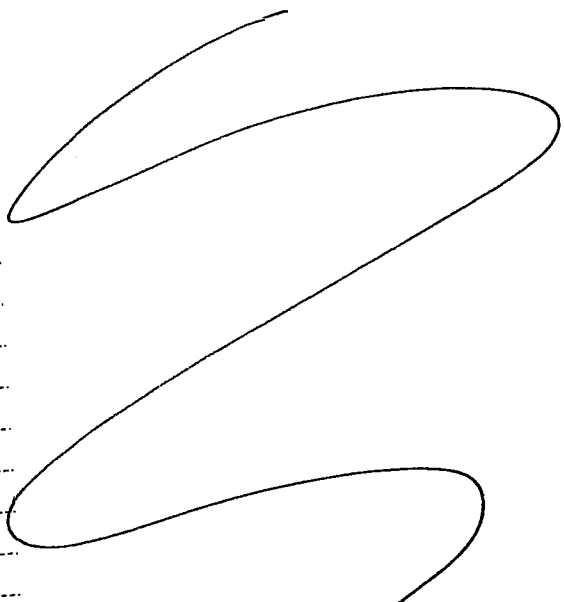
GC Program: BETX Column No: 832213 Column Type: RTX-502-2

Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_

Calibration File: \_\_\_\_\_ Curve Date: 2/2/10 63  
6/29/10 BETX

IS/SS	Ical/Ccal	LCS/ICV
<u>VW632-2</u>	<u>VW607-1</u>	<u>VW629-4</u>
	<u>VW630-4</u>	
	<u>VW629-4</u>	

Time	Filename	LabID	ClientID	Vial#	pH	DF			
1	0548	0629a001.d				1	23	1611	0629a023.d RB54H
2	0613	0629a002.d	RT-BCAL 1			1			02-1
3	0637	0629a003.d	GCAL 1			1			4 1 1
4	0735	0629a004.d	RINSE			1			
5	0759	0629a005.d	BETX .25			1			
6	0824	0629a006.d	BETX .5			1			
7	0848	0629a007.d	BETX 5			1			
8	0912	0629a008.d	BETX 25			1			
9	0937	0629a009.d	BETX 50			1			
10	1001	0629a010.d	BETX 100			1			
11	1026	0629a011.d	BETX 200			1			
12	1050	0629a012.d	BETX ICV			1			
13	1145	0629a013.d	GCAL 2			1			
14	1210	0629a014.d	LCS0629			1			
15	1234	0629a015.d	LCS0629			1			
16	1259	0629a016.d	MB0629			1			
17	1344	0629a017.d	RC1B9	Trip Blank		2 1 1			
18	1408	0629a018.d	RC1B8	Sample 1		2 1 1			
19	1433	0629a019.d	RB54D	92-8S		8 1 1			
20	1458	0629a020.d	RB54E	92-9S		4 1 1			
21	1522	0629a021.d	RB54F	92-10S		4 1 1			
22	1547	0629a022.d	RB54G	51-2		3 1 1			



MH  
7/1/10

## Maintenance / Comments

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):  
Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-JUN-2010 07:59  
 End Cal Date : 29-JUN-2010 10:26  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid3.i/20100629-1.b/PIDB.m  
 Cal Date : 29-Jun-2010 11:12 monicah  
 Curve Type : Average

Calibration File Names:

Level 1: /chem3/pid3.i/20100629-1.b/0629a005.d/0629a005.cdf  
 Level 2: /chem3/pid3.i/20100629-1.b/0629a006.d/0629a006.cdf  
 Level 3: /chem3/pid3.i/20100629-1.b/0629a007.d  
 Level 4: /chem3/pid3.i/20100629-1.b/0629a008.d  
 Level 5: /chem3/pid3.i/20100629-1.b/0629a009.d  
 Level 6: /chem3/pid3.i/20100629-1.b/0629a010.d  
 Level 7: /chem3/pid3.i/20100629-1.b/0629a011.d

Compound	0.25000	0.50000	5.000	25.000	50.000	100.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	200.000							
	Level 7							
1 MTBE	464 343	288	367	346	348	334	356	15.046
2 Benzene	1564 1254	1462	1257	1240	1256	1221	1322	10.156
4 Toluene	1608 1294	1252	1288	1275	1275	1247	1320	9.717
15 Chlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
5 Ethylbenzene	1404 1183	1420	1164	1185	1190	1152	1243	9.380
6 M/P-Xylene	1614 1268	1381	1314	1300	1302	1247	1347	9.293

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-JUN-2010 07:59  
 End Cal Date : 29-JUN-2010 10:26  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid3.i/20100629-1.b/PIDB.m  
 Cal Date : 29-Jun-2010 11:12 monicah  
 Curve Type : Average

Compound	0.25000	0.50000	5.000	25.000	50.000	100.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	200.000							
	Level 7							
7 O-Xylene	1352 1307	1232	1295	1269	1282	1256	1285	3.016
13 1,3,5 Trimethylbenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
14 1,2,4 Trimethyl benzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
16 1,3 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
17 1,4 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
18 1,2 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
\$ 3 TFT(Surr)	243 219	220	213	214	217	212	220	4.943
\$ 8 BB(Surr)	496 463	451	434	440	456	450	456	4.411

Report Date : 29-Jun-2010 11:13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-JUN-2010 07:59  
 End Cal Date : 29-JUN-2010 10:26  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid3.i/20100629-2.b/FID.m  
 Cal Date : 29-Jun-2010 11:13 monicah  
 Curve Type : Average

Compound	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	0.000e+00							
	Level 7							
14 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++							
\$ 4 TFT(Surr)	78.13636 70.30000	73.54545	71.97015	70.36000	70.48120	69.03933	71.97607	4.271
\$ 9 BB(Surr)	48.72727 42.23000	43.22727	42.49254	41.18000	42.06767	41.53933	43.06630	5.994



14  
11/01/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a005.d  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a005.d  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m  
Instrument: pid3.i  
Gas Ical Date: 02-FEB-2010  
BETX Ical Date: 29-JUN-2010

ARI ID: BETX .25  
Client ID:  
Injection Date: 29-JUN-2010 07:59  
Matrix: WATER  
Dilution Factor: 1.000

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.418	-0.021	1719	20323	23.9	TFT(Surr)
14.897	-0.015	1072	10075	24.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	23668	0.034
8015B 2MP-TMB ( 4.93 to 15.54)	22061	0.016
AK101 nC6-nC10 ( 5.50 to 14.63)	15306	0.014
NWTPHG Tol-Nap (10.21 to 18.23)	24708	0.033

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

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.417	-0.021	5356	24.4	TFT(Surr)
14.893	-0.016	10910	23.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.694	-0.019	391	0.30	Benzene
10.287	-0.021	402	0.30N	Toluene
12.817	-0.030	351	0.28N	Ethylbenzene
12.955	-0.034	807	0.60	M/P-Xylene
13.737	-0.025	338	0.26N	O-Xylene
5.283	-0.017	116	0.33N	MTBE

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

Data File: /chem3/pid3.i/20100629-2.b/0629a005.d

Date : 29-JUN-2010 07:59

Client ID:

Sample Info: BETX .25

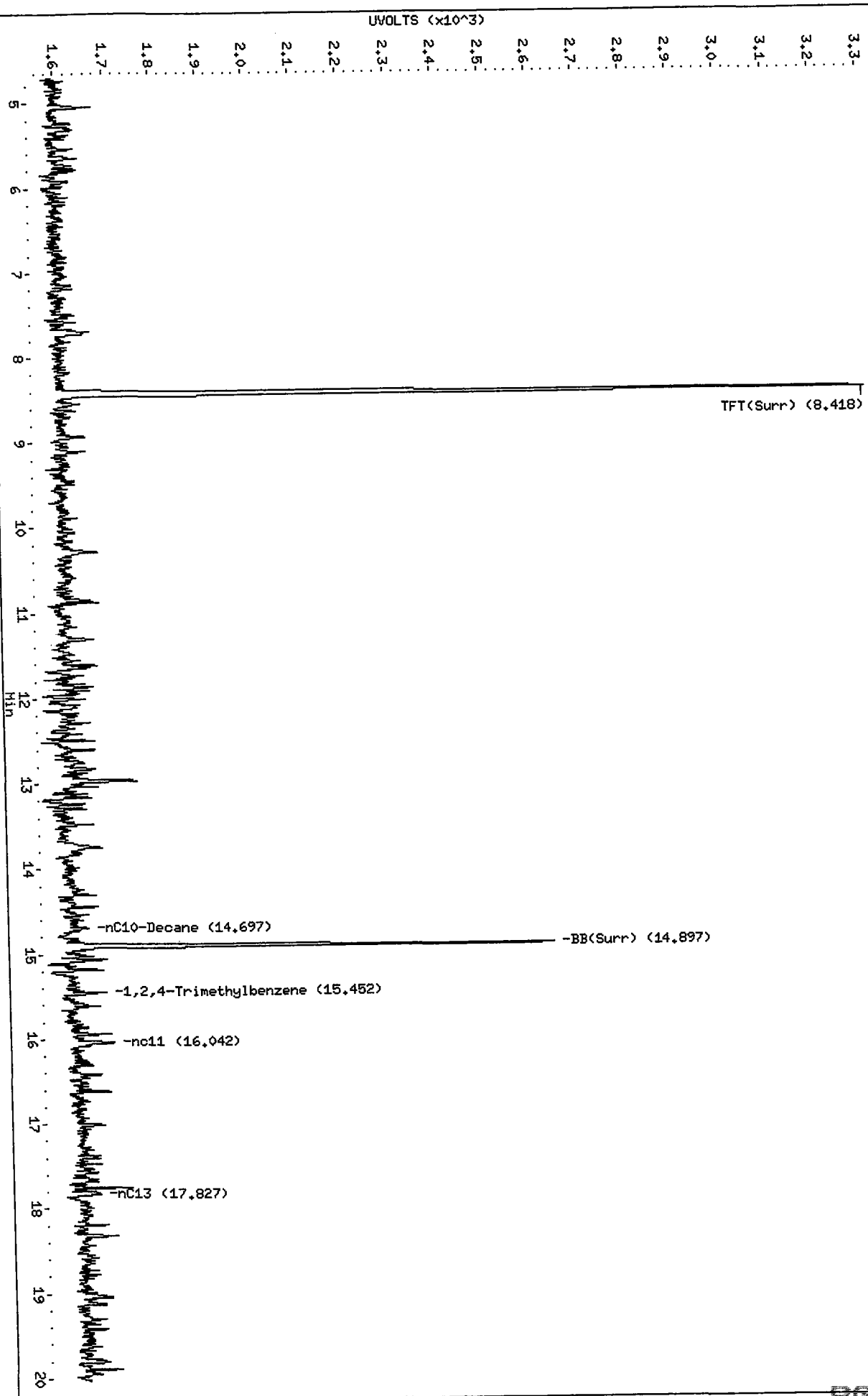
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a005.d/0629a005.cdf

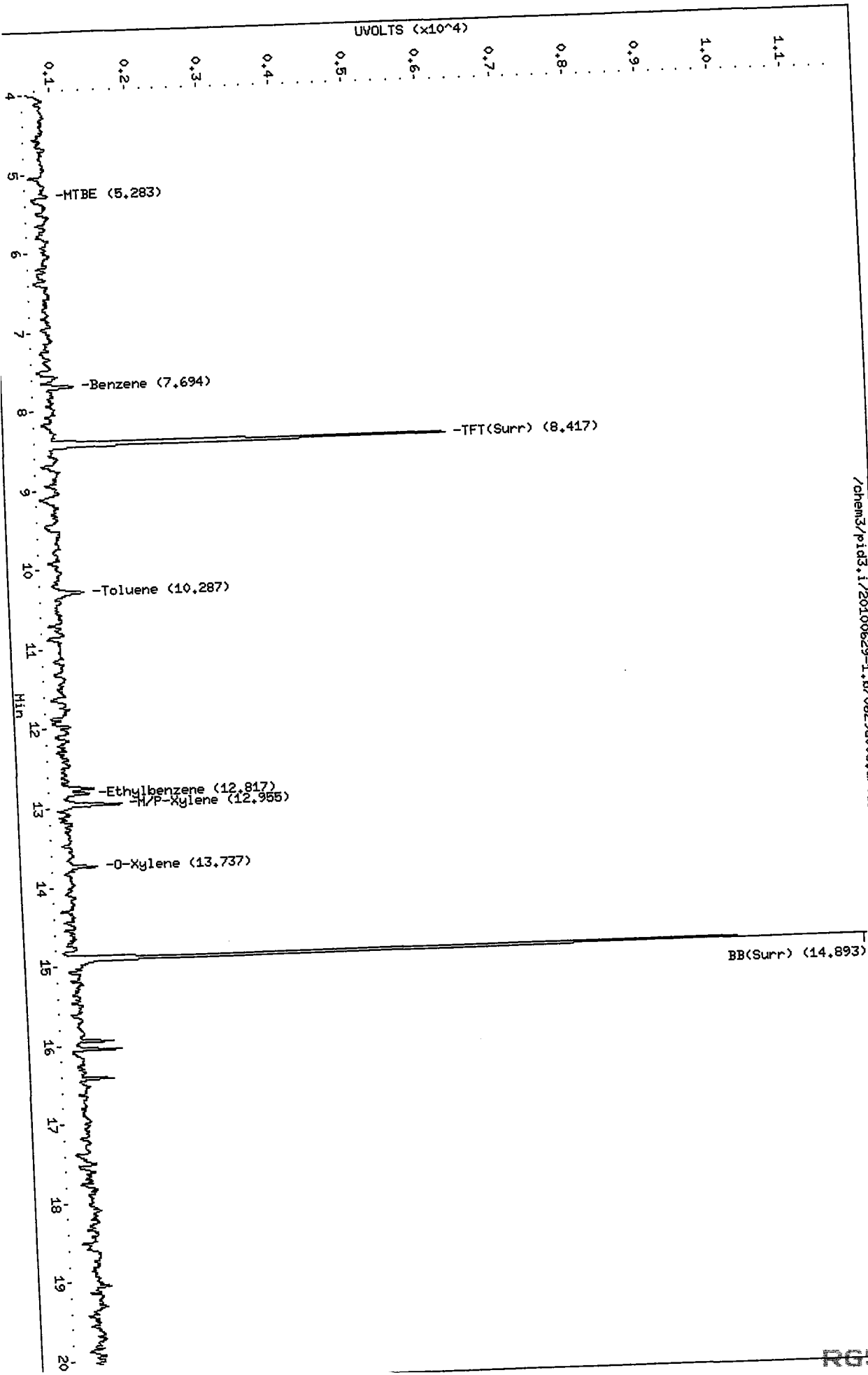


Data File: /chem3/pid3.i/20100629-1.b/0629a005.d  
Date: 29-JUN-2010 07:59  
Client ID:  
Sample Info: BETX .25

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100629-1.b/0629a005.d/0629a005.cdf

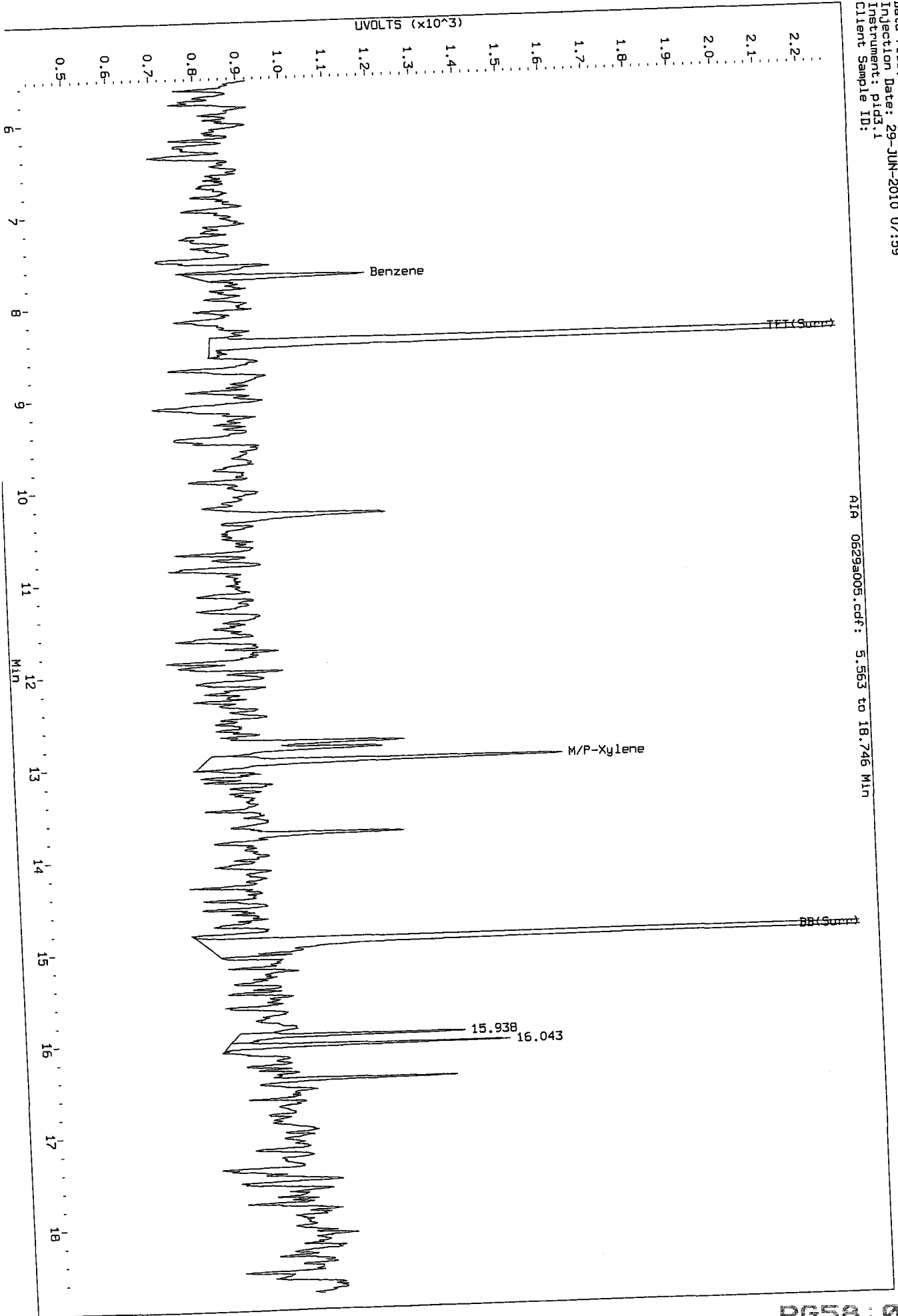
Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



7/10/10

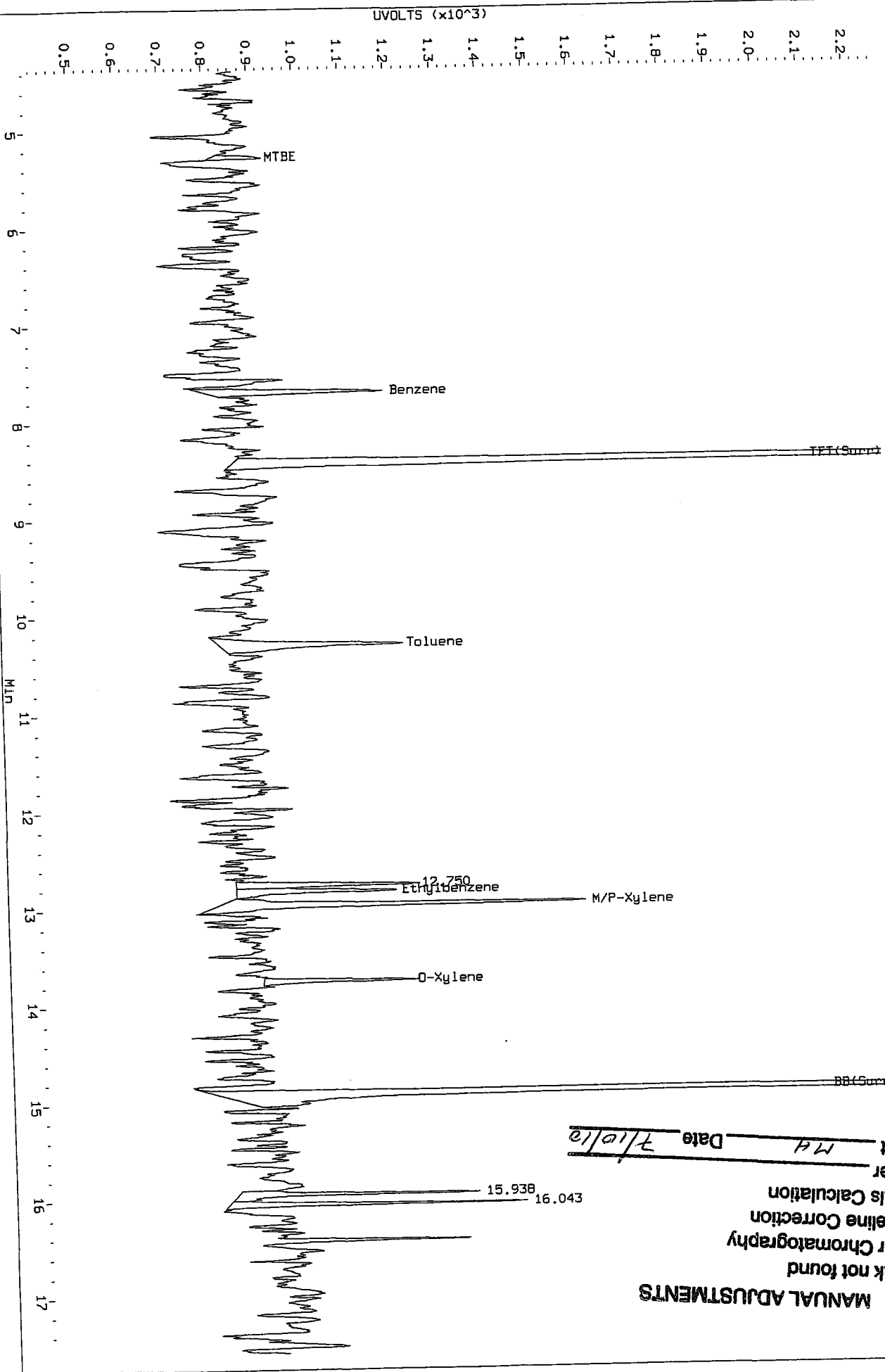
Data File: /chem3/pid3.1/20100629-1.b/0629a005.d/0629a005.cdf  
Injection Date: 29-JUN-2010 07:59  
Instrument: pid3.1  
Client Sample ID:

AIR 0629a005.cdf: 5.563 to 18.746 MIN



Data File: /chem3/pid3.1/20100629-1.b/0629a005.d/0629a005.cdf  
Injection Date: 29-JUN-2010 07:59  
Instrument: pid3.1  
Client Sample ID:

AIA 0629a005.cdf: 4.391 to 17.575 MIN



**MANUAL ADJUSTMENTS**  
X Peak not found  
2 Poor Chromatography  
3 Baseline Correction  
4 Totals Calculation  
5 Other  
Analyst: MA Date: 7/10/10

4  
7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a006.d      ARI ID: BETX .5  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a006.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 08:24  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                   Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.430	-0.008	3236	38151	45.0	TFT(Surr)
14.906	-0.006	1902	15702	44.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	29425	0.042
8015B 2MP-TMB ( 4.93 to 15.54)	33980	0.025
AK101 nC6-nC10 ( 5.50 to 14.63)	33979	0.031
NWTPHG Tol-Nap (10.21 to 18.23)	34396	0.046

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

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.429	-0.008	9683	44.0	TFT(Surr)
14.904	-0.006	19865	43.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.706	-0.007	731	0.55	Benzene
10.297	-0.011	626	0.47N	Toluene
12.832	-0.015	710	0.57	Ethylbenzene
12.969	-0.020	1381	1.03	M/P-Xylene
13.750	-0.012	616	0.48N	O-Xylene
5.300	-0.001	144	0.40N	MTBE

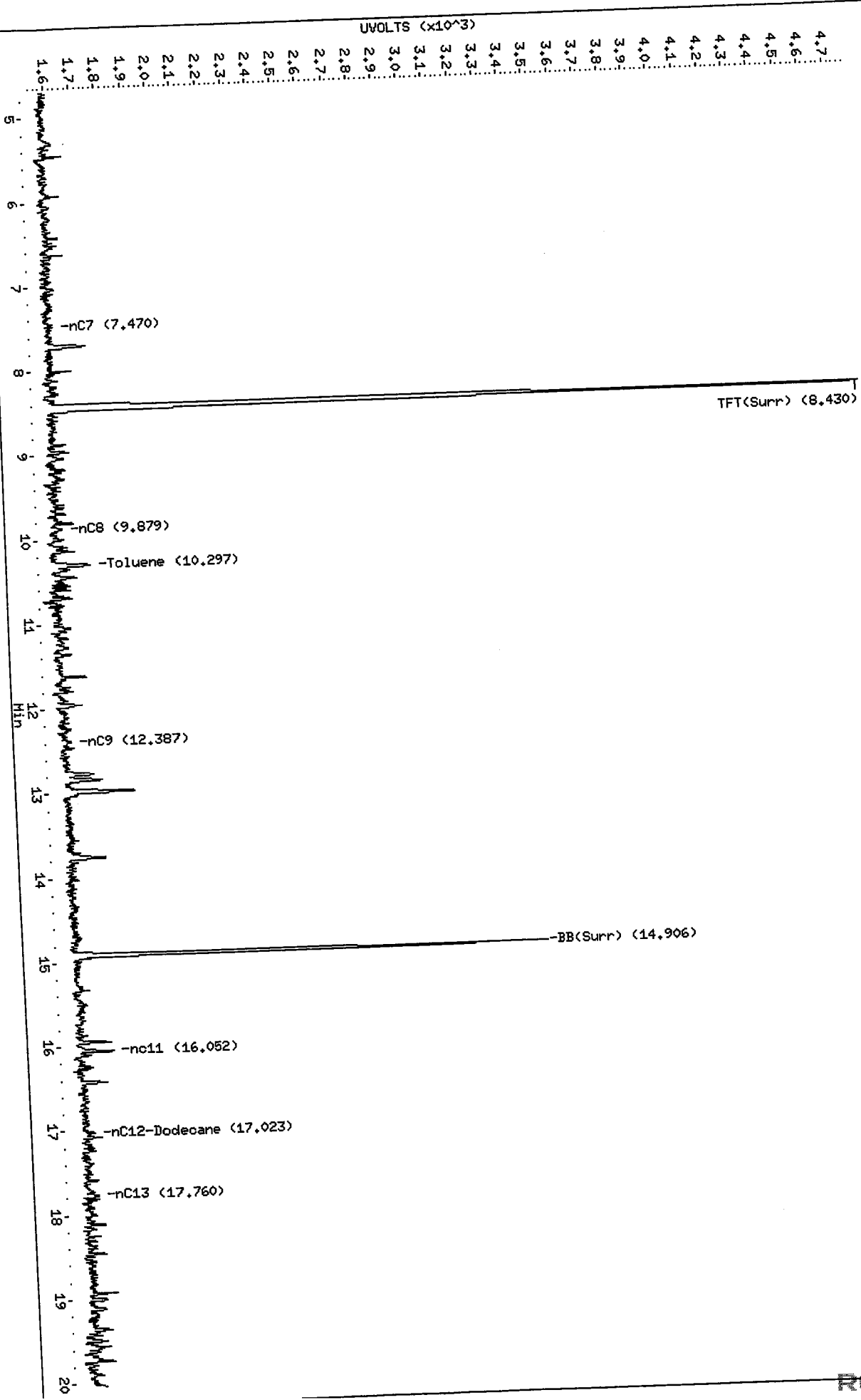
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a006.d  
Date: 29-JUN-2010 08:24  
Client ID:  
Sample Info: BETX .5

Column phase: RTX 502-2 FID

/chem3/pid3.i/20100629-2.b/0629a006.d/0629a006.cdf

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100629-1.b/0629a006.d

Date: 29-JUN-2010 08:24

Client ID:

Sample Info: BETX .5

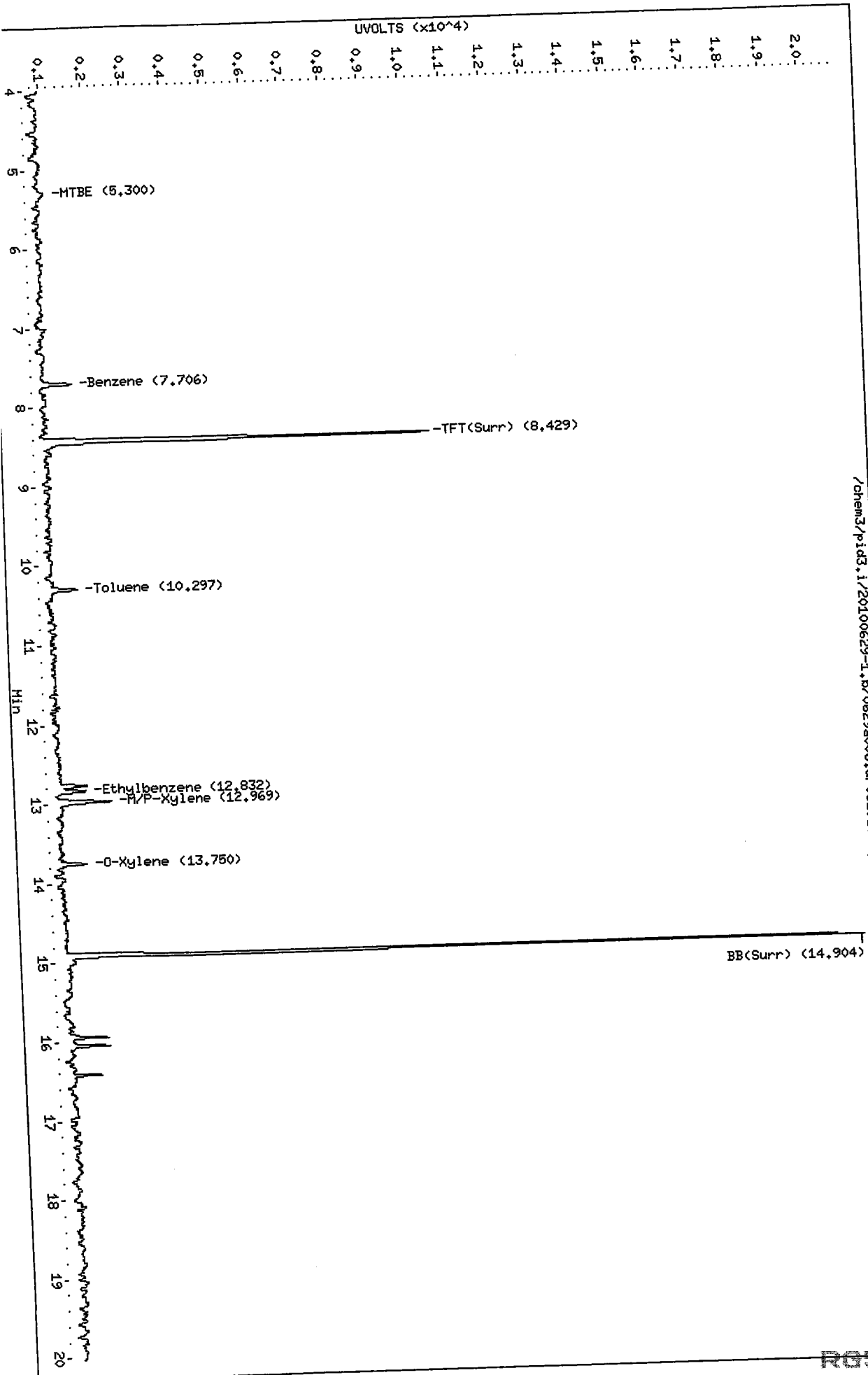
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

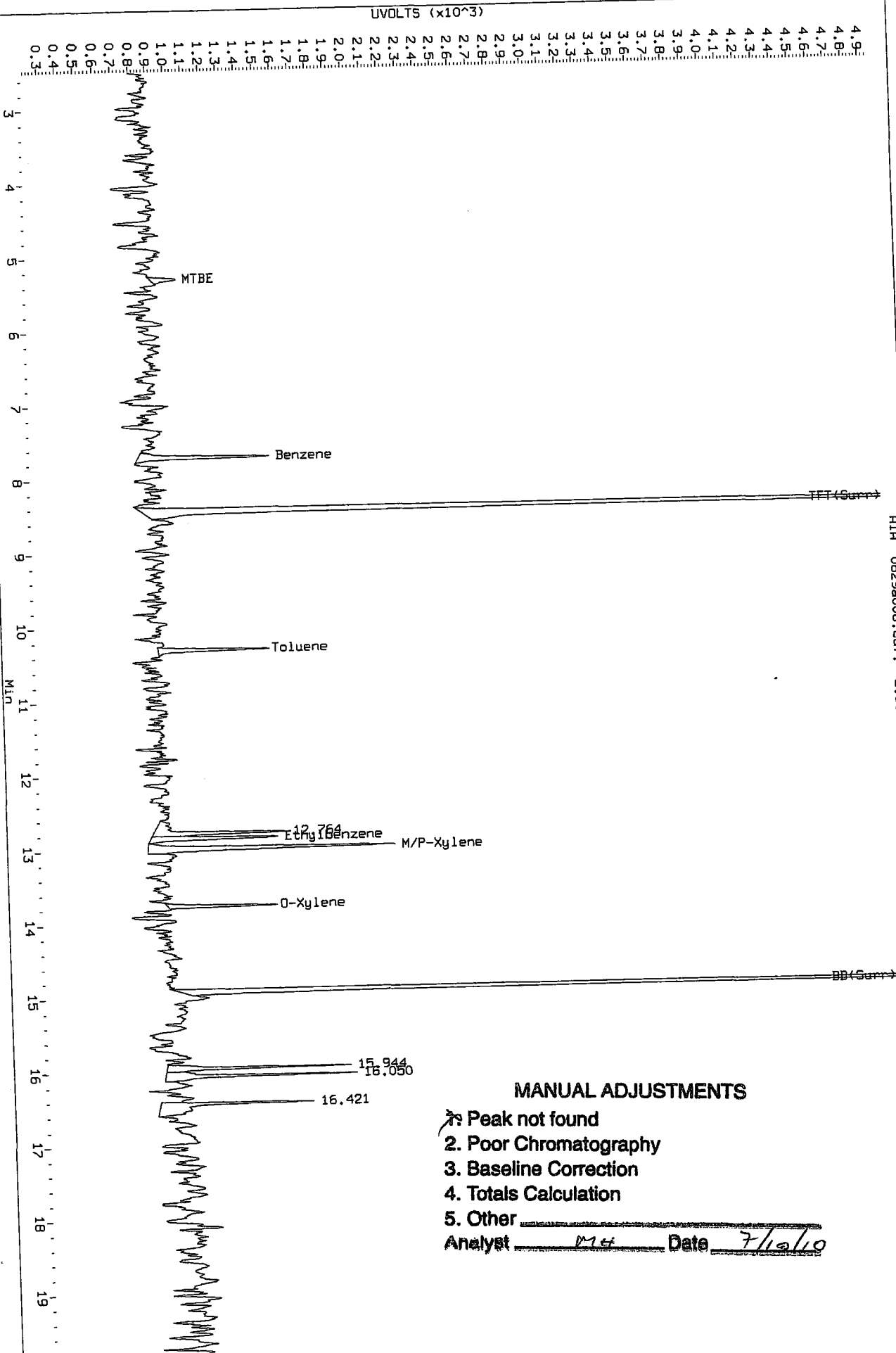
/chem3/pid3.i/20100629-1.b/0629a006.d/0629a006.cdf





Data File: /chem3/pid3.1/20100629-1.b/0629a006.d/0629a006.cdf  
 Injection Date: 29-JUN-2010 08:24  
 Instrument: pid3.1  
 Client Sample ID:

AIA 0629a006.cdf: 2.508 to 19.819 MIN



**MANUAL ADJUSTMENTS**

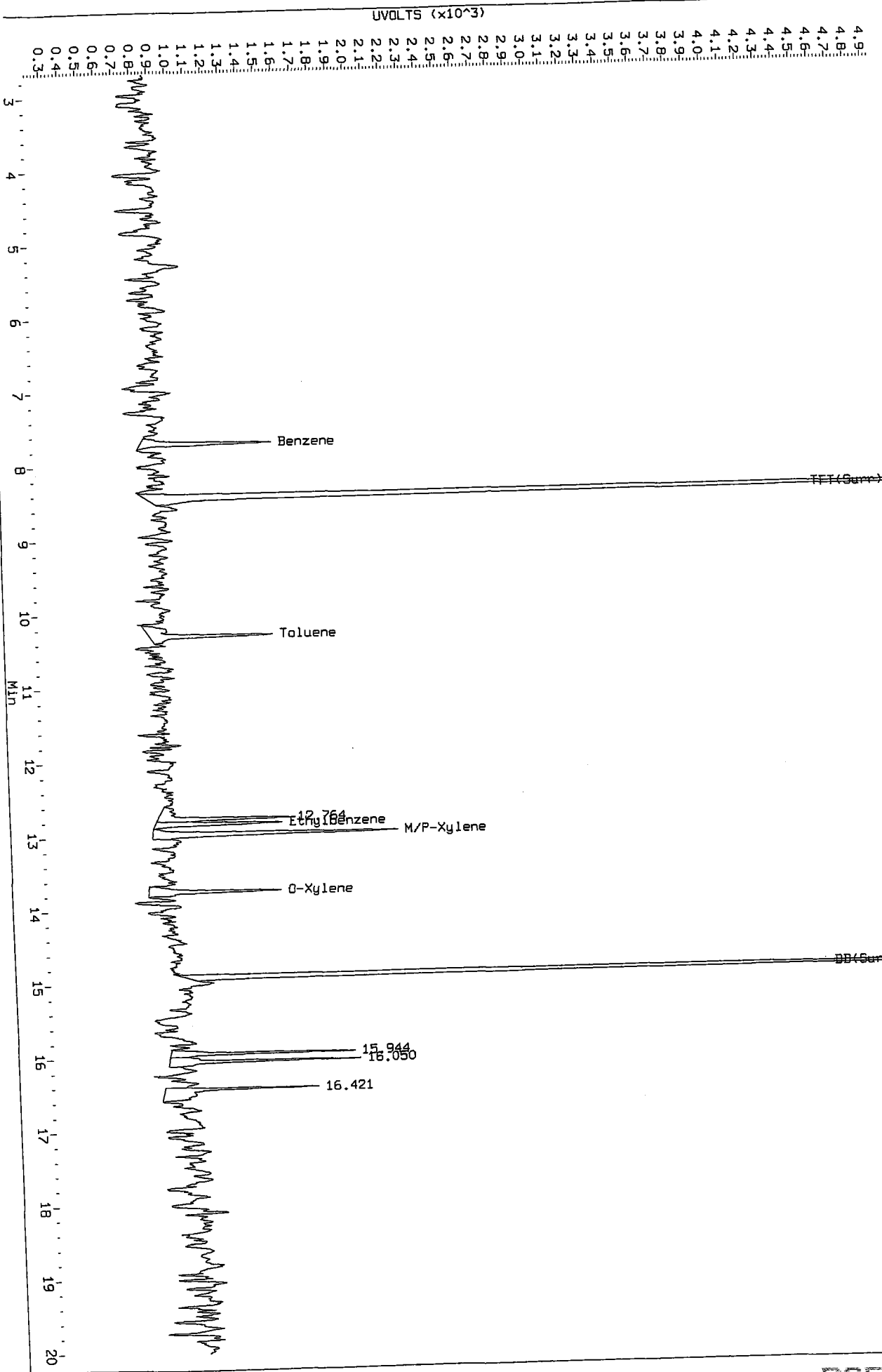
- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

Analyst: M4 Date: 7/10/10

MIT  
10/10/10

Data File: /chem3/pld3.i/20100629-1.b/0629a006.d/0629a006.cdf  
Injection Date: 29-JUN-2010 08:24  
Instrument: pld3.1  
Client Sample ID:

AIA 0629a006.cdf: 2.708 to 20.012 Min



4  
11/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a007.d      ARI ID: BETX 5  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a007.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 08:48  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
8.435	-0.003	4822	56817	67.0	TFT(Surr)
14.908	-0.003	2847	24157	66.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas Tol-C12 (10.21 to 17.13)	137046	0.197
8015B 2MP-TMB ( 4.93 to 15.54)	118984	0.088
AK101 nC6-nC10 ( 5.50 to 14.63)	107982	0.100
NWTPHG Tol-Nap (10.21 to 18.23)	152307	0.206

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

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
8.434	-0.003	14296	65.0	TFT(Surr)
14.907	-0.003	29105	63.8	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.709	-0.004	6287	4.76	Benzene
10.302	-0.006	6442	4.88	Toluene
12.837	-0.010	5819	4.68	Ethylbenzene
12.974	-0.015	13142	9.76	M/P-Xylene
13.753	-0.009	6477	5.04	O-Xylene
5.297	-0.003	1833	5.15	MTBE

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

Data File: /chem3/pid3.i/20100629-2.b/0629a007.d

Date: 29-JUN-2010 08:48

Client ID:

Sample Info: BETX 5

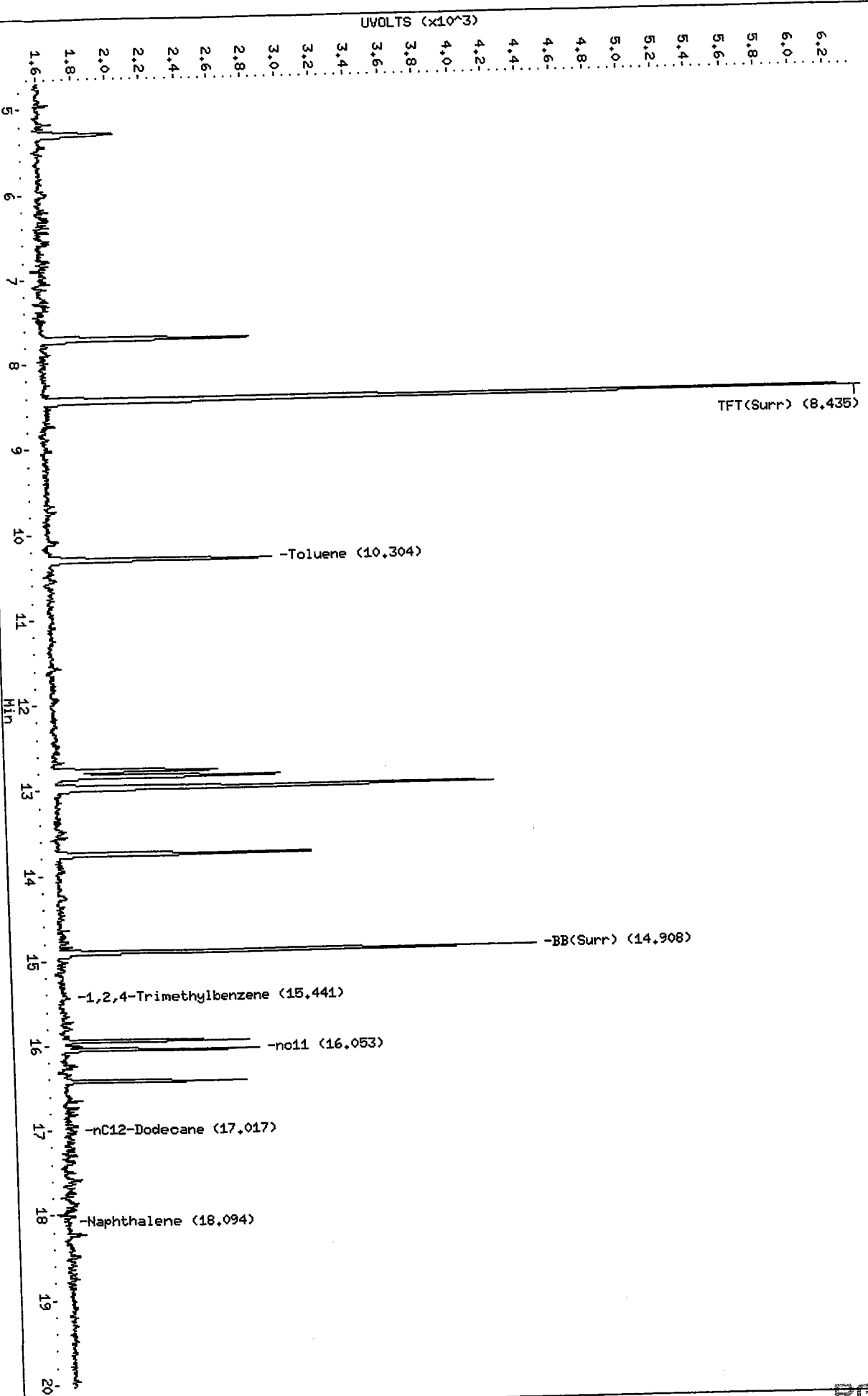
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a007.d/0629a007.cdf



Data File: /chem3/pid3.i/20100629-1.b/0629a007.d  
Date: 29-JUN-2010 08:48

Instrument: pid3.i

Client ID:

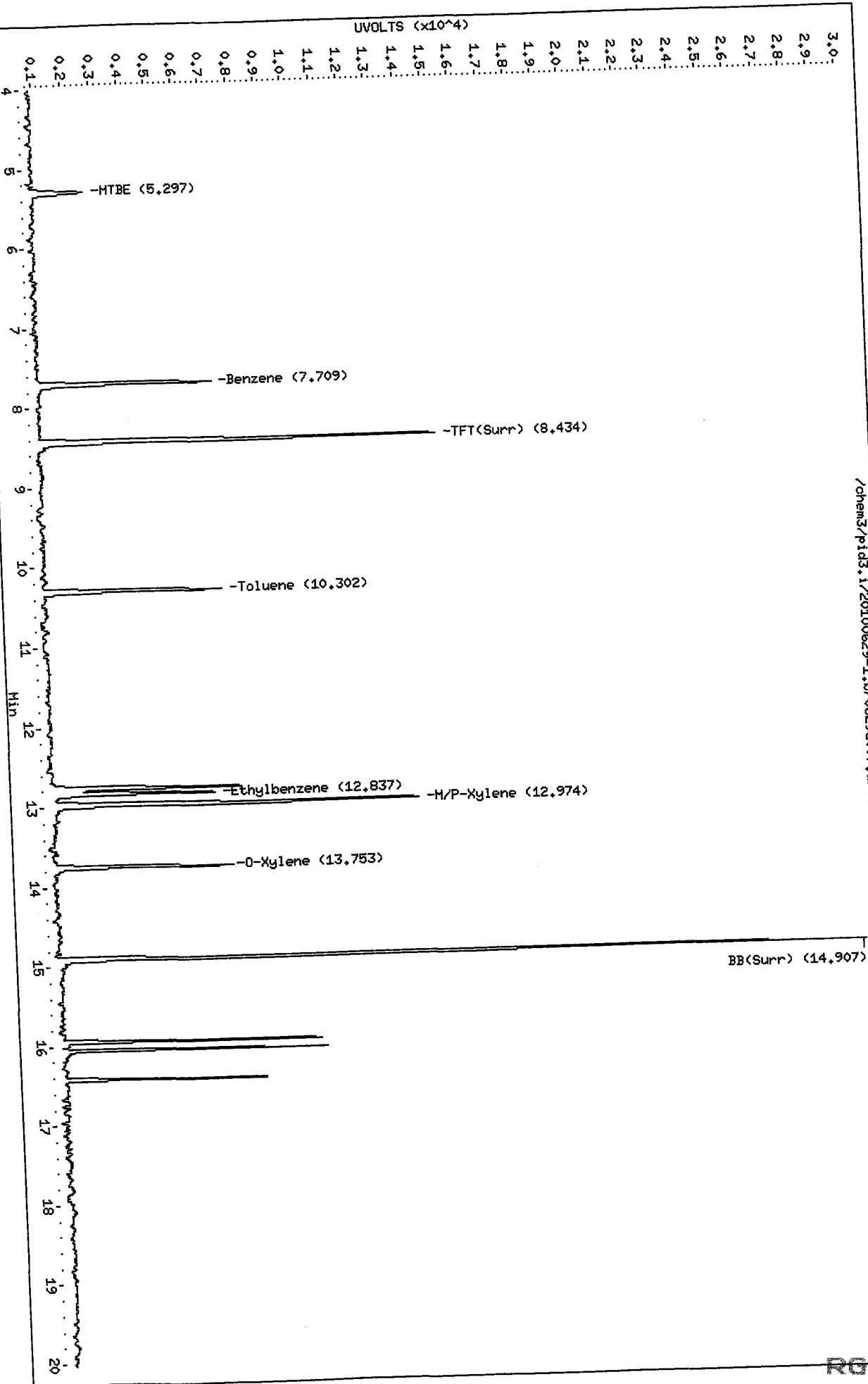
Operator: MH

Sample Info: BETX 5

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100629-1.b/0629a007.d/0629a007.pdf



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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a008.d  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a008.d  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m  
Instrument: pid3.i  
Gas Ical Date: 02-FEB-2010  
BETX Ical Date: 29-JUN-2010

ARI ID: BETX 25  
Client ID:  
Injection Date: 29-JUN-2010 09:12  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.000	7036	82252	97.8	TFT (Surr)
14.911	-0.001	4118	35649	95.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	554289	0.797
8015B 2MP-TMB ( 4.93 to 15.54)	539482	0.398
AK101 nC6-nC10 ( 5.50 to 14.63)	505710	0.468
NWTPHG Tol-Nap (10.21 to 18.23)	562868	0.760

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

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.436	-0.001	21401	97.4	TFT (Surr)
14.908	-0.002	44020	96.6	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.712	-0.001	31003	23.45	Benzene
10.304	-0.004	31867	24.14	Toluene
12.840	-0.007	29632	23.85	Ethylbenzene
12.977	-0.012	65022	48.28	M/P-Xylene
13.755	-0.007	31715	24.68	O-Xylene
5.300	-0.001	8658	24.33	MTBE

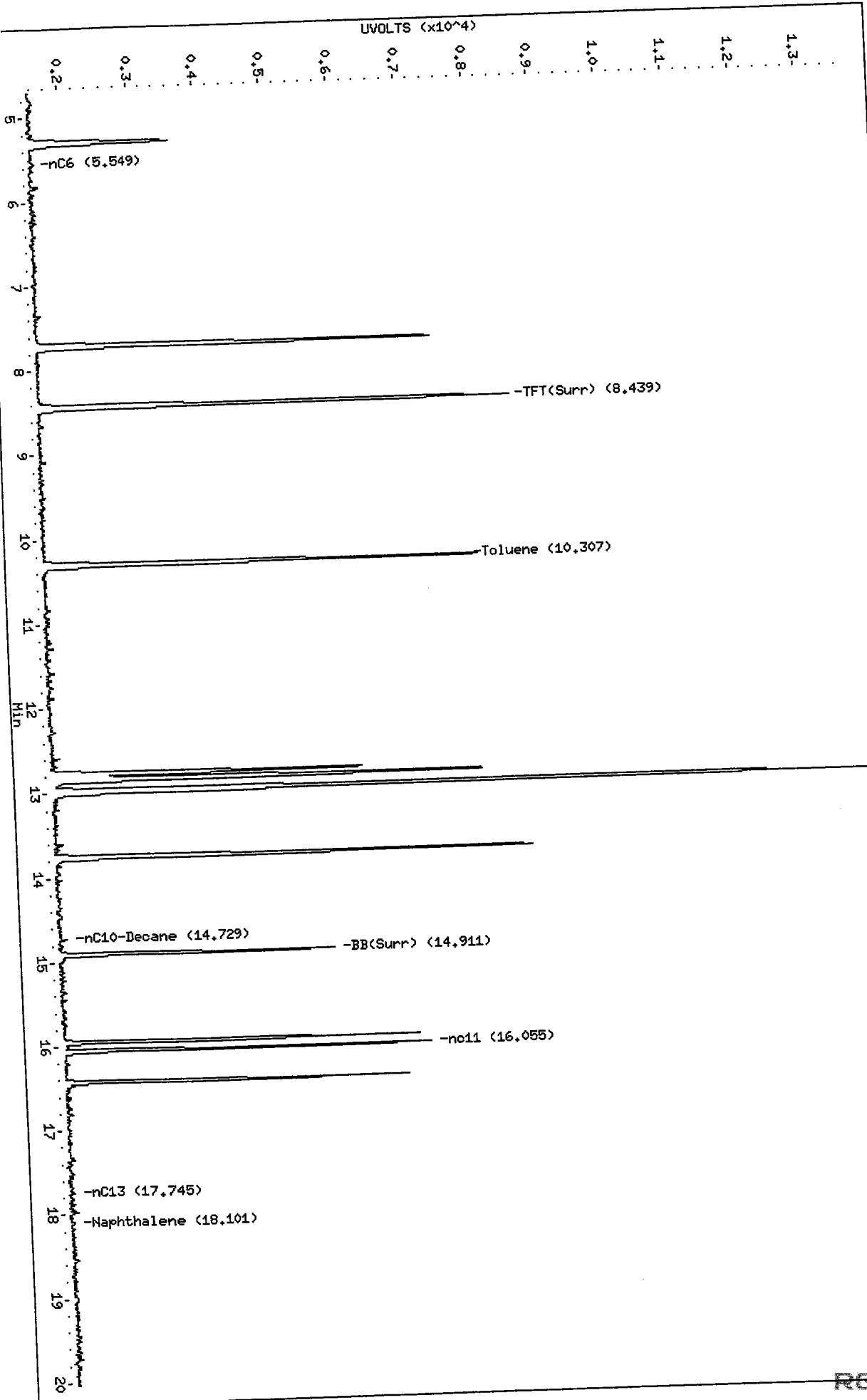
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a008.d  
Date: 29-JUN-2010 09:12  
Client ID:  
Sample Info: BETX 25

Column phase: RTX 502-2 FID

/chem3/pid3.i/20100629-2.b/0629a008.d/0629a008.cdf

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

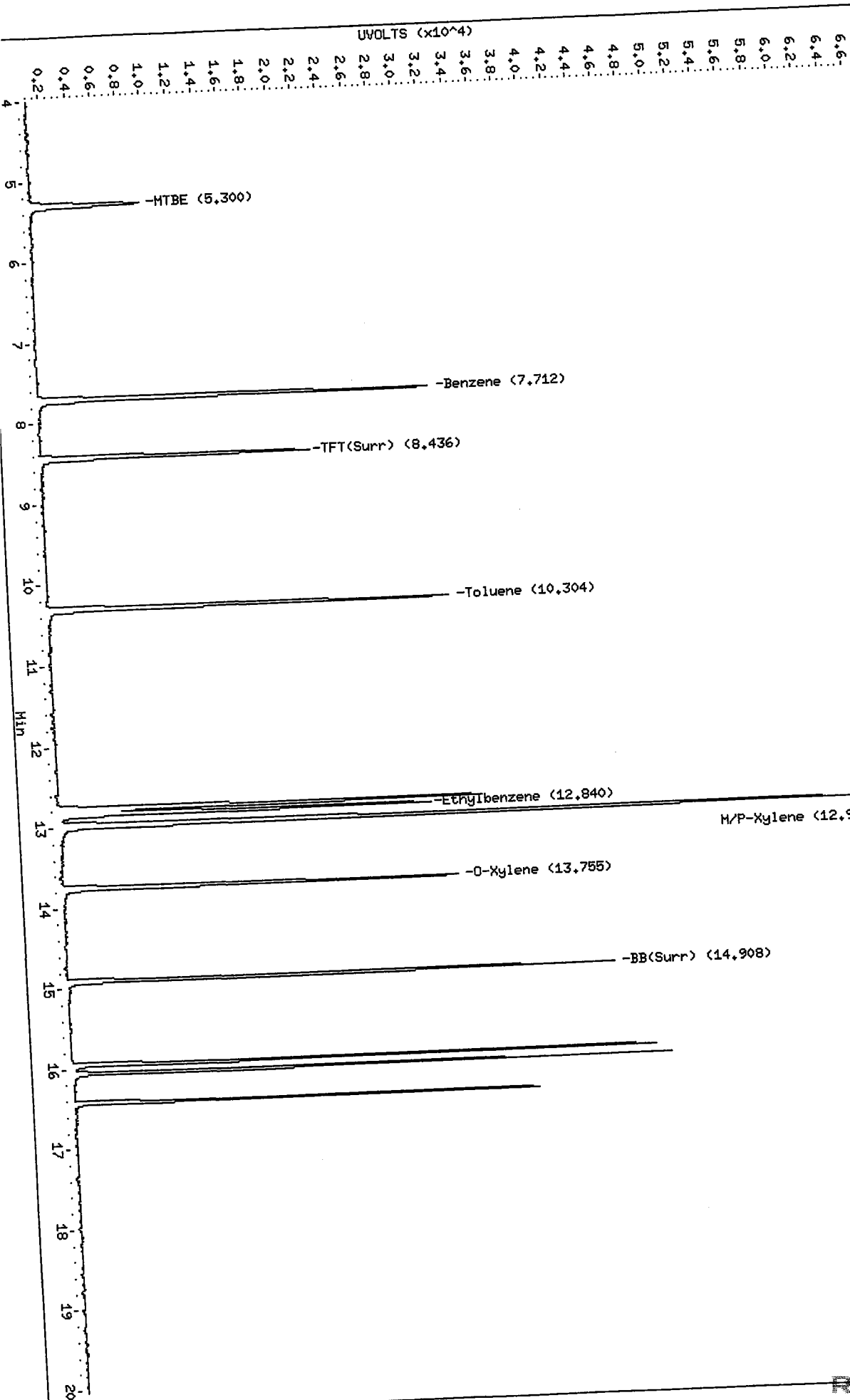


Data File: /chem3/pid3.i/20100629-1.b/0629a008.d  
Date: 29-JUN-2010 09:12  
Client ID:  
Sample Info: BETX 25

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100629-1.b/0629a008.d/0629a008.cdf





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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a009.d  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a009.d  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m  
Instrument: pid3.i  
Gas Ical Date: 02-FEB-2010  
BETX Ical Date: 29-JUN-2010

ARI ID: BETX 50  
Client ID:  
Injection Date: 29-JUN-2010 09:37  
Matrix: WATER  
Dilution Factor: 1.000

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.438	-0.001	9374	110805	130.2	TFT (Surr)
14.911	-0.001	5595	46087	129.9	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas Tol-C12 (10.21 to 17.13)	1045595	1.504
8015B 2MP-TMB ( 4.93 to 15.54)	1041320	0.768
AK101 nC6-nC10 ( 5.50 to 14.63)	978534	0.906
NWTPHG Tol-Nap (10.21 to 18.23)	1053990	1.423

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

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.436	-0.001	28902	131.5	TFT (Surr)
14.909	-0.001	60660	133.1	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.711	-0.002	62822	47.52	Benzene
10.305	-0.003	63750	48.30	Toluene
12.841	-0.006	59507	47.89	Ethylbenzene
12.979	-0.010	130181	96.67	M/P-Xylene
13.757	-0.005	64099	49.89	O-Xylene
5.298	-0.003	17422	48.97	MTBE

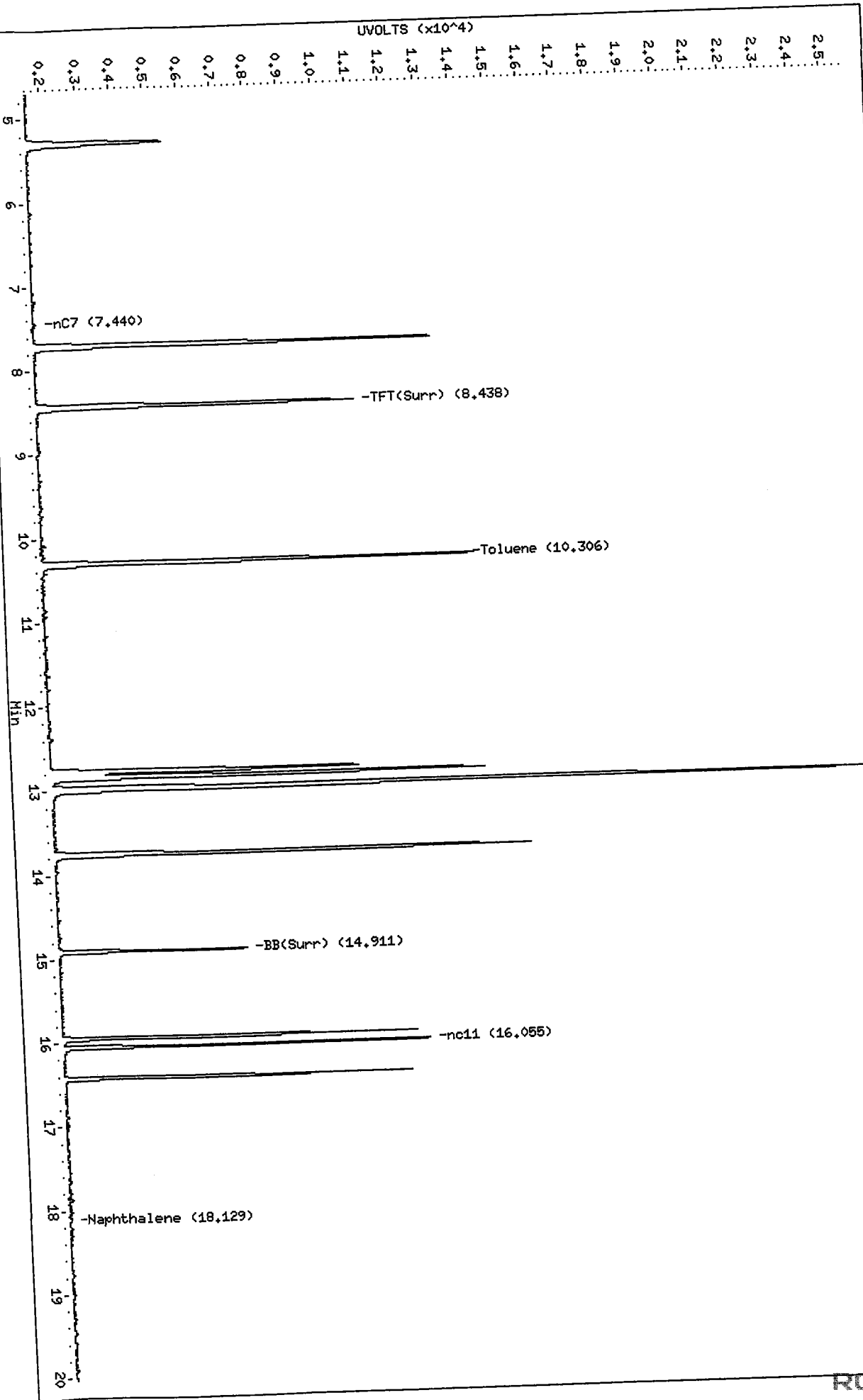
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a009.d  
Date : 29-JUN-2010 09:37  
Client ID:  
Sample Info: BETX 50

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a009.d/0629a009.cdf

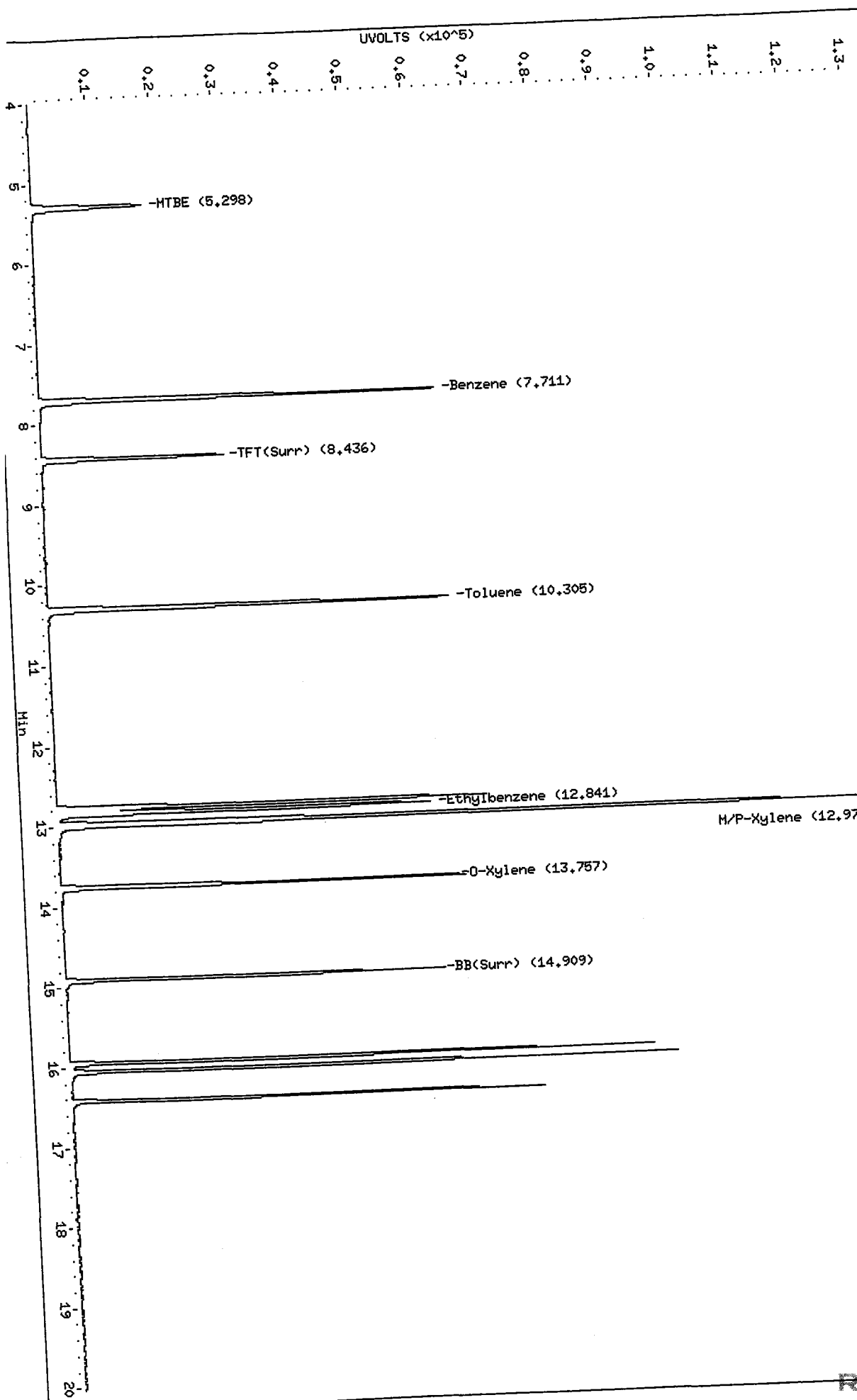


Data File: /chem3/pid3.i/20100629-1.b/0629a009.d  
Date: 29-JUN-2010 09:37  
Client ID:  
Sample Info: BETX 50

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100629-1.b/0629a009.d/0629a009.cdf

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a010.d  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a010.d  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m  
Instrument: pid3.i  
Gas Ical Date: 02-FEB-2010  
BETX Ical Date: 29-JUN-2010

ARI ID: BETX 100  
Client ID:  
Injection Date: 29-JUN-2010 10:01  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.440	0.001	12289	144775	170.7	TFT(Surr)
14.912	0.001	7394	58577	171.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	2011481	2.893
8015B 2MP-TMB ( 4.93 to 15.54)	1982095	1.462
AK101 nC6-nC10 ( 5.50 to 14.63)	1860428	1.722
NWTPHG Tol-Nap (10.21 to 18.23)	2014004	2.719

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

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.438	0.001	37664	171.3	TFT(Surr)
14.910	0.001	80033	175.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.714	0.001	122057	92.32	Benzene
10.307	-0.001	124686	94.47	Toluene
12.844	-0.003	115194	92.70	Ethylbenzene
12.984	-0.006	249433	185.23	M/P-Xylene
13.759	-0.003	125630	97.78	O-Xylene
5.302	0.001	33414	93.91	MTBE

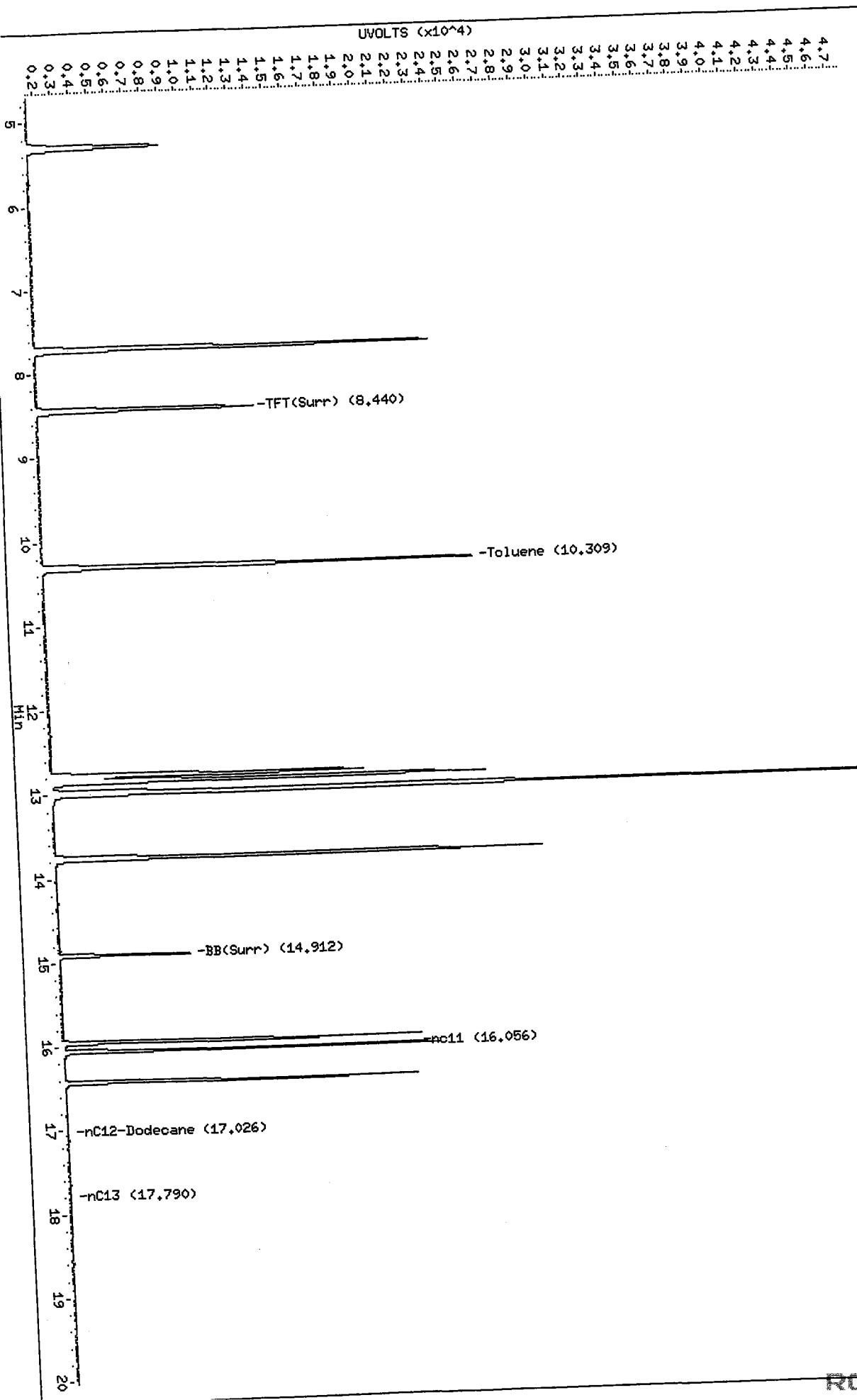
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a010.d  
Date: 29-JUN-2010 10:01  
Client ID:  
Sample Info: BETX 100

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid3.i/20100629-2.b/0629a010.d/0629a010.cdf

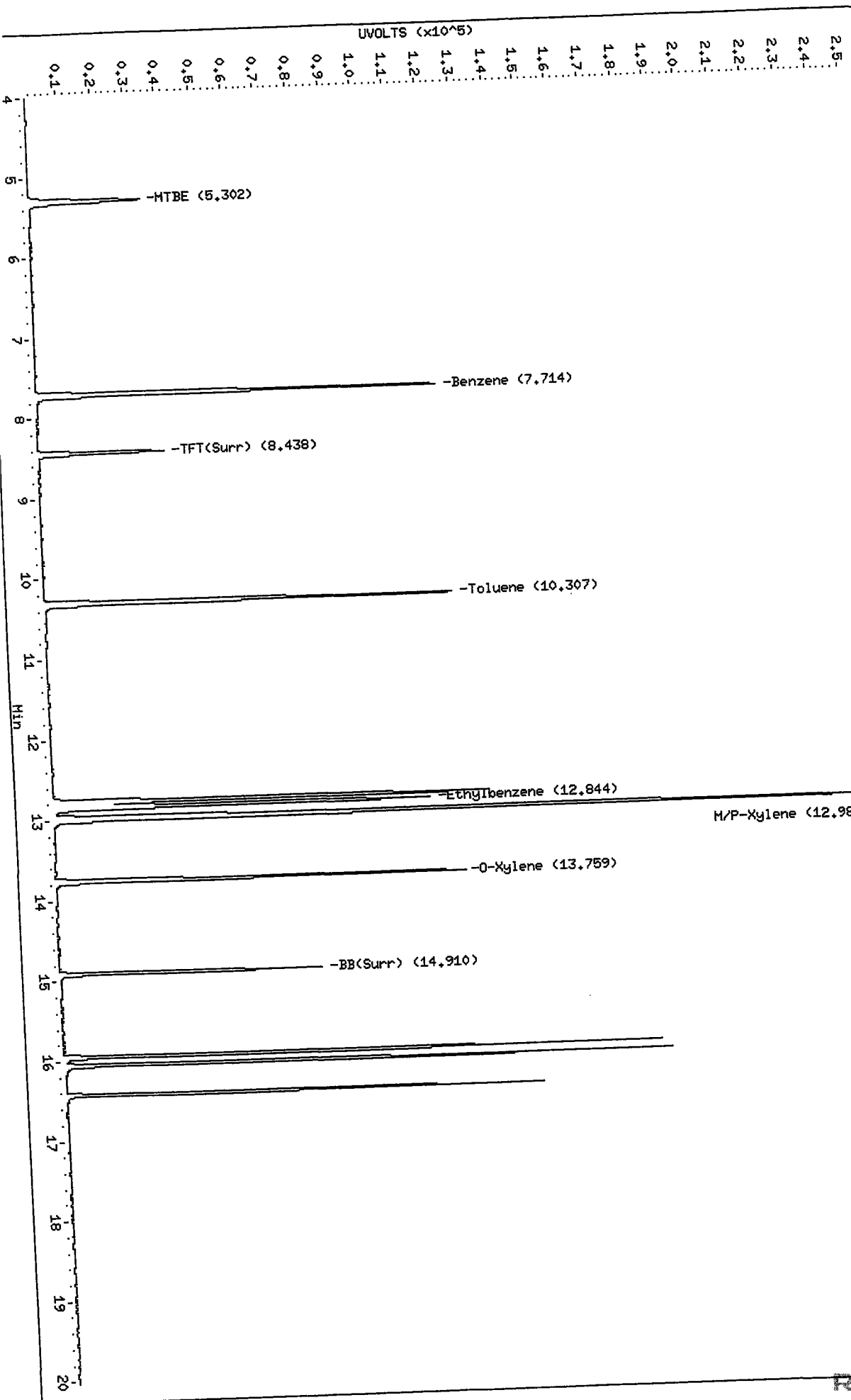


Data File: /chem3/pid3.i/20100629-1.b/0629a010.d  
Date: 29-JUN-2010 10:01  
Client ID:  
Sample Info: BETX 100

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100629-1.b/0629a010.d/0629a010.cdf

Instrument: pid3.i  
Operator: NH  
Column diameter: 0.18



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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a011.d  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a011.d  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m  
Instrument: pid3.i  
Gas Ical Date: 02-FEB-2010  
BETX Ical Date: 29-JUN-2010

ARI ID: BETX 200  
Client ID:  
Injection Date: 29-JUN-2010 10:26  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.000	14060	165027	195.3	TFT(Surr)
14.911	0.000	8446	67516	196.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	4138650	5.951
8015B 2MP-TMB ( 4.93 to 15.54)	4088735	3.015
AK101 nC6-nC10 ( 5.50 to 14.63)	3833098	3.547
NWTPHG Tol-Nap (10.21 to 18.23)	4139793	5.588

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

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.437	0.000	43804	199.3	TFT(Surr)
14.910	0.000	92698	203.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.713	0.000	250899	189.77	Benzene
10.308	0.000	258768	196.06	Toluene
12.847	0.000	236635	190.43	Ethylbenzene
12.989	0.000	507143	376.60	M/P-Xylene
13.762	0.000	261479	203.52	O-Xylene
5.301	0.000	68624	192.87	MTBE

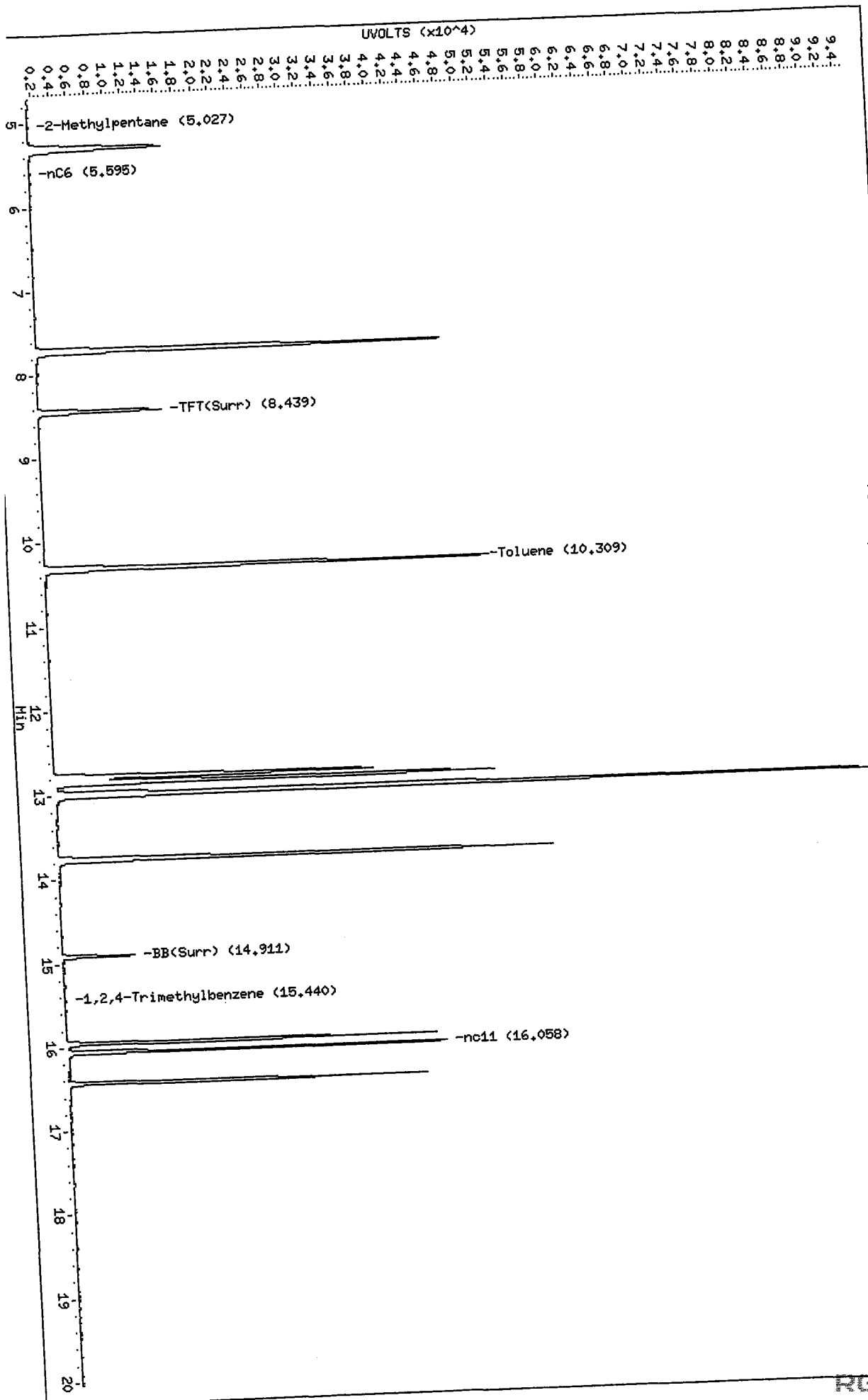
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a011.d  
Date: 29-JUN-2010 10:26  
Client ID:  
Sample Info: BETX 200

Column phase: RTX 502-2 FID

/chem3/pid3.i/20100629-2.b/0629a011.d/0629a011.cdf

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



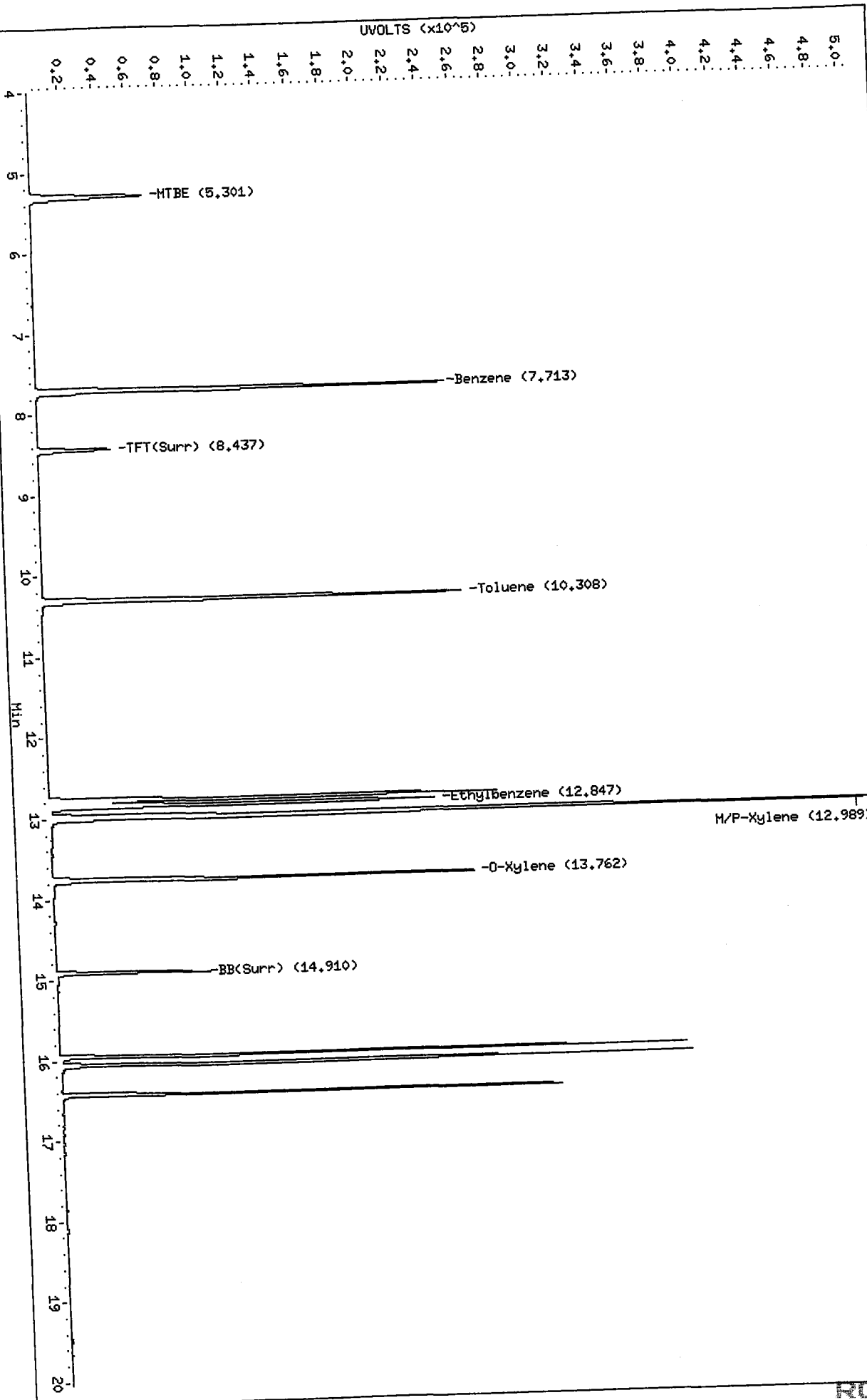


Data File: /chem3/pid3.i/20100629-1.b/0629a011.d  
Date: 29-JUN-2010 10:26  
Client ID:  
Sample Info: BETX 200

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a011.d/0629a011.cdf



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7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a012.d      ARI ID: BETX ICV  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a012.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 10:50  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	----	-----
8.439	0.000	6906	81786	95.9	TFT(Surr)
14.911	0.000	4128	34996	95.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas Tol-C12 (10.21 to 17.13)	577743	0.831
8015B 2MP-TMB ( 4.93 to 15.54)	579812	0.428
AK101 nC6-nC10 ( 5.50 to 14.63)	541769	0.501
NWTPHG Tol-Nap (10.21 to 18.23)	580332	0.783

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

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.437	0.000	21036	95.7	TFT(Surr)
14.909	0.000	44825	98.3	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.712	-0.001	34297	25.94	Benzene
10.305	-0.002	33530	25.40	Toluene
12.841	-0.005	30482	24.53	Ethylbenzene
12.979	-0.010	67184	49.89	M/P-Xylene
13.757	-0.005	32583	25.36	O-Xylene
5.300	-0.001	9537	26.80	MTBE

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

Data File: /chem3/pid3.i/20100629-2.b/0629a012.d

Date: 29-JUN-2010 10:50

Client ID:

Sample Info: BETX ICV

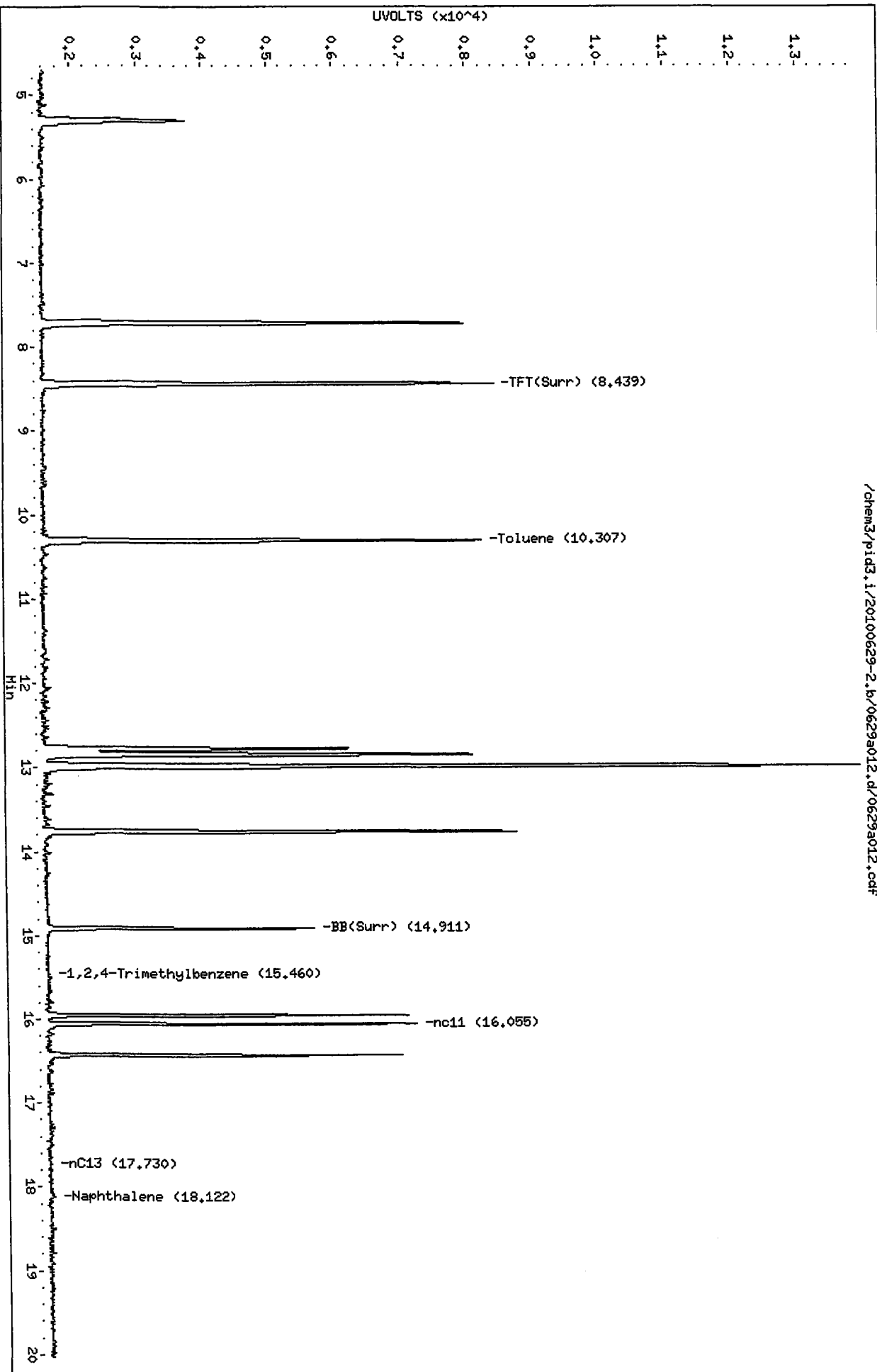
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a012.d/0629a012.cdf



Data File: /chem3/pid3.i/20100629-1.b/0629a012.d

Date: 29-JUN-2010 10:50

Client ID:

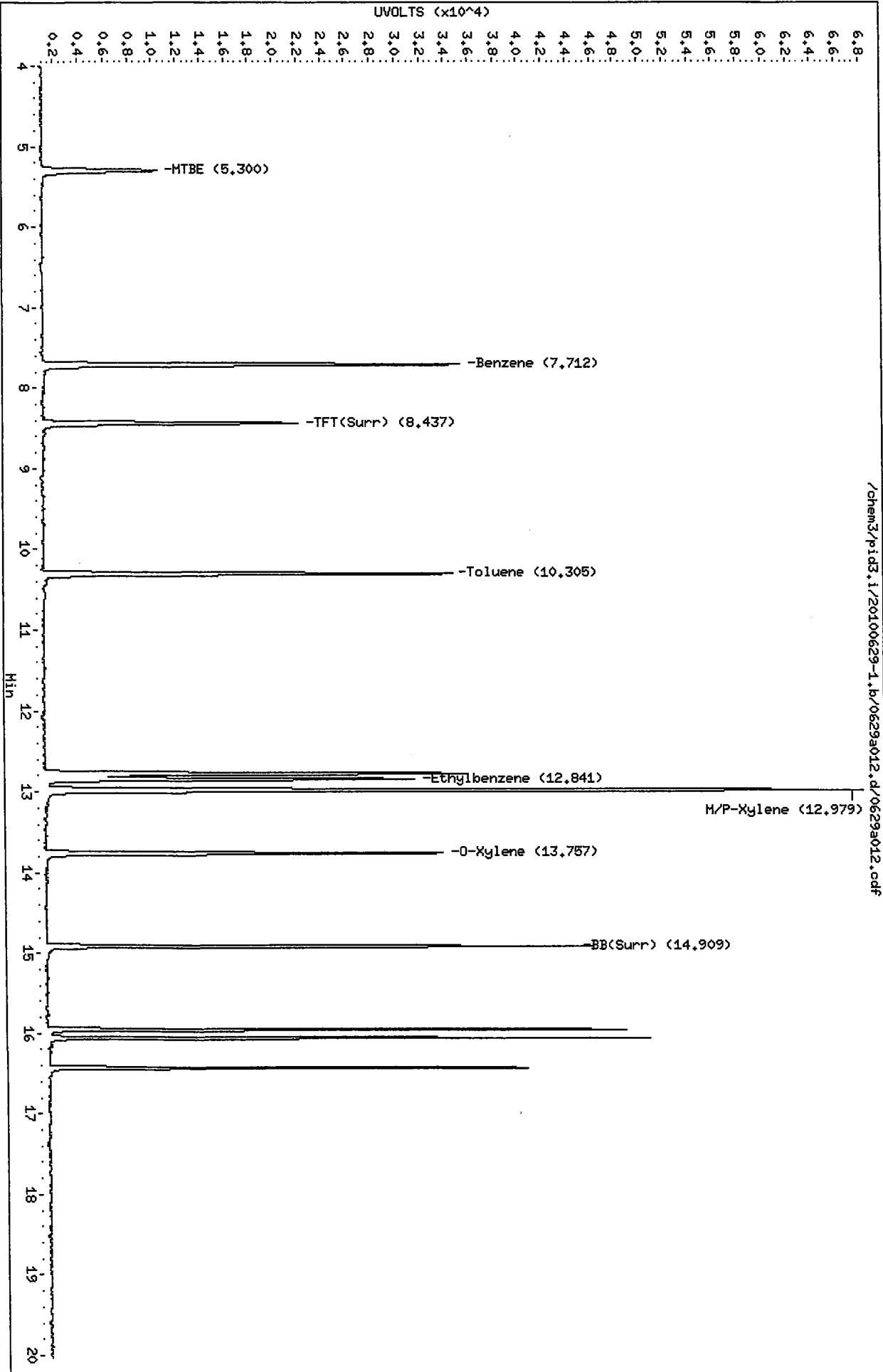
Sample Info: BETX ICV

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18





Report Date : 10-Jul-2010 08:08

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100629-1.b/PIDB.m  
Batch File: /chem3/pid3.i/20100629-1.b  
Inst ID: pid3.i

ID	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME: 0629a005	0629a006	0629a007	0629a008	0629a009	0629a010	0629a010	0629a011				
INJ.DATE: 29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010				
INJ.TIME: 07:59	08:24	08:48	09:12	09:37	10:01	10:01	10:26				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 MTBE	5.283	5.300	5.297	5.300	5.298	5.302	5.301	5.283	5.213-5.353	5.297	0.006
2 Benzene	7.694	7.706	7.709	7.712	7.711	7.714	7.713	7.694	7.624-7.764	7.708	0.007
3 TPT(Surr)	8.417	8.429	8.434	8.436	8.436	8.438	8.437	8.417	8.347-8.487	8.433	0.008
4 Toluene	10.287	10.297	10.302	10.304	10.305	10.307	10.308	10.287	10.217-10.357	10.301	0.007
15 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.765-12.905	+++++	+++++
5 Ethylbenzene	12.817	12.832	12.837	12.840	12.841	12.844	12.847	12.817	12.747-12.887	12.837	0.010
6 M/P-Xylene	12.955	12.969	12.974	12.977	12.979	12.984	12.989	12.955	12.885-13.025	12.975	0.011
7 O-Xylene	13.737	13.750	13.753	13.755	13.757	13.759	13.762	13.737	13.687-13.787	13.753	0.008
8 BB(Surr)	14.893	14.904	14.907	14.908	14.909	14.910	14.910	14.893	14.823-14.963	14.906	0.006
13 1,3,5 Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.351-12.491	+++++	+++++
14 1,2,4 Trimethyl benzen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.059	12.989-13.129	+++++	+++++
16 1,3 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.034	15.964-16.104	+++++	+++++
17 1,4 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.140	16.070-16.210	+++++	+++++
18 1,2 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.513	16.443-16.583	+++++	+++++

Reviewer 1         MH         Date: 7/10/10  
Reviewer 2         VJ         Date: 7-10-10

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid3.i/20100629-1.1.b

ARI Job No.: BETX Method: PIDB.m Instrument: pid3.i Date: 29-JUN-2010

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0759	0629a005.d	BETX .25		1	Toluene, Ethylbenzene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
0824	0629a006.d	BETX .5		1	Toluene, O-Xylene, MTBE,
0848	0629a007.d	BETX 5		1	NO MANUAL INTEGRATION
0912	0629a008.d	BETX 25		1	NO MANUAL INTEGRATION
0937	0629a009.d	BETX 50		1	NO MANUAL INTEGRATION
1001	0629a010.d	BETX 100		1	NO MANUAL INTEGRATION
1026	0629a011.d	BETX 200		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid3.i/20100629-2.b

ARI Job No.: BETX Method: FID.m Instrument: pid3.i Date: 29-JUN-2010

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0759	0629a005.d	BETX .25		1	NO MANUAL INTEGRATION
0824	0629a006.d	BETX .5		1	NO MANUAL INTEGRATION
0848	0629a007.d	BETX 5		1	NO MANUAL INTEGRATION
0912	0629a008.d	BETX 25		1	NO MANUAL INTEGRATION
0937	0629a009.d	BETX 50		1	NO MANUAL INTEGRATION
1001	0629a010.d	BETX 100		1	NO MANUAL INTEGRATION
1026	0629a011.d	BETX 200		1	NO MANUAL INTEGRATION



**TPHG/BETX Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: RG58**

# Analytical Resources Inc.: Organics Instrument Log

PID-2 Serial No.: 33033A-33620

Date: 8/6/10 Analysis: NWTPHG/BETX Analyst: MH

GC Program: BETX1 Column No: 832217 Column Type: RTX502-Z

Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_

Calibration File: \_\_\_\_\_ Curve Date: 7/28/10

IS/SS	Ical/Ccal	LCS/ICV
<u>VW632-3 MH 8/10/10</u>	<u>VW635-1</u>	<u>VW647-2</u>
<u>VW648-3</u>	<u>VW644-3</u>	
	<u>VW647-2</u>	

Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0559	0806a001.d	RINSE		1	
2	0625	0806a002.d	RT+BCAL 1		1	
3	0651	0806a003.d	GCAL 1		1	
4	0717	0806a004.d	LCS0806		1	
5	0743	0806a005.d	LCSD0806		1	
6	0809	0806a006.d	MB0806		1	
7	0850	0806a007.d	RG58T	PSB22-TB	1	
8	0932	0806a008.d	RG58U	PSB23-TB	1	
9	0958	0806a009.d	RG58V	PSB24-TB	1	
10	1023	0806a010.d	RG78M	PSB9-TB	1	
11	1049	0806a011.d	RG78N	PSB10-TB	1	
12	1115	0806a012.d	RG58E	PSB22-17-19-072910	0.00	
13	1141	0806a013.d	RINSE		1	
14	1207	0806a014.d	BCAL 2		1	
15	1233	0806a015.d	GCAL 2		1	
16	1259	0806a016.d	RG58F	PSB22-19-20-072910	0.00	
17	1325	0806a017.d	RG58K	PSB23-14-16.5-07291	0.00	
18	1351	0806a018.d	RG58L	PSB23-16.5-19-07291	0.00	
19	1417	0806a019.d	RG58R	PSB24-14-16-072910	0.00	
20	1443	0806a020.d	RG58S	PSB24-16-17-072910	0.00	
21	1509	0806a021.d	RG78A	PSB9A-11-13.5-07301	0.00	
22	1535	0806a022.d	RG78B	PSB9A-1.5-2-073010	0.00	
23	1601	0806a023.d	RG78D	PSB9A-4-6-073010	0.00	
24	1627	0806a024.d	RINSE		1	
25	1653	0806a025.d	BCAL 3		1	
26	1718	0806a026.d	GCAL 3		1	
27	1744	0806a027.d	RG78F	PSB10-0-0.5-073010	0.00	
28	1810	0806a028.d	RG78H	PSB10-2-4-073010	0.00	
29	1836	0806a029.d	RG78I	PSB10-4-6-073010	0.00	
30	1902	0806a030.d	RG78J	PSB10-8.5-10-073010	0.00	
31	1928	0806a031.d	RG78JMS	PSB10-8.5-10-07 MS	0.00	
32	1954	0806a032.d	RG78JMSD	PSB10-8.5-10-07 MSD	0.00	
33	2020	0806a033.d	RG78K	PSB10-14-15-073010	0.00	
34	2046	0806a034.d	RG78L	PSB10-20-25-073010	0.00	
35	2112	0806a035.d	RINSE		1	
36	2138	0806a036.d	BCAL 4		1	
37	2204	0806a037.d	GCAL 4		1	

MH  
8/10/10

**Maintenance / Comments** BCal 2 Failed low for Ethylbenzene by 17.62.76% m/pXylene by 2.12% & o-Xylene by 0.92% TBS reported no more wad for re-runs, all soil samples re-run in PID 3 8/9/10.

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):  
Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.



**VOA Analyst Notes / Corrective Action Log**

ARI Project ID: RG58/R678 Client ID: Floyd/Snyder

ARI SOP: ~~404S(Gas)~~ ~~410S(BTEX)~~ ~~430S(VPH)~~ ~~700S(8260C)~~ ~~703S(SIM)~~ ~~706S(524.2)~~ ~~710S(RSK-175)~~

Parameter(s): NWTPHG/BETX

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 ~~PID-2~~ ~~PID-3~~ FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 7/28/10 Analysis Start Date: 8/6/10

pH ≤ 2.0	<input checked="" type="radio"/> YES / NO / NA	Method Blank In Control?	<input checked="" type="radio"/> YES / NO
BFB Tune Meets Criteria?	YES / NO <input checked="" type="radio"/> NA	LCS / LCSD Recovery In Control?	<input checked="" type="radio"/> YES / NO
Internal Standard Meets Criteria?	YES / NO <input checked="" type="radio"/> NA	Surrogate Recovery In Control?	<input checked="" type="radio"/> YES / NO
ICal acceptable?	<input checked="" type="radio"/> YES / <input checked="" type="radio"/> NO	CCal acceptable?	<input checked="" type="radio"/> YES / <input checked="" type="radio"/> NO
Q flag applied?	YES / NO <input checked="" type="radio"/> NA	Q flag applied?	YES / NO <input checked="" type="radio"/> NA
Manual Integrations for ICal?	<input checked="" type="radio"/> YES / NO	Manual Integrations for Samples?	Yes <input checked="" type="radio"/> NO
Special Analysis Criteria Met?	YES / NO <input checked="" type="radio"/> NA		
Bubbles/Headspace:	None	SM <input checked="" type="radio"/> (≤ 2mm)	PB (2-4mm) LG (> 4mm) ● Head Space

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

Cal 2 low for Ethylbenzene by 2.76%  
 m/p xylene by 2.12%  
 o-xylene by 0.92%  
 TB's reported no more wals for 2nd runs. soils re-run on  
 PID3 8/9/10

**Additional Details on Reverse: Yes / No**

Analyst: [Signature] Date: 8/10/10

Reviewer: [Signature] Date: 8/11/10

8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a002.d  
Data file 2: /chem3/pid2.i/080610-2.b/0806a002.d  
Method: /chem3/pid2.i/080610-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: RT+BCAL 1  
Client ID:  
Injection Date: 06-AUG-2010 06:25  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.188	0.000	4096	67636	98.7	TFT (Surr)
14.802	0.000	2994	27506	99.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	706169	1.224
8015B (2MP-TMB)	1015260	0.778
AKGas (nC6-nC10)	733190	0.825
NWGas (Tol-Nap)	742685	1.234

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.235	0.010	1451	101.0	TFT (Surr)
14.828	0.003	5780	99.4	BB (Surr)

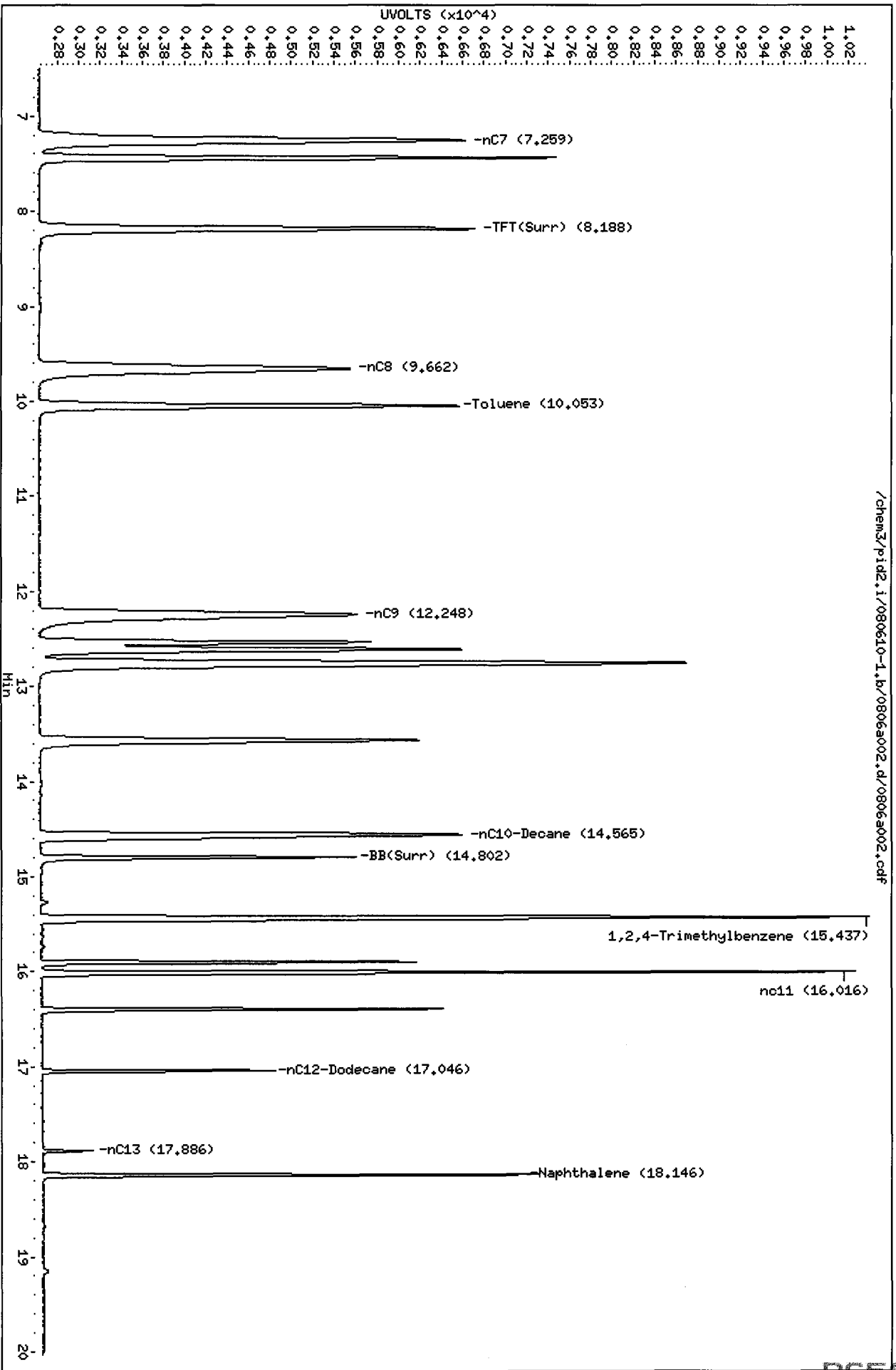
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.492	0.009	2869	24.64	Benzene
10.099	0.005	2510	24.20	Toluene
12.658	0.002	2621	22.87	Ethylbenzene
12.804	0.001	4670	48.19	M/P-Xylene
13.609	0.004	2434	23.97	O-Xylene
5.115	0.015	995	23.70	MTBE

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

Data File: /chem3/pid2.i/080610-1.b/0806a002.d  
Date: 06-AUG-2010 06:25  
Client ID:  
Sample Info: RT+BCAL 1  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid2.i/080610-2.b/0806a002.d

Date: 06-AUG-2010 06:25

Client ID:

Sample Info: RT+GCAL 1

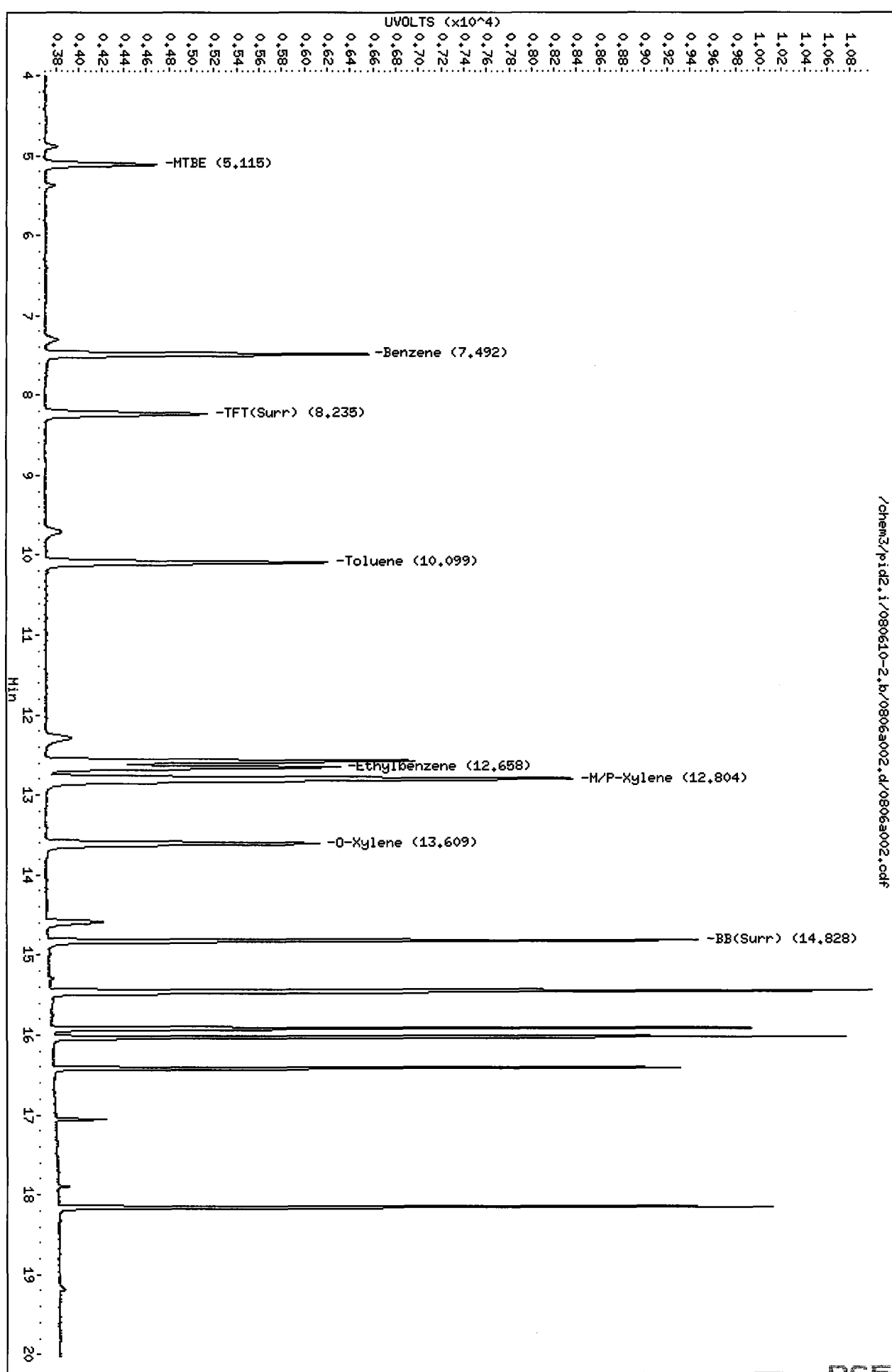
Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: MH

Column diameter: 0.18

/chem3/pid2.i/080610-2.b/0806a002.d/0806a002.cdf



MH  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a003.d      ARI ID: GCAL 1  
Data file 2: /chem3/pid2.i/080610-2.b/0806a003.d      Client ID:  
Method: /chem3/pid2.i/080610-2.b/PIDB.m              Injection Date: 06-AUG-2010 06:51  
Instrument: pid2.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.191	0.002	4238	72060	102.1	TFT (Surr)
14.803	0.001	3087	29826	102.3	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	1399696	2.426
8015B (2MP-TMB)	3181324	2.438
AKGas (nC6-nC10)	2176873	2.448
NWGas (Tol-Nap)	1448524	2.406

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.239	0.013	1403	97.6	TFT (Surr)
14.829	0.004	5746	98.8	BB (Surr)

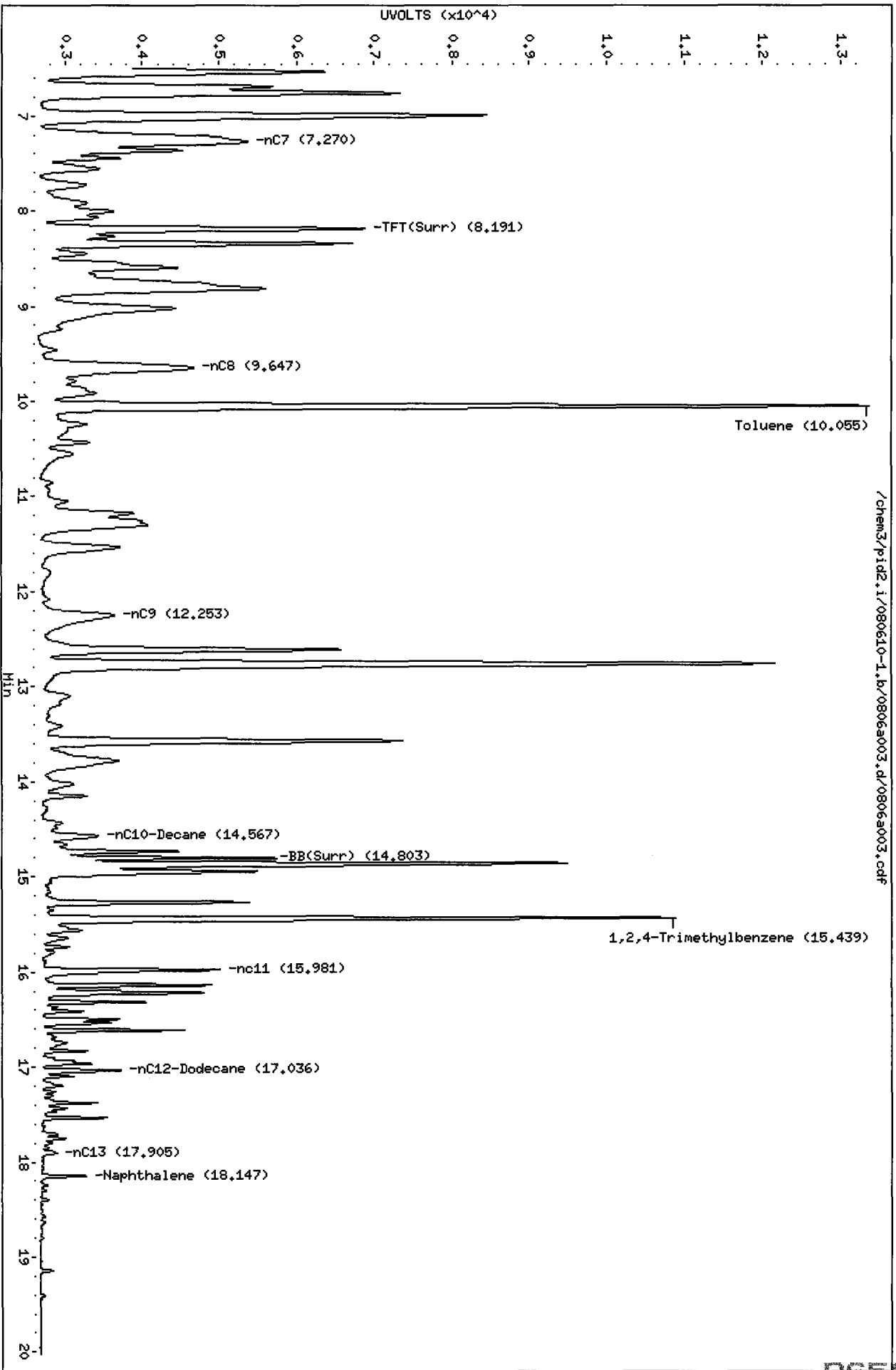
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.494	0.011	511	4.39	Benzene
10.101	0.008	6913	66.65	Toluene
12.660	0.004	2328	20.31	Ethylbenzene
12.808	0.006	7291	75.24	M/P-Xylene
13.610	0.005	3220	31.71	O-Xylene
5.120	0.020	8621	205.33	MTBE

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

Data File: /chem3/pid2.i/080610-1.b/0806a003.d  
Date: 06-AUG-2010 06:51  
Client ID:  
Sample Info: GCAL 1  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid2.i/080610-1.b/0806a003.d/0806a003.cdf



Data File: /chem3/pid2.i/080610-2.b/0806a003.d

Date: 06-AUG-2010 06:51

Client ID:

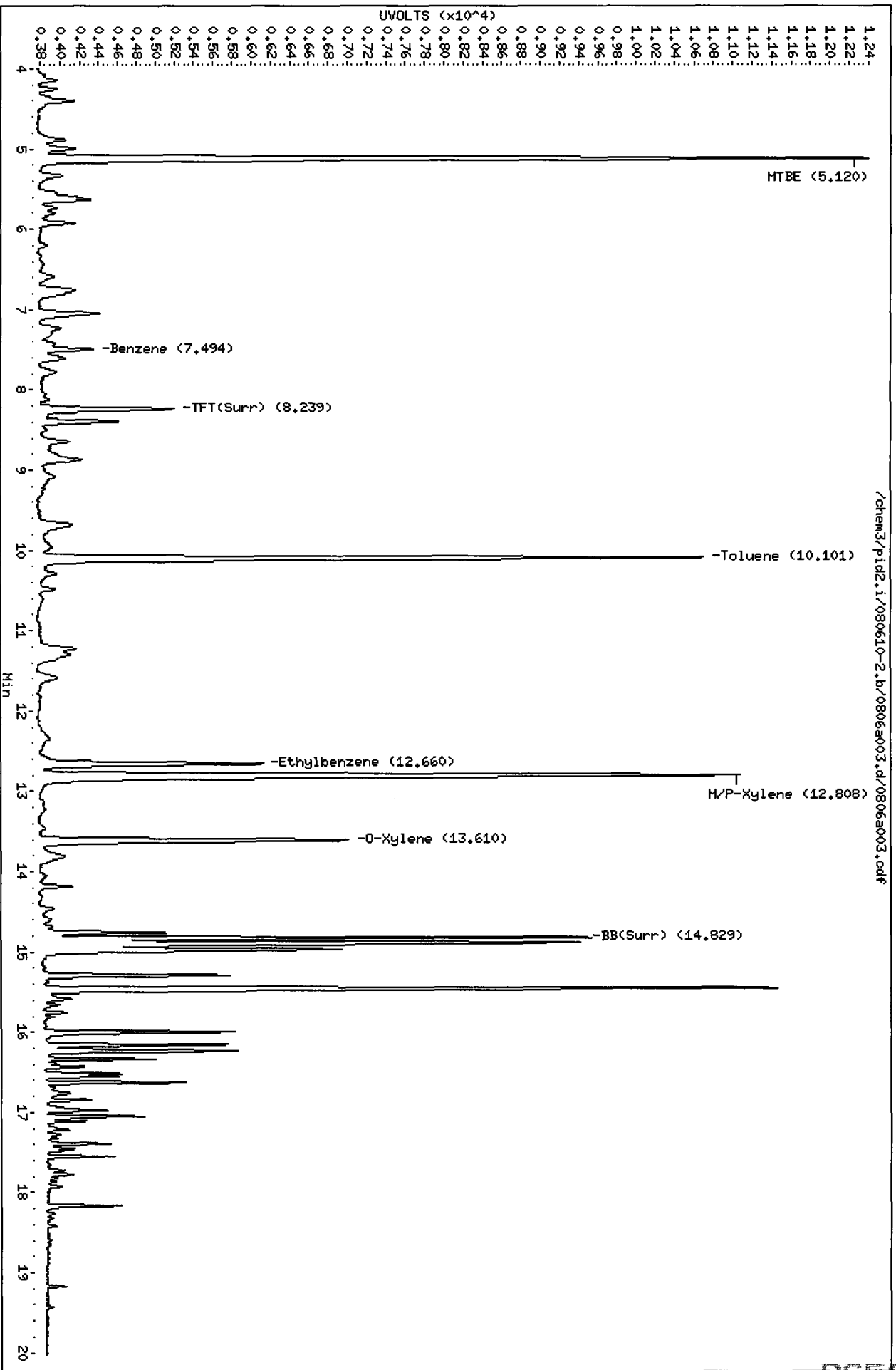
Sample Info: GCRL 1

Column phase: RTX 502-2 PID

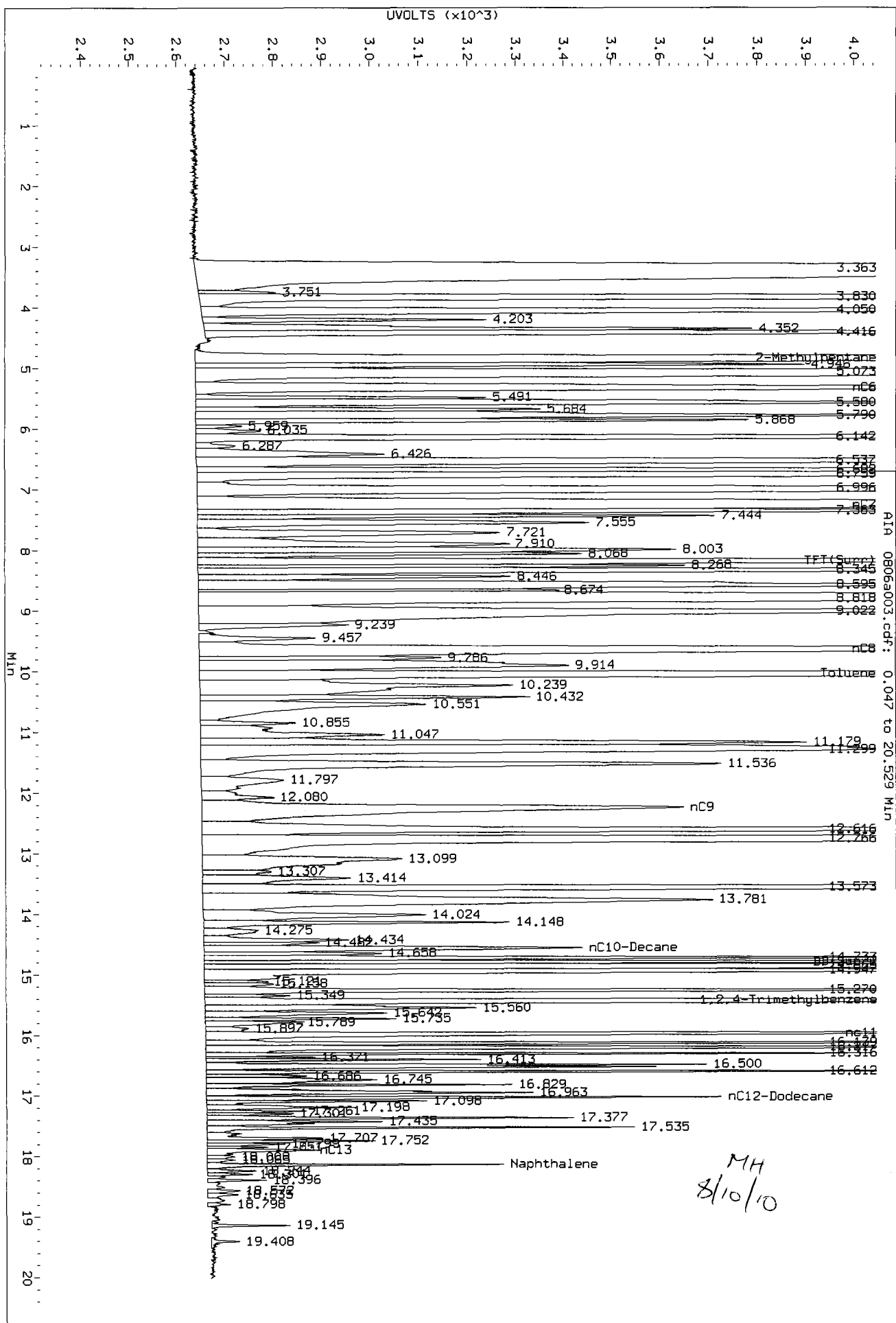
Instrument: pid2.i

Operator: MH

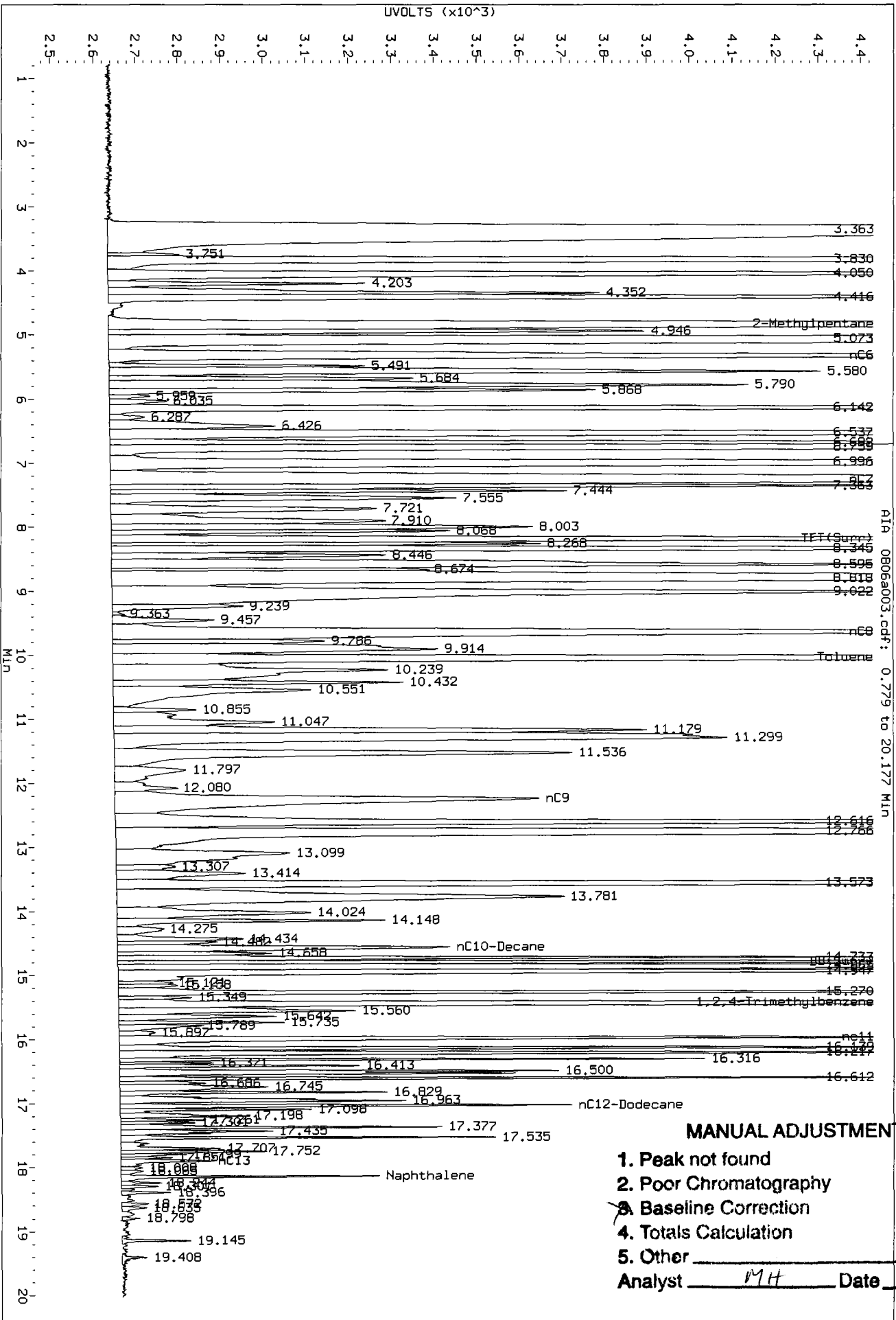
Column diameter: 0.18



Data File: /chem3/pid2\_1/080610-1.b/0806a003.d/0806a003.cdf  
 Injection Date: 06-AUG-2010 06:51  
 Instrument: pid2.1  
 Client Sample ID:



Data File: /chem3/pid2\_1/080610-1\_b/0806a003.d/0806a003.cdf  
 Injection Date: 06-AUG-2010 06:51  
 Instrument: pid2.1  
 Client Sample ID:



ATN 0806a003.cdf: 0.779 to 20.177 MIN

**MANUAL ADJUSTMENTS**

- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

Analyst MH Date 8/10/10

8/10/1

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a004.d	ARI ID: LCS0806
Data file 2: /chem3/pid2.i/080610-2.b/0806a004.d	Client ID:
Method: /chem3/pid2.i/080610-2.b/PIDB.m	Injection Date: 06-AUG-2010 07:17
Instrument: pid2.i	Matrix: WATER
Gas Ical Date: 28-JUL-2010	Dilution Factor: 1.000
BETX Ical Date: 28-JUL-2010	

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.188	0.000	4015	73783	96.7	TFT (Surr)
14.802	0.000	2944	27783	97.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	536276	0.930
8015B (2MP-TMB)	1251240	0.959
AKGas (nC6-nC10)	847990	0.954
NWGas (Tol-Nap)	557220	0.926

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.236	0.011	1378	95.9	TFT (Surr)
14.828	0.004	5635	96.9	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.491	0.008	197	1.69	Benzene
10.100	0.006	2721	26.23	Toluene
12.659	0.003	929	8.11	Ethylbenzene
12.808	0.005	2916	30.09	M/P-Xylene
13.610	0.005	1277	12.58	O-Xylene
5.115	0.015	3545	84.43	MTBE

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

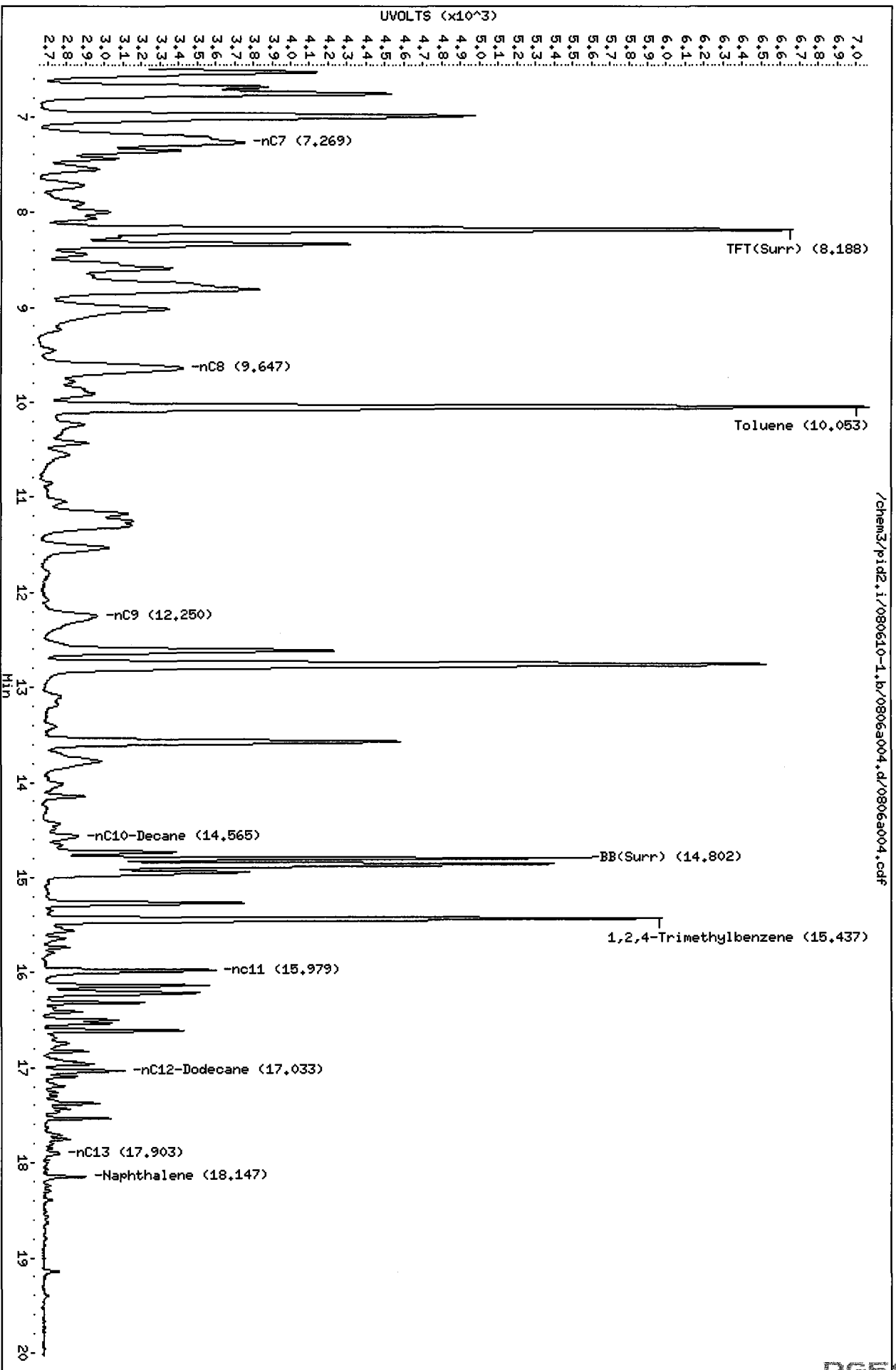
Data File: /chem3/pid2.i/080610-1.b/0806a004.d  
Date: 06-AUG-2010 07:17

Client ID:  
Sample Info: LCS0806

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: NH  
Column diameter: 0.18

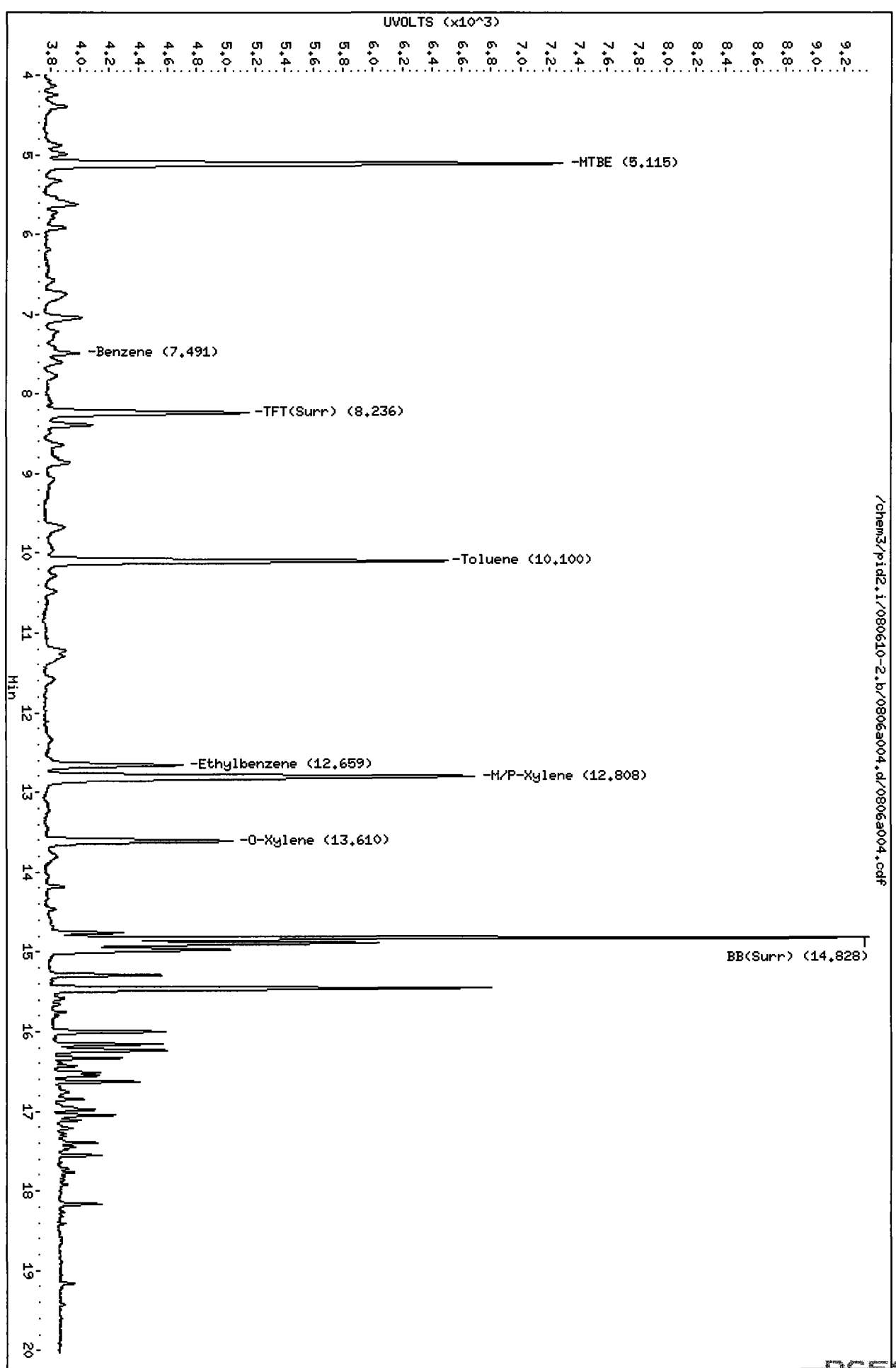
/chem3/pid2.i/080610-1.b/0806a004.d/0806a004.cdf



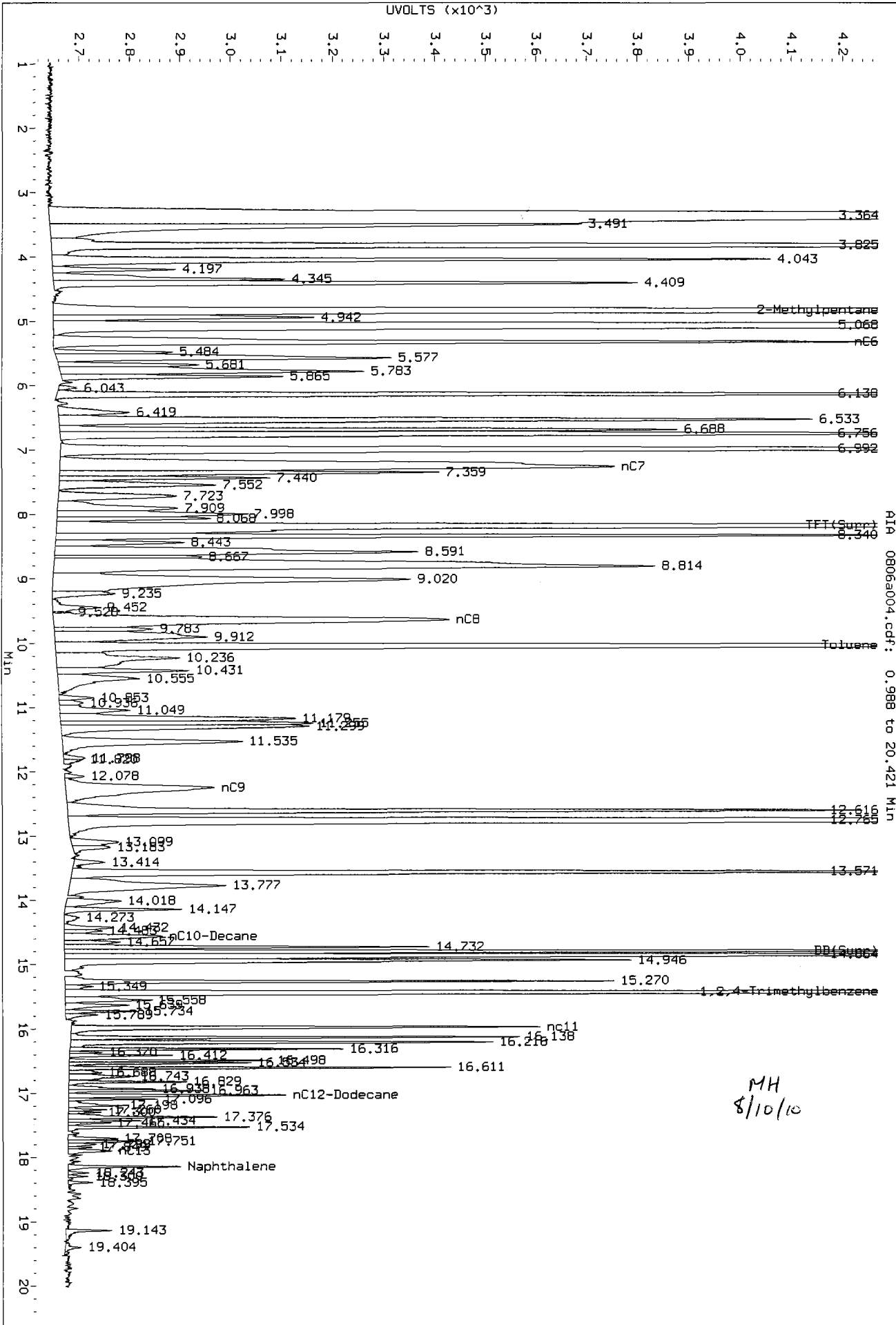
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Date : 06-AUG-2010 07:17  
Client ID:  
Sample Info: LCS0806  
Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/080610-2.b/0806a004.d/0806a004.cdf



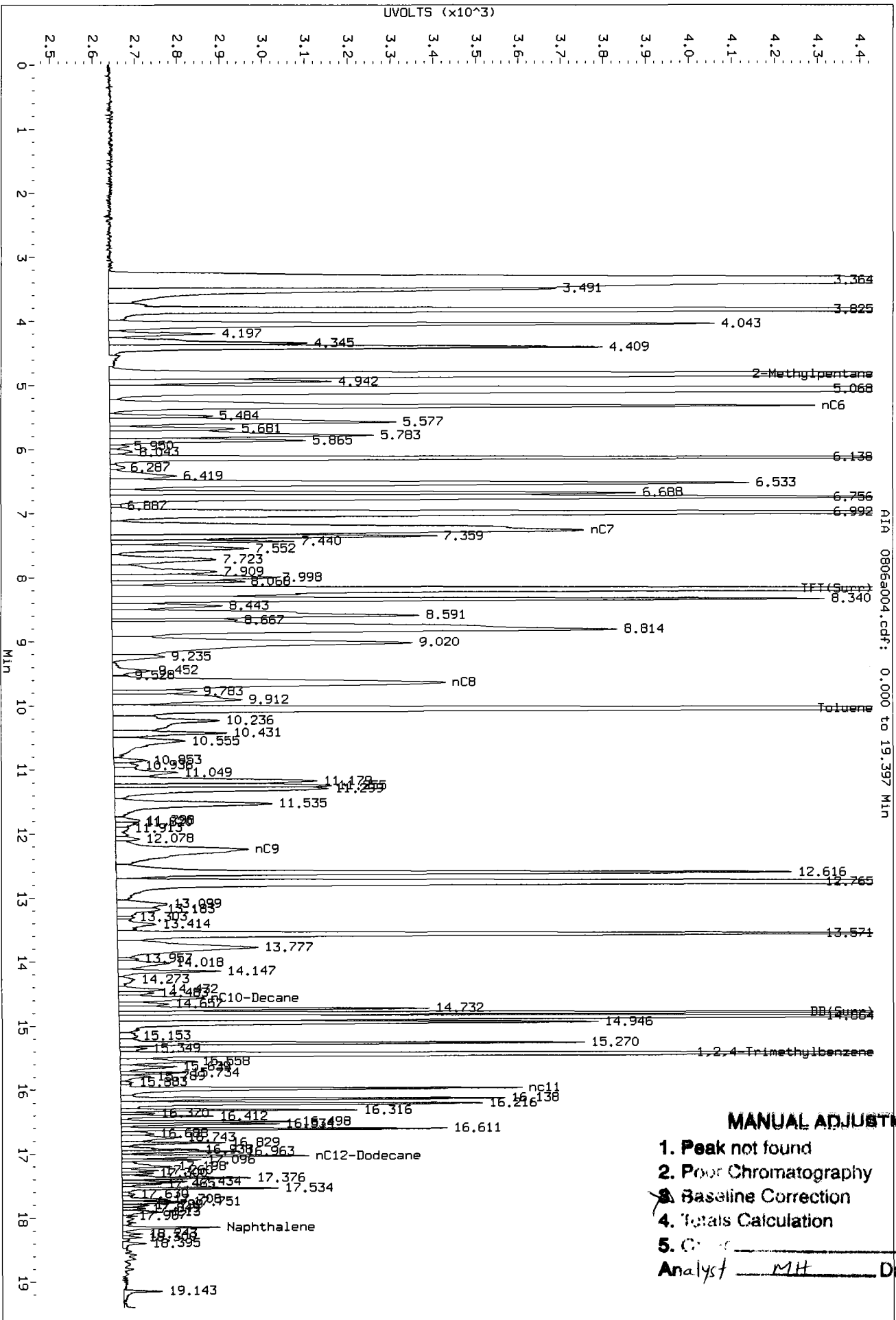
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Injection Date: 06-AUG-2010 07:17  
Instrument: pid2.1  
Client Sample ID:



RI 0806a004.cdf: 0.988 to 20.421 MIN

MH  
8/10/10

Data File: /chem3/pid2.1/080610-1.b/0806a004.d/0806a004.cdf  
 Injection Date: 06-AUG-2010 07:17  
 Instrument: pid2.1  
 Client Sample ID:



AIA 0806a004.cdf: 0.000 to 19.397 MIN

**MANUAL ADJUSTMENTS**

- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

Analyst MH Date 8/10/10



MH  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a005.d	ARI ID: LCSD0806
Data file 2: /chem3/pid2.i/080610-2.b/0806a005.d	Client ID:
Method: /chem3/pid2.i/080610-2.b/PIDB.m	Injection Date: 06-AUG-2010 07:43
Instrument: pid2.i	Matrix: WATER
Gas Ical Date: 28-JUL-2010	Dilution Factor: 1.000
BETX Ical Date: 28-JUL-2010	

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
8.189	0.001	4026	73987	97.0	TFT (Surr)
14.802	0.000	2975	27927	98.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	551550	0.956
8015B (2MP-TMB)	1277734	0.979
AKGas (nC6-nC10)	865470	0.973
NWGas (Tol-Nap)	571891	0.950

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
8.237	0.012	1375	95.7	TFT (Surr)
14.828	0.004	5647	97.1	BB (Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.493	0.009	208	1.79	Benzene
10.100	0.007	2802	27.01	Toluene
12.659	0.003	960	8.38	Ethylbenzene
12.808	0.005	2991	30.87	M/P-Xylene
13.610	0.005	1305	12.85	O-Xylene
5.116	0.016	3630	86.46	MTBE

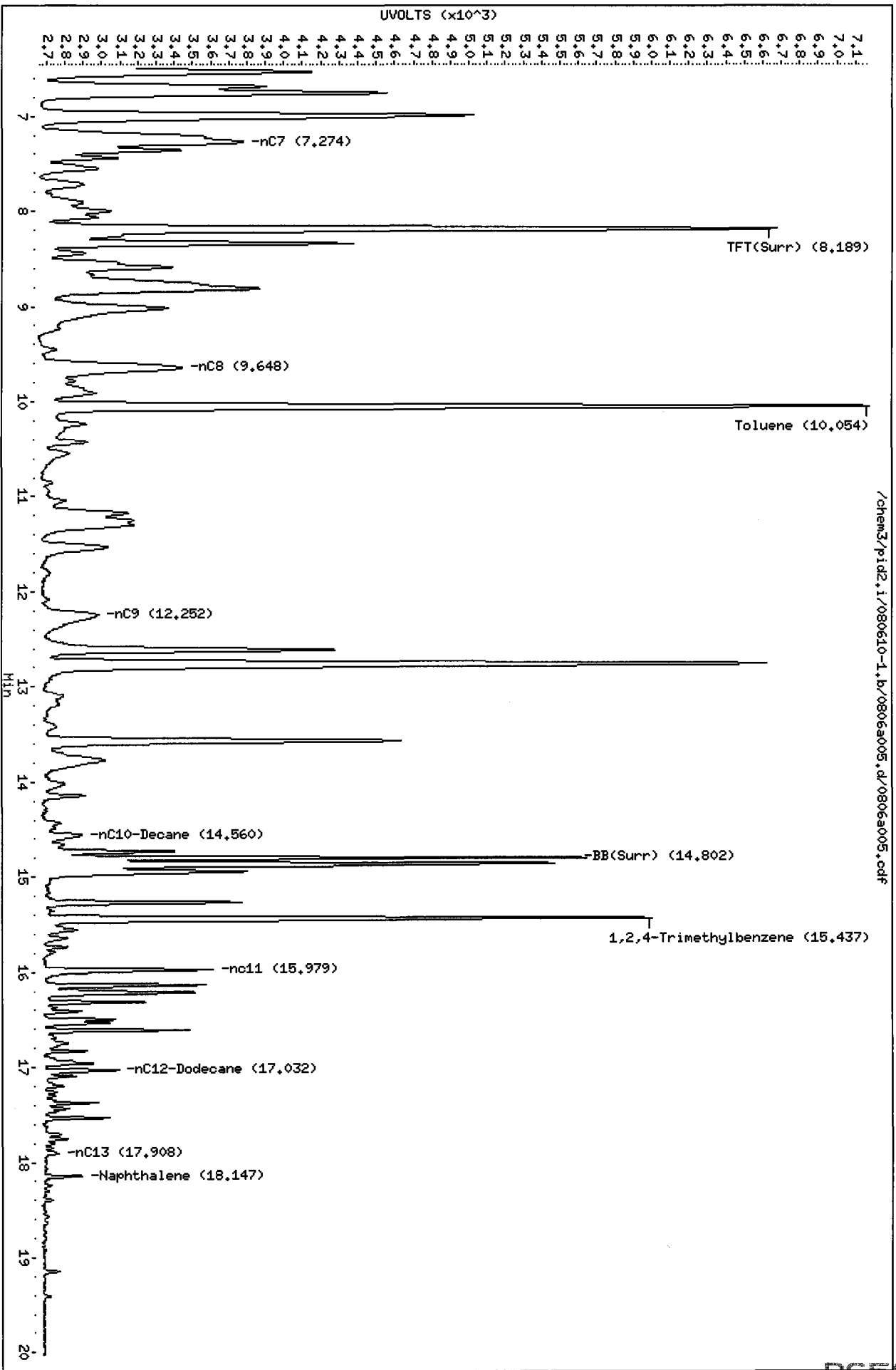
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080610-1.b/0806a005.d  
Date: 06-AUG-2010 07:43  
Client ID:  
Sample Info: LCS00806

Column phaset: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/080610-1.b/0806a005.d/0806a005.cdf



Data File: /chem3/pid2.1/080610-2.b/0806a005.d

Date: 06-AUG-2010 07:43

Client ID:

Sample Info: LCS00806

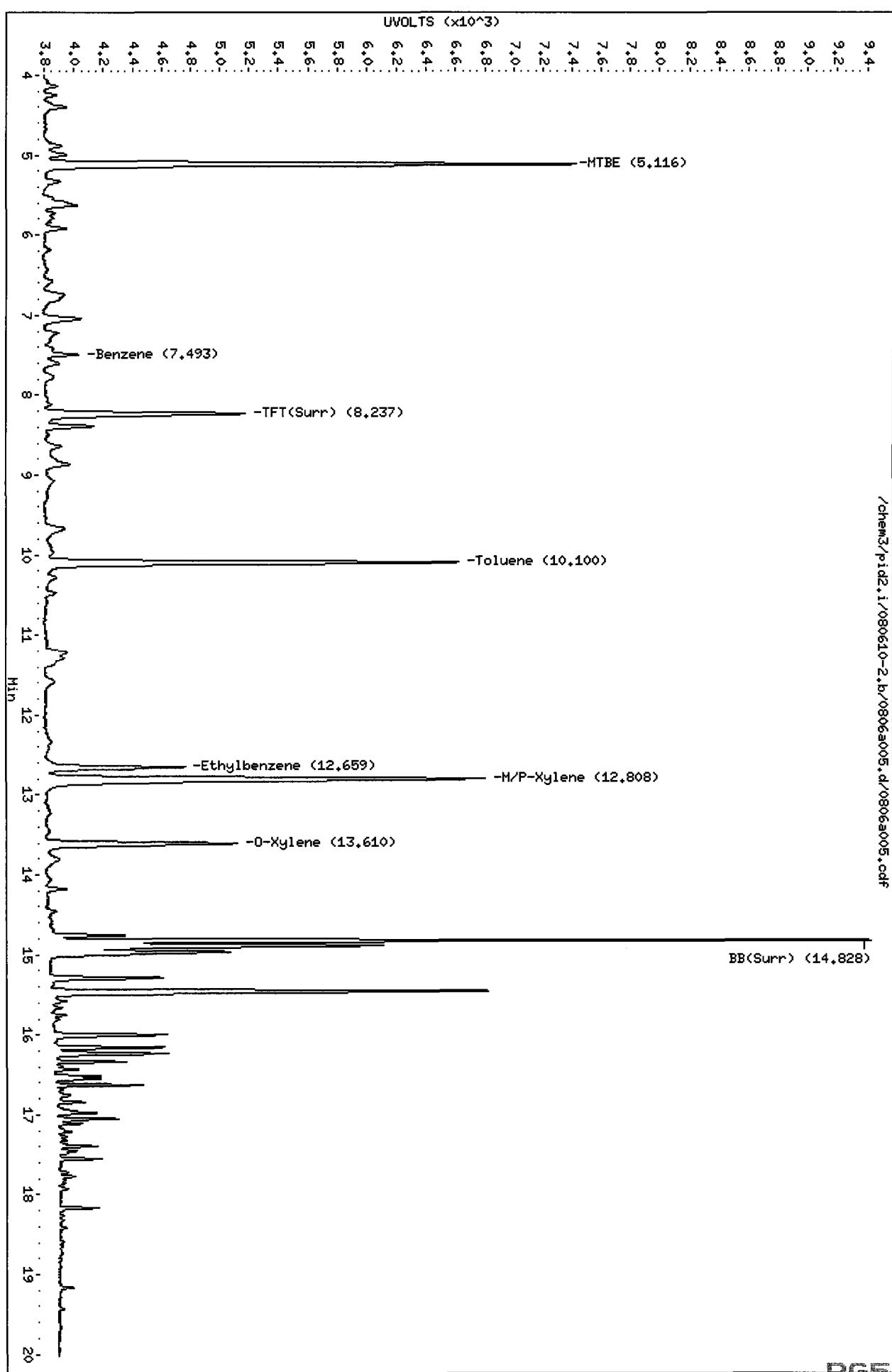
Column phase: RTX 502-2 PID

Instrument: pid2.i

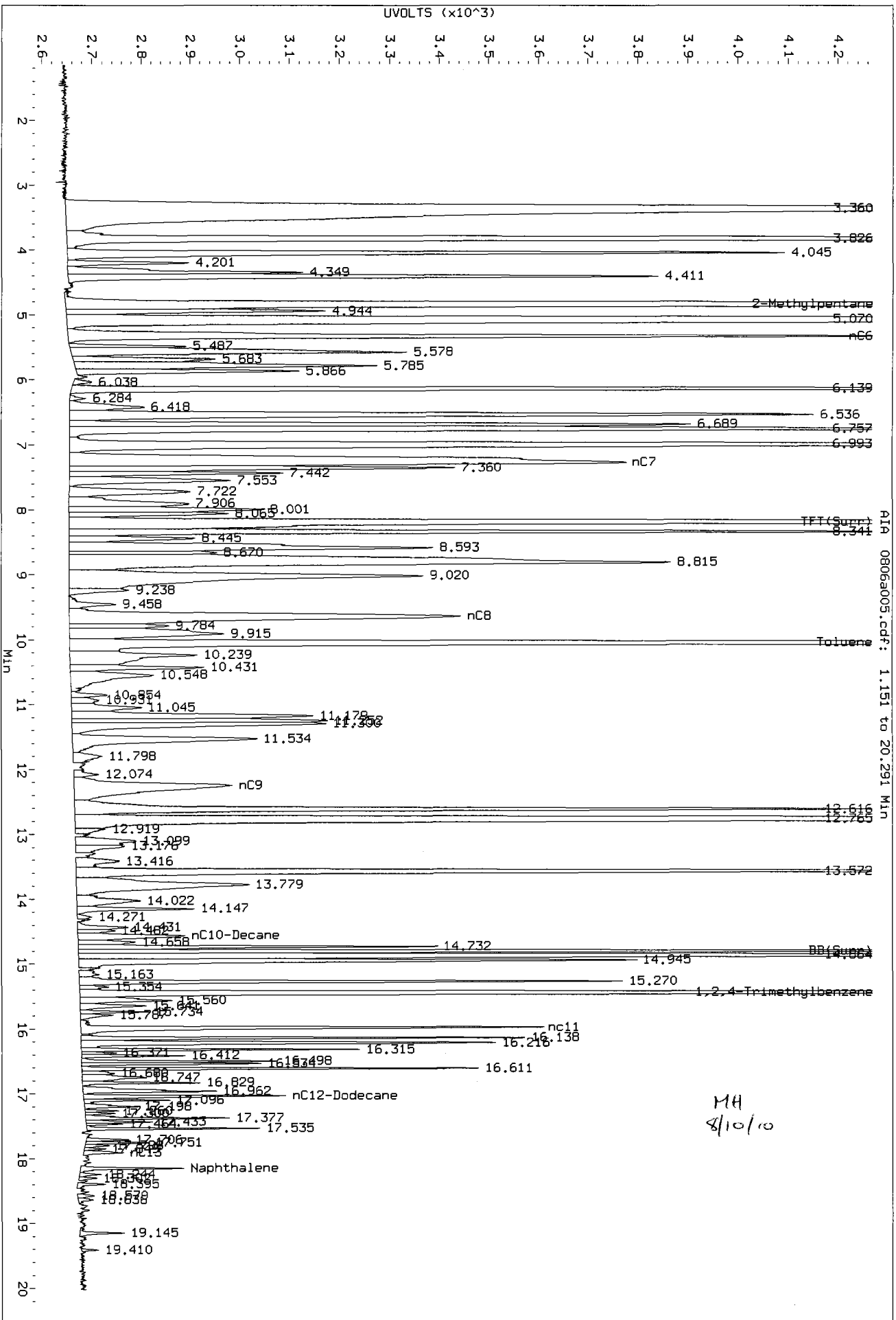
Operator: HH

Column diameter: 0.18

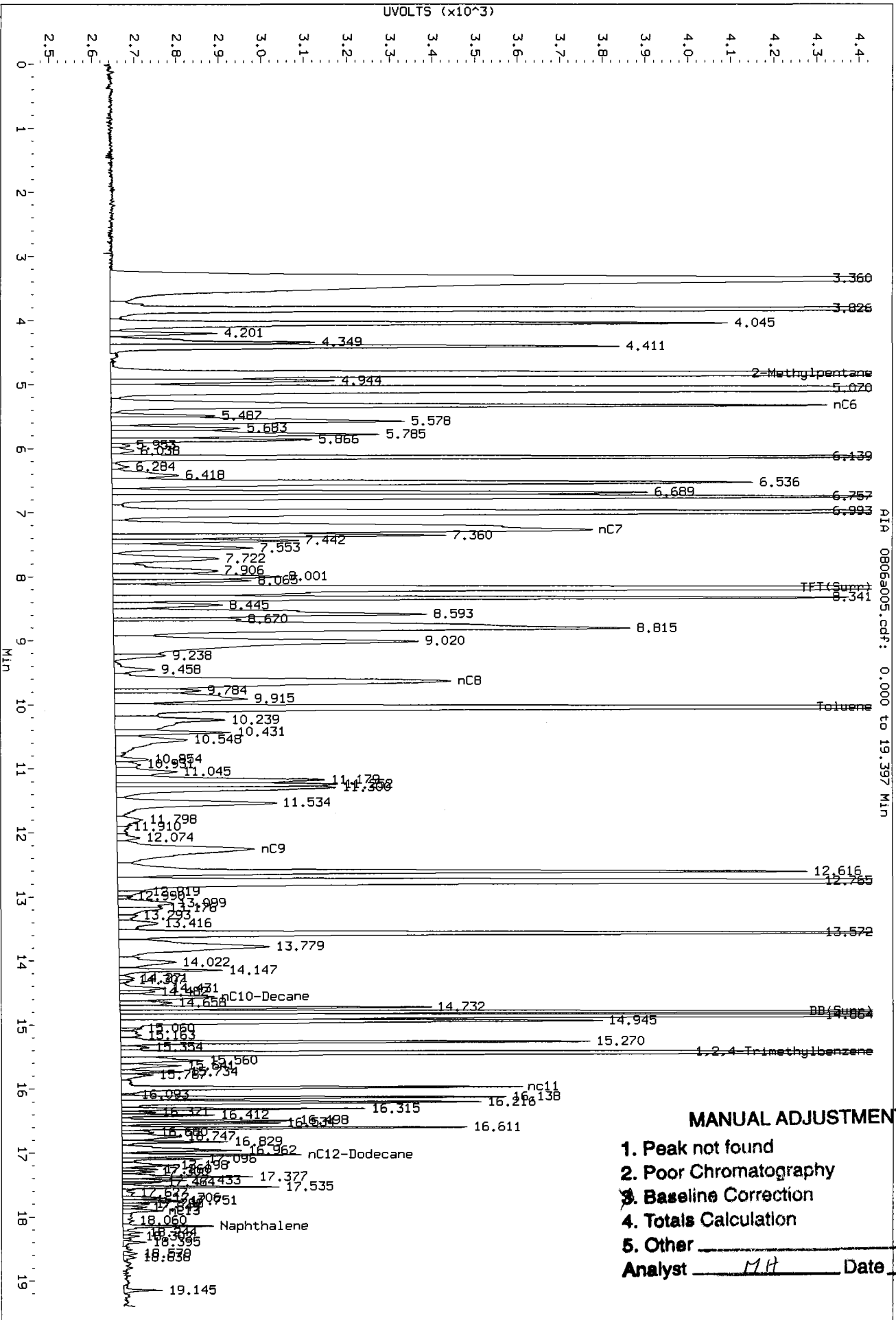
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Data File: /chem3/pid2.1/080610-1.b/0806a005.d/0806a005.cdf  
 Injection Date: 06-AUG-2010 07:43  
 Instrument: pid2.1  
 Client Sample ID:



Data File: /chem3/pid2\_1/080610-1.b/0806a005.d/0806a005.cdf  
 Injection Date: 06-AUG-2010 07:43  
 Instrument: pid2.1  
 Client Sample ID:



A1A 0806a005.cdf: 0.000 to 19.397 Min

**MANUAL ADJUSTMENTS**

- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

Analyst MH Date 8/10/10

8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a006.d  
Data file 2: /chem3/pid2.i/080610-2.b/0806a006.d  
Method: /chem3/pid2.i/080610-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: MB0806  
Client ID:  
Injection Date: 06-AUG-2010 08:09  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.190	0.002	3732	64955	89.9	TFT (Surr)
14.803	0.001	2799	26648	92.7	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	1	0.000
8015B (2MP-TMB)	699	0.001
AKGas (nC6-nC10)	0	0.000
NWGas (Tol-Nap)	1	0.000

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.239	0.014	1287	89.6	TFT (Surr)
14.829	0.004	5338	91.8	BB (Surr)

AROMATICS (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/pid2.i/080610-1.b/0806a006.d

Date: 06-AUG-2010 08:09

Client ID:

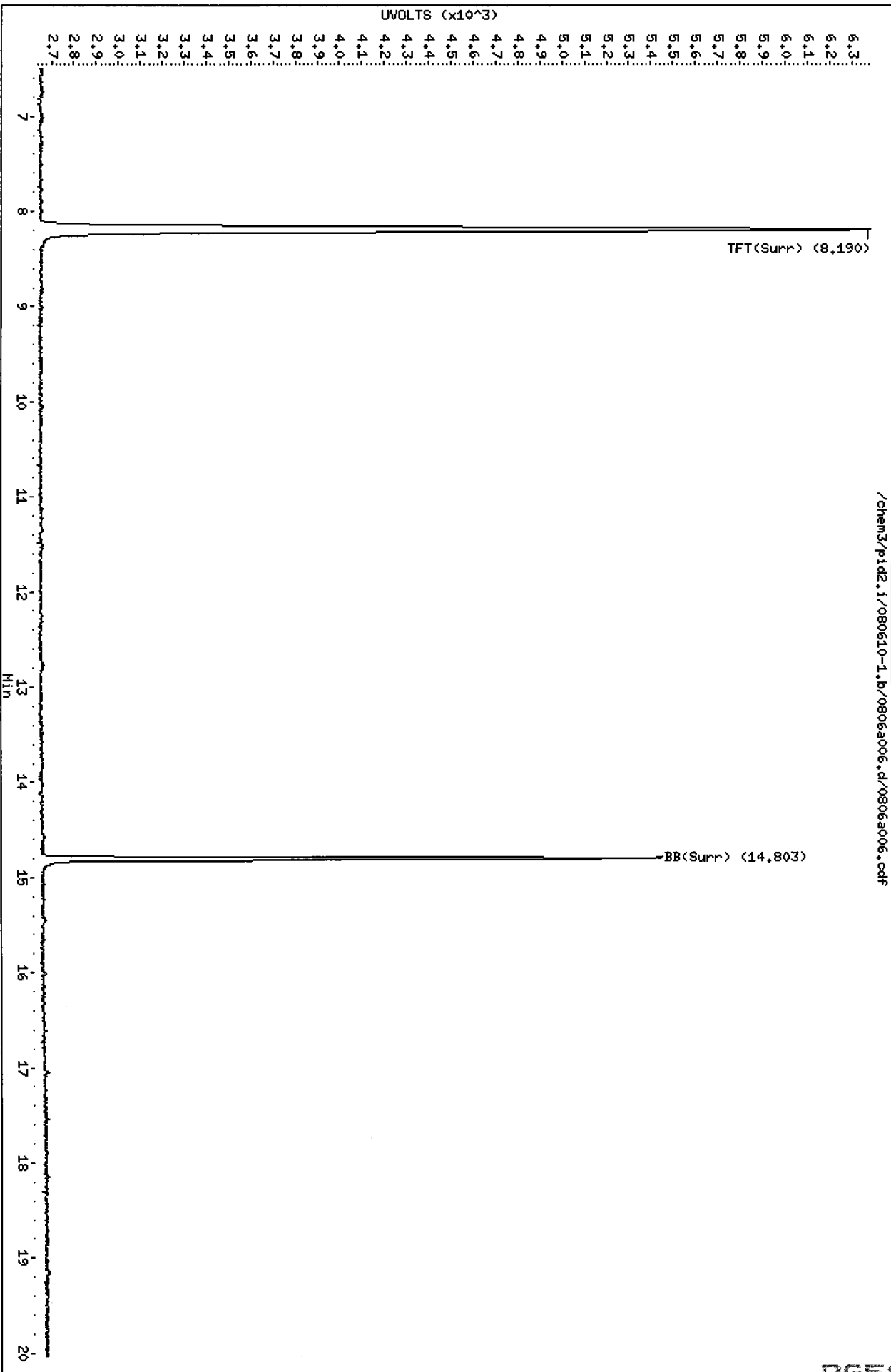
Sample Info: MB0806

Column phase: RTX 502-2 FID

Instrument: pid2.i

Operator: MH

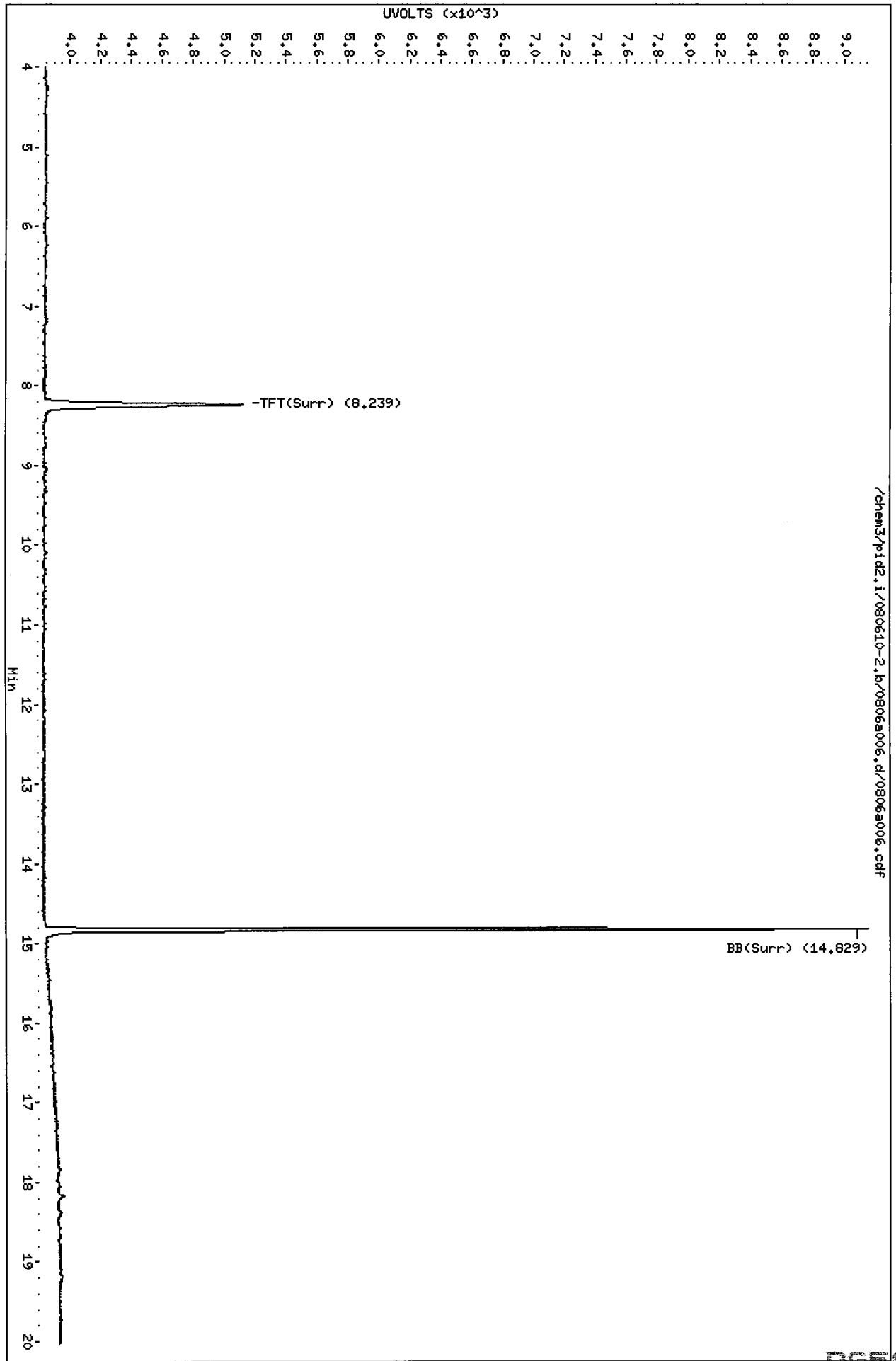
Column diameter: 0.18



RG58 : 01445

Data File: /chem3/pid2.i/080610-2.b/0806a006.d  
Date: 06-AUG-2010 08:09  
Client ID:  
Sample Info: MB0806  
Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18





M.  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a007.d	ARI ID: RG58T
Data file 2: /chem3/pid2.i/080610-2.b/0806a007.d	Client ID: PSB22-TB
Method: /chem3/pid2.i/080610-2.b/PIDB.m	Injection Date: 06-AUG-2010 08:50
Instrument: pid2.i	Matrix: WATER
Gas Ical Date: 28-JUL-2010	Dilution Factor: 1.000
BETX Ical Date: 28-JUL-2010	

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.188	0.000	3950	67727	95.1	TFT (Surr)
14.803	0.001	2889	27033	95.7	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	1	0.000
8015B (2MP-TMB)	1	0.000
AKGas (nC6-nC10)	0	0.000
NWGas (Tol-Nap)	1	0.000

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.237	0.011	1392	96.9	TFT (Surr)
14.829	0.004	5639	97.0	BB (Surr)

AROMATICS (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/pid2.1/080610-1.b/0806a007.d

Date: 06-AUG-2010 08:50

Client ID: PSB2-1B

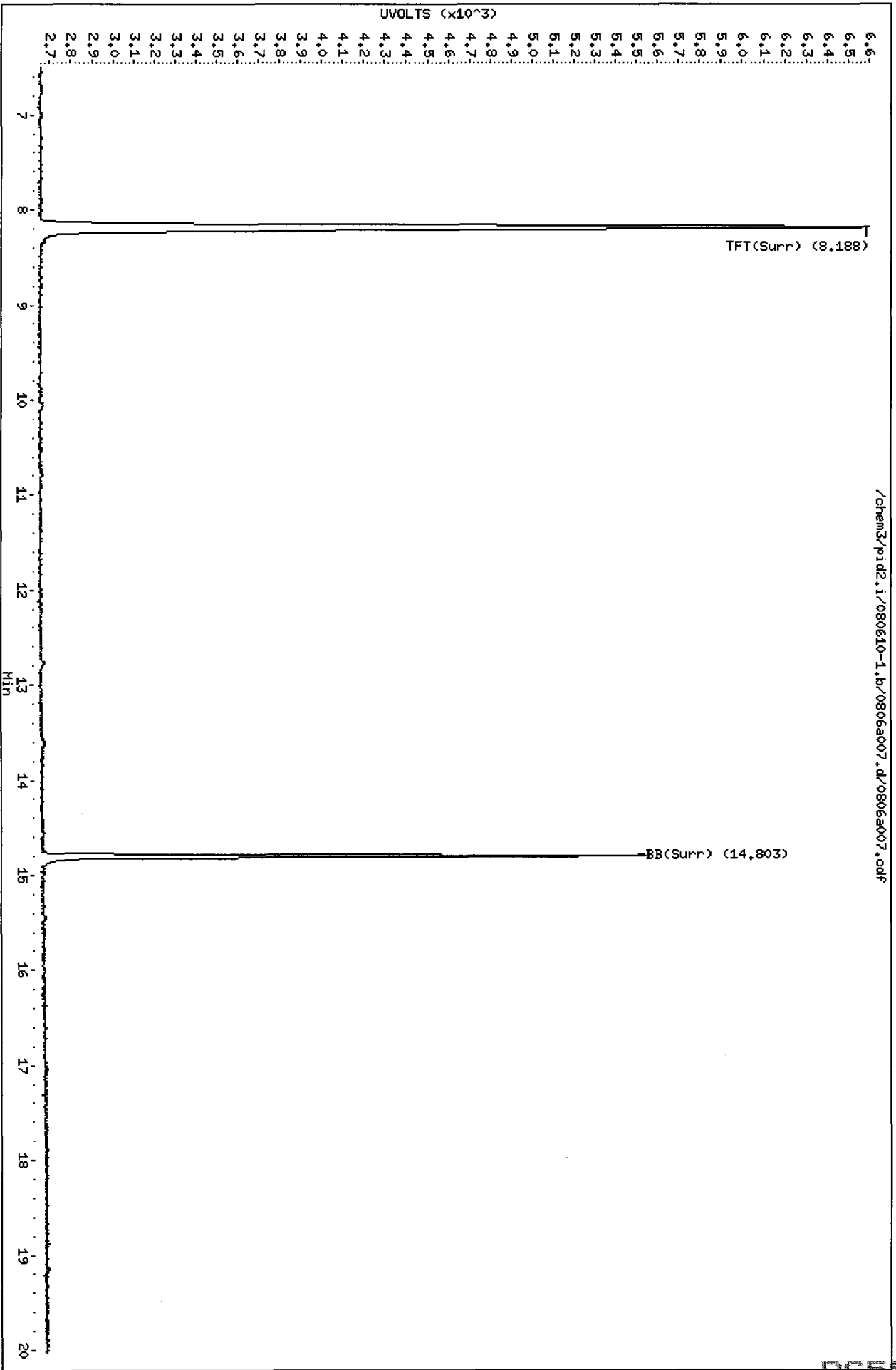
Sample Info: R058T

Column phase: RTX 502-2 FID

Instrument: pid2.i

Operator: MH

Column diameter: 0.18



Data File: /chem3/pid2.i/080610-2.b/0806a007.d

Date: 06-AUG-2010 08:50

Client ID: PSB22-TB

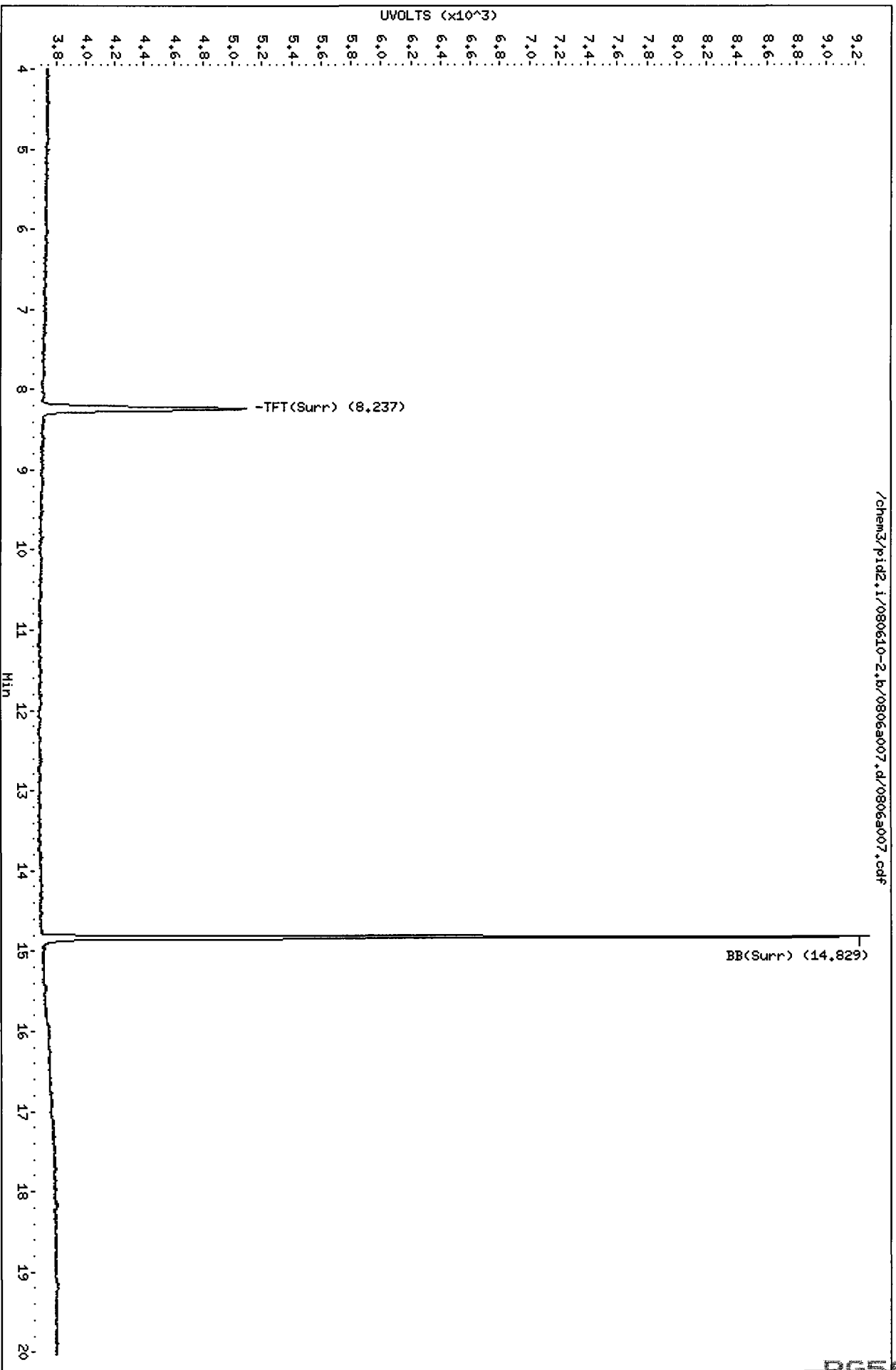
Sample Info: RG58T

Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: MH

Column diameter: 0.18



M.  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a008.d	ARI ID: RG58U
Data file 2: /chem3/pid2.i/080610-2.b/0806a008.d	Client ID: PSB23-TB
Method: /chem3/pid2.i/080610-2.b/PIDB.m	Injection Date: 06-AUG-2010 09:32
Instrument: pid2.i	Matrix: WATER
Gas Ical Date: 28-JUL-2010	Dilution Factor: 1.000
BETX Ical Date: 28-JUL-2010	

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.190	0.002	4204	73247	101.3	TFT (Surr)
14.804	0.002	3103	29069	102.8	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	1	0.000
8015B (2MP-TMB)	284	0.000
AKGas (nC6-nC10)	1	0.000
NWGas (Tol-Nap)	1	0.000

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.238	0.013	1491	103.8	TFT (Surr)
14.830	0.005	5967	102.6	BB (Surr)

AROMATICS (PID)

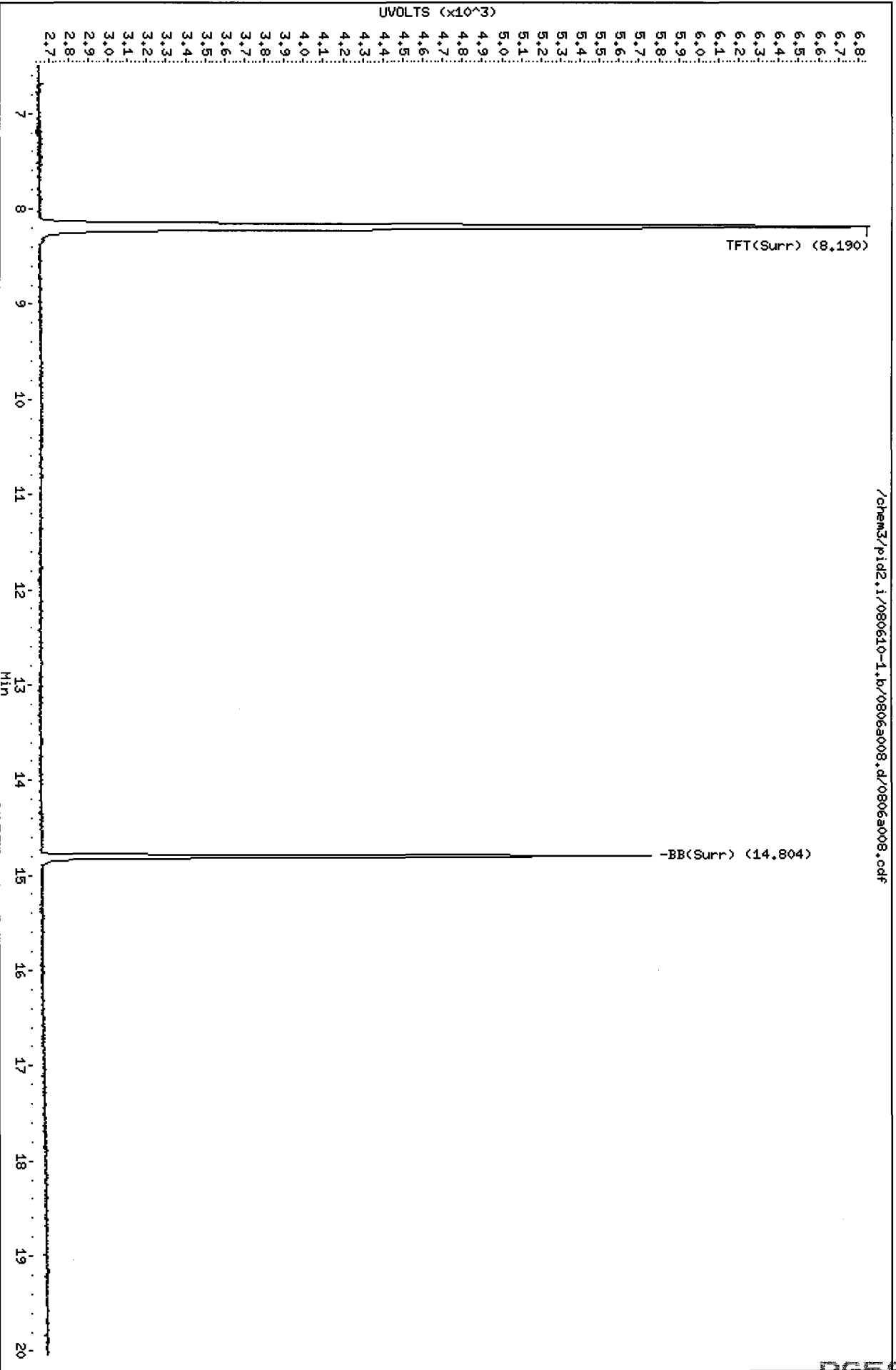
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

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

Data File: /chem3/pid2.i/080610-1.b/0806a008.d  
Date: 06-AUG-2010 09:32  
Client ID: PSB23-TB  
Sample Info: RG58U

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



RG58 : 01421

Data File: /chem3/pid2.i/080610-2.b/0806a008.d

Date : 06-AUG-2010 09:32

Client ID: PSB23-1B

Sample Info: RG58U

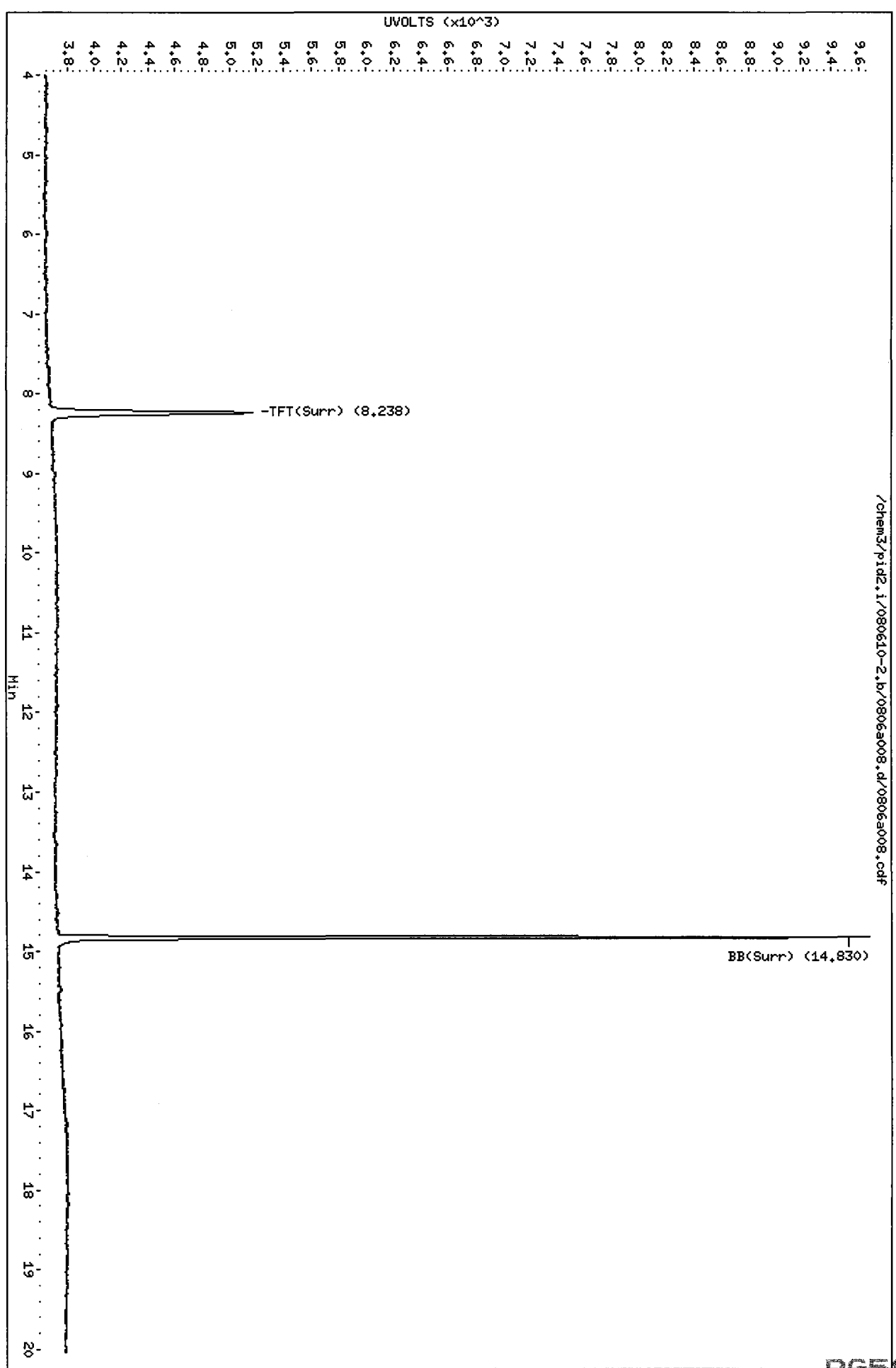
Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: MH

Column diameter: 0.18

/chem3/pid2.i/080610-2.b/0806a008.d/0806a008.cdf



Mr.  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a009.d  
Data file 2: /chem3/pid2.i/080610-2.b/0806a009.d  
Method: /chem3/pid2.i/080610-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: RG58V  
Client ID: PSB24-TB  
Injection Date: 06-AUG-2010 09:58  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.192	0.003	4020	70186	96.8	TFT (Surr)
14.804	0.001	2957	28004	98.0	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	0	0.000
8015B (2MP-TMB)	0	0.000
AKGas (nC6-nC10)	0	0.000
NWGas (Tol-Nap)	0	0.000

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.241	0.015	1419	98.7	TFT (Surr)
14.830	0.006	5691	97.8	BB (Surr)

AROMATICS (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/pid2.i/080610-1.b/0806a009.d

Date: 06-AUG-2010 09:58

Client ID: PSB24-TB

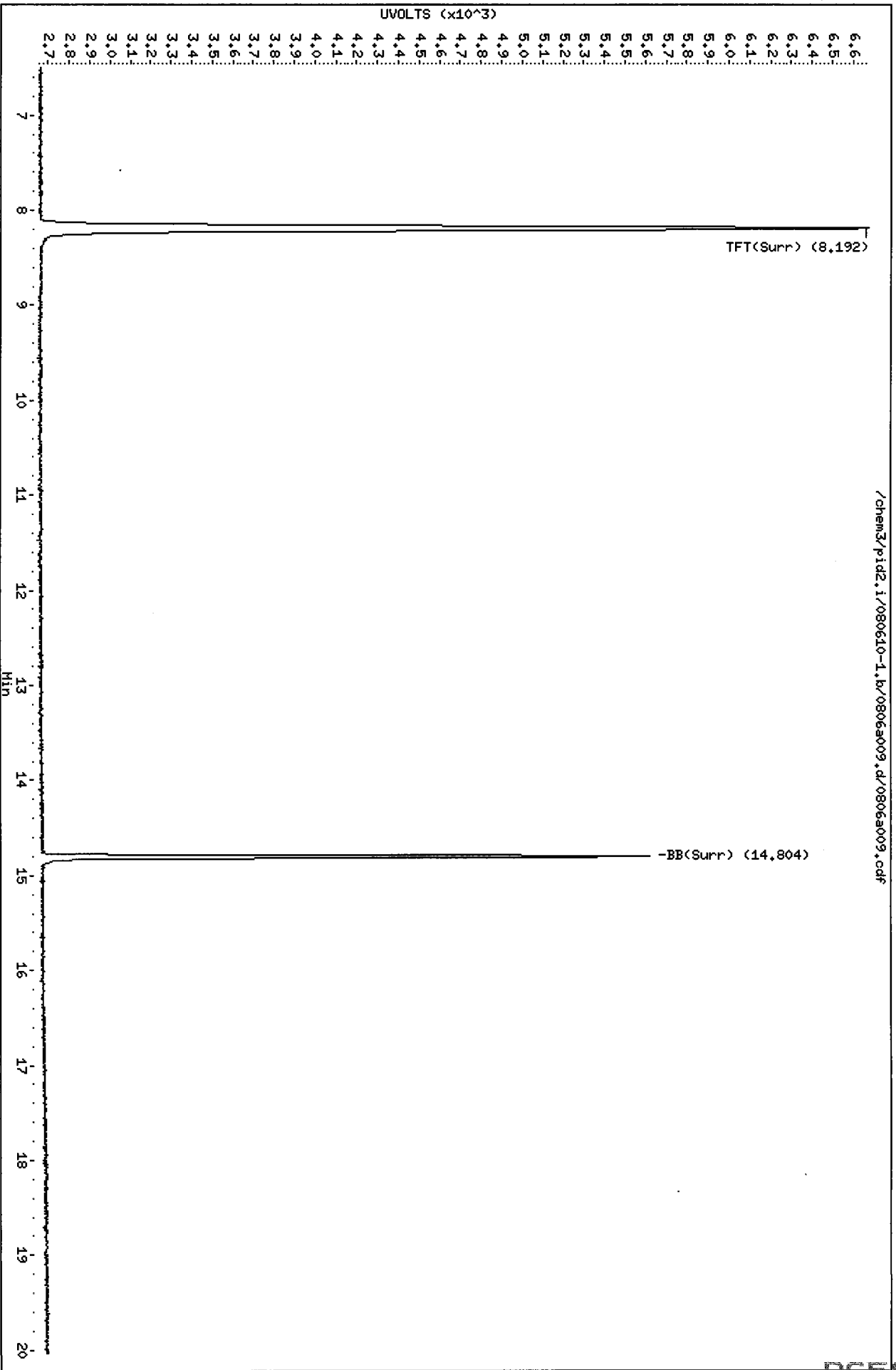
Sample Info: RG58V

Column phase: RTX 502-2 FID

Instrument: pid2.i

Operator: MH

Column diameter: 0.18





Data File: /chem3/pid2.i/080610-2.b/0806a009.d

Date: 06-AUG-2010 09:58

Client ID: PSR24-1B

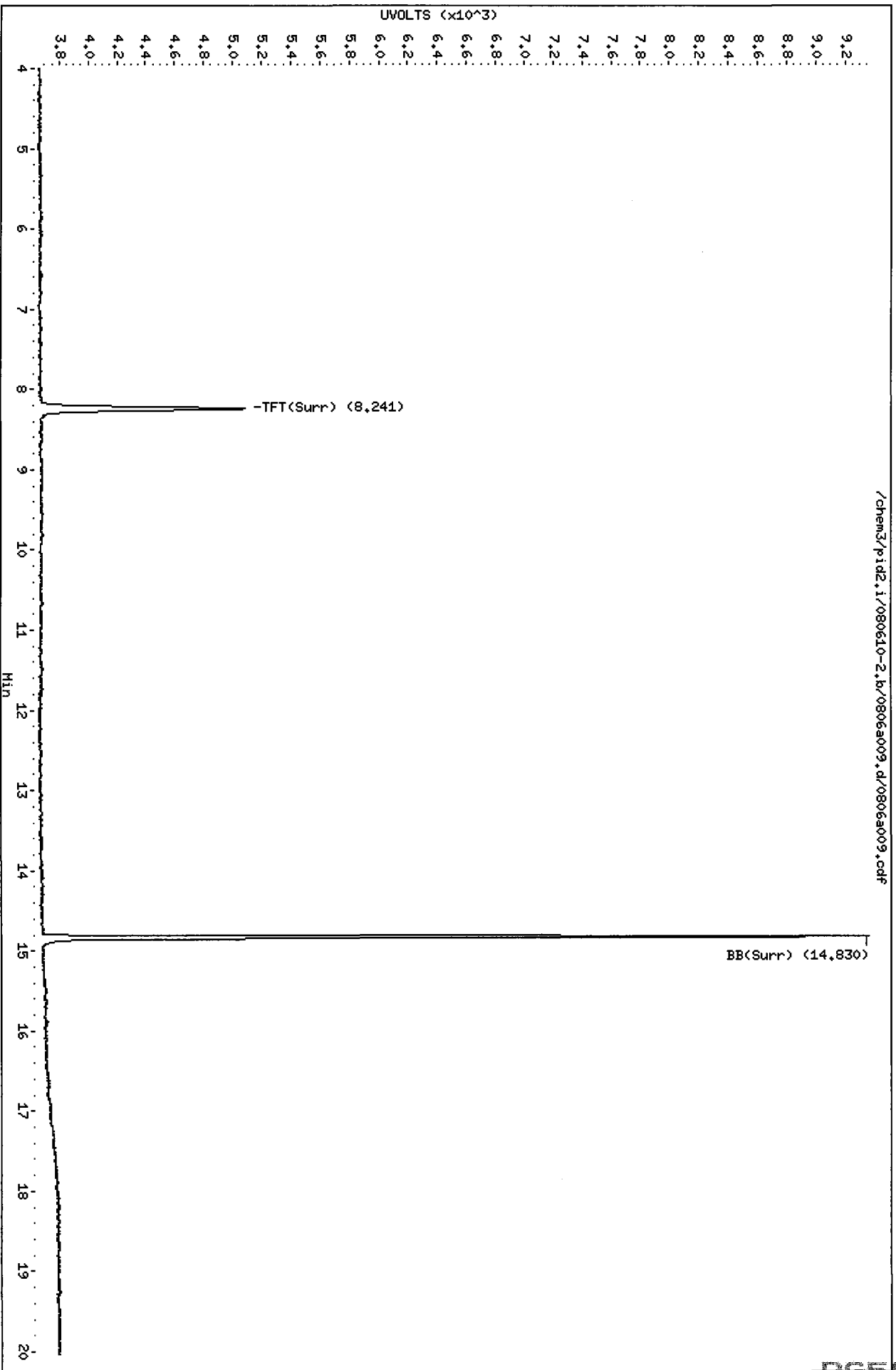
Sample Info: RG58V

Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: MH

Column diameter: 0.18



8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a014.d	ARI ID: BCAL 2
Data file 2: /chem3/pid2.i/080610-2.b/0806a014.d	Client ID:
Method: /chem3/pid2.i/080610-2.b/PIDB.m	Injection Date: 06-AUG-2010 12:07
Instrument: pid2.i	Matrix: WATER
Gas Ical Date: 28-JUL-2010	Dilution Factor: 1.000
BETX Ical Date: 28-JUL-2010	

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.189	0.000	3710	65343	89.4	TFT (Surr)
14.801	-0.001	2770	26351	91.8	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	391896	0.679
8015B (2MP-TMB)	404607	0.310
AKGas (nC6-nC10)	371737	0.418
NWGas (Tol-Nap)	391896	0.651

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.236	0.011	1305	90.8	TFT (Surr)
14.827	0.003	5362	92.2	BB (Surr)

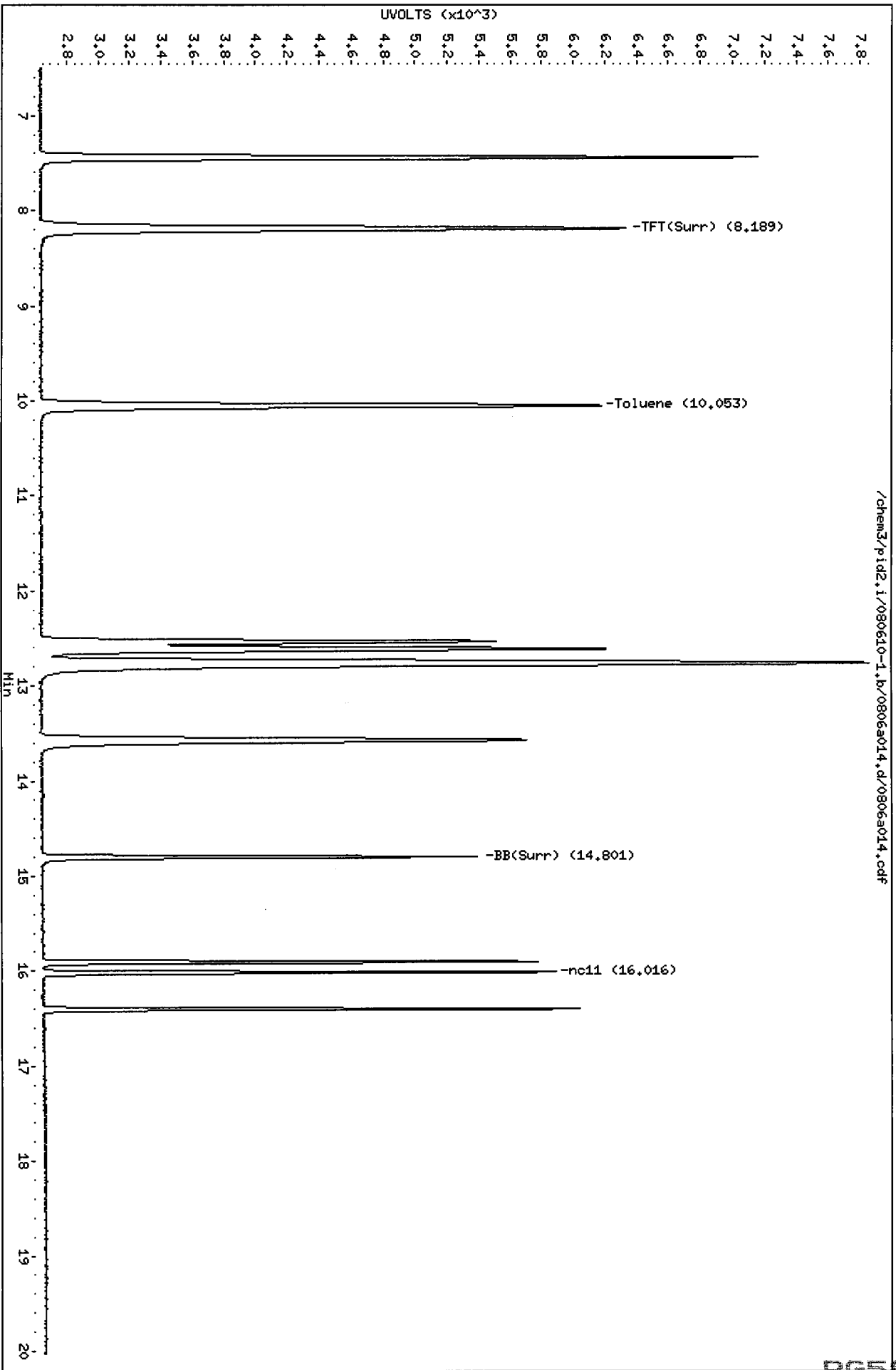
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.490	0.007	2667	22.90	Benzene
10.100	0.006	2253	21.72	Toluene
12.658	0.002	2354	20.54	Ethylbenzene
12.806	0.003	4019	41.48	M/P-Xylene
13.610	0.004	2134	21.02	O-Xylene
5.112	0.012	931	22.17	MTBE

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

Data File: /chem3/pid2.i/080610-1.b/0806a014.d  
Date : 06-AUG-2010 12:07  
Client ID:  
Sample Info: BCAL 2  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid2.1/080610-2.b/0806a014.d  
Date : 06-AUG-2010 12:07

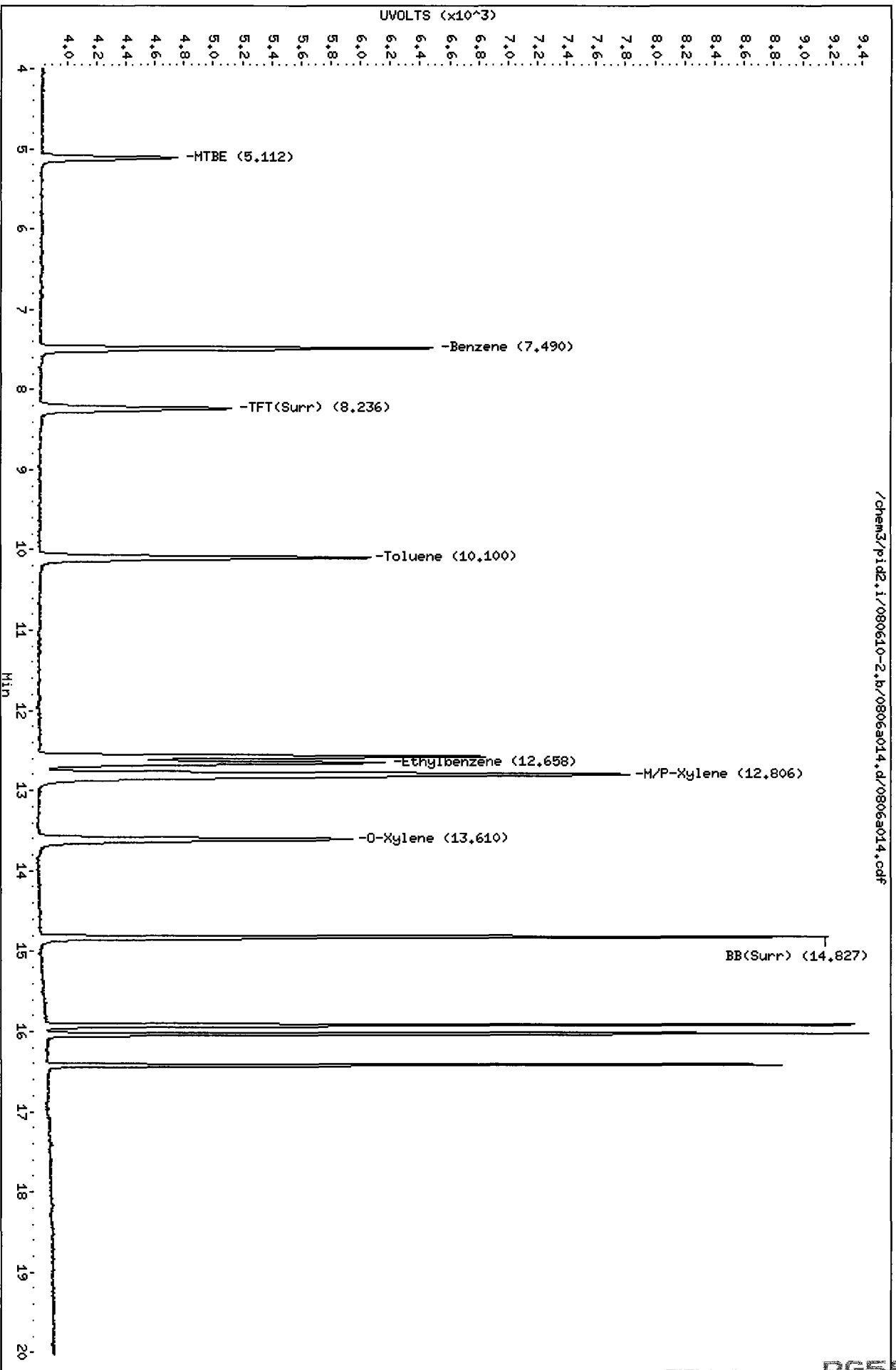
Client ID:  
Sample Info: BCL 2

Column phaset: RTX 502-2 PID

Instrument: pid2.1

Operator: MH  
Column diameter: 0.18

/chem3/pid2.1/080610-2.b/0806a014.d/0806a014.cdf



Mt  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080610-1.b/0806a015.d      ARI ID: GCAL 2  
Data file 2: /chem3/pid2.i/080610-2.b/0806a015.d      Client ID:  
Method: /chem3/pid2.i/080610-2.b/PIDB.m              Injection Date: 06-AUG-2010 12:33  
Instrument: pid2.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.189	0.000	3965	70056	95.5	TFT (Surr)
14.801	-0.001	2953	29684	97.8	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	1323520	2.294
8015B (2MP-TMB)	3034332	2.325
AKGas (nC6-nC10)	2081870	2.341
NWGas (Tol-Nap)	1362091	2.263

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.236	0.011	1327	92.3	TFT (Surr)
14.827	0.002	5513	94.8	BB (Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.491	0.008	524	4.50	Benzene
10.099	0.006	6736	64.94	Toluene
12.658	0.002	2250	19.63	Ethylbenzene
12.809	0.006	6775	69.92	M/P-Xylene
13.610	0.005	3028	29.82	O-Xylene
5.114	0.014	8655	206.14	MTBE

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

Data File: /chem3/pid2.i/080610-1.b/0806a015.d

Date: 06-AUG-2010 12:33

Client ID:

Sample Info: GCAL 2

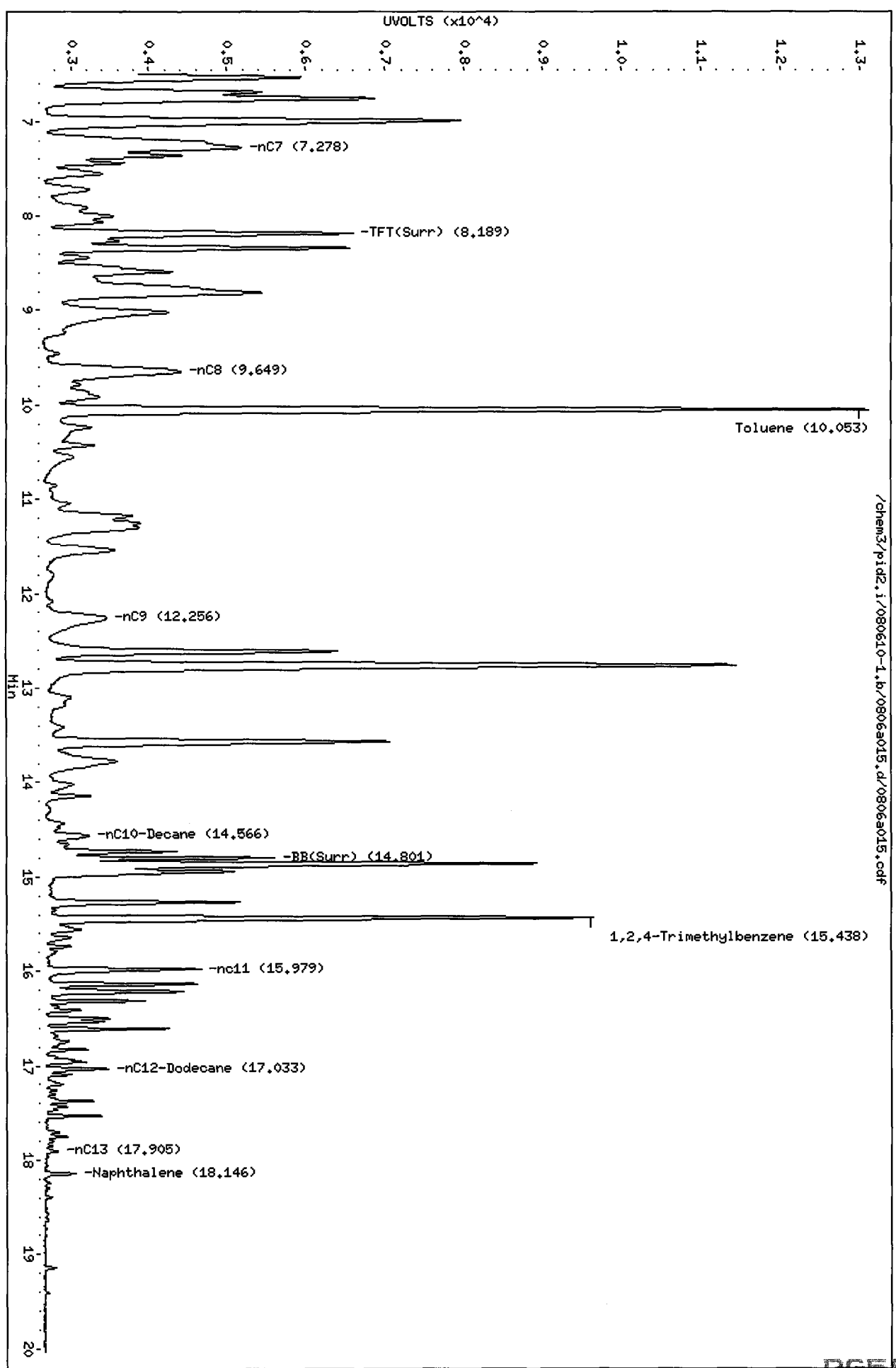
Column phase: RTX 502-2 FID

Instrument: pid2.i

Operator: NH

Column diameter: 0.18

/chem3/pid2.i/080610-1.b/0806a015.d/0806a015.cdf



Data File: /chem3/pid2.i/080610-2.b/0806a015.d

Date : 06-AUG-2010 12:33

Client ID:

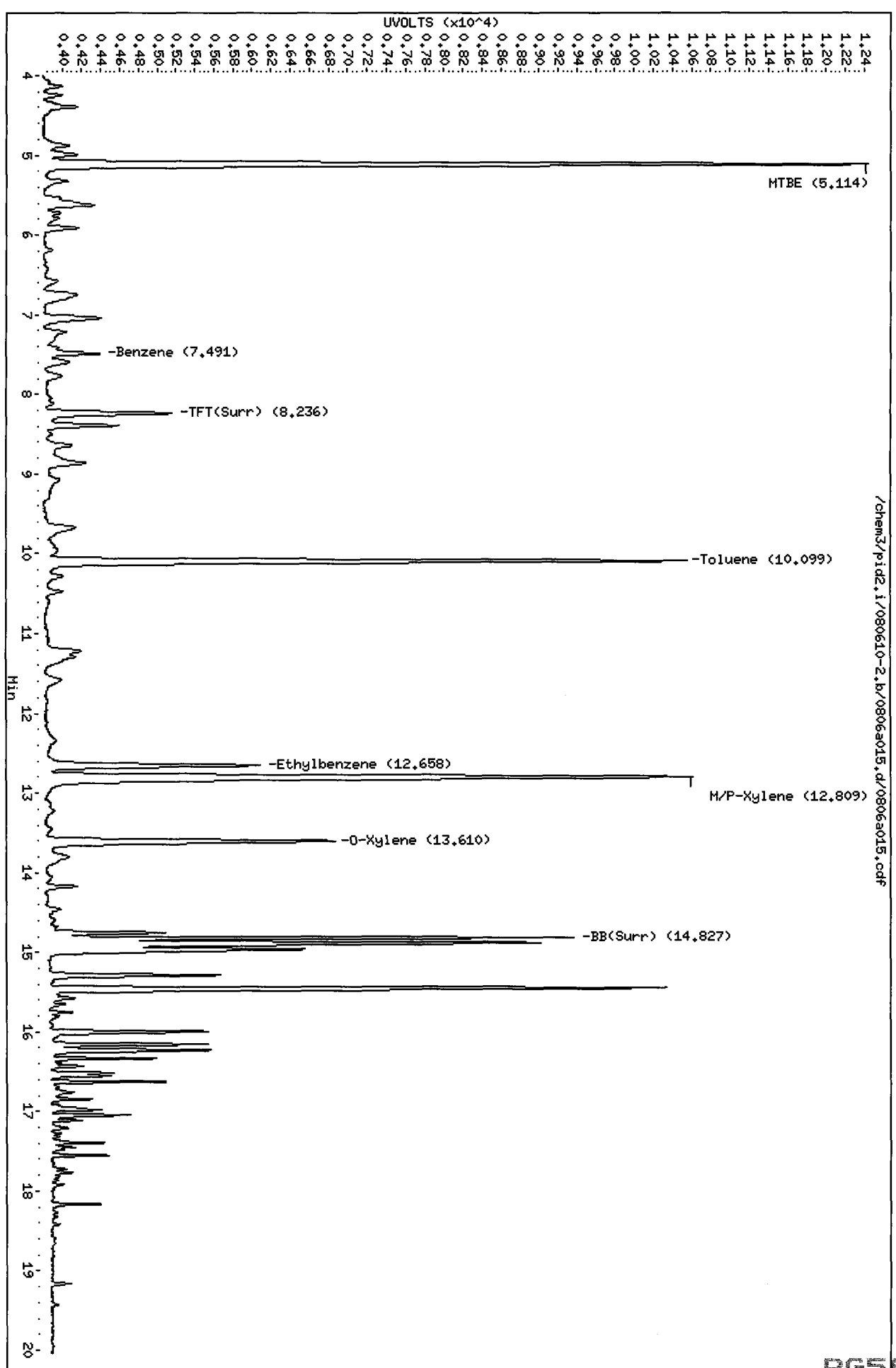
Sample Info: GCAL 2

Column phase: RTX 502-2 PID

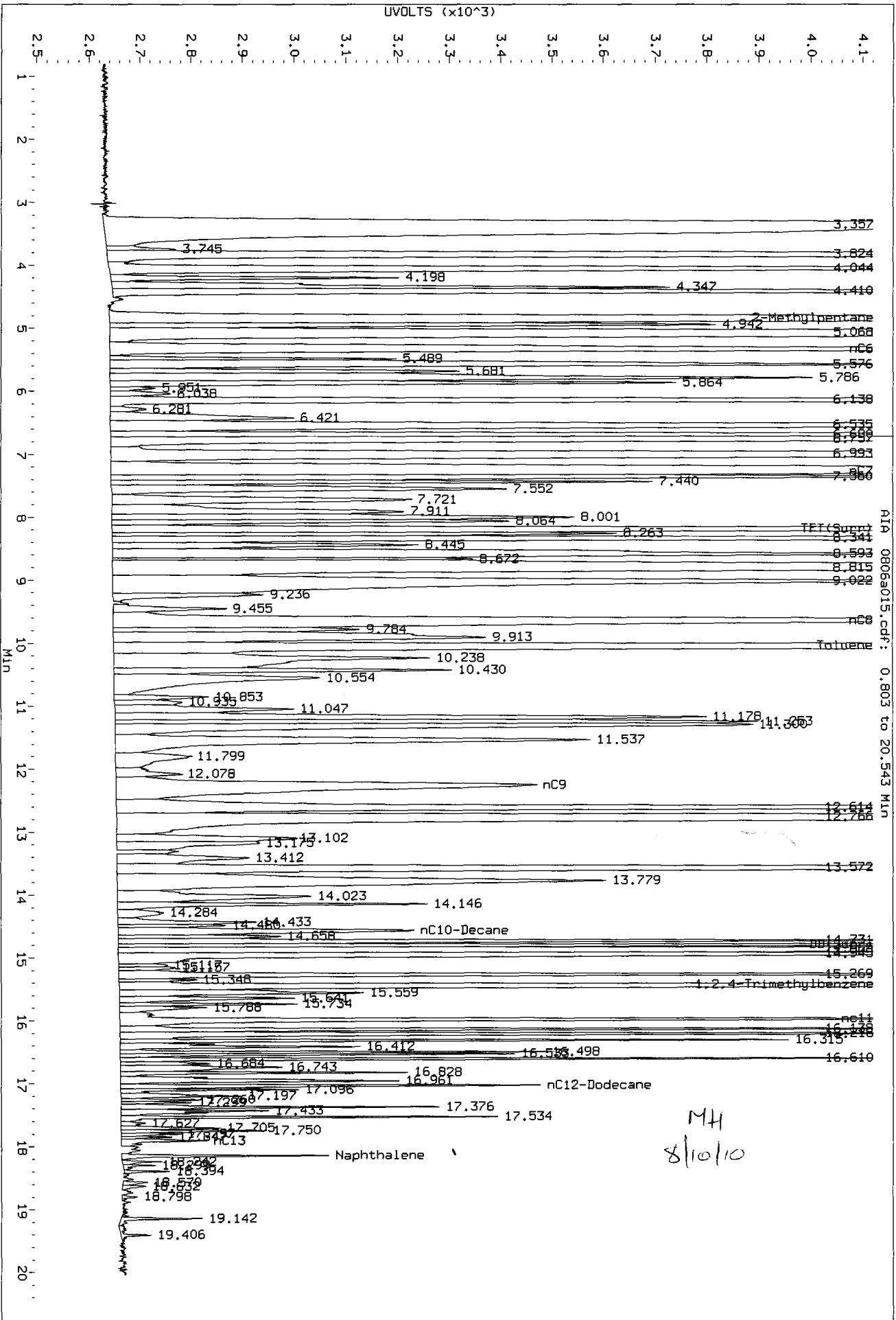
Instrument: pid2.i

Operator: MH

Column diameter: 0.18



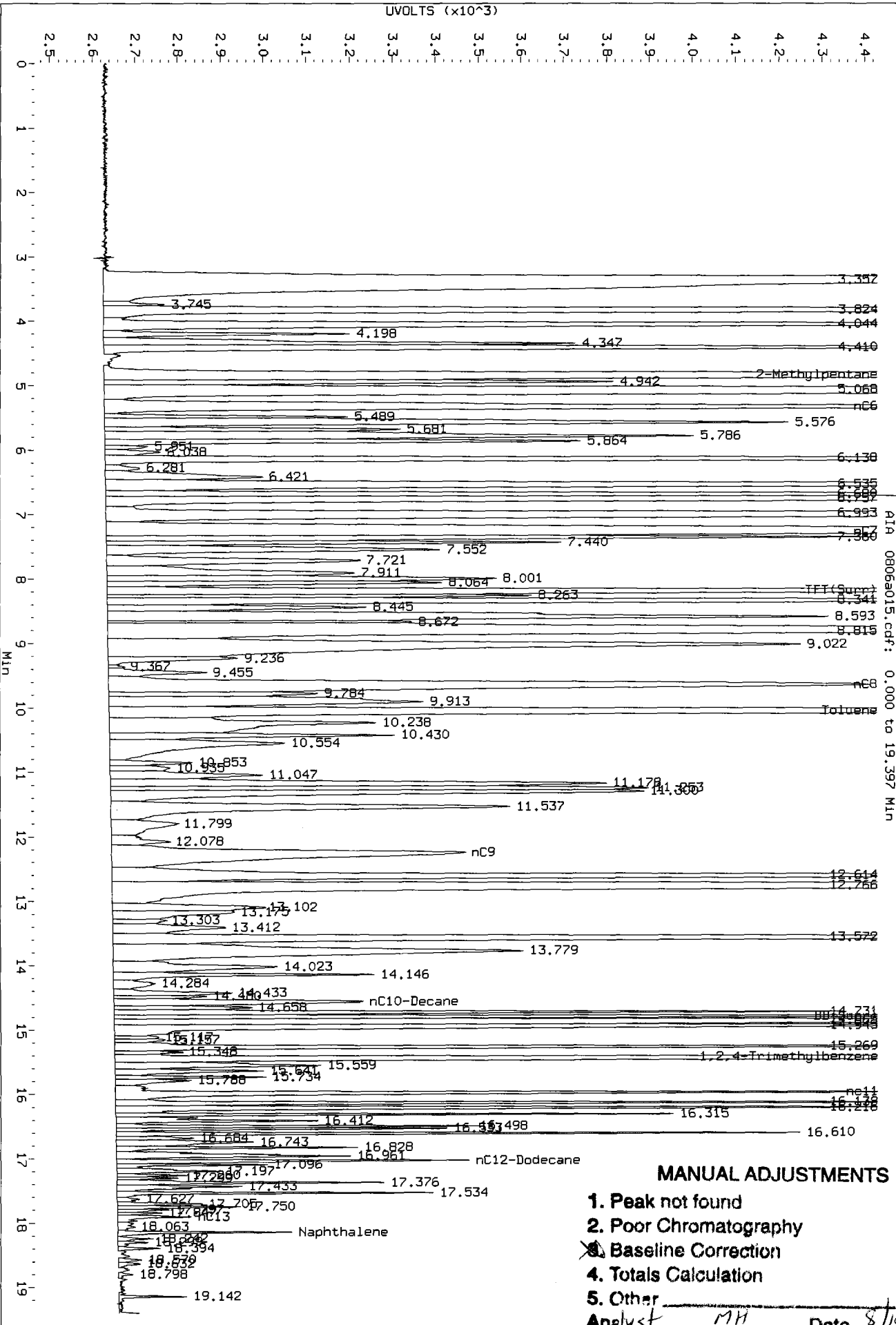
Data File: /chem3/pid2\_1/080610-1.b/0806a015.d/0806a015.cdf  
 Injection Date: 06-AUG-2010 12:33  
 Instrument: pid2.1  
 Client Sample ID:



MH  
8/10/10



Data File: /chem3/plid2\_1/080610-1.b/0806a015.d/0806a015.cdf  
 Injection Date: 06-AUG-2010 12:33  
 Instrument: plid2.1  
 Client Sample ID:



0806a015.cdf: 0.000 to 19.397 MIN

**MANUAL ADJUSTMENTS**

- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other \_\_\_\_\_

Analyst MH Date 8/10/10

RG58: 01433

# Analytical Resources Inc.: Organics Instrument Log

PID-3 HP 5890 Series II - Serial No.: 2728A-13336

Date: 8/9/10 Analysis: NWTP46/BETA Analyst: MH

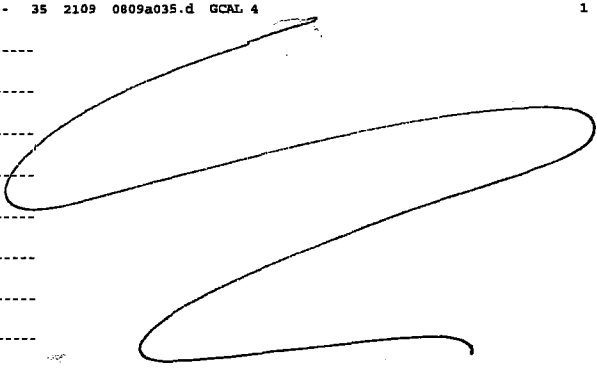
GC Program: BETA Column No: 32213 Column Type: RTX502-2

Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_

Calibration File: \_\_\_\_\_ Curve Date: 6/29/10 BETA  
7/28/10 GCS

IS/SS	Ical/Ccal	LCS/ICV
<u>VW648-3</u>	<u>VW635-1</u>	<u>VW647-2</u>
	<u>VW644-3</u>	
	<u>VW647-2</u>	

Time	Filename	LabID	ClientID	Vial#	pH	DF				
1	0639	0809a001.d	RINSE			1	23	1615	0809a023.d RINSE	1
2	0703	0809a002.d	RT+BCAL 1			1	24	1639	0809a024.d GCAL 3	1
3	0728	0809a003.d	GCAL 1			1	25	1704	0809a025.d RG78D	PSB9A-4-6-073010 0.00
4	0752	0809a004.d	LCS0809			1	26	1728	0809a026.d RG78F	PSB10-0-0.5-073010 0.00
5	0817	0809a005.d	LCS0809			1	27	1753	0809a027.d RG78H	PSB10-2-4-073010 0.00
6	0841	0809a006.d	MS0809			1	28	1817	0809a028.d RG78I	PSB10-4-6-073010 0.00
7	0940	0809a007.d	RH05K	FTATW01-8		0.00	29	1842	0809a029.d RH78J	1
8	1005	0809a008.d	RH30A	ICON TYPE 17		0.00	30	1907	0809a030.d RG78JMS	PSB10-8.5-10-07 MS 0.00
9	1030	0809a009.d	RH30B	ICON TYPE 2-G		0.00	31	1931	0809a031.d RG78JMSD	PSB10-8.5-10-07 MSD 0.00
10	1054	0809a010.d	RH30C	ICON TYPE 1-G		0.00	32	1956	0809a032.d RG78K	PSB10-14-15-073010 0.00
11	1119	0809a011.d	RINSE			1	33	2020	0809a033.d RG78L	PSB10-20-25-073010 0.00
12	1144	0809a012.d	BCAL 2			1	34	2045	0809a034.d RINSE	1
13	1208	0809a013.d	GCAL 2			1	35	2109	0809a035.d GCAL 4	1
14	1233	0809a014.d	RH30B	ICON TYPE 2-G		0.00				
15	1258	0809a015.d	RG58E	PSB22-17-19-072910		0.00				
16	1322	0809a016.d	RG58F	PSB22-19-20-072910		0.00				
17	1347	0809a017.d	RG58K	PSB23-14-16.5-07291		0.00				
18	1412	0809a018.d	RG58L	PSB23-16.5-19-07291		0.00				
19	1436	0809a019.d	RG58R	PSB24-14-16-072910		0.00				
20	1501	0809a020.d	RG58S	PSB24-16-17-072910		0.00				
21	1525	0809a021.d	RG78A	PSB9A-11-13.5-07301		0.00				
22	1550	0809a022.d	RG78B	PSB9A-1.5-2-073010		0.00				



MH  
8/10/10

## Maintenance / Comments

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: RG58/R678 Client ID: Floyd/Snyder

ARI SOR: ~~404S(Gas)~~ ~~410S(BTEX)~~ 430S(VPH) 700S(8260C) 703S(SIM) 706S(524.2) 710S(RSK-175)

Parameter(s): NWTP46/BETA

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 7/28/10 6-5  
6/29/10 BETA Analysis Start Date: 8/9/10

pH ≤ 2.0	YES / NO <u>NA</u>	Method Blank In Control?	<u>YES</u> / NO
BFB Tune Meets Criteria?	YES / NO <u>NA</u>	LCS / LCSD Recovery In Control?	<u>YES</u> / NO
Internal Standard Meets Criteria?	YES / NO <u>NA</u>	Surrogate Recovery In Control?	<u>YES</u> / NO
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	YES / NO <u>NA</u>	Q flag applied?	YES / NO <u>NA</u>
Manual Integrations for ICal?	<u>YES</u> / NO	Manual Integrations for Samples?	Yes <u>NO</u>
Special Analysis Criteria Met?	YES / NO <u>NA</u>		

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

BETA Compounds in Gcal 3 & Gcal 4 used to validated BETA at the end of 2nd & 3rd bracket. Gcal 3 & Gcal 4 OK for BETA

**Additional Details on Reverse: Yes / No**

Analyst: [Signature] Date: 8/11/10

Reviewer: \_\_\_\_\_ Date: \_\_\_\_\_

8/10/10 MH

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a002.d      ARI ID: RT+BCAL 1  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a002.d      Client ID:  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 07:03  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.409	0.000	7250	85109	100.7	TFT(Surr)
14.888	0.000	4324	35188	100.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1008315	1.218
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1243055	0.747
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	868786	0.768
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1065748	1.208

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
8.408	0.000	20561	93.5	TFT(Surr)
14.887	0.000	42952	94.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.689	0.000	31000	23.45	Benzene
10.273	0.000	30250	22.92	Toluene
12.805	0.000	27553	22.17	Ethylbenzene
12.943	0.000	60495	44.92	M/P-Xylene
13.725	0.000	28986	22.56	O-Xylene
5.291	0.000	8888	24.98	MTBE

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

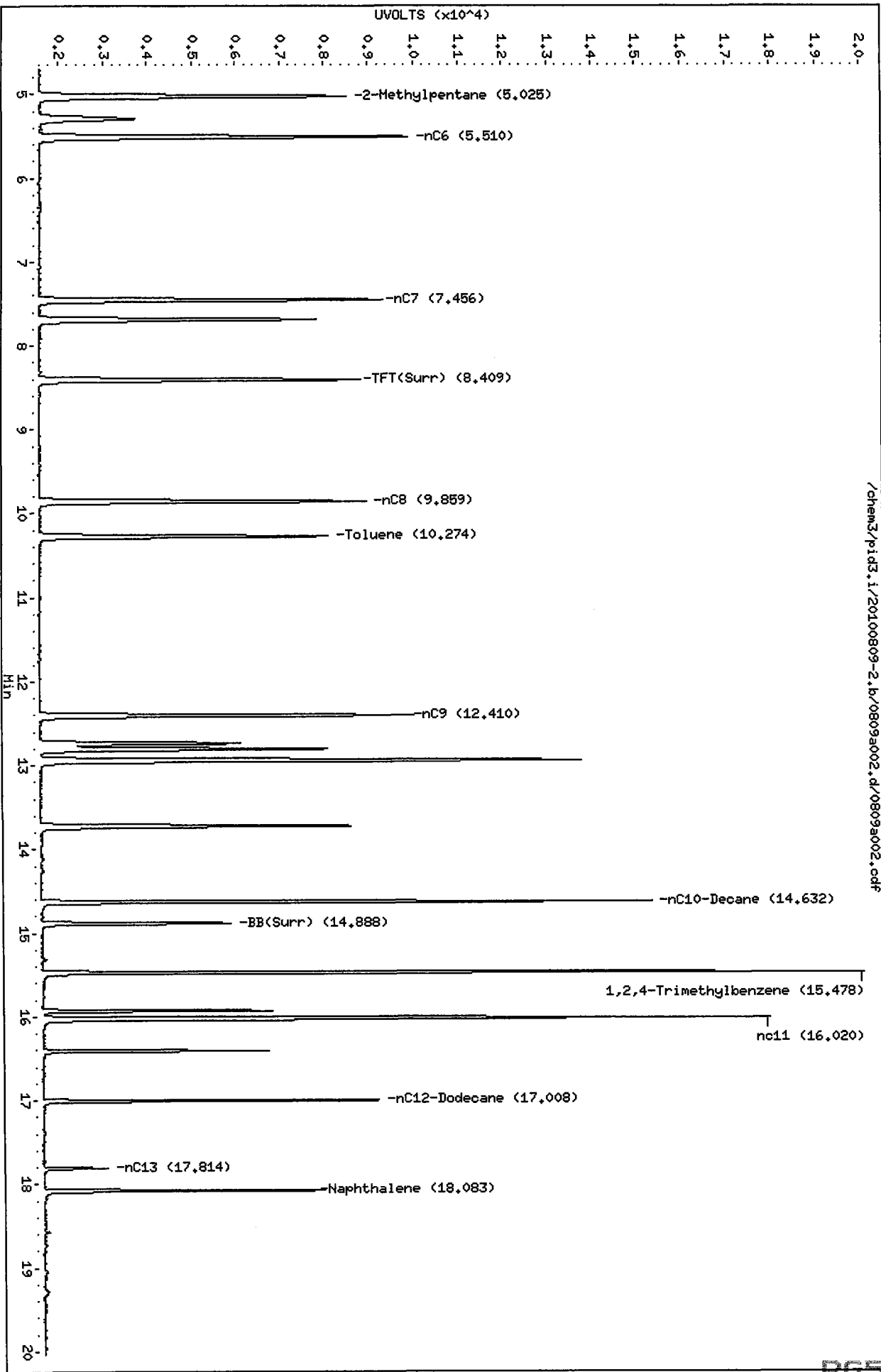
MH  
8/10/10

Data File: /chem3/pid3.i/20100809-2.k/0809a002.d  
Date : 09-AUG-2010 07:03  
Client ID:  
Sample Info: RT+BCAL 1

Column phase: RTX 502-2 FID

/chem3/pid3.i/20100809-2.k/0809a002.d/0809a002.cdf

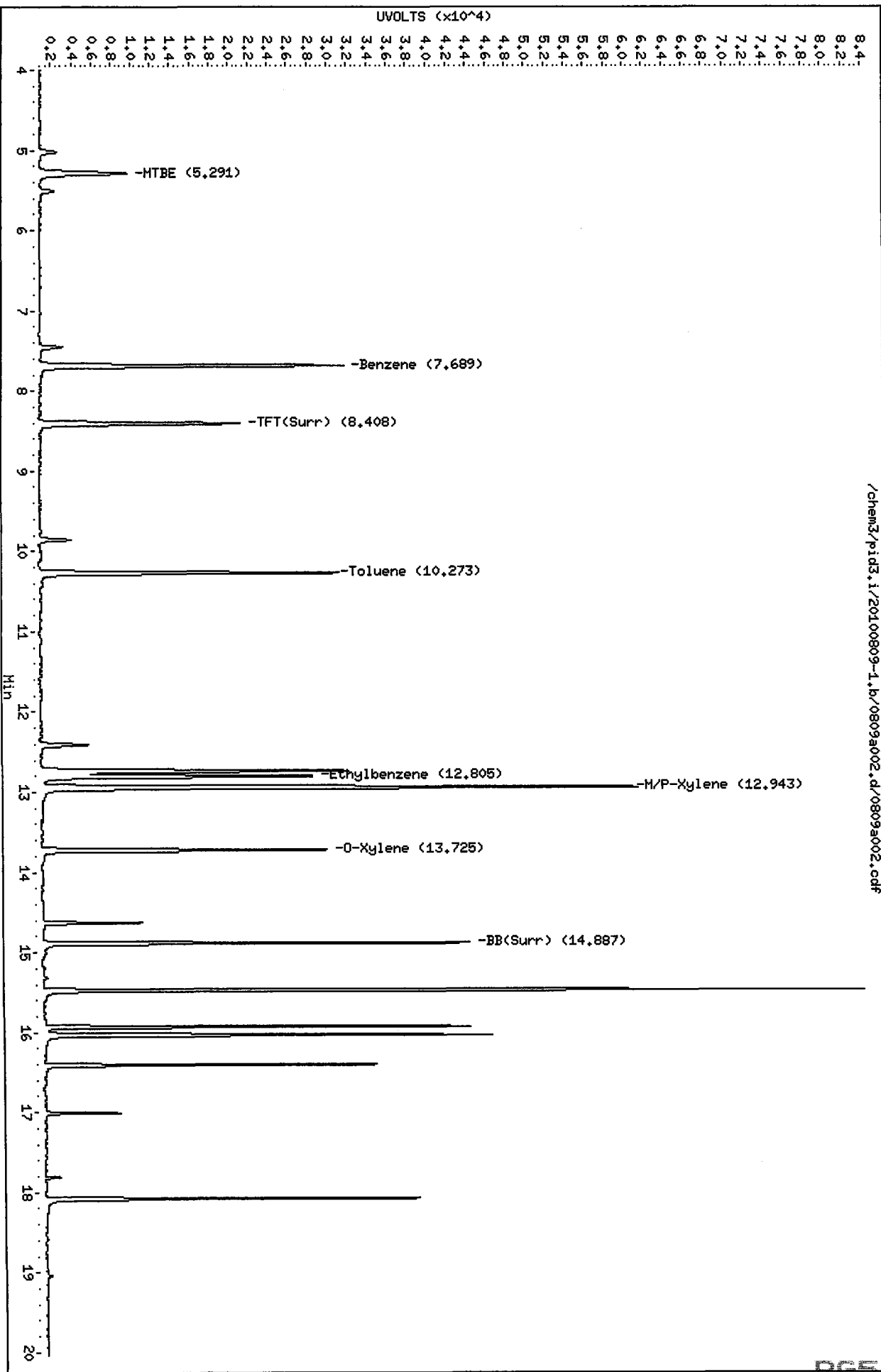
Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100809-1.b/0809a002.d  
Date : 09-AUG-2010 07:03  
Client ID:  
Sample Info: RT+BCAL 1  
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100809-1.b/0809a002.d/0809a002.cdf



MH  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a003.d      ARI ID: GCAL 1  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a003.d      Client ID:  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 07:28  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.428	0.019	7438	88646	103.3	TFT(Surr)
14.902	0.013	4451	38121	103.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1840855	2.224 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	3571983	2.146 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2410004	2.129 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1964102	2.227 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
8.427	0.019	20904	95.1	TFT(Surr)
14.900	0.013	43547	95.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.707	0.018	6364	4.81	Benzene
10.293	0.020	84327	63.89	Toluene
12.826	0.021	24475	19.70	Ethylbenzene
12.967	0.024	94934	70.50	M/P-Xylene
13.744	0.019	39248	30.55	O-Xylene
5.306	0.015	73864	207.60	MTBE

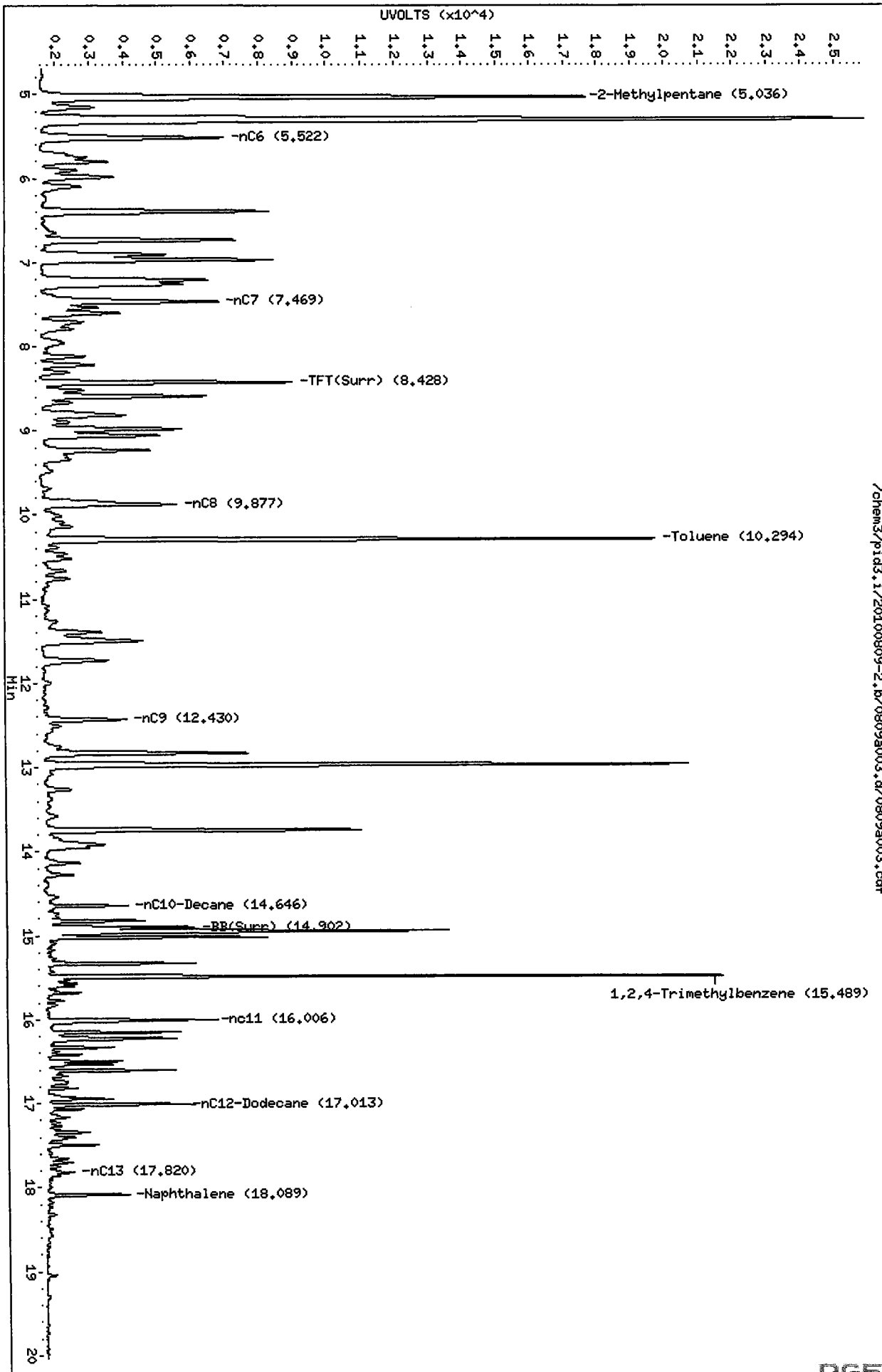
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100809-2.b/0809a003.d  
Date : 09-AUG-2010 07:28  
Client ID: LORA LAKE  
Sample Info: C0AL 1

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100809-2.b/0809a003.d/0809a003.cdf





Data File: /chem3/pid3.i/20100809-1.b/0809a003.d

Date : 09-AUG-2010 07:28

Client ID:

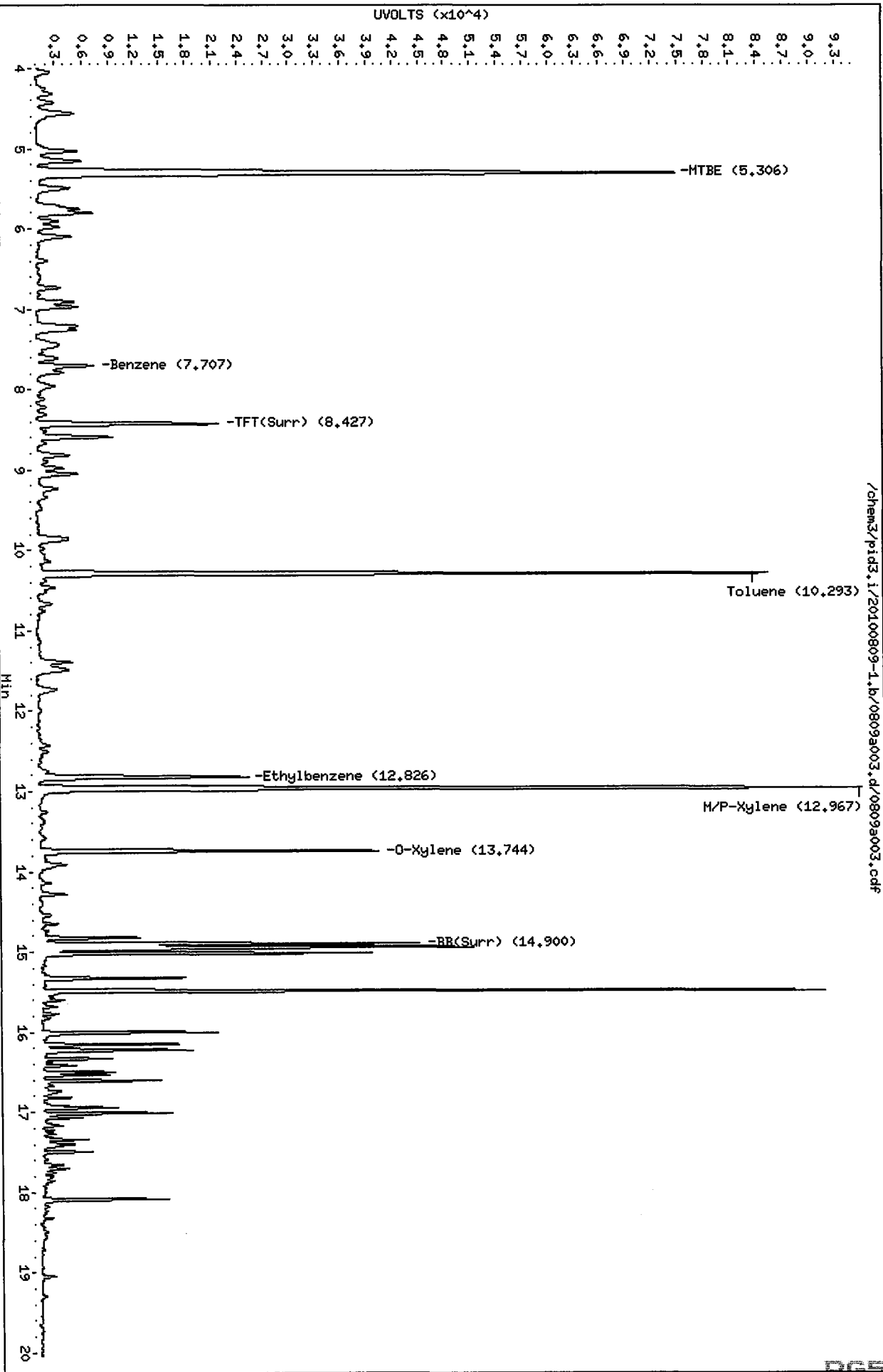
Sample Info: GCAL 1

Column phase: RTX 502-2 PID

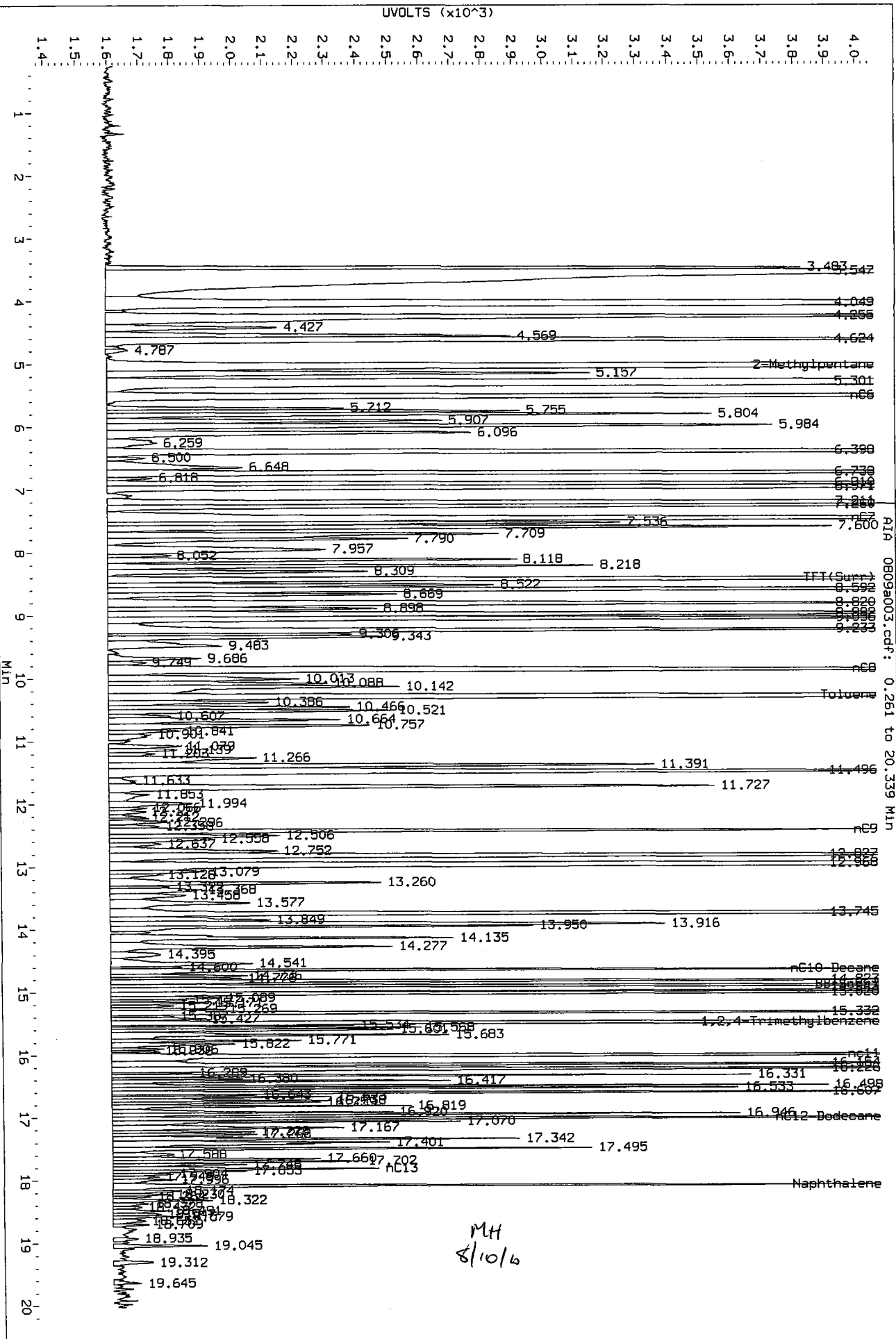
Instrument: pid3.i

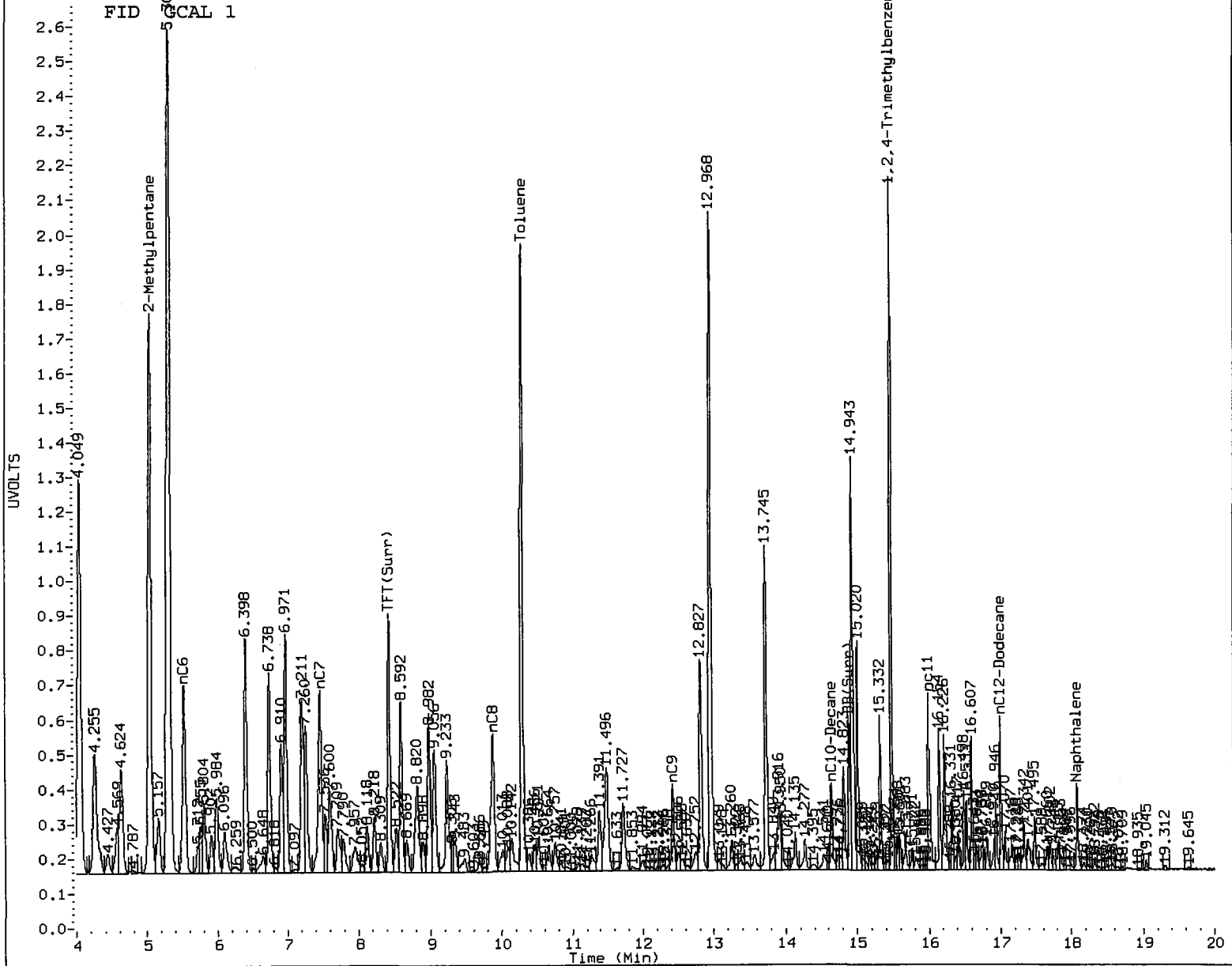
Operator: HH

Column diameter: 0.18



Data File: /chem3/pid3.1/20100809-2.b/0809a003.d/0809a003.cdf  
Injection Date: 09-AUG-2010 07:28  
Instrument: pid3.i  
Client Sample ID:





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst:   MH   Date:   8/10/0

M.  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a004.d      ARI ID: LCS0809  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a004.d      Client ID:  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 07:52  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.436	0.027	7305	87319	101.5	TFT (Surr)
14.908	0.020	4450	37138	103.3	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	764186	0.923 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1485820	0.893 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1006874	0.890 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	821450	0.931 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
8.435	0.027	20578	93.6	TFT (Surr)
14.907	0.020	44220	97.0	BB (Surr)

SW8021 (PID)

-----

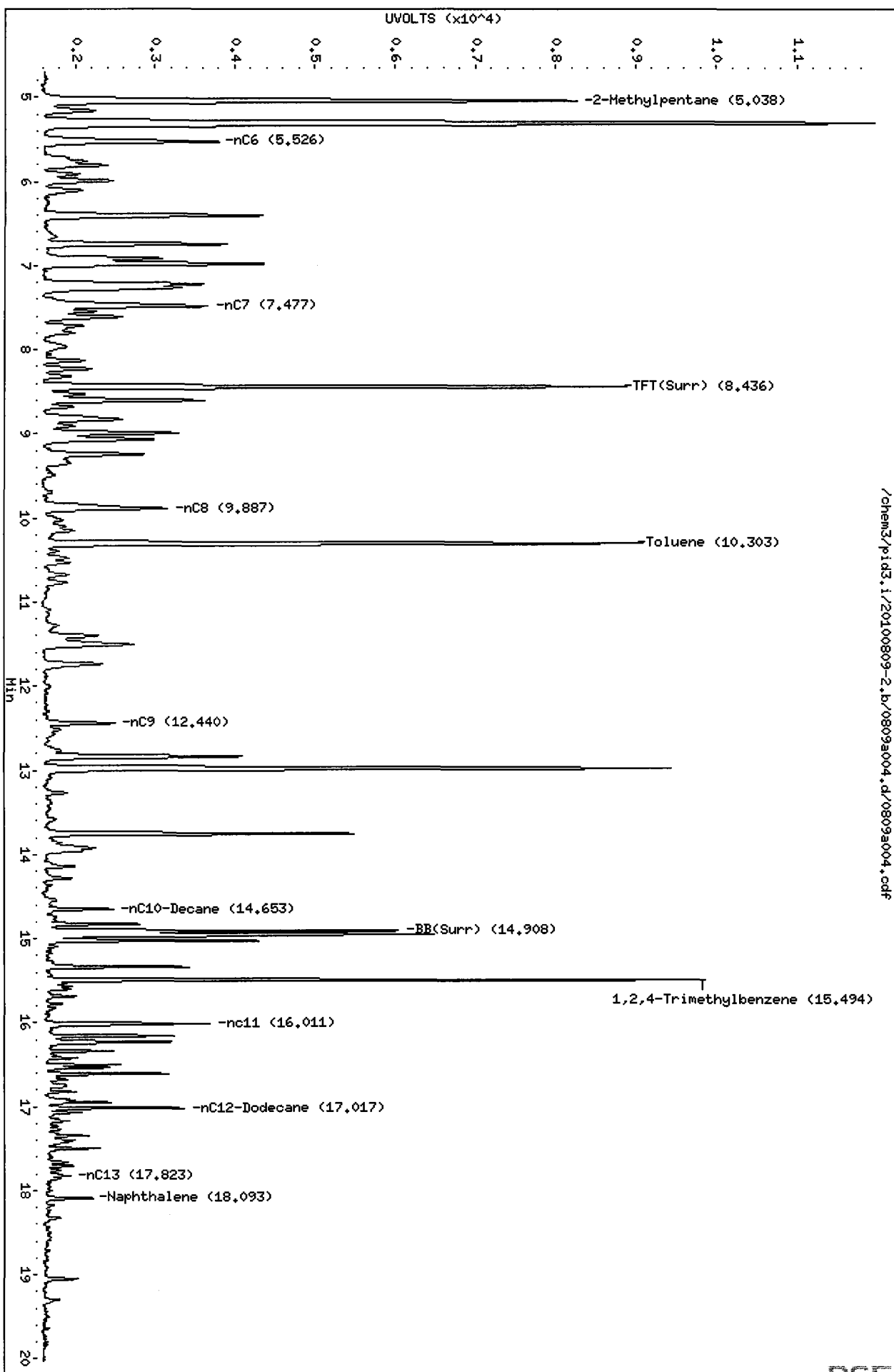
RT	Shift	Response	Amount	Compound
7.714	0.025	2622	1.98	Benzene
10.302	0.029	34735	26.32	Toluene
12.836	0.030	9877	7.95	Ethylbenzene
12.975	0.033	38777	28.80	M/P-Xylene
13.752	0.027	16065	12.50	O-Xylene
5.308	0.016	31403	88.26	MTBE

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

Data File: /chem3/pid3.i/20100809-2.b/0809a004.d  
Date: 09-AUG-2010 07:52  
Client ID:  
Sample Info: LCS0809

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100809-2.b/0809a004.d/0809a004.cdf

Data File: /chem3/pid3.i/20100809-1.b/0809a004.d

Date: 09-AUG-2010 07:52

Client ID:

Sample Info: LCS0809

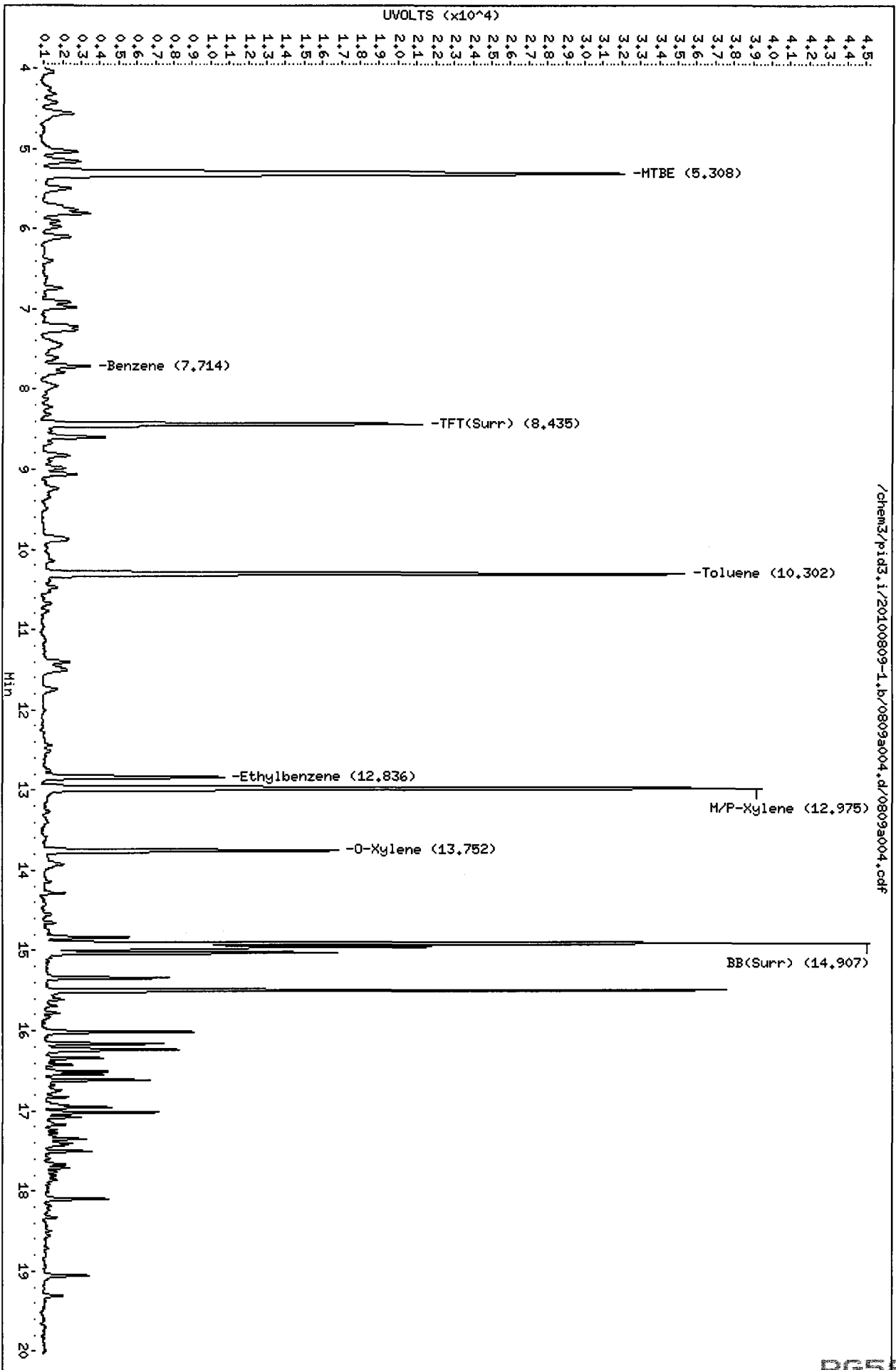
Instrument: pid3.i

Operator: MH

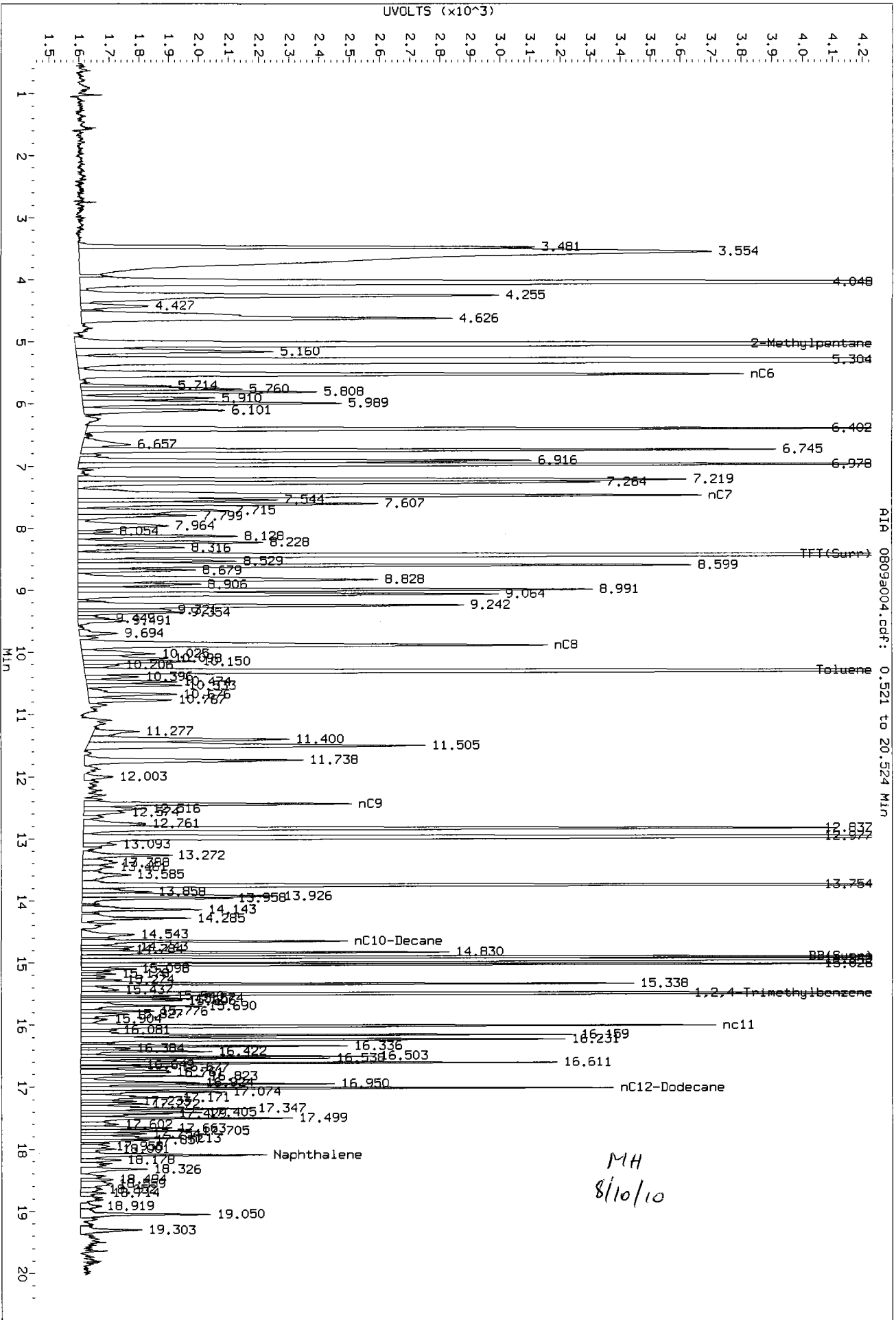
Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100809-1.b/0809a004.d/0809a004.cdf

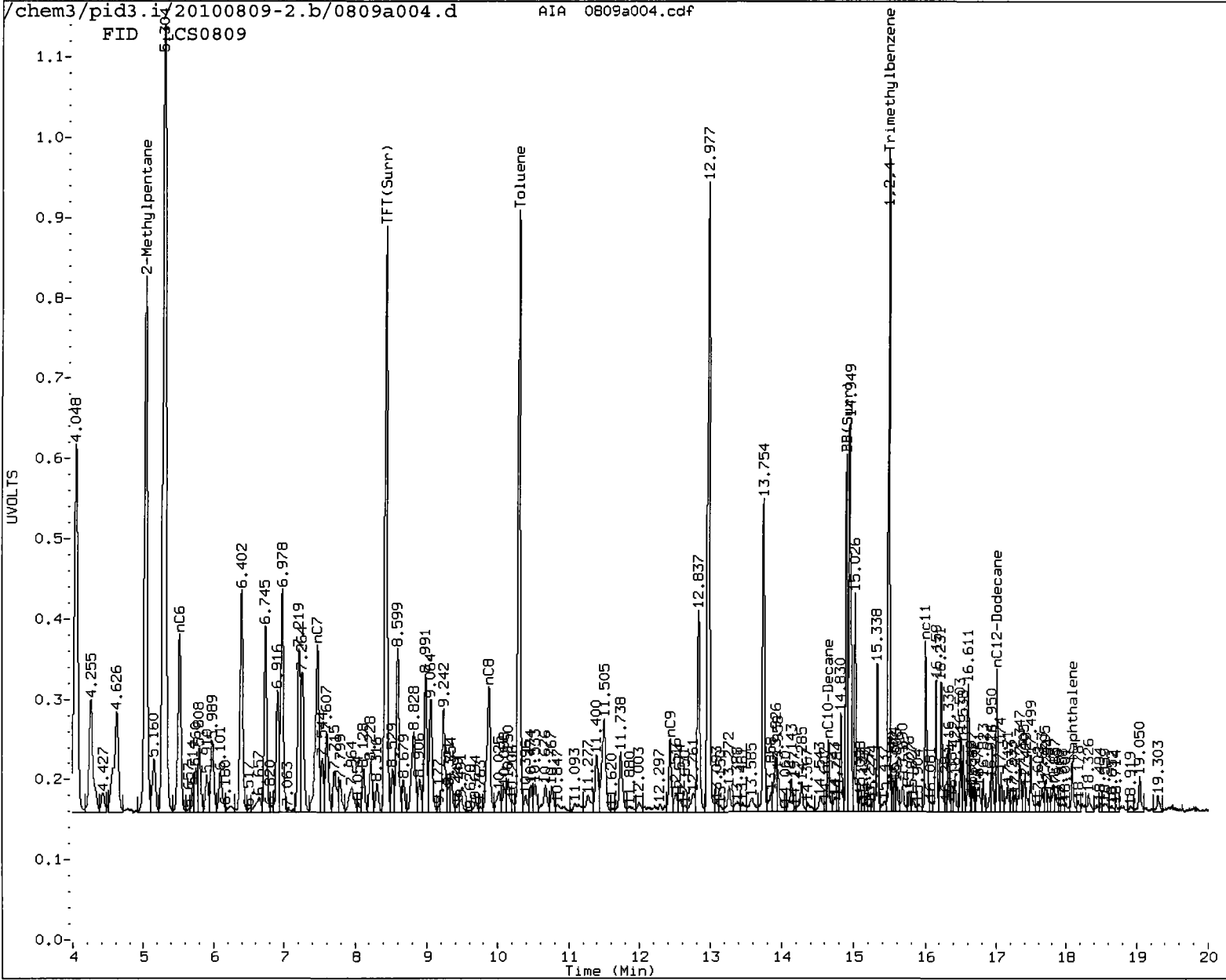


Data File: /chem3/pid3.1/20100809-2.b/0809a004.d/0809a004.cdf  
Injection Date: 09-AUG-2010 07:52  
Instrument: PID3.1  
Client Sample ID:



AIA 0809a004.cdf: 0.521 to 20.524 MIN

FID CS0809



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH Date: 8/10/10



M.L.  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a005.d      ARI ID: LCSD0809  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a005.d      Client ID:  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 08:17  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.029	7232	85903	100.5	TFT (Surr)
14.910	0.022	4412	36162	102.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	760196	0.918 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1480522	0.890 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1007446	0.890 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	813401	0.922 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
8.437	0.029	20475	93.1	TFT (Surr)
14.908	0.021	43782	96.0	BB (Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
7.715	0.026	2608	1.97	Benzene
10.304	0.031	34802	26.37	Toluene
12.839	0.033	10108	8.13	Ethylbenzene
12.978	0.036	38566	28.64	M/P-Xylene
13.754	0.029	16129	12.55	O-Xylene
5.306	0.015	31134	87.50	MTBE

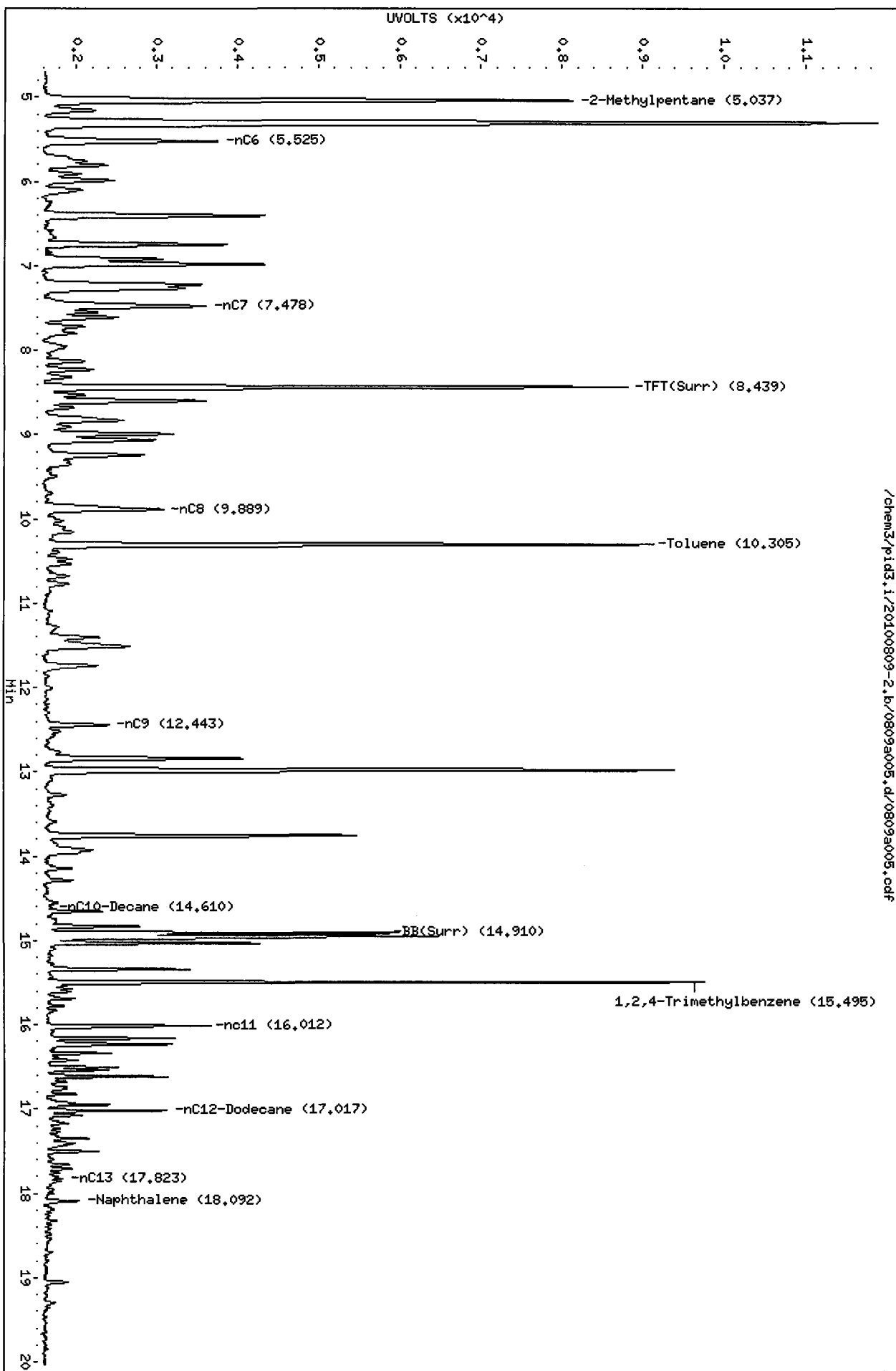
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100809-2.b/0809a005.d  
Date: 09-AUG-2010 08:17  
Client ID:  
Sample Info: LCSD0809

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

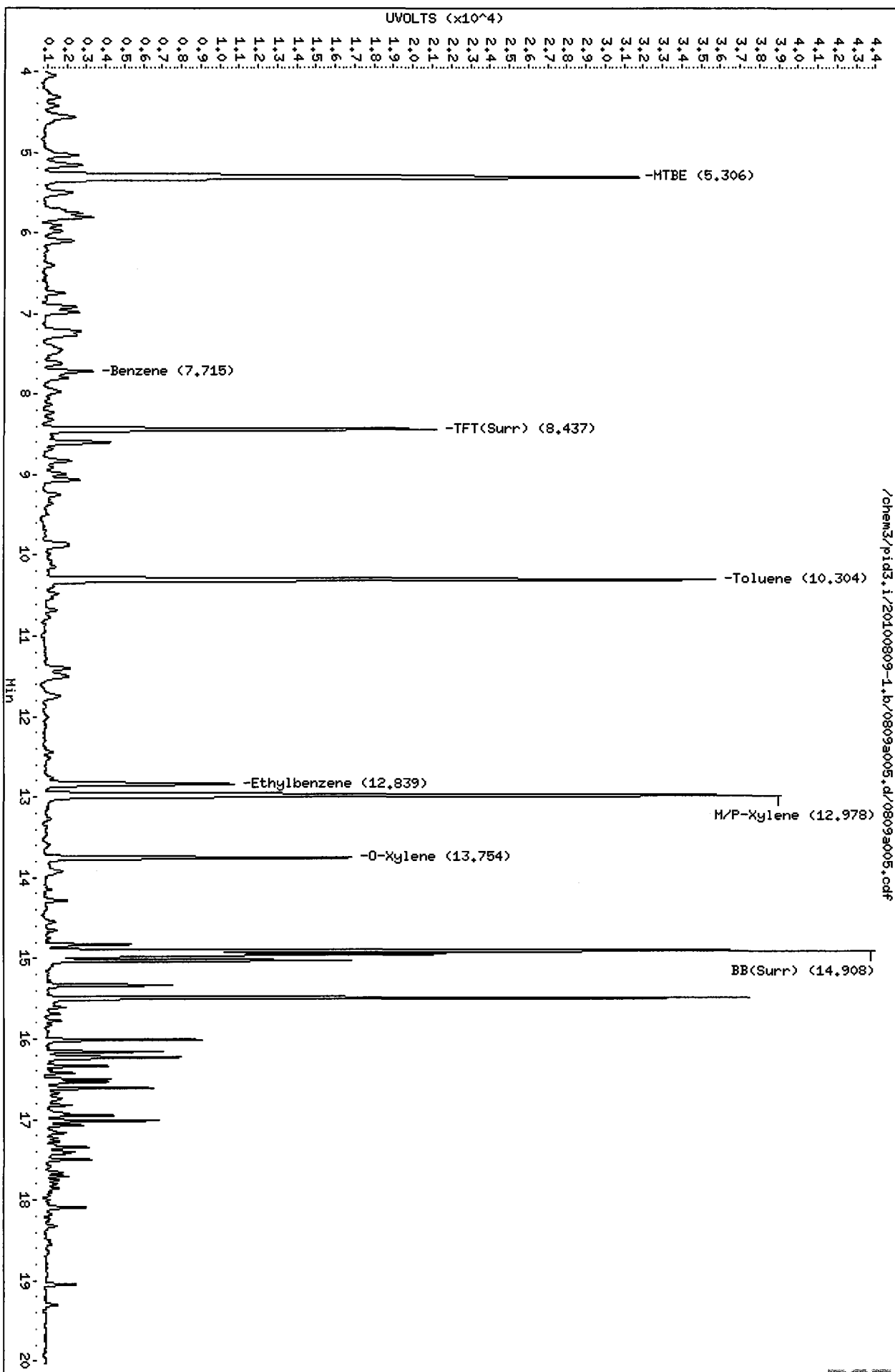
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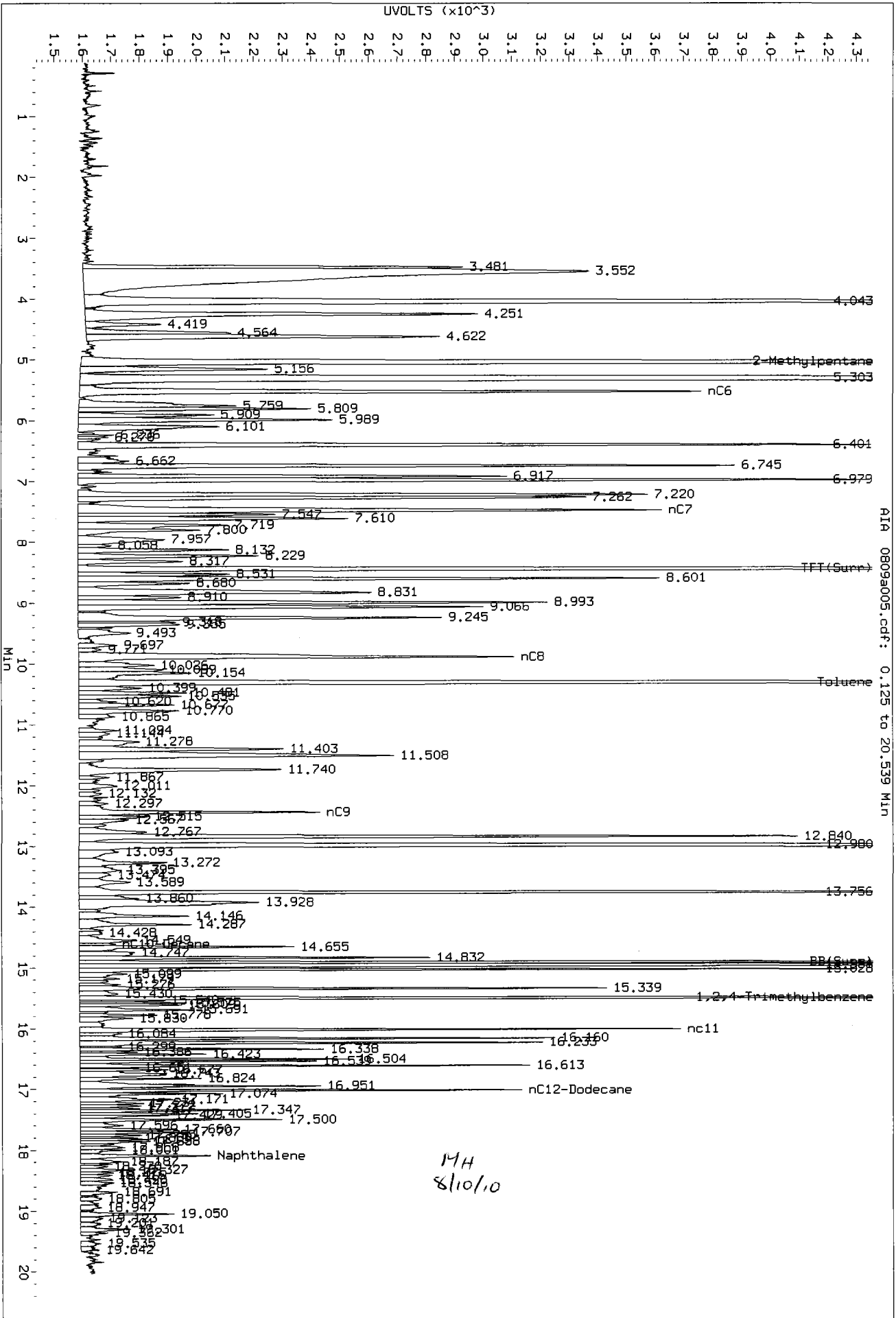
Data File: /chem3/pid3.i/20100809-1.b/0809a005.d  
Date: 09-AUG-2010 08:17  
Client ID:  
Sample Info: LCSD0809

Column phase: RTX 502-2 PID

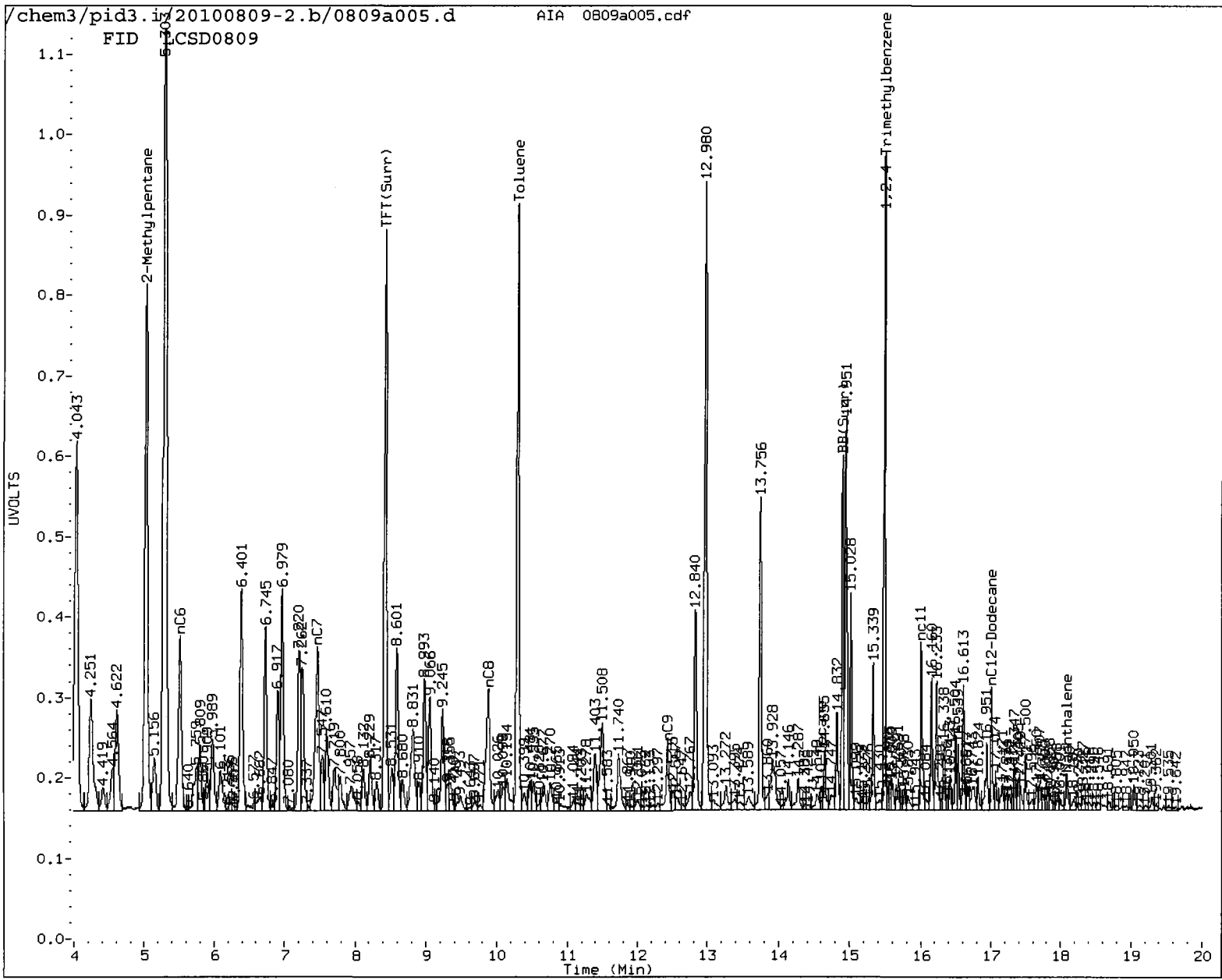
Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100809-1.b/0809a005.d/0809a005.cdf



AIA 0809a005.cdf: 0.125 to 20.539 MIN



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH Date: 8/10/10

8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a006.d      ARI ID: MB0809  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a006.d      Client ID:  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 08:41  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.441	0.031	7115	84252	98.9	TFT (Surr)
14.911	0.023	4335	37189	100.7	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	11750	0.014
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	11454	0.007
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	10391	0.009
NWTPHG Tol-Nap (10.17 to 18.18)	882029	15075	0.017

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
8.440	0.032	19870	90.4	TFT (Surr)
14.910	0.023	42600	93.4	BB (Surr)

SW8021 (PID)

-----

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

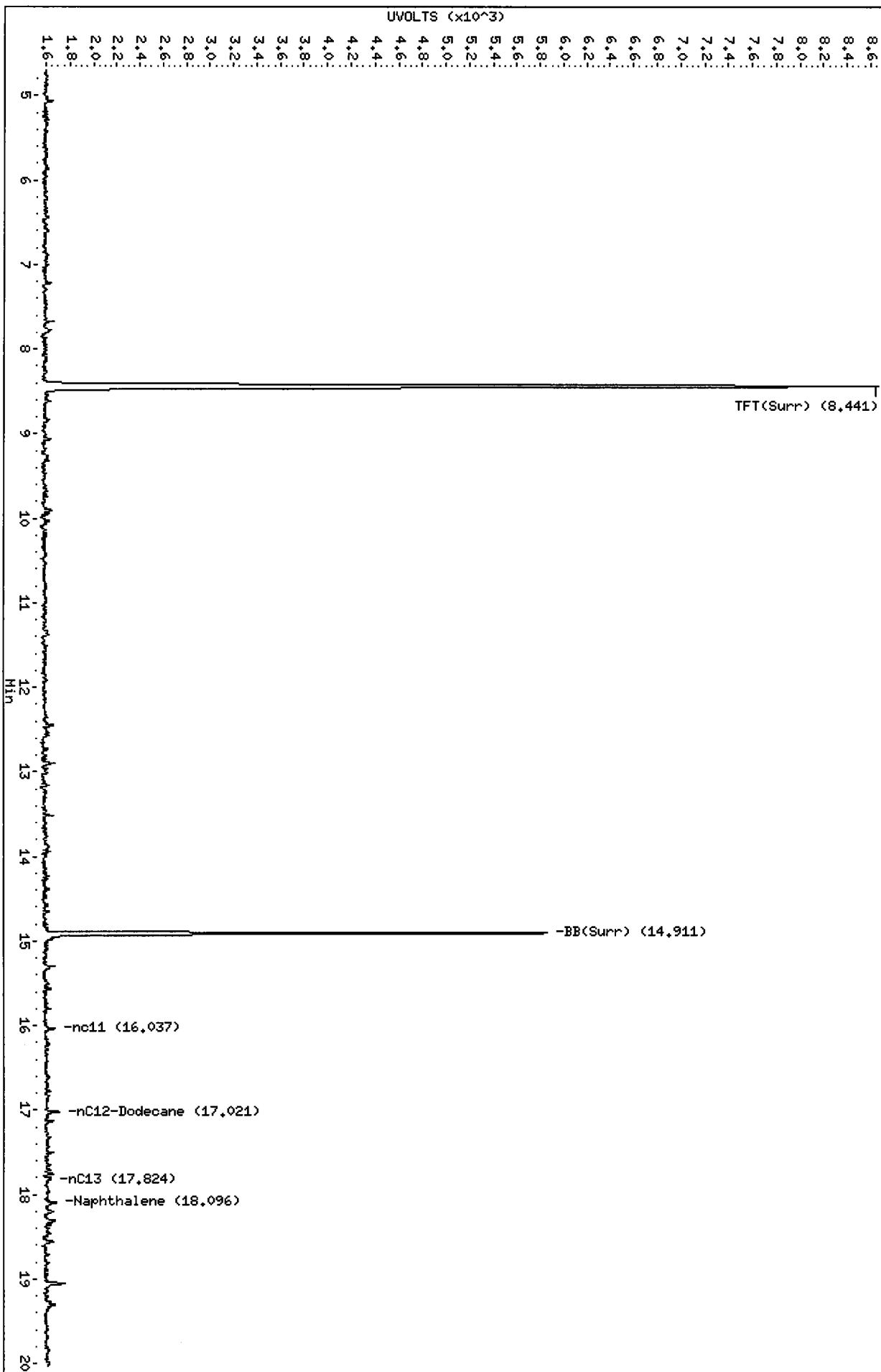
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100809-2.b/0809a006.d  
Date: 09-AUG-2010 08:41  
Client ID:  
Sample Info: MB0809

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100809-2.b/0809a006.d/0809a006.cdf



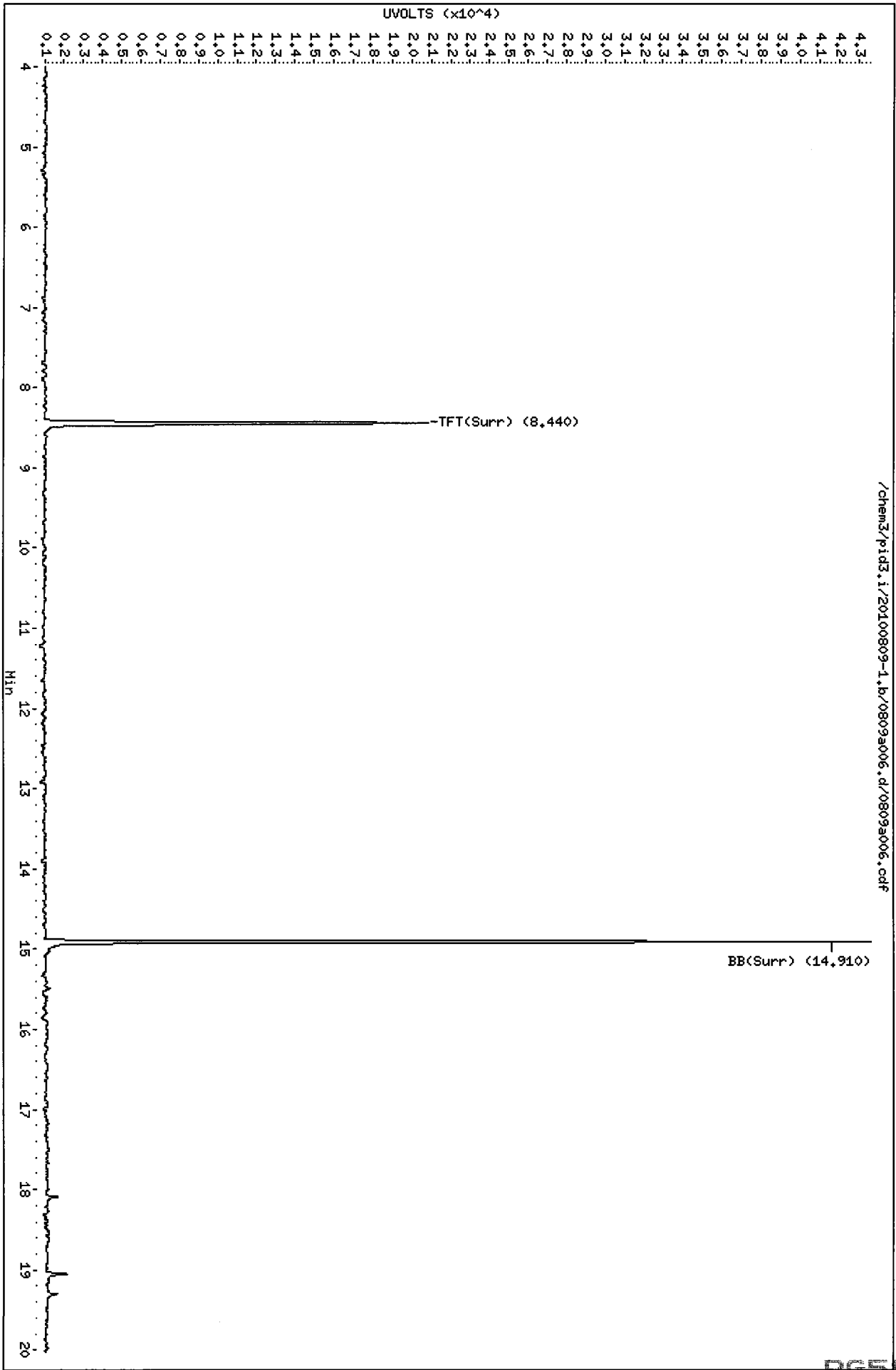
Data File: /chem3/pid3.i/20100809-1.b/0809a006.d  
Date : 09-AUG-2010 08:41

Client ID:  
Sample Info: HB0809

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100809-1.b/0809a006.d/0809a006.cdf





MH  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a012.d      ARI ID: BCAL 2  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a012.d      Client ID: BCAL 2  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 11:44  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.030	7264	86055	100.9	TFT(Surr)
14.910	0.022	4438	36314	103.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	571157	0.690
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	572155	0.344
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	532312	0.470
NWTPHG Tol-Nap (10.17 to 18.18)	882029	571157	0.648

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
8.438	0.030	20187	91.8	TFT(Surr)
14.909	0.022	44066	96.7	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
7.714	0.025	33347	25.22	Benzene
10.305	0.032	32158	24.37	Toluene
12.841	0.035	29661	23.87	Ethylbenzene
12.978	0.035	63696	47.30	M/P-Xylene
13.756	0.031	31392	24.43	O-Xylene
5.305	0.014	9297	26.13	MTBE

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

Data File: /chem3/pid3.i/20100809-2.b/0809a012.d

Date : 09-AUG-2010 11:44

Client ID:

Sample Info: BCL 2

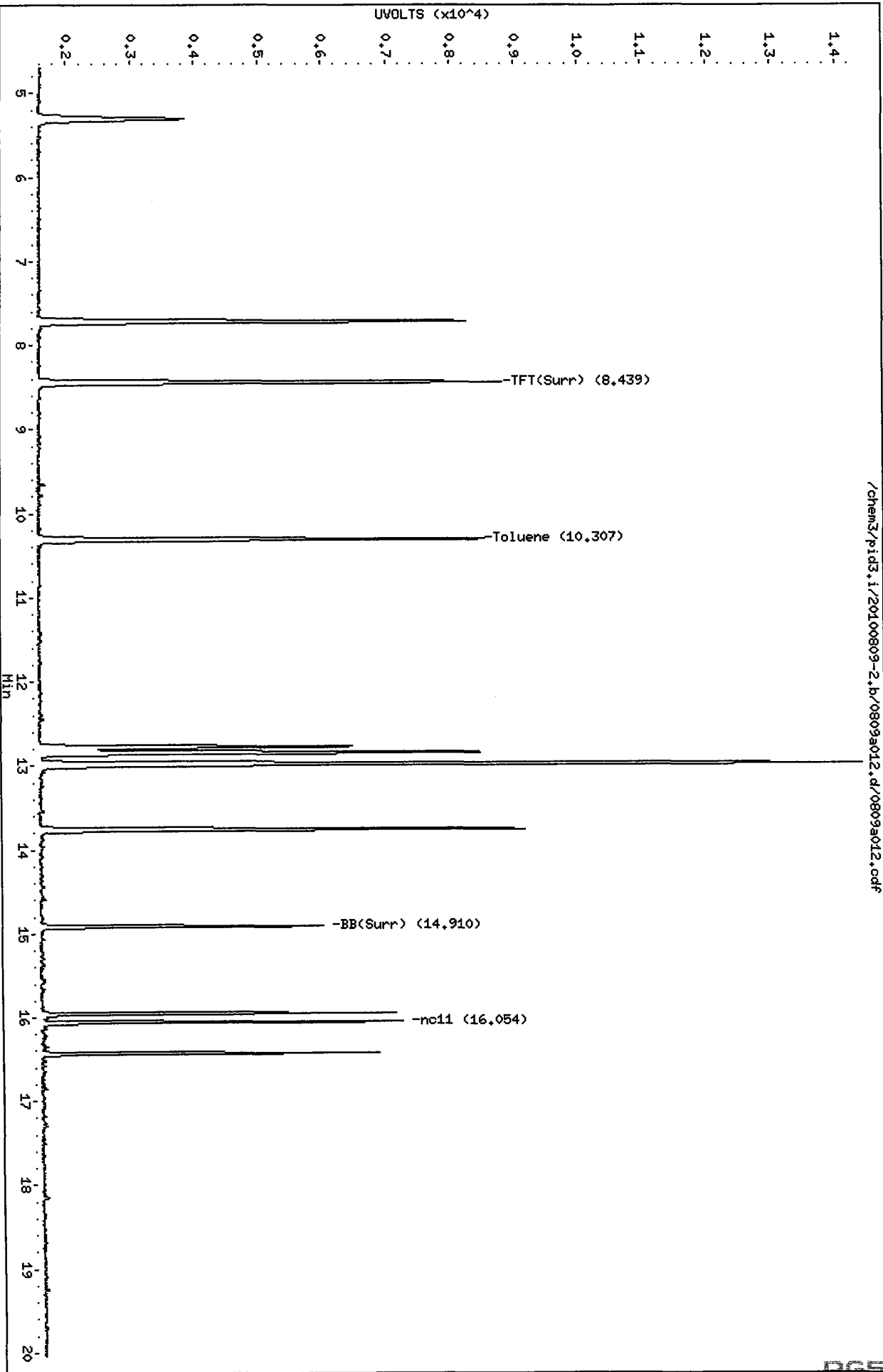
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

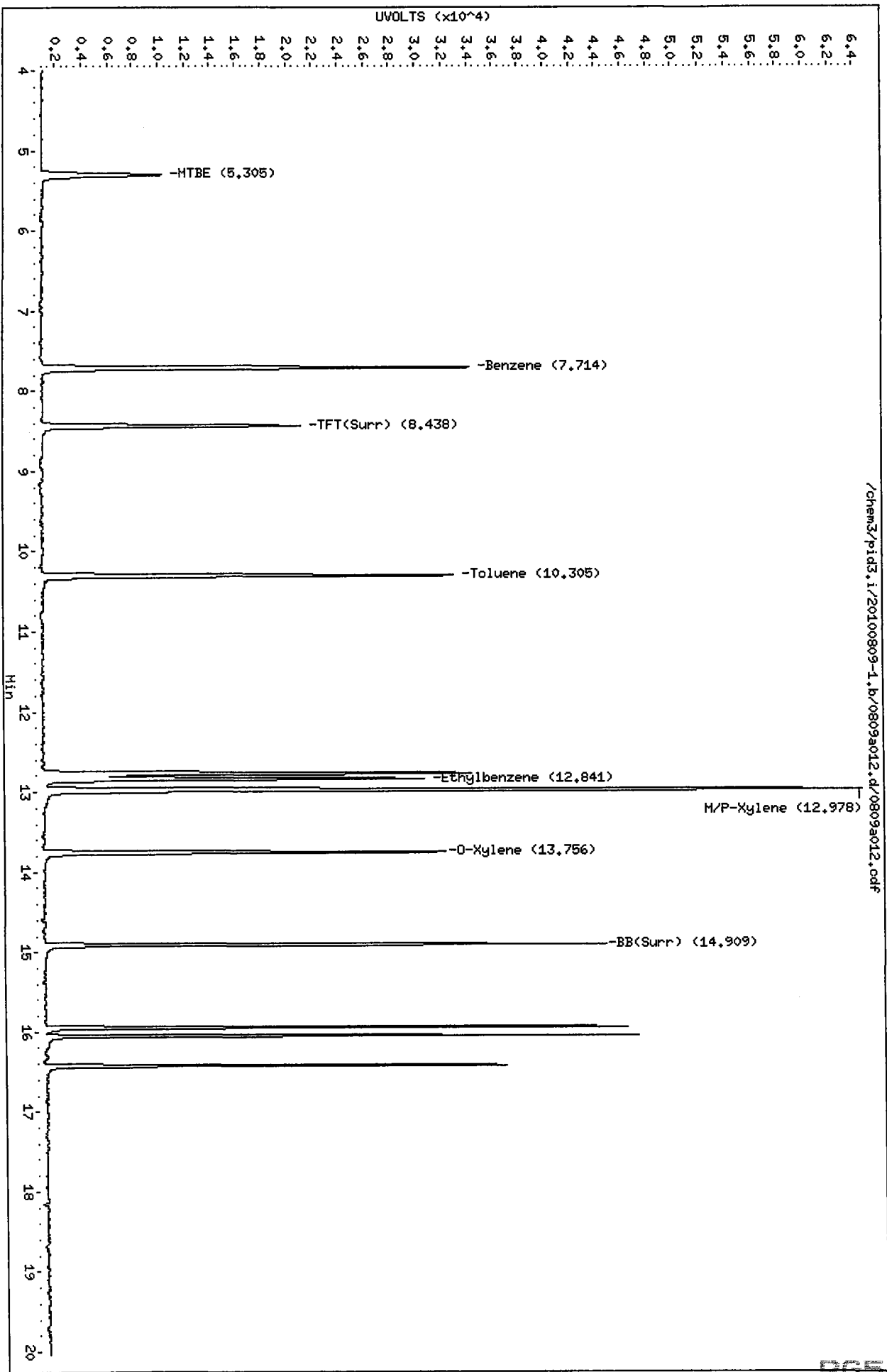
Column diameter: 0.18

/chem3/pid3.i/20100809-2.b/0809a012.d/0809a012.cdf



Data File: /chem3/pid3.i/20100809-1.b/0809a012.d  
Date: 09-AUG-2010 11:44  
Client ID: BCAL 2  
Sample Info: BCAL 2  
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100809-1.b/0809a012.d/0809a012.cdf

Mh  
8/18/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a013.d      ARI ID: GCAL 2  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a013.d      Client ID:  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 12:08  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.031	7662	91799	106.5	TFT (Surr)
14.911	0.023	4747	37426	110.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	2054503	2.482 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	4042380	2.429 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2717390	2.401 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2171923	2.462 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
8.439	0.031	21505	97.8	TFT (Surr)
14.910	0.023	45773	100.4	BB (Surr)

SW8021 (PID)

-----

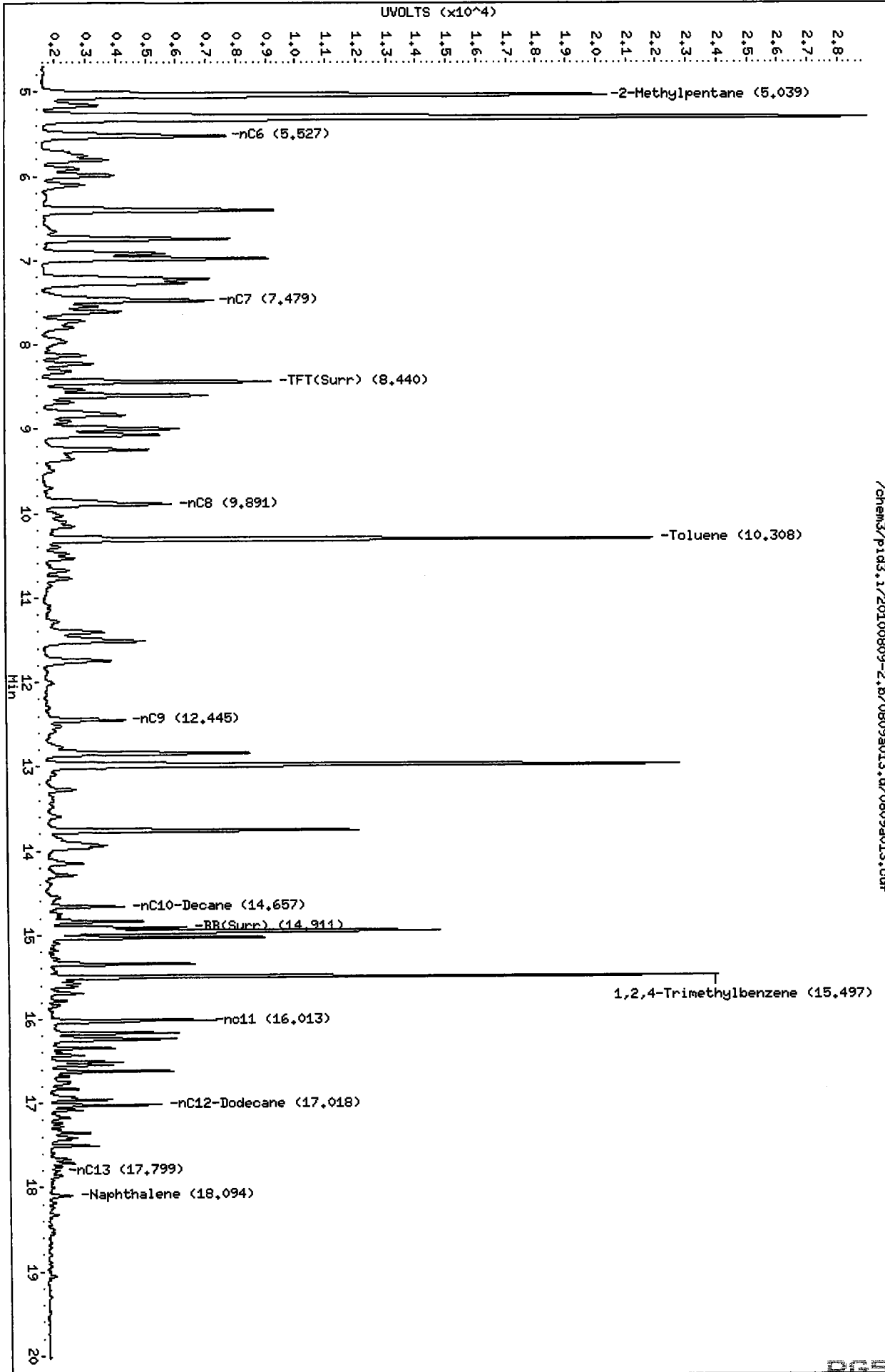
RT	Shift	Response	Amount	Compound
7.717	0.028	7135	5.40	Benzene
10.307	0.034	95289	72.20	Toluene
12.841	0.036	27493	22.13	Ethylbenzene
12.982	0.039	105027	77.99	M/P-Xylene
13.757	0.032	43442	33.81	O-Xylene
5.310	0.019	82021	230.52	MTBE

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

Data File: /chem3/pid3.i/20100809-2.b/0809a013.d  
Date : 09-AUG-2010 12:08  
Client ID: LORA LAKE  
Sample Info: GCAL 2  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100809-2.b/0809a013.d/0809a013.cdf



Data File: /chem3/pid3.i/20100809-1.b/0809a013.d

Date: 09-AUG-2010 12:08

Client ID:

Sample Info: GCAL 2

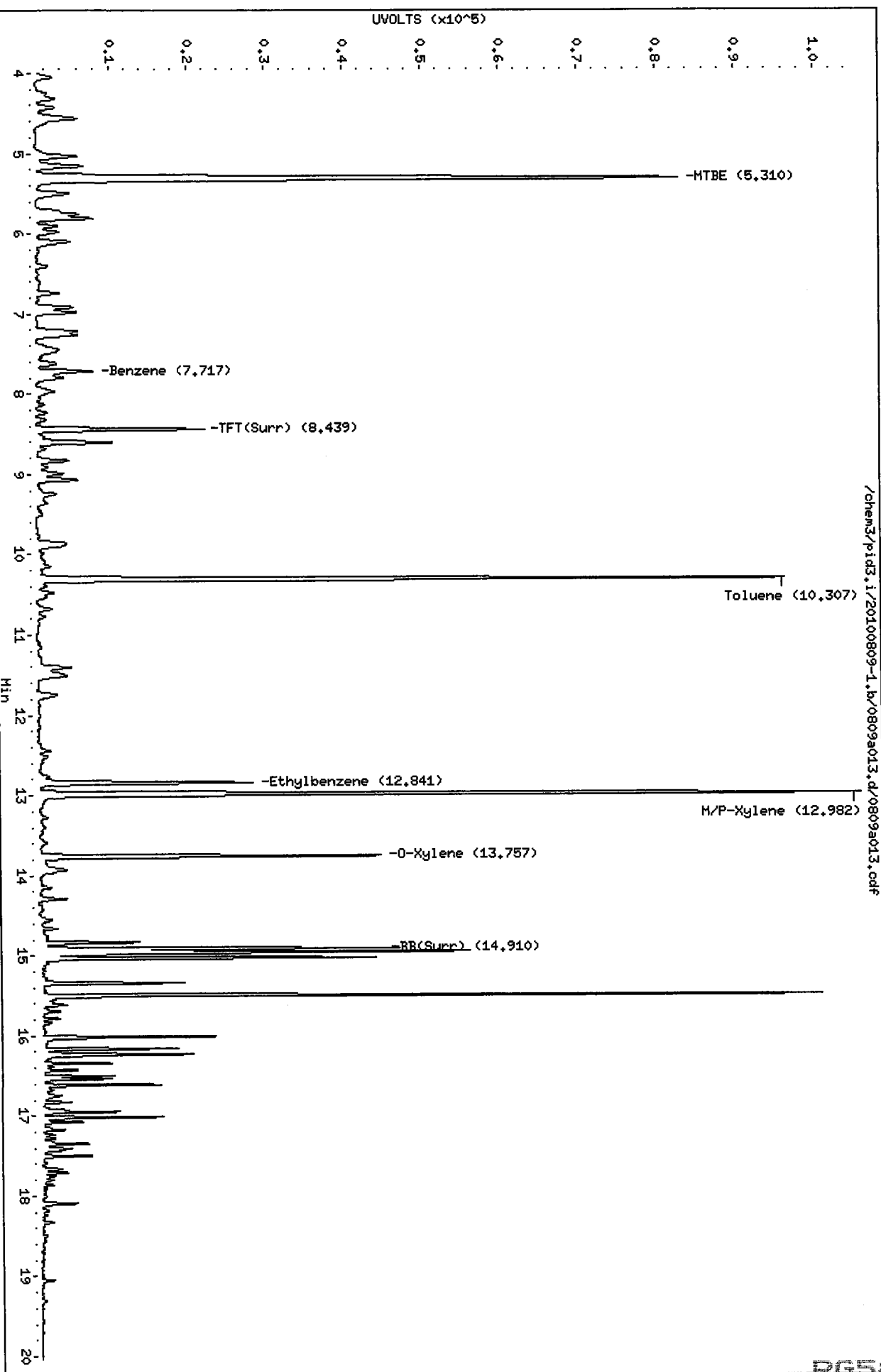
Column phase: RTX 502-2 PID

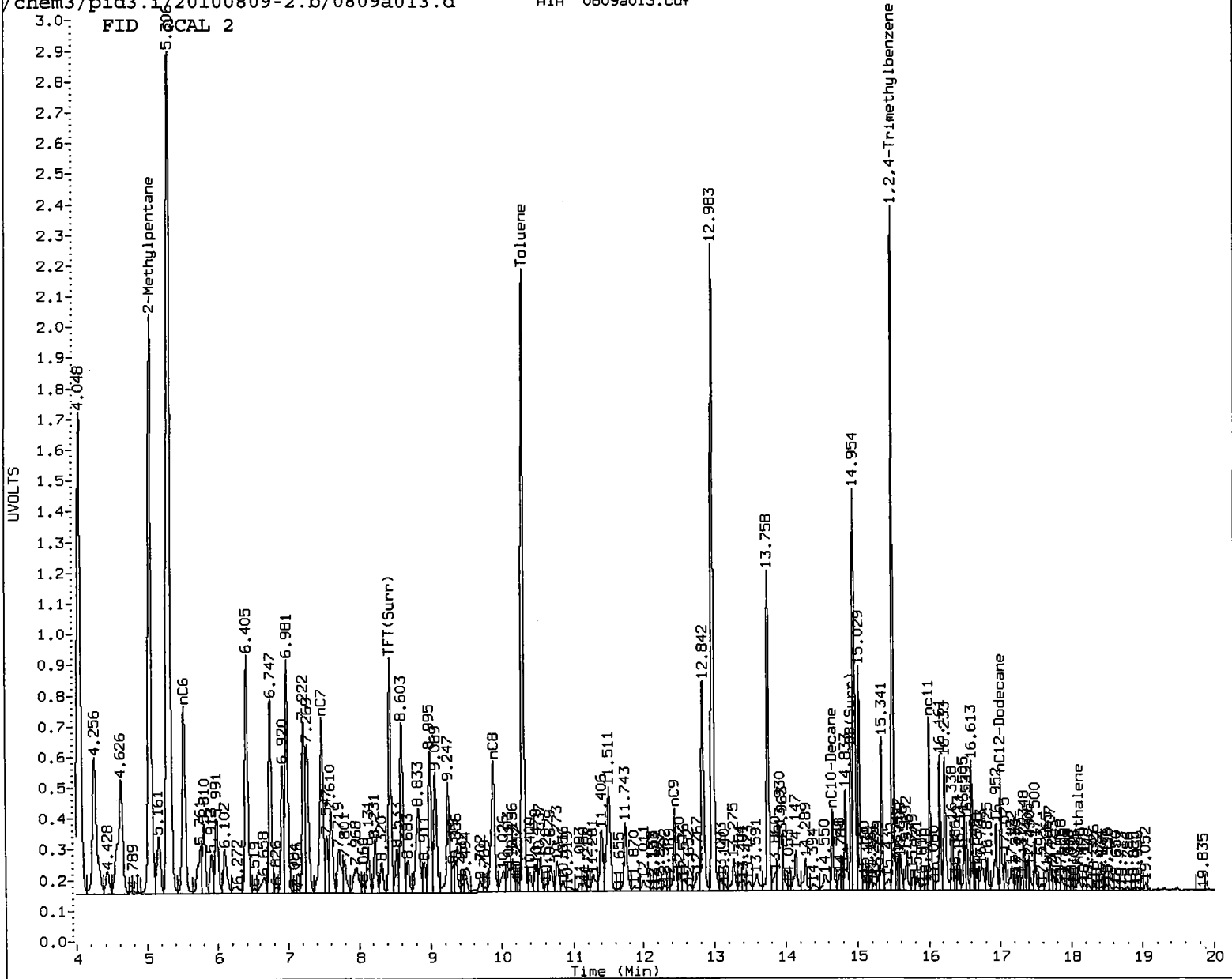
Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100809-1.b/0809a013.d/0809a013.cdf





MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: nyf Date: 8/10/00

MH  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a015.d      ARI ID: RG58E  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a015.d      Client ID: PSB22-17-19-072910  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 12:58  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
8.441	0.031	7248	85190	100.7	TFT(Surr)
14.912	0.023	4368	36177	101.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)  
-----

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	11641	0.014
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	17181	0.010
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	15958	0.014
NWTPHG Tol-Nap (10.17 to 18.18)	882029	11641	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
--	-----	-----	-----	-----
8.440	0.031	20390	92.8	TFT(Surr)
14.910	0.023	42989	94.3	BB(Surr)

SW8021 (PID)  
-----

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

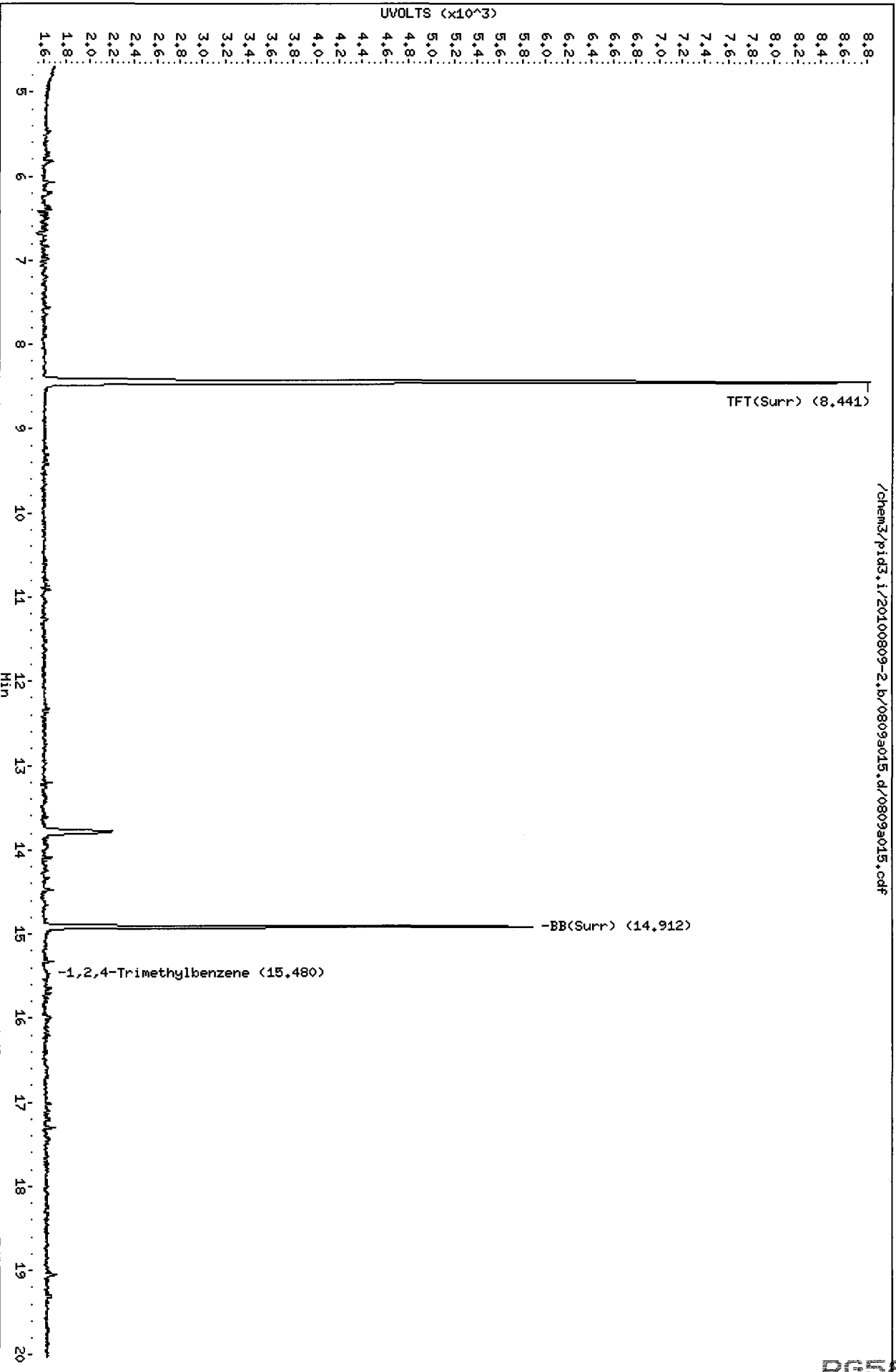
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100809-2.b/0809a015.d  
Date: 09-AUG-2010 12:58  
Client ID: PSB2-17-19-072910  
Sample Info: RG5BE

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100809-1.b/0809a015.d

Date: 09-AUG-2010 12:58

Client ID: PSB22-17-19-072910

Sample Info: RGS9E

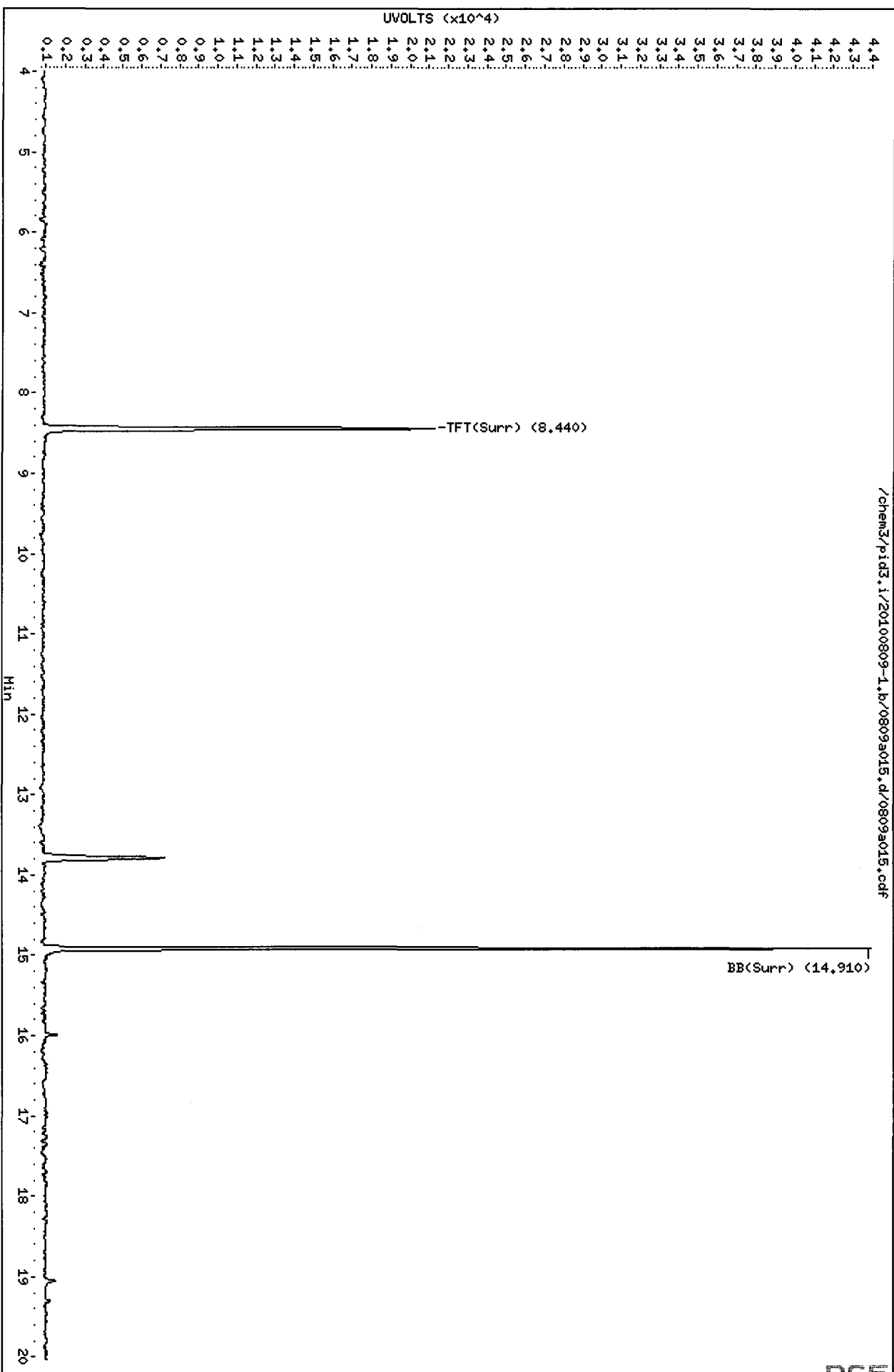
Page 1

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 PID



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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a016.d      ARI ID: RG58F  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a016.d      Client ID: PSB22-19-20-072910  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 13:22  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.441	0.031	7120	84490	98.9	TFT (Surr)
14.911	0.023	4297	35426	99.8	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	10466	0.013
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	9250	0.006
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	7030	0.006
NWTPHG Tol-Nap (10.17 to 18.18)	882029	13548	0.015

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
8.440	0.031	20038	91.2	TFT (Surr)
14.909	0.022	42029	92.2	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/pid3.i/20100809-2.b/0809a016.d

Date: 09-AUG-2010 13:22

Client ID: PSB22-19-20-072910

Sample Info: RG58F

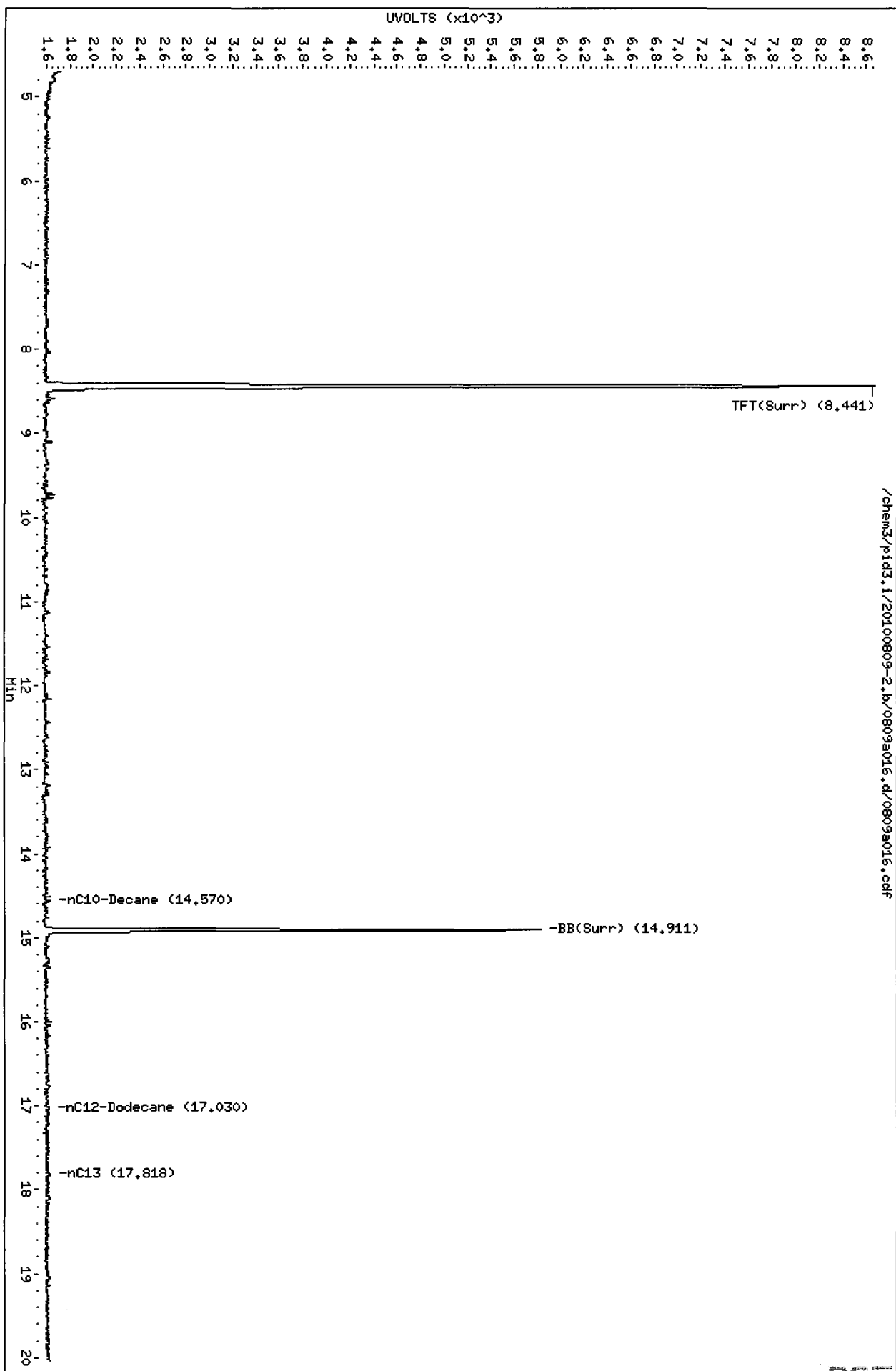
Page 1

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 FID

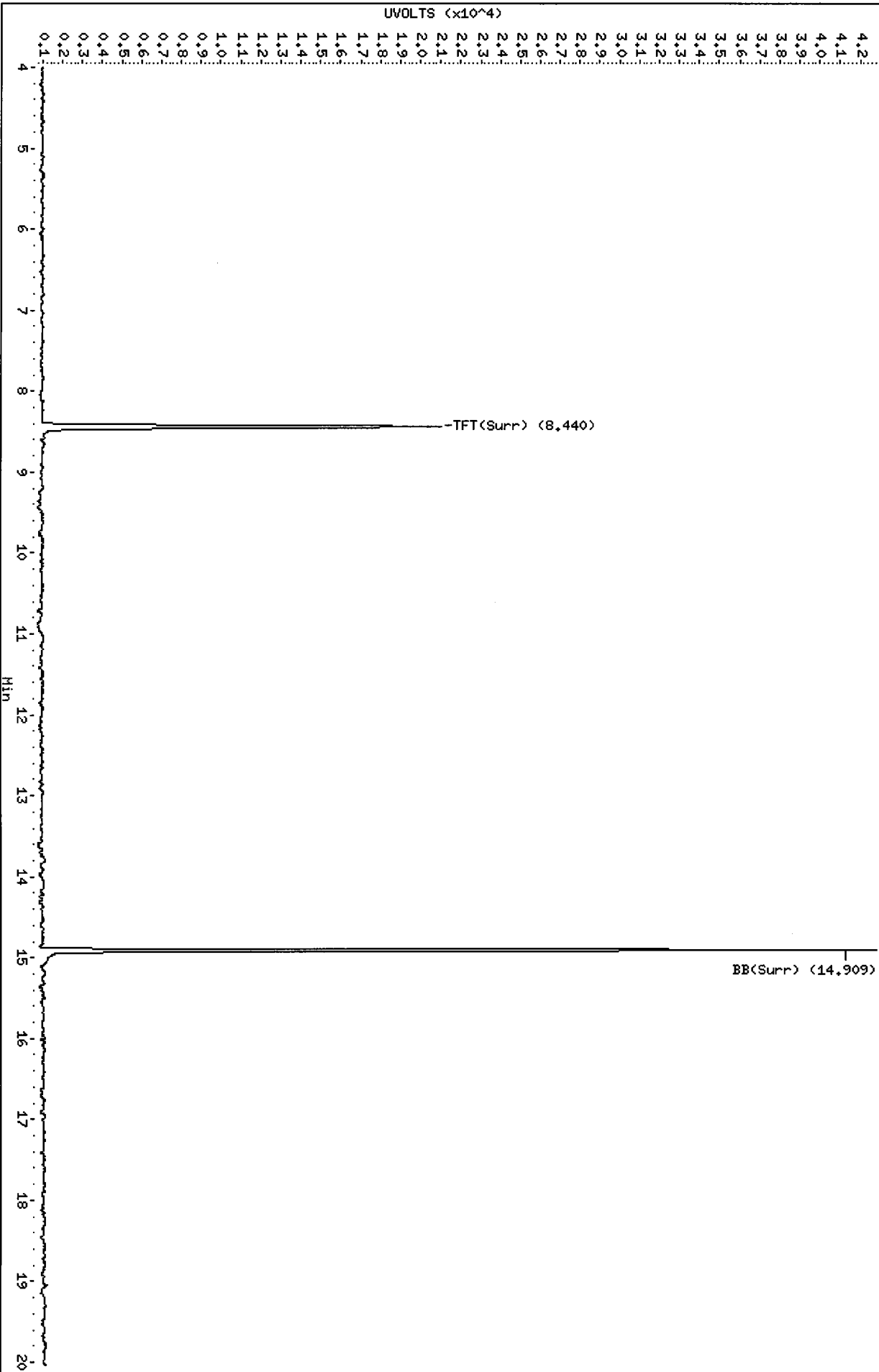


Data File: /chem3/pid3.i/20100809-1.b/0809a016.d  
Date : 09-AUG-2010 13:22  
Client ID: PSB22-19-20-072910  
Sample Info: RGSBF

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100809-1.b/0809a016.d/0809a016.cdf



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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a017.d      ARI ID: RG58K  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a017.d      Client ID: PSB23-14-16.5-07291  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 13:47  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	----	-----
8.441	0.032	7244	86596	100.6	TFT (Surr)
14.912	0.024	4301	34715	99.9	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

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Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	12346	0.015
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	12155	0.007
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	12155	0.011
NWTPHG Tol-Nap (10.17 to 18.18)	882029	15942	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
--	-----	-----	----	-----
8.440	0.032	20627	93.8	TFT (Surr)
14.910	0.023	42266	92.7	BB (Surr)

SW8021 (PID)

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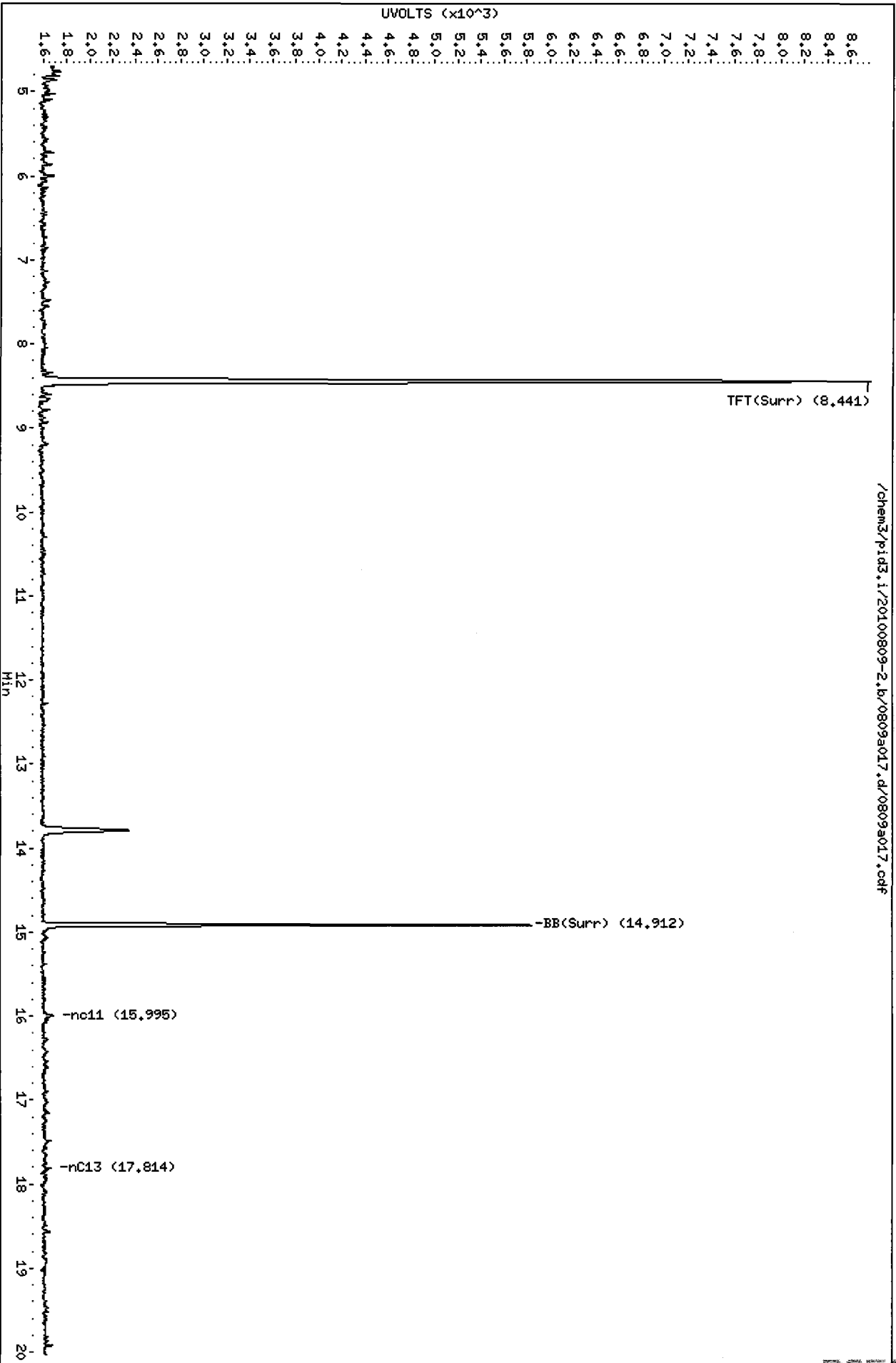
RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

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

Data File: /chem3/pid3.i/20100809-2.b/0809a017.d  
Date : 09-AUG-2010 13:47  
Client ID: PSB23-14-16.5-07291  
Sample Info: RG5BK

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

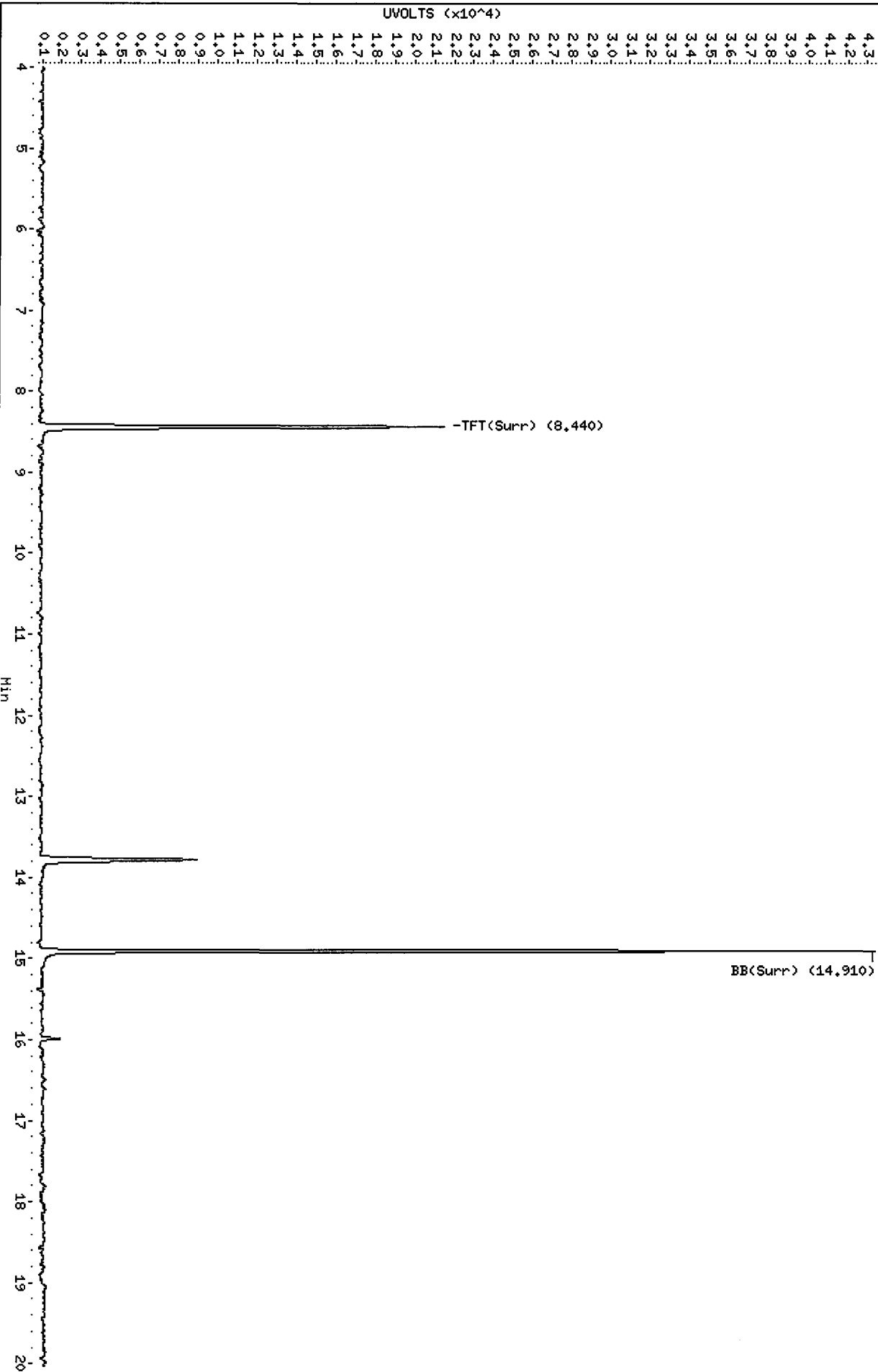


Data File: /chem3/pid3.i/20100809-1.b/0809a017.d  
Date : 09-AUG-2010 13:47  
Client ID: PSB23-14-16.5-07291  
Sample Info: RG58K

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100809-1.b/0809a017.d/0809a017.cdf





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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a018.d      ARI ID: RG58L  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a018.d      Client ID: PSB23-16.5-19-07291  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 14:12  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.441	0.032	6812	80655	94.6	TFT(Surr)
14.911	0.023	4119	33887	95.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	30042	0.036
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	25655	0.015
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	25655	0.023
NWTPHG Tol-Nap (10.17 to 18.18)	882029	30042	0.034

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
8.440	0.032	19047	86.6	TFT(Surr)
14.910	0.023	40820	89.5	BB(Surr)

SW8021 (PID)

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

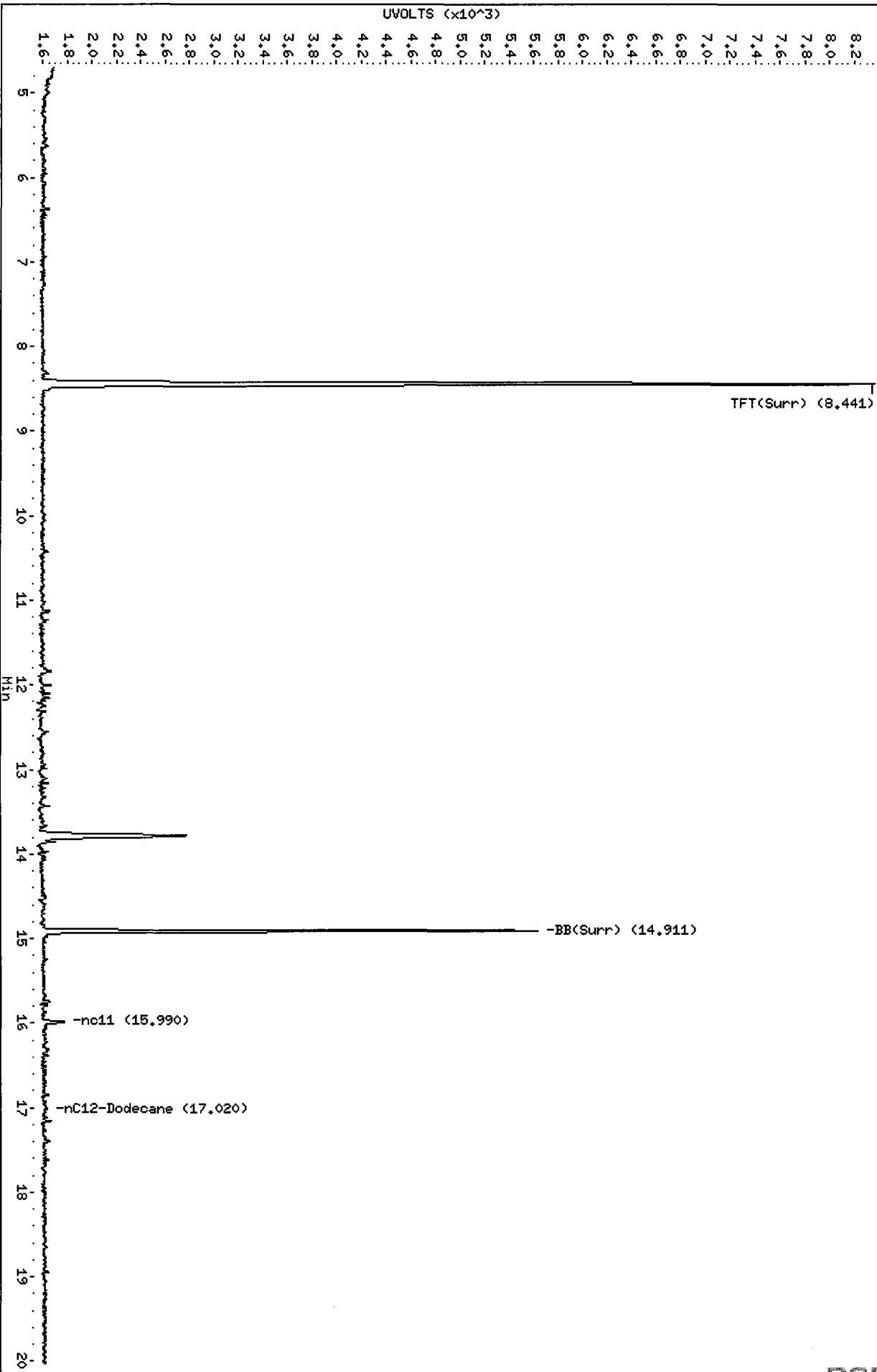
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100809-2.b/0809a018.d  
Date : 09-AUG-2010 14:12  
Client ID: PS823-16.5-19-07291  
Sample Info: RG58L

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100809-2.b/0809a018.d/0809a018.cdf

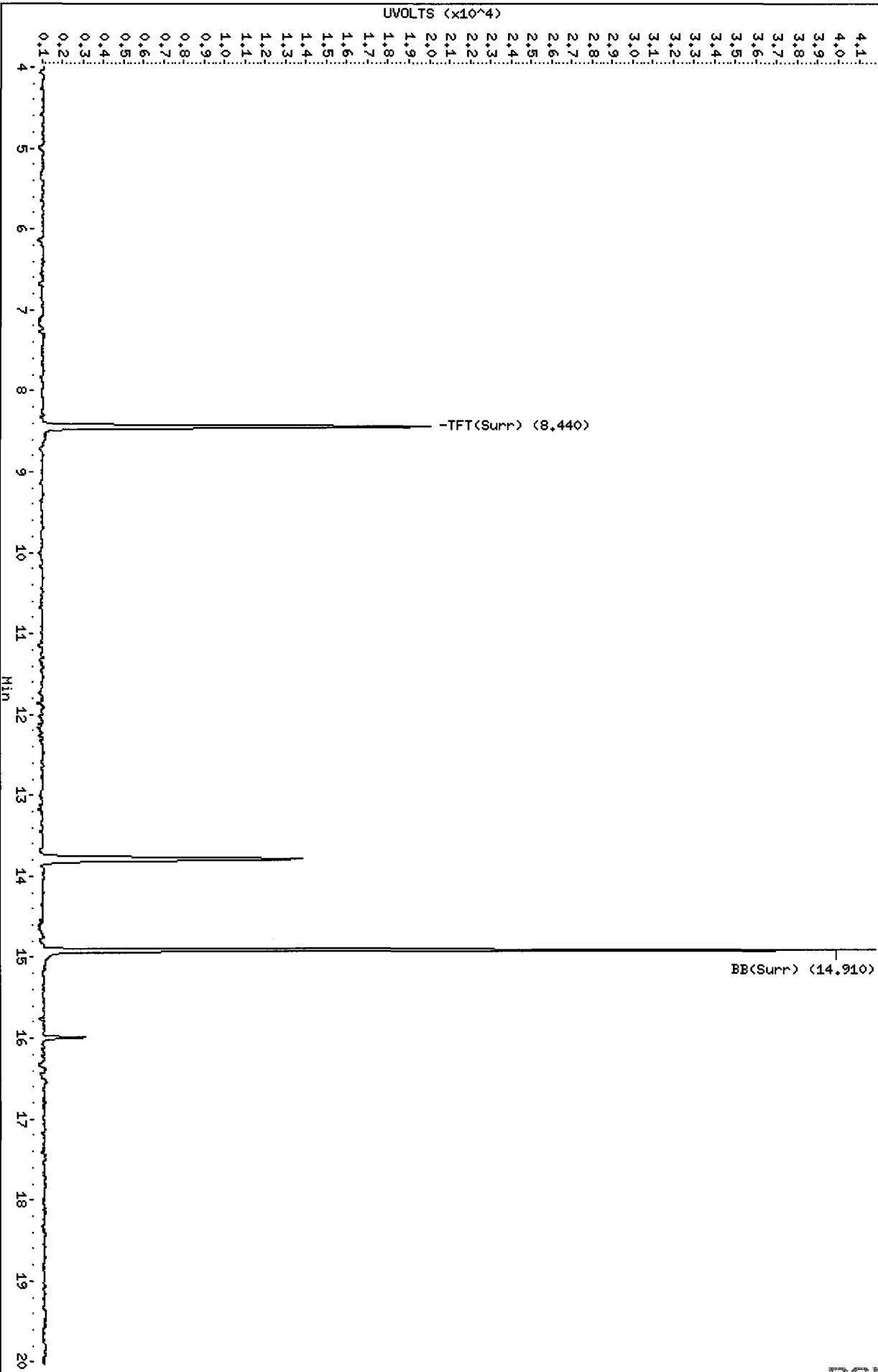


Data File: /chem3/pid3.i/20100809-1.b/0809a018.d  
Date : 09-AUG-2010 14:12  
Client ID: PSB23-16.5-19-07291  
Sample Info: RG58L

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: NH  
Column diameter: 0.18

/chem3/pid3.i/20100809-1.b/0809a018.d/0809a018.cdf



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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a019.d      ARI ID: RG58R  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a019.d      Client ID: PSB24-14-16-072910  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 14:36  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	----	-----
8.441	0.032	7134	84314	99.1	TFT (Surr)
14.912	0.023	4319	35620	100.3	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

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Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	1108	0.001
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	2236	0.001
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2235	0.002
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1108	0.001

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
--	-----	-----	----	-----
8.440	0.032	20028	91.1	TFT (Surr)
14.910	0.023	42748	93.8	BB (Surr)

SW8021 (PID)

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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/pid3.i/20100809-2.b/0809a019.d

Date: 09-AUG-2010 14:36

Client ID: PSB24-14-16-072910

Sample Info: RGSBR

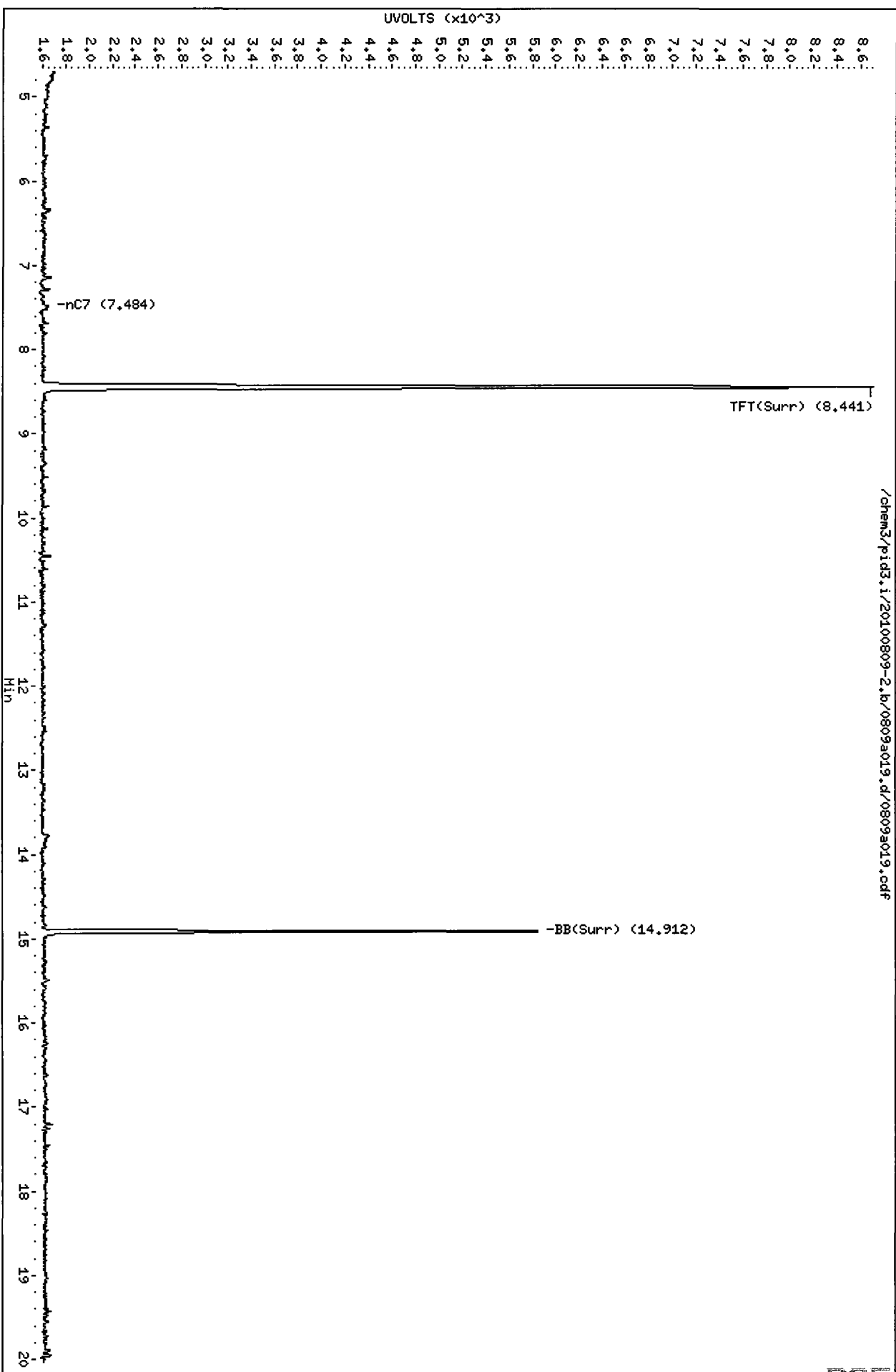
Page 1

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 FID



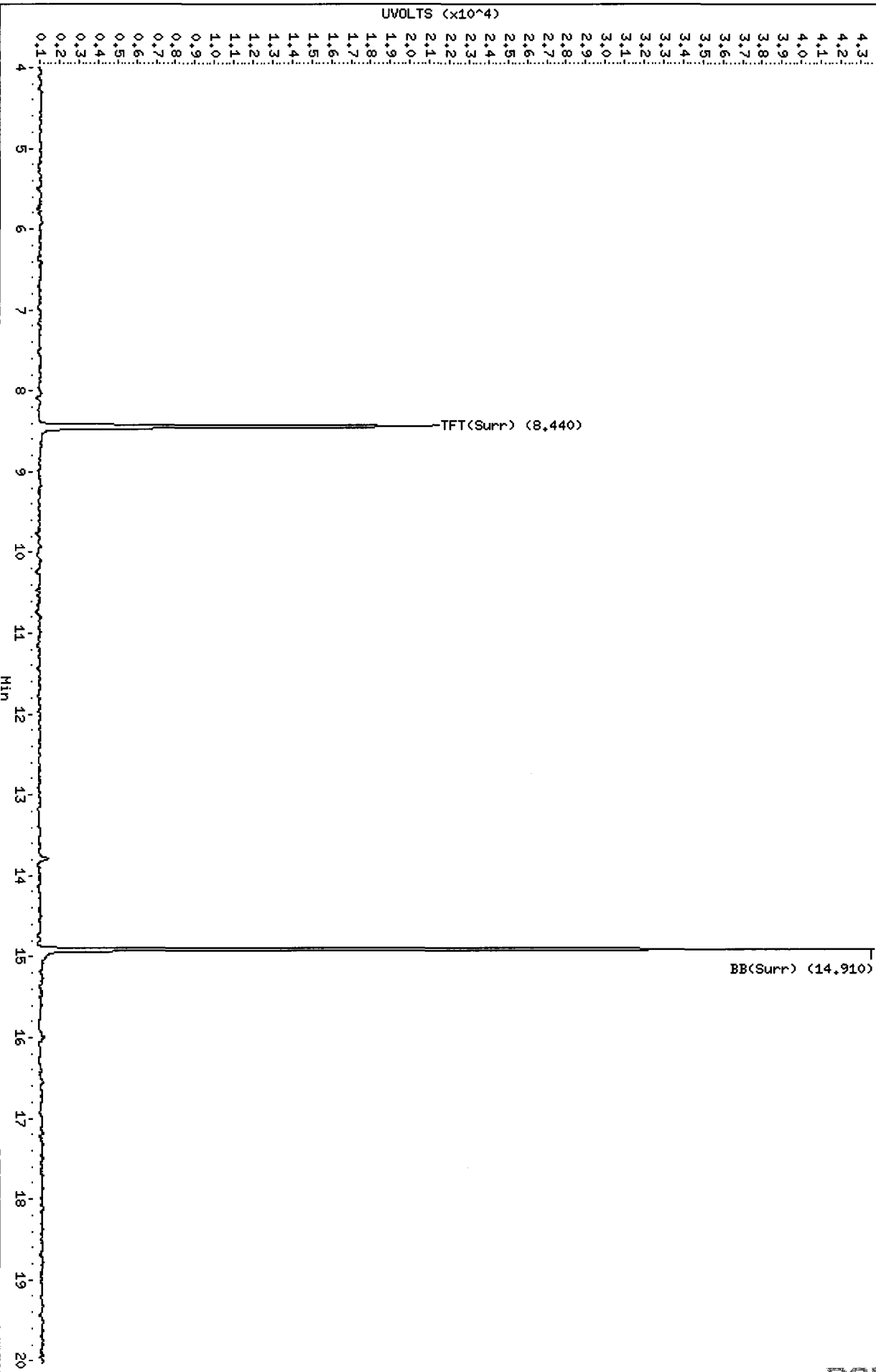
RGSBR : 01477

Data File: /chem3/pid3.i/20100809-1.b/0809a019.d  
Date: 09-AUG-2010 14:36  
Client ID: PSB24-14-16-072910  
Sample Info: RG58R

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100809-1.b/0809a019.d/0809a019.cdf



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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a020.d      ARI ID: RG58S  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a020.d      Client ID: PSB24-16-17-072910  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 15:01  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.445	0.035	7341	86639	102.0	TFT (Surr)
14.912	0.024	4488	36137	104.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1	0.000
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1	0.000
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	0	0.000
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1275	0.001

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
8.444	0.035	20522	93.4	TFT (Surr)
14.911	0.024	44063	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

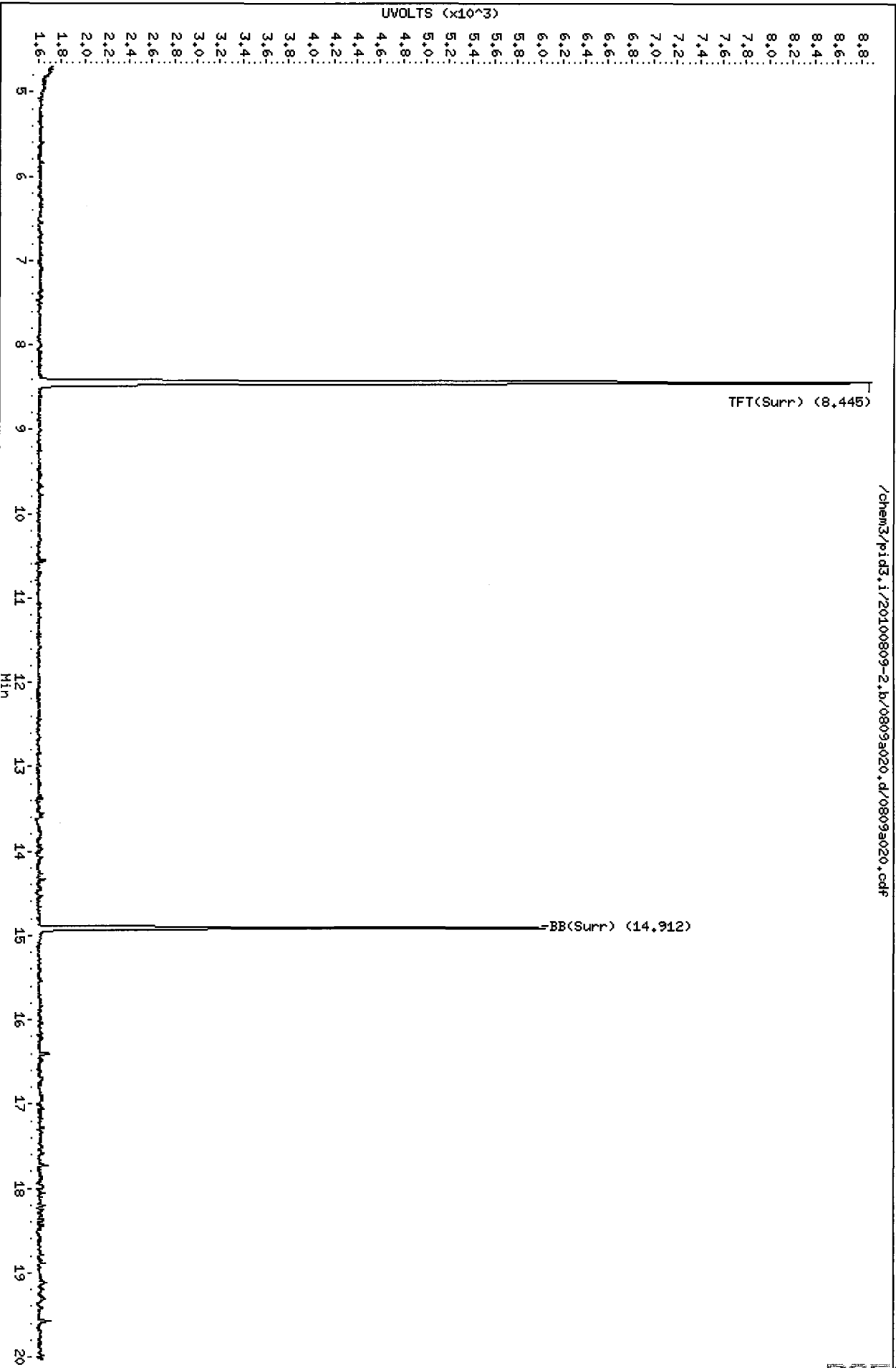
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100809-2.b/0809a020.d  
Date : 09-AUG-2010 15:01  
Client ID: PSB24-16-17-072910  
Sample Info: RG58S

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100809-2.b/0809a020.d/0809a020.cdf



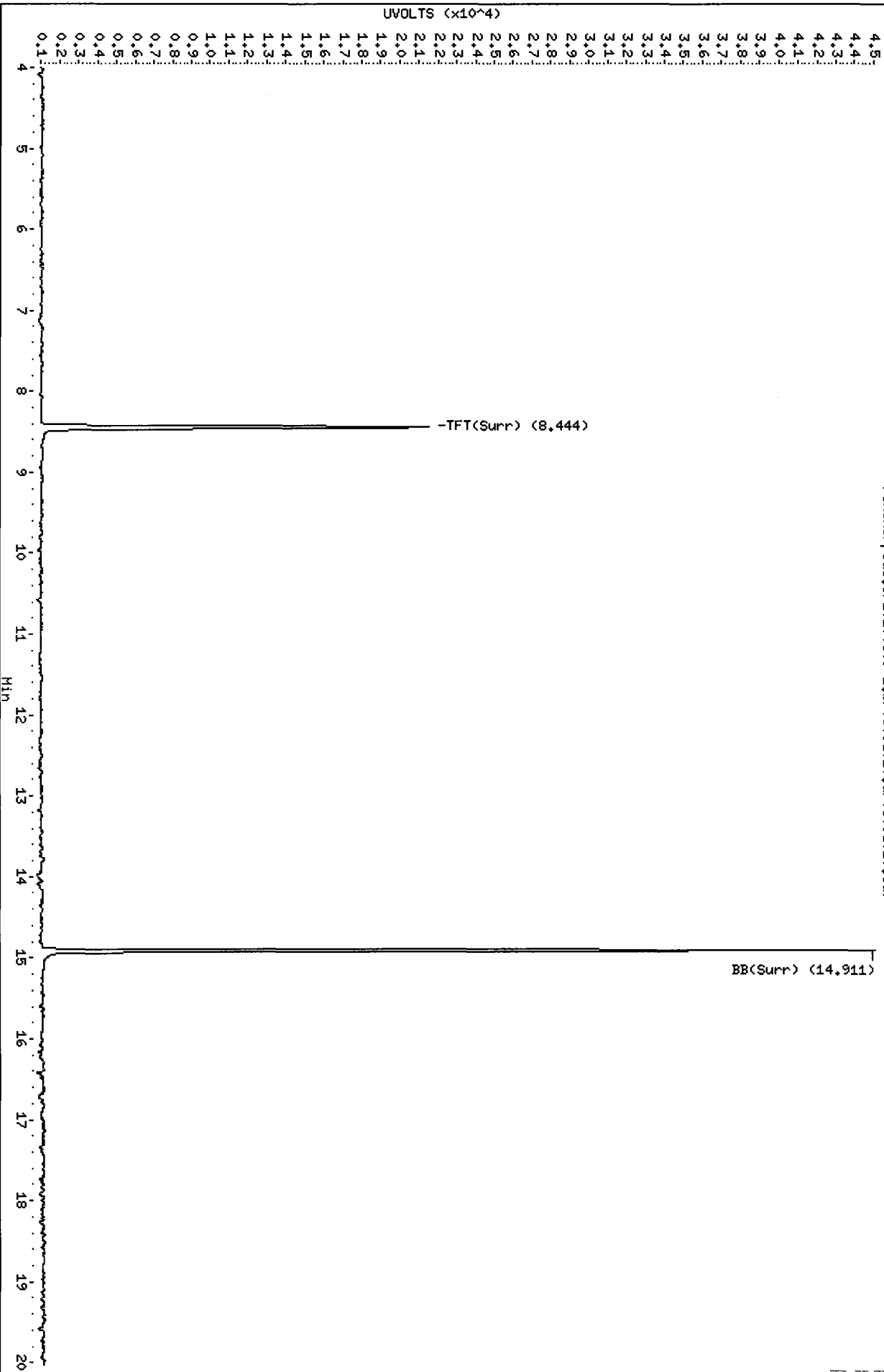


Data File: /chem3/pid3.i/20100809-1.b/0809a020.d  
Date : 09-AUG-2010 15:01  
Client ID: PSB24-16-17-072910  
Sample Info: RGS88

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100809-1.b/0809a020.d/0809a020.cdf



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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a024.d      ARI ID: GCAL 3  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a024.d      Client ID:  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 16:39  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.031	7390	87843	102.7	TFT(Surr)
14.912	0.024	4465	38342	103.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1944532	2.349 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	3873074	2.327 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2595428	2.293 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2053311	2.328 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
8.438	0.030	20639	93.9	TFT(Surr)
14.909	0.022	43897	96.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.716	0.027	6826	5.16	Benzene
10.306	0.034	92315	69.94	Toluene
12.841	0.035	26557	21.37	Ethylbenzene
12.981	0.039	102949	76.45	M/P-Xylene
13.756	0.031	43013	33.48	O-Xylene
5.308	0.017	80767	227.00	MTBE

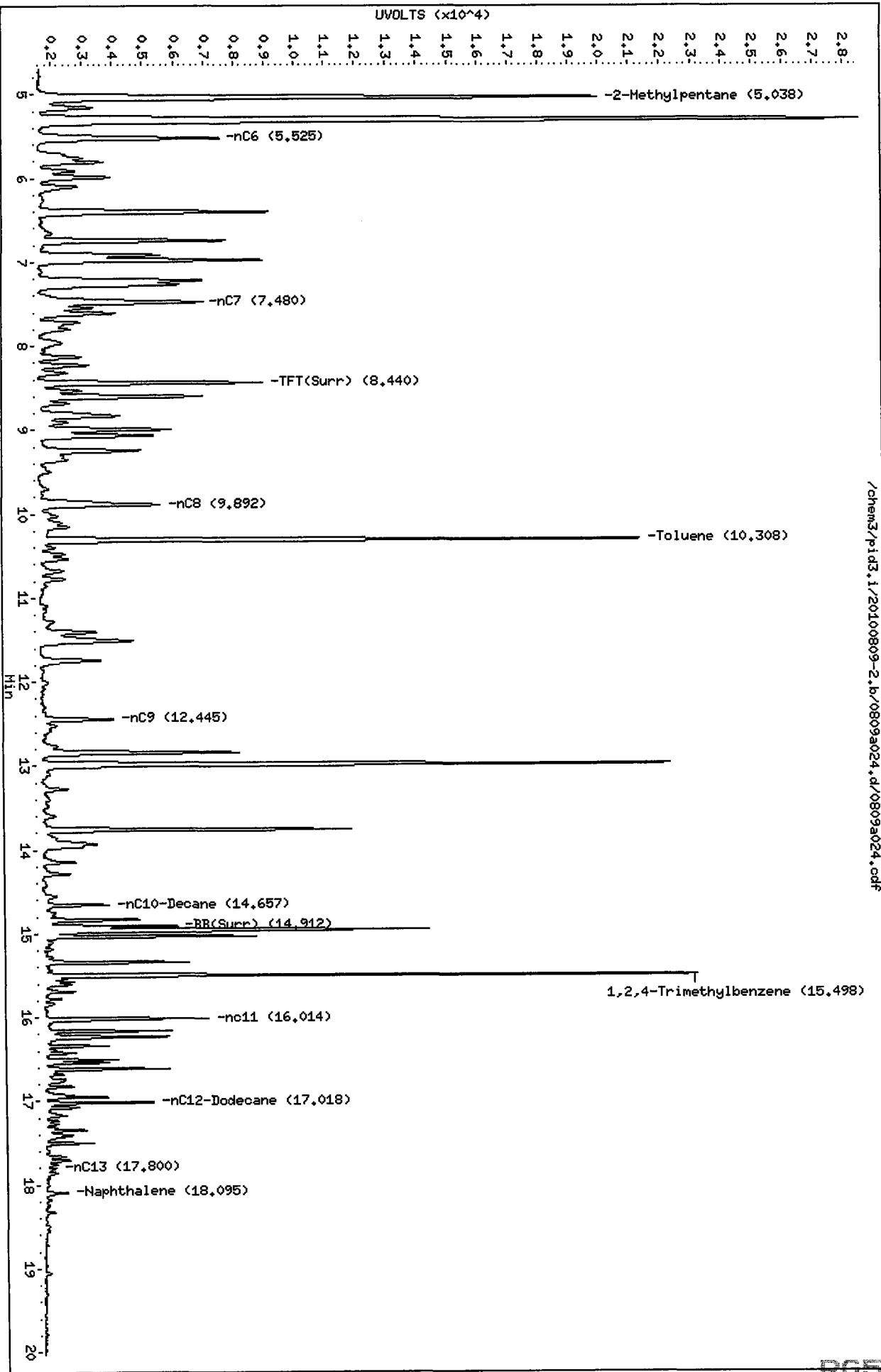
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100809-2.l/0809a024.d  
Date : 09-AUG-2010 16:39  
Client ID: LORA LAKE  
Sample Info: GCAL 3

Column phase: RTX 502-2 FID

/chem3/pid3.i/20100809-2.l/0809a024.d/0809a024.cdf

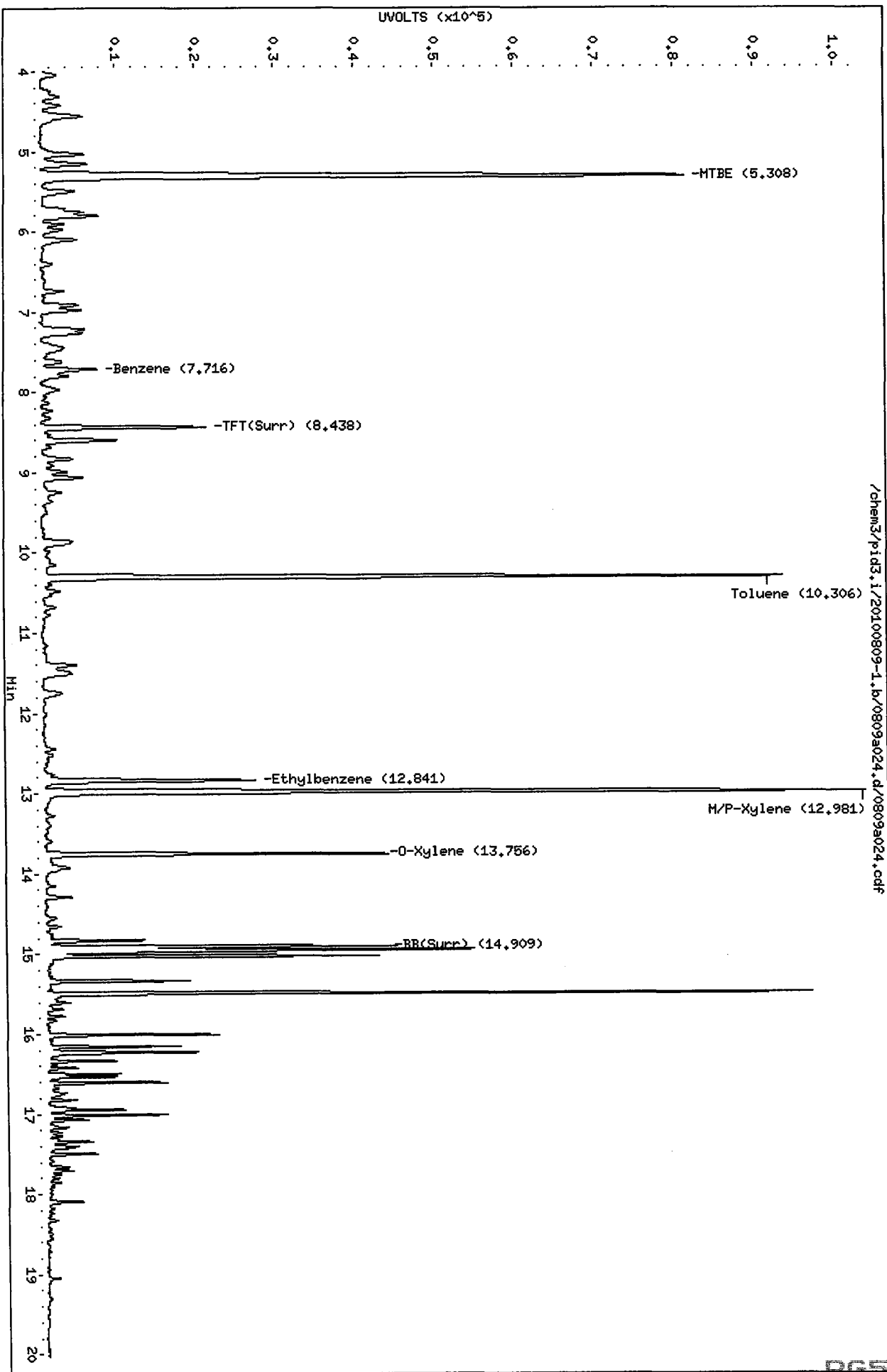
Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100809-1.b/0809a024.d  
Date: 09-AUG-2010 16:39  
Client ID:  
Sample Info: GCAL 3

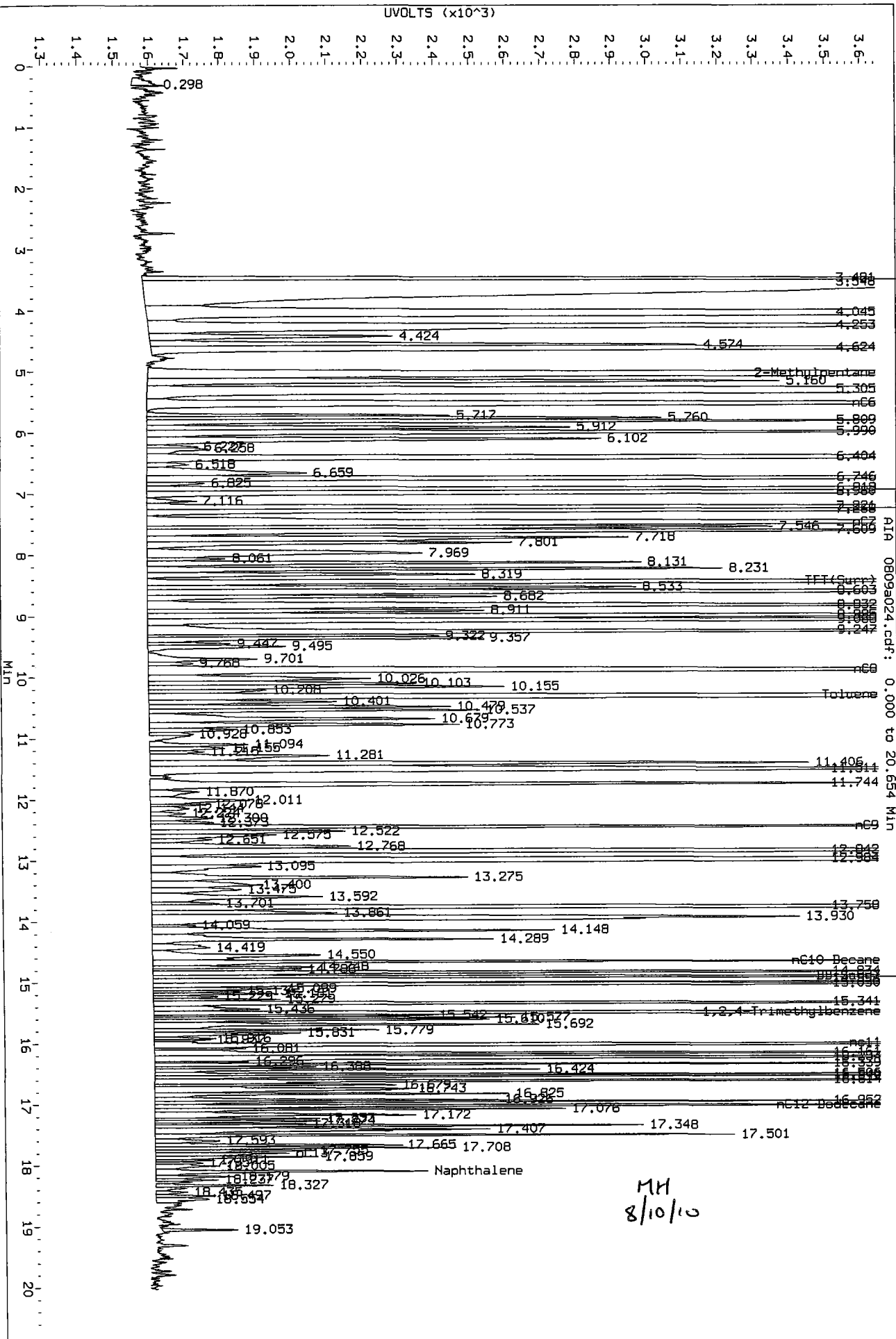
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid3.i/20100809-1.b/0809a024.d/0809a024.cdf

Data File: /chem3/pid3.1/20100809-2.b/0809a024.d/0809a024.cdf  
 Injection Date: 09-AUG-2010 16:39  
 Instrument: pid3.1  
 Client Sample ID:





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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100809-2.b/0809a035.d      ARI ID: GCAL 4  
Data file 2: /chem3/pid3.i/20100809-1.b/0809a035.d      Client ID:  
Method: /chem3/pid3.i/20100809-1.b/PIDB.m              Injection Date: 09-AUG-2010 21:09  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.444	0.034	6973	83511	96.9	TFT(Surr)
14.913	0.025	4351	36034	101.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1873948	2.264 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	3704465	2.226 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2469808	2.182 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1979464	2.244 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

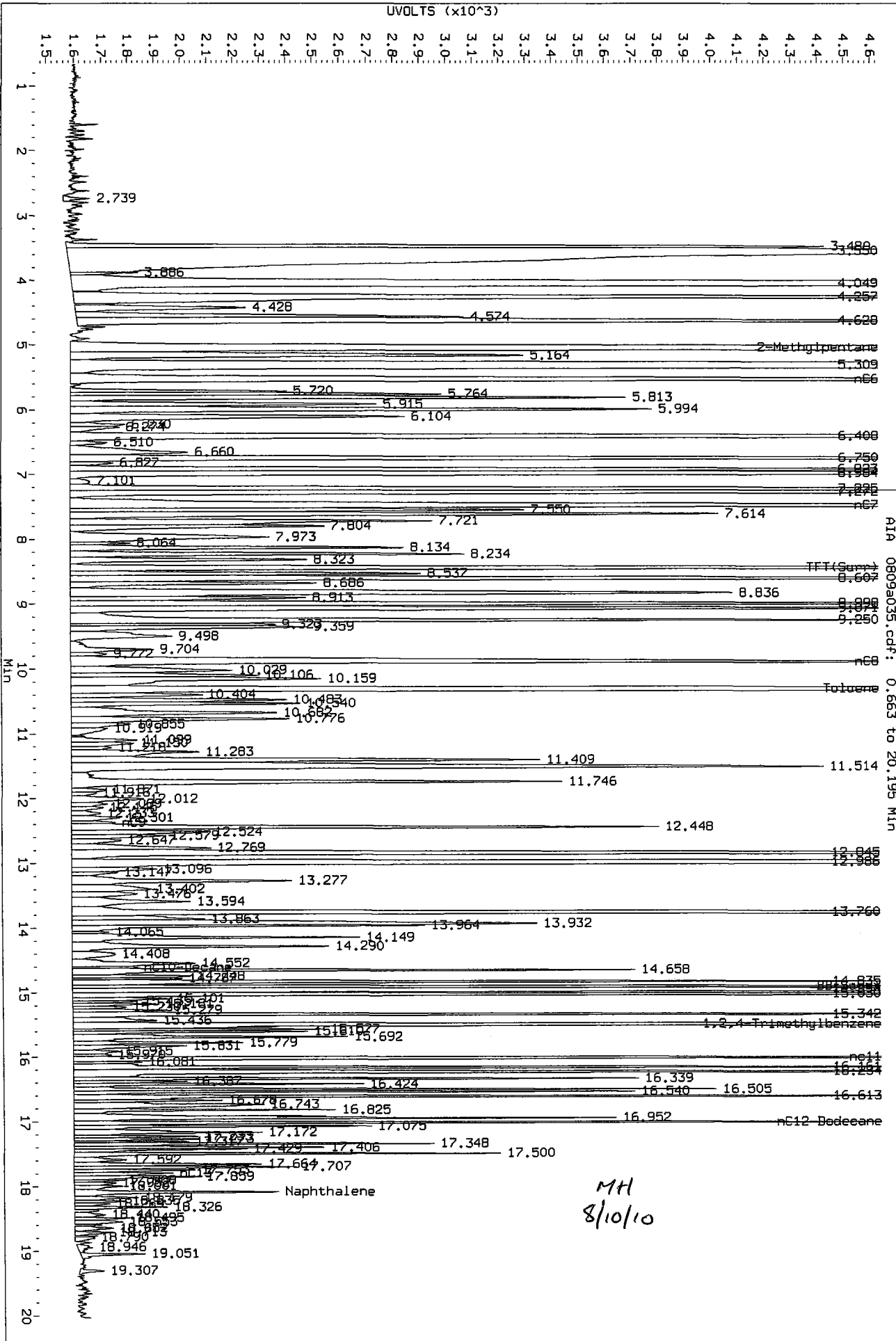
RT	Shift	Response	%Rec	Compound
8.442	0.034	19786	90.0	TFT(Surr)
14.911	0.024	42560	93.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.720	0.031	6840	5.17	Benzene
10.310	0.037	91636	69.43	Toluene
12.844	0.038	26408	21.25	Ethylbenzene
12.984	0.042	101996	75.74	M/P-Xylene
13.759	0.034	42087	32.76	O-Xylene
5.314	0.022	79236	222.70	MTBE

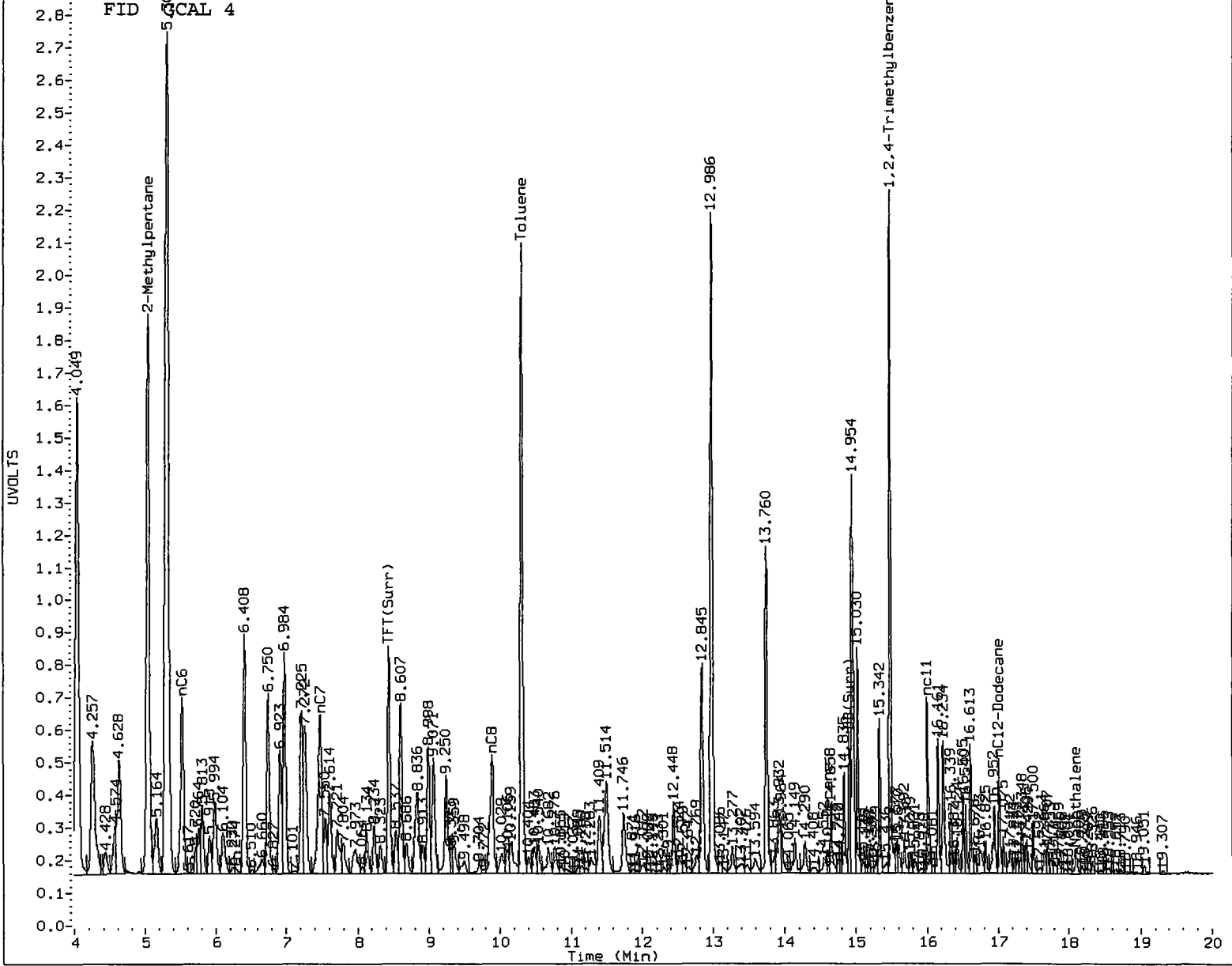
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3,1/20100809-2-b/0809a035.d/0809a035.cdf  
 Injection Date: 09-AUG-2010 21:09  
 Instrument: pid3.i  
 Client Sample ID:



MH  
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MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH

Date: 8/10/10

**Metals Raw Data  
Preparation Bench Sheets and Notes**

**ARI Job ID: RG58**





Analytical Resources, Incorporated  
Analytical Chemists and Consultants

# Digestion Log

Analyst: KM  
Matrix: Soil

Date: 8/09/10  
Block Temp: 90°C

ARI Sample ID	Btl #	pH<2	Prep Code: <u>SWC</u>		Prep Code:		Comments
			Initial Wt (g) Vol (mL)	Final Vol (mL)	Initial Wt (g) Vol (mL)	Final Vol (mL)	
RG58 A	2	—	1.062	50.0			
" B	2	—	1.016				
" C	2	—	1.080				
" D	2	—	1.013				
" E	8	—	1.029				
" F	8	—	1.021				
" G	2	—	1.053				
" H	2	—	1.019				
" I	2	—	1.022				
" IDuP	2	—	1.019				
" ISPK	2	—	1.019				
" J	2	—	1.047				
" K	8	—	1.030				
" L	8	—	1.006				
" M	2	—	1.026				
" N	2	—	1.068				
" O	2	—	1.075				
" P	2	—	1.068				
" Q	2	—	1.025				
" R	8	—	1.031				
" S	8	—	1.083				
" REF1	D053	—	1.004				
" MBI	—	—	—	↓			
" MBISPK	—	—	—	50.0			
				KM	8/09/10		

Chemical/Reagent ID:

HNO<sub>3</sub>: MP1936 HCl: I5548 H<sub>2</sub>O<sub>2</sub>: I5512 Tube Lot #: 1005282  
I5547

**Metals Raw Data  
Run Logs, Calibrations, and Raw Data**

**ARI Job ID: RG58**



IEC Date: 7.16.10

Analysis Date: 8.10.10

Analyst: RLW

LR Date: 7.12.10

8.10.10 RLW

Page: 1 of 3

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		std 0			2748-2
		2			↓ - 11
		3			2749-1
		4			↓ - 2
		↓ 5			↓ - 3
		<del>std 0</del>			
		ICV			2732-14
		ICB			
		CEI			
		ICSA			
		ICSAB			
		new ICSA			2749-8
		new ICSAB			↓ - 9
		CCV1			
		CCB1			
		RG62 MB1	SUC	2	
		RG52 MB	LEN	5	Ba 0.014 A.N.
		Adyp			✓
		A			
		↓ AspH	↓	↓	✓
		RG60 D	SUC	↓	
		RG62 Bdep		2	✓
		B			
label		zzzzzz ↓ air b5ph	↓	↓	tubing disconnect



IEC Date: \_\_\_\_\_

Analysis Date: 8/10/10

Analyst: REW

LR Date: \_\_\_\_\_

Page: 2 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		RG62 MB sph	SUC	2 ✓	
		CCV2			
		CCB2			
		RG63 MB	WMW		
		↓ A	↓		
		↓ B	↓		
		RG49 G	↓		printer error - data reprocessed
		RG60 B	SUC	2	
		RG76 Q	↓	5	
		↓ R	↓	2	
		↓ S	↓		
Label		RG62 B sph	↓	↓ ✓	
		RG76 MB sph	↓	↓ ✓	
		CCV3			
		CCB3			
		RG76 MB	SUC	2	
		RG82 MB	TWC		
		RG63 C	WMW		
		↓ D	↓		
		↓ E	↓		
		RG82 A	TWC		
		↓ B	↓		
		↓ C	↓		
		↓ D	↓		



IEC Date: \_\_\_\_\_

Analysis Date: 8.10.10

Analyst: BW

LR Date: \_\_\_\_\_

Page: 3 of 5

All corrections made by analyst unless otherwise noted.

BW 8.10.10

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		RG82 MBSph	TWC	✓	
2		<del>RG74</del> 222222			tubing disconnected
		<del>CCB4</del> CCV4			
		CCB4			
		RH62 MB	SWC	2	
		RG76 T	↓	↓	
		RH55 B	↓	↓	
		↓ C	↓	↓	
✓		RH62 A	↓	↓	Al Fe high - rem
✓		↓ B	↓	↓	Al high ↓
		↓ C	↓	↓	
		↓ D	↓	↓	
		↓ E	↓	↓	
		↓ MBSph	↓	↓	axial noisy - RI
		CCV5			Sn low
		CCB5			
		RH55 MB	SWC	2	
		↓ D	↓	↓	
		↓ E	↓	↓	
		↓ F	↓	↓	
		↓ G	↓	↓	
		↓ H	↓	↓	
		↓ Adip	↓	↓	
		↓ A	↓	↓	





IEC Date: \_\_\_\_\_

Analysis Date: 8.10.10

Analyst: PLW

LR Date: \_\_\_\_\_

PLW 8.11.10

Page: 4 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		RH55 Asph	swc	2	✓
	✓	↓ MBSph	↓	↓	radial wavy
		CCV6			Sn low
		CCB6			
		RH55 I	swc	2	
		↓ J	↓	↓	
		↓ K	↓	↓	
		↓ L	↓	↓	
		↓ M	↓	↓	
		↓ N	↓	↓	
label		RH58 A			
↓		↓ B	↓	↓	
		↓ C	↓	↓	
		↓ D	↓	↓	
		CCV7			Sn low
		CCB7			
		RG58 MBI	swc	2	
		↓ E	↓	↓	
		↓ F	↓	↓	
		↓ G	↓	↓	
		↓ H	↓	↓	
		↓ I dep	↓	↓	✓
		↓ I	↓	↓	✓
		↓ Isph	↓	↓	✓



IEC Date: \_\_\_\_\_  
LR Date: \_\_\_\_\_

Analysis Date: 8.10.10

Analyst: BW  
Page: 5 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		RG58 Ref 1	swc	2	
		↓ MB15ph	↓	↓	
		CCV8			Sn low
		CCB8			SeR Sl. noisy - NR
		RG58 J	swc	2	
		K	↓	↓	
		L	↓	↓	radial noisy - NR
		M	↓	↓	
		N	↓	↓	
		O	↓	↓	
		P	↓	↓	
		Q	↓	↓	
		R	↓	↓	
		S	↓	↓	
		CCV9			Sn low
		CCB9			Cu low end plug
✓	✓	RG63 UB			into + 0.02ul diluent
		↓ A			↓
		ZH62 A	swc	5	
		↓ B	↓	↓	
		CV			Ag Mo Sn low
		CB			Cu low
		BW	8.11		

BW  
8/11/10

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 8.10.10

ICP 1	Analyst AW8-11	Peer AS-11	Comment
<b>Logbook:</b>			
Analyst, Date, Method info	/	✓	
Sample ID's	/	✓	
Standard/QC solution ID's recorded	/	✓	
Prep codes	/	✓	
Dilution factors	/	✓	
Crossouts/Corrections/Deletions	/	✓	
<b>Calibration:</b>			
Blank & Standard intensities	/	✓	
Standard deviations	/	✓	
Curve fit	/	✓	
<b>Calibration Verification:</b>			
ICV/CCV	/	✓	see log
ICB/CCB	/	✓	↓
<b>Samples:</b>			
RSD's & SD's	/	✓	see log
Internal Standards	✓	✓	
Carry-over	✓	✓	
<b>Method QC:</b>			
CRI/CRA	/	✓	
ICSA/ICSAB	/	✓	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
<b>Matrix QC:</b>			
SRM/LCS	/	✓	
Matrix Spikes	/	✓	
Matrix Duplicates	/	✓	
Method Blanks	/	✓	RH50
<b>Data Distribution:</b>			
Requested elements/isotope identified	/	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	/	✓	
Necessary Analysts Notes and CAF's	/	✓	RH52 R682 R663 R676

Nebulizer Parameters: Hg ReAlign

Analyte Back Pressure Flow
All 163.0 kPa 0.55 L/min

8/10/2010 11:06:20 AM Hg ReAlign... Actual peak offset (nm): 0.000
Drift (nm): -0.000 Slit adjustment: 0

Analysis Begun

Start Time: 8/10/2010 11:07:32 AM Plasma On Time: 8/10/2010 10:18:38 AM
Logged In Analyst: metals Technique: ICP Continuous
Spectrometer Model: Optima 4300 DV, S/N 077N0060101 Autosampler Model: S10

Sample Information File: C:\pe\metals\Sample Information\CRISSET1.sif
Batch ID:
Results Data Set: PE100810
Results Library: C:\pe\metals\Results\Results.mdb

Method Loaded

Method Name: ARIIEC6AN.552AS Method Last Saved: 7/13/2010 9:41:26 AM
IEC File: IEC44.iec MSF File:
Method Description: 12Axial Elements

Table with 6 columns: Analyte, Calibration Equation, Processing, View, Internal Standard, IEC. Lists various elements like Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Si, Sn, Sr, Ti, Tl, V, Zn and their corresponding calibration and processing details.

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib Blank 1 Date Collected: 8/10/2010 11:07:34 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte Back Pressure Flow
All 163.0 kPa 0.55 L/min

## Mean Data: Calib Blank 1

Analyte	Mean Corrected		Std.Dev.	RSD	Calib	
	Intensity				Conc.	Units
ScA 357.253	1428779.2		12890.52	0.90%	100.0	%
ScR 361.383	163061.8		728.23	0.45%	100.0	%
Ag 328.068†	-172.9		62.13	35.94%	[0.00]	mg/L
Al 308.215†	-231.1		30.03	12.99%	[0.00]	mg/L
As 188.979†	15.2		2.08	13.64%	[0.00]	mg/L
B 249.677†	-20.5		3.95	19.26%	[0.00]	mg/L
Ba 233.527†	28.8		0.84	2.93%	[0.00]	mg/L
Be 313.042†	532.8		20.28	3.81%	[0.00]	mg/L
Ca 317.933†	-95.4		8.82	9.24%	[0.00]	mg/L
Cd 228.802†	156.9		3.70	2.36%	[0.00]	mg/L
Co 228.616†	-157.6		1.67	1.06%	[0.00]	mg/L
Cr 267.716†	-40.9		1.64	4.02%	[0.00]	mg/L
Cu 324.752†	1254.6		55.03	4.39%	[0.00]	mg/L
Fe 273.955†	-21.9		2.15	9.83%	[0.00]	mg/L
K 766.490†	3421.7		57.07	1.67%	[0.00]	mg/L
Mg 279.077†	-52.9		1.09	2.07%	[0.00]	mg/L
Mn 257.610†	70.3		3.69	5.24%	[0.00]	mg/L
Mo 202.031†	23.2		1.71	7.37%	[0.00]	mg/L
Na 589.592†	1789.1		74.28	4.15%	[0.00]	mg/L
Na 330.237†	-248.6		2.62	1.05%	[0.00]	mg/L
Ni 231.604†	-63.0		4.32	6.87%	[0.00]	mg/L
Pb 220.353†	277.2		6.19	2.23%	[0.00]	mg/L
Sb 206.836†	165.8		0.83	0.50%	[0.00]	mg/L
Se 196.026†	-77.2		2.32	3.00%	[0.00]	mg/L
Si 288.158†	11.5		4.28	37.13%	[0.00]	mg/L
Sn 189.927†	-5.5		2.50	45.39%	[0.00]	mg/L
Sr 421.552†	475.8		46.53	9.78%	[0.00]	mg/L
Ti 334.903†	235.4		13.51	5.74%	[0.00]	mg/L
Tl 190.801†	-9.6		2.60	27.20%	[0.00]	mg/L
V 292.402†	509.2		8.59	1.69%	[0.00]	mg/L
Zn 206.200†	-14.8		1.71	11.51%	[0.00]	mg/L

Sequence No.: 2  
Sample ID: STD2

Autosampler Location: 2  
Date Collected: 8/10/2010 11:13:33 AM  
Data Type: Original

## Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	163.0 kPa	0.55 L/min

## Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	1445937.0	4808.22	0.33%	101.2	%
ScR 361.383	162971.8	945.95	0.58%	99.94	%
Ba 233.527†	74786.1	38.54	0.05%	[10]	mg/L
Cd 228.802†	521561.6	793.10	0.15%	[10]	mg/L
Co 228.616†	481786.5	938.63	0.19%	[10]	mg/L
Cr 267.716†	35137.8	37.31	0.11%	[10]	mg/L
Cu 324.752†	1944185.2	2972.60	0.15%	[10]	mg/L
Mn 257.610†	369734.4	256.97	0.07%	[10]	mg/L
V 292.402†	1063713.5	2762.29	0.26%	[10]	mg/L

Sequence No.: 3  
Sample ID: STD3

Autosampler Location: 3  
Date Collected: 8/10/2010 11:17:21 AM  
Data Type: Original

## Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	164.0 kPa	0.55 L/min

## Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	1434879.5	9148.78	0.64%	100.4	%
ScR 361.383	163793.3	446.47	0.27%	100.4	%
Ag 328.068†	179225.1	524.37	0.29%	[1.0]	mg/L
As 188.979†	15425.3	168.62	1.09%	[10]	mg/L
B 249.677†	19941.9	81.40	0.41%	[10]	mg/L
Be 313.042†	1304730.4	5362.28	0.41%	[5.0]	mg/L
Na 589.592†	308306.4	1514.20	0.49%	[50]	mg/L
Ni 231.604†	16398.8	77.42	0.47%	[10]	mg/L
Pb 220.353†	73288.8	87.93	0.12%	[10]	mg/L
Se 196.026†	10198.3	121.52	1.19%	[10]	mg/L
Sr 421.552†	2311836.8	3467.84	0.15%	[5]	mg/L
Tl 190.801†	19248.8	135.81	0.71%	[10]	mg/L
Zn 206.200†	21168.6	136.54	0.65%	[10]	mg/L

Sequence No.: 4  
Sample ID: STD4

Autosampler Location: 4  
Date Collected: 8/10/2010 11:21:41 AM  
Data Type: Original

## Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	164.0 kPa	0.55 L/min

## Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	1457294.0	6380.63	0.44%	102.0	%
ScR 361.383	163436.5	1089.85	0.67%	100.2	%
Mo 202.031†	108160.6	38.57	0.04%	[10]	mg/L
Sb 206.836†	19359.9	73.68	0.38%	[10]	mg/L
Si 288.158†	11926.7	41.37	0.35%	[10]	mg/L
Sn 189.927†	36156.8	31.58	0.09%	[10]	mg/L
Ti 334.903†	186202.6	1389.31	0.75%	[10]	mg/L



Sequence No.: 5  
 Sample ID: STD5

Autosampler Location: 5  
 Date Collected: 8/10/2010 11:25:54 AM  
 Data Type: Original

**Nebulizer Parameters: STD5**

Analyte	Back Pressure	Flow
All	164.0 kPa	0.55 L/min

**Mean Data: STD5**

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1413858.0	5337.11	0.38%	98.96	%
ScR 361.383	164428.4	776.51	0.47%	100.8	%
Al 308.215†	39101.5	231.34	0.59%	[30]	mg/L
Ca 317.933†	247424.3	162.46	0.07%	[30]	mg/L
Fe 273.955†	108386.0	499.33	0.46%	[100]	mg/L
K 766.490†	238935.7	906.59	0.38%	[100]	mg/L
Mg 279.077†	30416.6	179.74	0.59%	[30]	mg/L
Na 330.237†	2205.6	10.60	0.48%	[100]	mg/L

**Calibration Summary**

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	179200	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1303	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1543	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	1994	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	7479	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	260900	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	8247	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	52160	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	48180	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	3514	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	194400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1084	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2389	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1014	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	36970	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	10820	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	6166	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	22.06	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	1640	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7329	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	1936	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1020	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1193	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3616	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	462400	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	18620	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1925	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	106400	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	2117	0.00000	1.000000	

=====  
Analysis Begun

Start Time: 8/10/2010 11:39:09 AM

Plasma On Time: 8/10/2010 10:18:38 AM

Logged In Analyst: metals

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N0060101Autosampler Model: S10

Sample Information File: C:\pe\metals\Sample Information\0810.sif

Batch ID:

Results Data Set: PE100810

Results Library: C:\pe\metals\Results\Results.mdb

=====  
Sequence No.: 1

Sample ID: Calib Blank 1

Date Collected: 8/10/2010 11:39:11 AM

Data Type: Original

-----  
Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	164.0 kPa	0.55 L/min

-----  
Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1454027.9	6591.10	0.45%	101.8	%
ScR 361.383	161433.1	1294.20	0.80%	99.00	%
Ag 328.068†	-196.7	56.47	28.70%	[0.00]	mg/L
Al 308.215†	-217.2	23.49	10.82%	[0.00]	mg/L
As 188.979†	16.3	4.01	24.51%	[0.00]	mg/L
B 249.677†	-17.5	5.58	31.94%	[0.00]	mg/L
Ba 233.527†	28.4	4.82	16.97%	[0.00]	mg/L
Be 313.042†	535.9	18.99	3.54%	[0.00]	mg/L
Ca 317.933†	-107.2	15.43	14.39%	[0.00]	mg/L
Cd 228.802†	162.8	1.65	1.01%	[0.00]	mg/L
Co 228.616†	-153.7	5.15	3.35%	[0.00]	mg/L
Cr 267.716†	-36.8	1.80	4.89%	[0.00]	mg/L
Cu 324.752†	1797.2	53.29	2.97%	[0.00]	mg/L
Fe 273.955†	-19.0	0.54	2.86%	[0.00]	mg/L
K 766.490†	3506.8	23.14	0.66%	[0.00]	mg/L
Mg 279.077†	-61.8	6.82	11.04%	[0.00]	mg/L
Mn 257.610†	78.9	3.71	4.71%	[0.00]	mg/L
Mo 202.031†	27.0	0.52	1.94%	[0.00]	mg/L
Na 589.592†	1837.9	67.49	3.67%	[0.00]	mg/L
Na 330.237†	-248.2	6.36	2.56%	[0.00]	mg/L
Ni 231.604†	-62.6	4.73	7.56%	[0.00]	mg/L
Pb 220.353†	275.6	3.50	1.27%	[0.00]	mg/L
Sb 206.836†	161.6	3.38	2.09%	[0.00]	mg/L
Se 196.026†	-74.7	1.42	1.90%	[0.00]	mg/L
Si 288.158†	14.5	2.91	20.07%	[0.00]	mg/L
Sn 189.927†	-4.6	1.33	29.17%	[0.00]	mg/L
Sr 421.552†	484.1	23.72	4.90%	[0.00]	mg/L
Ti 334.903†	249.8	24.86	9.95%	[0.00]	mg/L
Tl 190.801†	-14.4	2.48	17.17%	[0.00]	mg/L
V 292.402†	494.7	23.34	4.72%	[0.00]	mg/L
Zn 206.200†	-12.9	0.93	7.20%	[0.00]	mg/L

=====  
Analysis Begun

Start Time: 8/10/2010 11:43:39 AM

Plasma On Time: 8/10/2010 10:18:38 AM

Logged In Analyst: metals

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N0060101Autosampler Model: S10

Sample Information File: C:\pe\metals\Sample Information\0810.sif

Batch ID:

Results Data Set: PE100810

Results Library: C:\pe\metals\Results\Results.mdb

=====  
Sequence No.: 1

Autosampler Location: 7

Sample ID: CV

Date Collected: 8/10/2010 11:43:42 AM

Data Type: Original

Dilution: 1X

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Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	164.0 kPa	0.55 L/min

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Mean Data: CV

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1442130.8	100.9	%	0.61				0.60%
ScR 361.383	164426.3	100.8	%	0.40				0.39%
Ag 328.068†	174606.2	0.9742	mg/L	0.00574	0.9742	mg/L	0.00574	0.59%
Al 308.215†	2739.5	2.063	mg/L	0.0128	2.063	mg/L	0.0128	0.62%
As 188.979†	3109.6	2.016	mg/L	0.0173	2.016	mg/L	0.0173	0.86%
B 249.677†	1973.0	0.9878	mg/L	0.00543	0.9878	mg/L	0.00543	0.55%
Ba 233.527†	7537.4	1.007	mg/L	0.0051	1.007	mg/L	0.0051	0.50%
Be 313.042†	260038.8	0.9939	mg/L	0.00160	0.9939	mg/L	0.00160	0.16%
Ca 317.933†	17313.0	2.099	mg/L	0.0082	2.099	mg/L	0.0082	0.39%
Cd 228.802†	53672.5	1.026	mg/L	0.0067	1.026	mg/L	0.0067	0.66%
Co 228.616†	47927.2	0.9929	mg/L	0.00278	0.9929	mg/L	0.00278	0.28%
Cr 267.716†	3572.3	1.017	mg/L	0.0048	1.017	mg/L	0.0048	0.47%
Cu 324.752†	207575.1	1.068	mg/L	0.0052	1.068	mg/L	0.0052	0.49%
Fe 273.955†	2207.0	2.035	mg/L	0.0067	2.035	mg/L	0.0067	0.33%
K 766.490†	49022.0	20.52	mg/L	0.037	20.52	mg/L	0.037	0.18%
Mg 279.077†	2085.2	2.060	mg/L	0.0139	2.060	mg/L	0.0139	0.68%
Mn 257.610†	37213.5	1.007	mg/L	0.0039	1.007	mg/L	0.0039	0.39%
Mo 202.031†	10771.2	0.9957	mg/L	0.01053	0.9957	mg/L	0.01053	1.06%
Na 589.592†	305474.4	49.54	mg/L	0.140	49.54	mg/L	0.140	0.28%
Na 330.237†	1148.6	51.95	mg/L	0.106	51.95	mg/L	0.106	0.20%
Ni 231.604†	1658.8	1.012	mg/L	0.0068	1.012	mg/L	0.0068	0.67%
Pb 220.353†	14710.3	2.009	mg/L	0.0064	2.009	mg/L	0.0064	0.32%
Sb 206.836†	4191.6	2.161	mg/L	0.0229	2.161	mg/L	0.0229	1.06%
Se 196.026†	2057.8	2.016	mg/L	0.0186	2.016	mg/L	0.0186	0.92%
Si 288.158†	2610.0	2.191	mg/L	0.0062	2.191	mg/L	0.0062	0.28%
Sn 189.927†	3398.6	0.9405	mg/L	0.01001	0.9405	mg/L	0.01001	1.06%
Sr 421.552†	469749.1	1.016	mg/L	0.0025	1.016	mg/L	0.0025	0.24%
Ti 334.903†	18688.0	1.002	mg/L	0.0028	1.002	mg/L	0.0028	0.28%
Tl 190.801†	3881.3	2.003	mg/L	0.0278	2.003	mg/L	0.0278	1.39%
V 292.402†	105848.3	1.007	mg/L	0.0059	1.007	mg/L	0.0059	0.58%
Zn 206.200†	2136.9	1.009	mg/L	0.0032	1.009	mg/L	0.0032	0.32%

Sequence No.: 2

Sample ID: CB

Autosampler Location: 1

Date Collected: 8/10/2010 11:49:43 AM

Data Type: Original

Dilution: 1X

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	165.0 kPa	0.55 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1470387.5	102.9 %	1.12			1.09%
ScR 361.383	162321.3	99.55 %	0.512			0.51%
Ag 328.068†	49.2	0.00027 mg/L	0.000125	0.00027 mg/L	0.000125	45.67%
Al 308.215†	-16.9	-0.01296 mg/L	0.008277	-0.01296 mg/L	0.008277	63.86%
As 188.979†	-0.0	-0.00001 mg/L	0.001588	-0.00001 mg/L	0.001588	>999.9%
B 249.677†	8.1	0.00408 mg/L	0.001522	0.00408 mg/L	0.001522	37.29%
Ba 233.527†	-0.7	-0.00010 mg/L	0.000076	-0.00010 mg/L	0.000076	79.01%
Be 313.042†	26.6	0.00010 mg/L	0.000052	0.00010 mg/L	0.000052	50.72%
Ca 317.933†	6.6	0.00080 mg/L	0.001715	0.00080 mg/L	0.001715	213.88%
Cd 228.802†	-5.3	-0.00010 mg/L	0.000049	-0.00010 mg/L	0.000049	47.76%
Co 228.616†	7.4	0.00016 mg/L	0.000030	0.00016 mg/L	0.000030	19.04%
Cr 267.716†	-6.6	-0.00188 mg/L	0.000342	-0.00188 mg/L	0.000342	18.19%
Cu 324.752†	-20.1	-0.00010 mg/L	0.000018	-0.00010 mg/L	0.000018	17.35%
Fe 273.955†	-3.8	-0.00352 mg/L	0.000951	-0.00352 mg/L	0.000951	27.03%
K 766.490†	64.9	0.02717 mg/L	0.009247	0.02717 mg/L	0.009247	34.03%
Mg 279.077†	-2.0	-0.00201 mg/L	0.003952	-0.00201 mg/L	0.003952	196.25%
Mn 257.610†	1.0	0.00003 mg/L	0.000065	0.00003 mg/L	0.000065	236.97%
Mo 202.031†	-2.4	-0.00022 mg/L	0.000210	-0.00022 mg/L	0.000210	94.06%
Na 589.592†	202.7	0.03287 mg/L	0.002808	0.03287 mg/L	0.002808	8.54%
Na 330.237†	9.2	0.4145 mg/L	0.57170	0.4145 mg/L	0.57170	137.93%
Ni 231.604†	1.2	0.00073 mg/L	0.001138	0.00073 mg/L	0.001138	155.54%
Pb 220.353†	-2.9	-0.00040 mg/L	0.000962	-0.00040 mg/L	0.000962	242.42%
Sb 206.836†	-0.3	-0.00013 mg/L	0.001712	-0.00013 mg/L	0.001712	>999.9%
Se 196.026†	8.9	0.00875 mg/L	0.003928	0.00875 mg/L	0.003928	44.88%
Si 288.158†	0.5	0.00040 mg/L	0.002673	0.00040 mg/L	0.002673	663.07%
Sn 189.927†	4.1	0.00113 mg/L	0.000123	0.00113 mg/L	0.000123	10.86%
Sr 421.552†	19.5	0.00004 mg/L	0.000091	0.00004 mg/L	0.000091	214.53%
Ti 334.903†	-43.1	-0.00231 mg/L	0.000984	-0.00231 mg/L	0.000984	42.56%
Tl 190.801†	6.1	0.00315 mg/L	0.001321	0.00315 mg/L	0.001321	41.94%
V 292.402†	14.5	0.00012 mg/L	0.000074	0.00012 mg/L	0.000074	59.31%
Zn 206.200†	0.7	0.00032 mg/L	0.001803	0.00032 mg/L	0.001803	557.04%

Sequence No.: 3  
Sample ID: CRI

Autosampler Location: 21  
Date Collected: 8/10/2010 11:55:42 AM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CRI

Analyte Back Pressure Flow  
All 165.0 kPa 0.55 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
ScA 357.253	1464542.3	102.5	%	0.67			0.65%
ScR 361.383	164701.8	101.0	%	1.24			1.23%
Ag 328.068†	589.2	0.00329	mg/L	0.000254	0.00329 mg/L	0.000254	7.74%
Al 308.215†	77.1	0.05899	mg/L	0.012515	0.05899 mg/L	0.012515	21.21%
As 188.979†	79.8	0.05170	mg/L	0.001469	0.05170 mg/L	0.001469	2.84%
B 249.677†	47.2	0.02368	mg/L	0.002635	0.02368 mg/L	0.002635	11.13%
Ba 233.527†	22.1	0.00295	mg/L	0.000487	0.00295 mg/L	0.000487	16.50%
Be 313.042†	275.7	0.00105	mg/L	0.000090	0.00105 mg/L	0.000090	8.55%
Ca 317.933†	442.8	0.05369	mg/L	0.000531	0.05369 mg/L	0.000531	0.99%
Cd 228.802†	107.5	0.00197	mg/L	0.000011	0.00197 mg/L	0.000011	0.55%
Co 228.616†	151.5	0.00314	mg/L	0.000136	0.00314 mg/L	0.000136	4.35%
Cr 267.716†	17.5	0.00499	mg/L	0.001271	0.00499 mg/L	0.001271	25.46%
Cu 324.752†	235.5	0.00121	mg/L	0.000073	0.00121 mg/L	0.000073	6.03%
Fe 273.955†	54.0	0.04979	mg/L	0.001678	0.04979 mg/L	0.001678	3.37%
K 766.490†	1237.2	0.5178	mg/L	0.02815	0.5178 mg/L	0.02815	5.44%
Mg 279.077†	55.2	0.05439	mg/L	0.008095	0.05439 mg/L	0.008095	14.88%
Mn 257.610†	33.8	0.00092	mg/L	0.000032	0.00092 mg/L	0.000032	3.48%
Mo 202.031†	55.1	0.00509	mg/L	0.000409	0.00509 mg/L	0.000409	8.04%
Na 589.592†	3167.7	0.5137	mg/L	0.01128	0.5137 mg/L	0.01128	2.20%
Na 330.237†	35.7	1.615	mg/L	1.0695	1.615 mg/L	1.0695	66.22%
Ni 231.604†	18.1	0.01107	mg/L	0.001996	0.01107 mg/L	0.001996	18.03%
Pb 220.353†	143.0	0.01954	mg/L	0.000887	0.01954 mg/L	0.000887	4.54%
Sb 206.836†	106.7	0.05512	mg/L	0.002046	0.05512 mg/L	0.002046	3.71%
Se 196.026†	57.3	0.05618	mg/L	0.005687	0.05618 mg/L	0.005687	10.12%
Si 288.158†	79.2	0.06639	mg/L	0.002051	0.06639 mg/L	0.002051	3.09%
Sn 189.927†	35.5	0.00981	mg/L	0.001653	0.00981 mg/L	0.001653	16.85%
Sr 421.552†	501.0	0.00108	mg/L	0.000036	0.00108 mg/L	0.000036	3.31%
Ti 334.903†	52.5	0.00281	mg/L	0.000116	0.00281 mg/L	0.000116	4.13%
Tl 190.801†	96.8	0.05027	mg/L	0.003774	0.05027 mg/L	0.003774	7.51%
V 292.402†	337.4	0.00323	mg/L	0.000310	0.00323 mg/L	0.000310	9.60%
Zn 206.200†	21.8	0.01028	mg/L	0.000458	0.01028 mg/L	0.000458	4.46%

Sequence No.: 4  
Sample ID: ICSA

Autosampler Location: 22  
Date Collected: 8/10/2010 12:01:42 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: ICSA

Analyte Back Pressure Flow  
All 165.0 kPa 0.55 L/min

Mean Data: ICSA

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1402133.7	98.14	%	0.155				0.16%
ScR 361.383	163802.9	100.5	%	0.96				0.96%
Ag 328.068†	-1195.7	0.00029	mg/L	0.000252	0.00029	mg/L	0.000252	86.41%
Al 308.215†	267864.6	205.5	mg/L	1.10	205.5	mg/L	1.10	0.54%
As 188.979†	-5.8	-0.00374	mg/L	0.000582	-0.00374	mg/L	0.000582	15.57%
B 249.677†	35.4	0.01778	mg/L	0.001959	0.01778	mg/L	0.001959	11.02%
Ba 233.527†	80.5	0.00137	mg/L	0.000130	0.00137	mg/L	0.000130	9.47%
Be 313.042†	-6.0	-0.00009	mg/L	0.000035	-0.00009	mg/L	0.000035	39.99%
Ca 317.933†	821783.4	99.64	mg/L	0.444	99.64	mg/L	0.444	0.45%
Cd 228.802†	45.4	0.00088	mg/L	0.000103	0.00088	mg/L	0.000103	11.71%
Co 228.616†	40.4	0.00083	mg/L	0.000144	0.00083	mg/L	0.000144	17.26%
Cr 267.716†	1.4	-0.00016	mg/L	0.001064	-0.00016	mg/L	0.001064	661.17%
Cu 324.752†	-3403.9	0.00023	mg/L	0.000270	0.00023	mg/L	0.000270	116.71%
Fe 273.955†	215969.3	199.3	mg/L	1.24	199.3	mg/L	1.24	0.62%
K 766.490†	-118.5	-0.04960	mg/L	0.015912	-0.04960	mg/L	0.015912	32.08%
Mg 279.077†	104064.6	102.5	mg/L	0.82	102.5	mg/L	0.82	0.80%
Mn 257.610†	27.9	-0.00063	mg/L	0.000351	-0.00063	mg/L	0.000351	55.80%
Mo 202.031†	26.2	0.00243	mg/L	0.000111	0.00243	mg/L	0.000111	4.58%
Na 589.592†	17.8	0.00289	mg/L	0.005158	0.00289	mg/L	0.005158	178.63%
Na 330.237†	28.9	0.6518	mg/L	0.30053	0.6518	mg/L	0.30053	46.11%
Ni 231.604†	-1.9	-0.00111	mg/L	0.001077	-0.00111	mg/L	0.001077	96.94%
Pb 220.353†	-298.5	0.00407	mg/L	0.000289	0.00407	mg/L	0.000289	7.09%
Sb 206.836†	151.2	-0.00170	mg/L	0.002030	-0.00170	mg/L	0.002030	119.45%
Se 196.026†	-90.1	-0.01306	mg/L	0.002517	-0.01306	mg/L	0.002517	19.28%
Si 288.158†	-15.2	0.00097	mg/L	0.002449	0.00097	mg/L	0.002449	251.58%
Sn 189.927†	-52.2	-0.00618	mg/L	0.001956	-0.00618	mg/L	0.001956	31.63%
Sr 421.552†	1818.2	0.00393	mg/L	0.000068	0.00393	mg/L	0.000068	1.74%
Ti 334.903†	49.1	-0.00125	mg/L	0.000676	-0.00125	mg/L	0.000676	54.11%
Tl 190.801†	-56.1	-0.02927	mg/L	0.001651	-0.02927	mg/L	0.001651	5.64%
V 292.402†	2667.6	0.00168	mg/L	0.000658	0.00168	mg/L	0.000658	39.22%
Zn 206.200†	-11.7	-0.00049	mg/L	0.001563	-0.00049	mg/L	0.001563	316.58%

Sequence No.: 5  
Sample ID: ICSAB

Autosampler Location: 23  
Date Collected: 8/10/2010 12:07:59 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	165.0 kPa	0.55 L/min

Mean Data: ICSAB

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	1404712.4	98.32	%	0.116				0.12%
ScR 361.383	166289.3	102.0	%	0.42				0.41%
Ag 328.068†	184048.3	1.034	mg/L	0.0046	1.034	mg/L	0.0046	0.44%
Al 308.215†	268249.8	205.8	mg/L	0.60	205.8	mg/L	0.60	0.29%
As 188.979†	1556.2	1.009	mg/L	0.0096	1.009	mg/L	0.0096	0.95%
B 249.677†	39.4	0.01668	mg/L	0.001772	0.01668	mg/L	0.001772	10.62%
Ba 233.527†	7469.9	0.9890	mg/L	0.00271	0.9890	mg/L	0.00271	0.27%
Be 313.042†	266831.1	1.020	mg/L	0.0052	1.020	mg/L	0.0052	0.51%
Ca 317.933†	826519.0	100.2	mg/L	0.40	100.2	mg/L	0.40	0.40%
Cd 228.802†	53199.7	1.018	mg/L	0.0048	1.018	mg/L	0.0048	0.47%
Co 228.616†	45335.1	0.9406	mg/L	0.00285	0.9406	mg/L	0.00285	0.30%
Cr 267.716†	3516.2	1.000	mg/L	0.0012	1.000	mg/L	0.0012	0.12%
Cu 324.752†	208336.2	1.090	mg/L	0.0043	1.090	mg/L	0.0043	0.39%
Fe 273.955†	216804.2	200.0	mg/L	0.56	200.0	mg/L	0.56	0.28%
K 766.490†	-157.0	-0.06570	mg/L	0.030286	-0.06570	mg/L	0.030286	46.10%
Mg 279.077†	105089.0	103.5	mg/L	0.35	103.5	mg/L	0.35	0.34%
Mn 257.610†	36581.4	0.9883	mg/L	0.00310	0.9883	mg/L	0.00310	0.31%
Mo 202.031†	28.9	0.00252	mg/L	0.000213	0.00252	mg/L	0.000213	8.43%
Na 589.592†	159.8	0.02592	mg/L	0.005696	0.02592	mg/L	0.005696	21.97%
Na 330.237†	39.0	0.8116	mg/L	0.32460	0.8116	mg/L	0.32460	40.00%
Ni 231.604†	1585.9	0.9677	mg/L	0.00450	0.9677	mg/L	0.00450	0.46%
Pb 220.353†	6678.5	0.9570	mg/L	0.00749	0.9570	mg/L	0.00749	0.78%
Sb 206.836†	2268.5	1.079	mg/L	0.0089	1.079	mg/L	0.0089	0.83%
Se 196.026†	958.1	1.012	mg/L	0.0059	1.012	mg/L	0.0059	0.58%
Si 288.158†	-36.8	-0.01606	mg/L	0.005595	-0.01606	mg/L	0.005595	34.84%
Sn 189.927†	-54.4	-0.00675	mg/L	0.001526	-0.00675	mg/L	0.001526	22.62%
Sr 421.552†	1988.0	0.00430	mg/L	0.000055	0.00430	mg/L	0.000055	1.28%
Ti 334.903†	39.9	-0.00201	mg/L	0.000386	-0.00201	mg/L	0.000386	19.26%
Tl 190.801†	1838.9	0.9417	mg/L	0.00610	0.9417	mg/L	0.00610	0.65%
V 292.402†	110620.1	1.023	mg/L	0.0040	1.023	mg/L	0.0040	0.39%
Zn 206.200†	1979.3	0.9394	mg/L	0.00359	0.9394	mg/L	0.00359	0.38%

Sequence No.: 6  
 Sample ID: NEW ICSA

Autosampler Location: 24  
 Date Collected: 8/10/2010 12:13:49 PM  
 Data Type: Original

Dilution: 1X

Nebulizer Parameters: NEW ICSA

Analyte Back Pressure Flow  
 All 166.0 kPa 0.55 L/min

Mean Data: NEW ICSA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1389086.5	97.22 %	0.245			0.25%
ScR 361.383	164908.6	101.1 %	0.44			0.44%
Ag 328.068†	-1209.2	0.00022 mg/L	0.000434	0.00022 mg/L	0.000434	196.57%
Al 308.215†	264987.0	203.3 mg/L	0.37	203.3 mg/L	0.37	0.18%
As 188.979†	0.7	0.00043 mg/L	0.001903	0.00043 mg/L	0.001903	438.41%
B 249.677†	37.9	0.01899 mg/L	0.002156	0.01899 mg/L	0.002156	11.35%
Ba 233.527†	78.6	0.00111 mg/L	0.000327	0.00111 mg/L	0.000327	29.31%
Be 313.042†	-7.5	-0.00009 mg/L	0.000033	-0.00009 mg/L	0.000033	35.41%
Ca 317.933†	815485.2	98.88 mg/L	0.145	98.88 mg/L	0.145	0.15%
Cd 228.802†	55.4	0.00106 mg/L	0.000086	0.00106 mg/L	0.000086	8.13%
Co 228.616†	39.8	0.00082 mg/L	0.000047	0.00082 mg/L	0.000047	5.78%
Cr 267.716†	4.3	0.00071 mg/L	0.000338	0.00071 mg/L	0.000338	47.29%
Cu 324.752†	-3082.8	0.00188 mg/L -	0.000209	0.00188 mg/L	0.000209	11.11%
Fe 273.955†	215933.6	199.2 mg/L	1.12	199.2 mg/L	1.12	0.56%
K 766.490†	-172.2	-0.07207 mg/L	0.009511	-0.07207 mg/L	0.009511	13.20%
Mg 279.077†	101927.0	100.4 mg/L	0.81	100.4 mg/L	0.81	0.81%
Mn 257.610†	24.6	-0.00070 mg/L	0.000335	-0.00070 mg/L	0.000335	47.48%
Mo 202.031†	25.5	0.00235 mg/L	0.000623	0.00235 mg/L	0.000623	26.46%
Na 589.592†	30.5	0.00495 mg/L	0.009145	0.00495 mg/L	0.009145	184.74%
Na 330.237†	32.8	0.8320 mg/L	0.29662	0.8320 mg/L	0.29662	35.65%
Ni 231.604†	-8.9	-0.00534 mg/L	0.000968	-0.00534 mg/L	0.000968	18.14%
Pb 220.353†	-285.9	0.00518 mg/L	0.001792	0.00518 mg/L	0.001792	34.59%
Sb 206.836†	156.2	0.00140 mg/L	0.002419	0.00140 mg/L	0.002419	173.14%
Se 196.026†	-93.6	-0.01686 mg/L	0.007984	-0.01686 mg/L	0.007984	47.34%
Si 288.158†	-31.6	-0.01310 mg/L	0.003917	-0.01310 mg/L	0.003917	29.90%
Sn 189.927†	-51.6	-0.00612 mg/L	0.001451	-0.00612 mg/L	0.001451	23.72%
Sr 421.552†	1743.2	0.00377 mg/L	0.000048	0.00377 mg/L	0.000048	1.26%
Ti 334.903†	27.5	-0.00238 mg/L	0.001472	-0.00238 mg/L	0.001472	61.82%
Tl 190.801†	-53.3	-0.02784 mg/L	0.000944	-0.02784 mg/L	0.000944	3.39%
V 292.402†	2654.2	0.00156 mg/L	0.000125	0.00156 mg/L	0.000125	8.01%
Zn 206.200†	-0.1	0.00490 mg/L	0.001961	0.00490 mg/L	0.001961	40.03%



Sequence No.: 7

Sample ID: NEW ICSAB

Autosampler Location: 25

Date Collected: 8/10/2010 12:20:06 PM

Data Type: Original

Dilution: 1X

## Nebulizer Parameters: NEW ICSAB

Analyte	Back Pressure	Flow
All	166.0 kPa	0.55 L/min

## Mean Data: NEW ICSAB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1399442.7	97.95	%	0.700			0.71%
ScR 361.383	164582.0	100.9	%	0.46			0.46%
Ag 328.068†	184253.7	1.035	mg/L	0.0042	1.035 mg/L	0.0042	0.40%
Al 308.215†	262978.8	201.8	mg/L	0.10	201.8 mg/L	0.10	0.05%
As 188.979†	1542.9	1.000	mg/L	0.0082	1.000 mg/L	0.0082	0.82%
B 249.677†	49.1	0.02158	mg/L	0.001302	0.02158 mg/L	0.001302	6.03%
Ba 233.527†	7435.5	0.9846	mg/L	0.00602	0.9846 mg/L	0.00602	0.61%
Be 313.042†	264459.5	1.011	mg/L	0.0002	1.011 mg/L	0.0002	0.02%
Ca 317.933†	814217.0	98.72	mg/L	0.024	98.72 mg/L	0.024	0.02%
Cd 228.802†	52785.0	1.010	mg/L	0.0002	1.010 mg/L	0.0002	0.02%
Co 228.616†	45005.8	0.9338	mg/L	0.00205	0.9338 mg/L	0.00205	0.22%
Cr 267.716†	3499.1	0.9954	mg/L	0.00914	0.9954 mg/L	0.00914	0.92%
Cu 324.752†	206568.5	1.080	mg/L	0.0014	1.080 mg/L	0.0014	0.13%
Fe 273.955†	212901.4	196.4	mg/L	0.18	196.4 mg/L	0.18	0.09%
K 766.490†	-97.3	-0.04073	mg/L	0.007272	-0.04073 mg/L	0.007272	17.85%
Mg 279.077†	104134.6	102.6	mg/L	0.04	102.6 mg/L	0.04	0.03%
Mn 257.610†	36381.5	0.9829	mg/L	0.00699	0.9829 mg/L	0.00699	0.71%
Mo 202.031†	20.4	0.00173	mg/L	0.000462	0.00173 mg/L	0.000462	26.63%
Na 589.592†	59.5	0.00964	mg/L	0.005017	0.00964 mg/L	0.005017	52.02%
Na 330.237†	33.5	0.5750	mg/L	0.16003	0.5750 mg/L	0.16003	27.83%
Ni 231.604†	1576.1	0.9617	mg/L	0.00644	0.9617 mg/L	0.00644	0.67%
Pb 220.353†	6636.0	0.9503	mg/L	0.00844	0.9503 mg/L	0.00844	0.89%
Sb 206.836†	2098.9	0.9929	mg/L	0.01368	0.9929 mg/L	0.01368	1.38%
Se 196.026†	951.6	1.005	mg/L	0.0074	1.005 mg/L	0.0074	0.73%
Si 288.158†	-31.7	-0.01194	mg/L	0.003099	-0.01194 mg/L	0.003099	25.96%
Sn 189.927†	-49.9	-0.00560	mg/L	0.002014	-0.00560 mg/L	0.002014	35.94%
Sr 421.552†	1983.4	0.00429	mg/L	0.000027	0.00429 mg/L	0.000027	0.62%
Ti 334.903†	38.0	-0.00205	mg/L	0.000675	-0.00205 mg/L	0.000675	32.94%
Tl 190.801†	1858.1	0.9517	mg/L	0.00538	0.9517 mg/L	0.00538	0.57%
V 292.402†	109922.4	1.017	mg/L	0.0048	1.017 mg/L	0.0048	0.47%
Zn 206.200†	1962.5	0.9314	mg/L	0.00800	0.9314 mg/L	0.00800	0.86%

Sequence No.: 8  
 Sample ID: CV |

Autosampler Location: 7  
 Date Collected: 8/10/2010 12:27:04 PM  
 Data Type: Original

Dilution: 1X

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 Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	166.0 kPa	0.55 L/min

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 Mean Data: CV

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1433083.6	100.3	%	0.80				0.80%
ScR 361.383	166082.4	101.9	%	0.58				0.57%
Ag 328.068†	174473.5	0.9735	mg/L	0.01006	0.9735	mg/L	0.01006	1.03%
Al 308.215†	2692.1	2.027	mg/L	0.0212	2.027	mg/L	0.0212	1.05%
As 188.979†	3104.6	2.012	mg/L	0.0176	2.012	mg/L	0.0176	0.88%
B 249.677†	1937.4	0.9700	mg/L	0.00604	0.9700	mg/L	0.00604	0.62%
Ba 233.527†	7420.5	0.9917	mg/L	0.01092	0.9917	mg/L	0.01092	1.10%
Be 313.042†	259904.5	0.9934	mg/L	0.00124	0.9934	mg/L	0.00124	0.12%
Ca 317.933†	17119.1	2.076	mg/L	0.0181	2.076	mg/L	0.0181	0.87%
Cd 228.802†	53500.3	1.022	mg/L	0.0110	1.022	mg/L	0.0110	1.08%
Co 228.616†	47629.6	0.9867	mg/L	0.01038	0.9867	mg/L	0.01038	1.05%
Cr 267.716†	3537.3	1.007	mg/L	0.0068	1.007	mg/L	0.0068	0.67%
Cu 324.752†	207222.4	1.066	mg/L	0.0112	1.066	mg/L	0.0112	1.05%
Fe 273.955†	2173.2	2.004	mg/L	0.0256	2.004	mg/L	0.0256	1.28%
K 766.490†	48450.6	20.28	mg/L	0.074	20.28	mg/L	0.074	0.36%
Mg 279.077†	2059.9	2.035	mg/L	0.0123	2.035	mg/L	0.0123	0.61%
Mn 257.610†	37096.5	1.004	mg/L	0.0017	1.004	mg/L	0.0017	0.17%
Mo 202.031†	10713.7	0.9904	mg/L	0.00919	0.9904	mg/L	0.00919	0.93%
Na 589.592†	300809.7	48.78	mg/L	0.070	48.78	mg/L	0.070	0.14%
Na 330.237†	1128.2	51.03	mg/L	0.350	51.03	mg/L	0.350	0.69%
Ni 231.604†	1633.2	0.9968	mg/L	0.01106	0.9968	mg/L	0.01106	1.11%
Pb 220.353†	14647.2	2.000	mg/L	0.0252	2.000	mg/L	0.0252	1.26%
Sb 206.836†	4173.0	2.152	mg/L	0.0195	2.152	mg/L	0.0195	0.91%
Se 196.026†	2054.3	2.012	mg/L	0.0141	2.012	mg/L	0.0141	0.70%
Si 288.158†	2557.1	2.147	mg/L	0.0276	2.147	mg/L	0.0276	1.28%
Sn 189.927†	3376.9	0.9345	mg/L	0.00750	0.9345	mg/L	0.00750	0.80%
Sr 421.552†	468727.5	1.014	mg/L	0.0008	1.014	mg/L	0.0008	0.07%
Ti 334.903†	18596.0	0.9974	mg/L	0.00164	0.9974	mg/L	0.00164	0.16%
Tl 190.801†	3863.4	1.993	mg/L	0.0159	1.993	mg/L	0.0159	0.80%
V 292.402†	105489.1	1.003	mg/L	0.0125	1.003	mg/L	0.0125	1.24%
Zn 206.200†	2113.0	0.9975	mg/L	0.01171	0.9975	mg/L	0.01171	1.17%

Sequence No.: 9  
Sample ID: CB |

Autosampler Location: 1  
Date Collected: 8/10/2010 12:33:05 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
All 166.0 kPa 0.55 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1439257.1	100.7	%	1.17				1.16%
ScR 361.383	165997.3	101.8	%	0.81				0.80%
Ag 328.068†	36.2	0.00020	mg/L	0.000111	0.00020	mg/L	0.000111	54.87%
Al 308.215†	3.5	0.00267	mg/L	0.009929	0.00267	mg/L	0.009929	371.93%
As 188.979†	2.7	0.00176	mg/L	0.002780	0.00176	mg/L	0.002780	158.32%
B 249.677†	10.6	0.00531	mg/L	0.002773	0.00531	mg/L	0.002773	52.25%
Ba 233.527†	-2.6	-0.00035	mg/L	0.000647	-0.00035	mg/L	0.000647	182.53%
Be 313.042†	2.1	0.00001	mg/L	0.000010	0.00001	mg/L	0.000010	129.61%
Ca 317.933†	-0.5	-0.00006	mg/L	0.000990	-0.00006	mg/L	0.000990	>999.9%
Cd 228.802†	8.0	0.00015	mg/L	0.000065	0.00015	mg/L	0.000065	43.32%
Co 228.616†	-3.8	-0.00008	mg/L	0.000074	-0.00008	mg/L	0.000074	97.51%
Cr 267.716†	1.0	0.00028	mg/L	0.001193	0.00028	mg/L	0.001193	430.46%
Cu 324.752†	140.7	0.00072	mg/L	0.000340	0.00072	mg/L	0.000340	46.97%
Fe 273.955†	2.2	0.00201	mg/L	0.001142	0.00201	mg/L	0.001142	56.74%
K 766.490†	32.1	0.01342	mg/L	0.019790	0.01342	mg/L	0.019790	147.51%
Mg 279.077†	5.9	0.00580	mg/L	0.002575	0.00580	mg/L	0.002575	44.38%
Mn 257.610†	3.3	0.00009	mg/L	0.000065	0.00009	mg/L	0.000065	73.47%
Mo 202.031†	-0.7	-0.00007	mg/L	0.000264	-0.00007	mg/L	0.000264	387.16%
Na 589.592†	146.0	0.02368	mg/L	0.001617	0.02368	mg/L	0.001617	6.83%
Na 330.237†	-2.6	-0.1184	mg/L	0.51507	-0.1184	mg/L	0.51507	434.96%
Ni 231.604†	-1.1	-0.00066	mg/L	0.002026	-0.00066	mg/L	0.002026	309.20%
Pb 220.353†	3.4	0.00047	mg/L	0.000614	0.00047	mg/L	0.000614	130.60%
Sb 206.836†	0.2	0.00013	mg/L	0.002929	0.00013	mg/L	0.002929	>999.9%
Se 196.026†	6.2	0.00605	mg/L	0.004600	0.00605	mg/L	0.004600	76.03%
Si 288.158†	0.5	0.00040	mg/L	0.000717	0.00040	mg/L	0.000717	180.22%
Sn 189.927†	7.6	0.00210	mg/L	0.000771	0.00210	mg/L	0.000771	36.76%
Sr 421.552†	36.4	0.00008	mg/L	0.000121	0.00008	mg/L	0.000121	154.11%
Ti 334.903†	-26.7	-0.00143	mg/L	0.000066	-0.00143	mg/L	0.000066	4.61%
Tl 190.801†	3.6	0.00190	mg/L	0.001420	0.00190	mg/L	0.001420	74.92%
V 292.402†	16.7	0.00016	mg/L	0.000199	0.00016	mg/L	0.000199	124.73%
Zn 206.200†	1.8	0.00086	mg/L	0.001243	0.00086	mg/L	0.001243	144.47%

Sequence No.: 10  
Sample ID: RG62 MB1 SWC

Autosampler Location: 26  
Date Collected: 8/10/2010 12:39:03 PM  
Data Type: Original

Dilution: 2X

## Nebulizer Parameters: RG62 MB1 SWC

Analyte Back Pressure Flow  
All 166.0 kPa 0.55 L/min

## Mean Data: RG62 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1479829.4	103.6 %	0.87			0.84%
ScR 361.383	168440.0	103.3 %	1.29			1.25%
Ag 328.068†	35.7	0.00020 mg/L	0.000339	0.00040 mg/L	0.000677	169.81%
Al 308.215†	13.4	0.01032 mg/L	0.008823	0.02064 mg/L	0.017645	85.48%
As 188.979†	-0.3	-0.00022 mg/L	0.001720	-0.00044 mg/L	0.003441	784.56%
B 249.677†	8.2	0.00413 mg/L	0.001597	0.00826 mg/L	0.003195	38.70%
Ba 233.527†	-1.7	-0.00023 mg/L	0.000583	-0.00046 mg/L	0.001166	255.07%
Be 313.042†	-4.4	-0.00002 mg/L	0.000049	-0.00003 mg/L	0.000099	293.27%
Ca 317.933†	100.7	0.01221 mg/L	0.001498	0.02443 mg/L	0.002996	12.27%
Cd 228.802†	1.5	0.00003 mg/L	0.000072	0.00006 mg/L	0.000144	248.37%
Co 228.616†	1.4	0.00003 mg/L	0.000040	0.00006 mg/L	0.000080	125.96%
Cr 267.716†	-2.0	-0.00056 mg/L	0.000924	-0.00112 mg/L	0.001849	165.18%
Cu 324.752†	-76.0	-0.00039 mg/L	0.000149	-0.00078 mg/L	0.000297	38.10%
Fe 273.955†	1.9	0.00179 mg/L	0.002435	0.00359 mg/L	0.004869	135.78%
K 766.490†	-68.1	-0.02852 mg/L	0.013844	-0.05704 mg/L	0.027688	48.54%
Mg 279.077†	11.1	0.01091 mg/L	0.004549	0.02181 mg/L	0.009098	41.72%
Mn 257.610†	-4.6	-0.00012 mg/L	0.000226	-0.00025 mg/L	0.000453	183.78%
Mo 202.031†	-0.5	-0.00004 mg/L	0.000031	-0.00009 mg/L	0.000063	72.25%
Na 589.592†	-41.6	-0.00675 mg/L	0.004539	-0.01350 mg/L	0.009079	67.27%
Na 330.237†	12.5	0.5642 mg/L	0.47616	1.128 mg/L	0.9523	84.40%
Ni 231.604†	2.1	0.00127 mg/L	0.000950	0.00254 mg/L	0.001900	74.88%
Pb 220.353†	-2.1	-0.00028 mg/L	0.001128	-0.00056 mg/L	0.002256	402.82%
Sb 206.836†	-0.3	-0.00013 mg/L	0.001439	-0.00025 mg/L	0.002878	>999.9%
Se 196.026†	1.9	0.00187 mg/L	0.002525	0.00374 mg/L	0.005049	134.91%
Si 288.158†	-5.2	-0.00439 mg/L	0.003350	-0.00878 mg/L	0.006700	76.34%
Sn 189.927†	2.9	0.00081 mg/L	0.000628	0.00162 mg/L	0.001257	77.54%
Sr 421.552†	-8.8	-0.00002 mg/L	0.000032	-0.00004 mg/L	0.000065	170.01%
Ti 334.903†	-32.2	-0.00173 mg/L	0.001098	-0.00345 mg/L	0.002197	63.59%
Tl 190.801†	-1.9	-0.00099 mg/L	0.000828	-0.00199 mg/L	0.001657	83.32%
V 292.402†	5.7	0.00005 mg/L	0.000199	0.00010 mg/L	0.000398	389.61%
Zn 206.200†	0.1	0.00007 mg/L	0.001383	0.00014 mg/L	0.002765	>999.9%

Sequence No.: 11  
 Sample ID: RH52 MB LEN

Autosampler Location: 27  
 Date Collected: 8/10/2010 12:45:03 PM  
 Data Type: Original

Dilution: 5X

Nebulizer Parameters: RH52 MB LEN

Analyte Back Pressure Flow  
 All 167.0 kPa 0.55 L/min

Mean Data: RH52 MB LEN

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1423915.4	99.66	%	1.092			1.10%
ScR 361.383	168151.7	103.1	%	0.34			0.33%
Ag 328.068†	37.2	0.00021	mg/L	0.000365	0.00103 mg/L	0.001823	177.36%
Al 308.215†	-1.5	-0.00117	mg/L	0.020223	-0.00586 mg/L	0.101113	>999.9%
As 188.979†	-1.9	-0.00126	mg/L	0.000720	-0.00629 mg/L	0.003599	57.23%
B 249.677†	42.7	0.02142	mg/L	0.001903	0.1071 mg/L	0.00951	8.88%
Ba 233.527†	104.4	0.01396	mg/L	0.000369	0.06982 mg/L	0.001845	2.64%
Be 313.042†	-18.1	-0.00007	mg/L	0.000065	-0.00035 mg/L	0.000326	93.97%
Ca 317.933†	2255.2	0.2734	mg/L	0.00175	1.367 mg/L	0.0088	0.64%
Cd 228.802†	1.7	0.00004	mg/L	0.000046	0.00018 mg/L	0.000228	128.00%
Co 228.616†	-1.6	-0.00003	mg/L	0.000114	-0.00017 mg/L	0.000569	340.92%
Cr 267.716†	-0.3	-0.00009	mg/L	0.001303	-0.00046 mg/L	0.006517	>999.9%
Cu 324.752†	33.4	0.00017	mg/L	0.000151	0.00086 mg/L	0.000757	87.85%
Fe 273.955†	0.6	0.00055	mg/L	0.000275	0.00277 mg/L	0.001375	49.62%
K 766.490†	216.7	0.09069	mg/L	0.047958	0.4535 mg/L	0.23979	52.88%
Mg 279.077†	47.3	0.04662	mg/L	0.004180	0.2331 mg/L	0.02090	8.97%
Mn 257.610†	1.8	0.00005	mg/L	0.000059	0.00024 mg/L	0.000297	124.10%
Mo 202.031†	-1.7	-0.00016	mg/L	0.000110	-0.00079 mg/L	0.000552	70.01%
Na 589.592†	1614018.8	261.8	mg/L	0.23	1309 mg/L	1.2	0.09%
Na 330.237†	6053.1	274.4	mg/L	0.54	1372 mg/L	2.7	0.20%
Ni 231.604†	1.9	0.00114	mg/L	0.002977	0.00568 mg/L	0.014887	262.16%
Pb 220.353†	5.2	0.00071	mg/L	0.001860	0.00354 mg/L	0.009299	262.48%
Sb 206.836†	4.4	0.00229	mg/L	0.002745	0.01146 mg/L	0.013723	119.77%
Se 196.026†	1.2	0.00113	mg/L	0.005420	0.00566 mg/L	0.027100	478.56%
Si 288.158†	25.3	0.02119	mg/L	0.011386	0.1060 mg/L	0.05693	53.73%
Sn 189.927†	3.8	0.00107	mg/L	0.000223	0.00536 mg/L	0.001113	20.77%
Sr 421.552†	147.7	0.00032	mg/L	0.000061	0.00160 mg/L	0.000303	18.94%
Ti 334.903†	-41.5	-0.00224	mg/L	0.001473	-0.01119 mg/L	0.007363	65.78%
Tl 190.801†	2.3	0.00121	mg/L	0.002434	0.00606 mg/L	0.012169	200.90%
V 292.402†	9.3	0.00009	mg/L	0.000121	0.00044 mg/L	0.000607	138.39%
Zn 206.200†	17.9	0.00844	mg/L	0.000991	0.04222 mg/L	0.004954	11.73%

Sequence No.: 12  
Sample ID: RH52 ADUP LEN

Autosampler Location: 28  
Date Collected: 8/10/2010 12:51:23 PM  
Data Type: Original

Dilution: 5X

Nebulizer Parameters: RH52 ADUP LEN

Analyte Back Pressure Flow  
All 169.0 kPa 0.55 L/min

Mean Data: RH52 ADUP LEN

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1426932.9	99.87	%	1.625				1.63%
ScR 361.383	167480.7	102.7	%	0.69				0.67%
Ag 328.068†	65.4	0.00020	mg/L	0.000242	0.00098	mg/L	0.001212	123.31%
Al 308.215†	105.2	0.08069	mg/L	0.001907	0.4035	mg/L	0.00953	2.36%
As 188.979†	-1.0	-0.00067	mg/L	0.002202	-0.00335	mg/L	0.011011	328.22%
B 249.677†	26.7	0.01338	mg/L	0.003066	0.06692	mg/L	0.015332	22.91%
Ba 233.527†	463.4	0.06197	mg/L	0.001298	0.3098	mg/L	0.00649	2.09%
Be 313.042†	-4.0	-0.00002	mg/L	0.000028	-0.00008	mg/L	0.000141	174.59%
Ca 317.933†	121820.7	14.77	mg/L	0.059	73.85	mg/L	0.295	0.40%
Cd 228.802†	205.0	0.00393	mg/L	0.000108	0.01967	mg/L	0.000538	2.74%
Co 228.616†	155.2	0.00321	mg/L	0.000041	0.01603	mg/L	0.000203	1.26%
Cr 267.716†	3.7	0.00075	mg/L	0.000843	0.00375	mg/L	0.004217	112.41%
Cu 324.752†	1056.2	0.00543	mg/L	0.000132	0.02717	mg/L	0.000658	2.42%
Fe 273.955†	10.1	0.00930	mg/L	0.002969	0.04652	mg/L	0.014846	31.91%
K 766.490†	3714.3	1.555	mg/L	0.0179	7.773	mg/L	0.0894	1.15%
Mg 279.077†	1569.3	1.548	mg/L	0.0137	7.739	mg/L	0.0684	0.88%
Mn 257.610†	10808.6	0.2923	mg/L	0.00026	1.462	mg/L	0.0013	0.09%
Mo 202.031†	3.2	0.00029	mg/L	0.000412	0.00144	mg/L	0.002060	143.28%
Na 589.592†	1570646.1	254.7	mg/L	2.10	1274	mg/L	10.5	0.82%
Na 330.237†	5967.3	270.4	mg/L	1.16	1352	mg/L	5.8	0.43%
Ni 231.604†	6.8	0.00417	mg/L	0.002610	0.02083	mg/L	0.013049	62.65%
Pb 220.353†	9.3	0.00129	mg/L	0.000786	0.00643	mg/L	0.003930	61.08%
Sb 206.836†	4.6	0.00232	mg/L	0.001514	0.01158	mg/L	0.007571	65.39%
Se 196.026†	3.0	0.00267	mg/L	0.002412	0.01335	mg/L	0.012058	90.36%
Si 288.158†	2237.2	1.876	mg/L	0.0069	9.380	mg/L	0.0346	0.37%
Sn 189.927†	-2.7	0.00009	mg/L	0.000483	0.00045	mg/L	0.002417	538.29%
Sr 421.552†	37738.5	0.08162	mg/L	0.000153	0.4081	mg/L	0.00077	0.19%
Ti 334.903†	-18.0	-0.00154	mg/L	0.000582	-0.00771	mg/L	0.002909	37.73%
Tl 190.801†	2.6	0.00092	mg/L	0.001548	0.00461	mg/L	0.007741	167.91%
V 292.402†	29.6	0.00033	mg/L	0.000252	0.00164	mg/L	0.001258	76.53%
Zn 206.200†	200.0	0.09490	mg/L	0.001875	0.4745	mg/L	0.00938	1.98%

Sequence No.: 13  
 Sample ID: RH52 A LEN

Autosampler Location: 29  
 Date Collected: 8/10/2010 12:57:42 PM  
 Data Type: Original

Dilution: 5X

Nebulizer Parameters: RH52 A LEN

Analyte Back Pressure Flow  
 All 170.0 kPa 0.55 L/min

Mean Data: RH52 A LEN

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1443919.9	101.1	%	0.11				0.11%
ScR 361.383	170649.2	104.7	%	2.10				2.00%
Ag 328.068†	47.4	0.00009	mg/L	0.000262	0.00046	mg/L	0.001310	282.54%
Al 308.215†	110.7	0.08494	mg/L	0.005887	0.4247	mg/L	0.02943	6.93%
As 188.979†	-0.1	-0.00005	mg/L	0.000407	-0.00023	mg/L	0.002035	900.36%
B 249.677†	30.2	0.01512	mg/L	0.000838	0.07558	mg/L	0.004188	5.54%
Ba 233.527†	470.8	0.06296	mg/L	0.000518	0.3148	mg/L	0.00259	0.82%
Be 313.042†	6.2	0.00002	mg/L	0.000026	0.00011	mg/L	0.000130	113.43%
Ca 317.933†	124326.3	15.07	mg/L	0.030	75.37	mg/L	0.150	0.20%
Cd 228.802†	205.1	0.00393	mg/L	0.000014	0.01967	mg/L	0.000071	0.36%
Co 228.616†	149.5	0.00309	mg/L	0.000113	0.01544	mg/L	0.000566	3.66%
Cr 267.716†	3.9	0.00081	mg/L	0.000535	0.00405	mg/L	0.002676	66.14%
Cu 324.752†	1010.9	0.00520	mg/L	0.000086	0.02601	mg/L	0.000429	1.65%
Fe 273.955†	7.8	0.00716	mg/L	0.002153	0.03582	mg/L	0.010766	30.05%
K 766.490†	3689.3	1.544	mg/L	0.0606	7.720	mg/L	0.3028	3.92%
Mg 279.077†	1605.9	1.584	mg/L	0.0098	7.920	mg/L	0.0489	0.62%
Mn 257.610†	10965.1	0.2966	mg/L	0.00165	1.483	mg/L	0.0083	0.56%
Mo 202.031†	3.6	0.00033	mg/L	0.000204	0.00163	mg/L	0.001021	62.77%
Na 589.592†	1585209.2	257.1	mg/L	4.15	1285	mg/L	20.7	1.61%
Na 330.237†	6015.3	272.6	mg/L	1.64	1363	mg/L	8.2	0.60%
Ni 231.604†	11.8	0.00720	mg/L	0.002074	0.03600	mg/L	0.010369	28.80%
Pb 220.353†	6.5	0.00091	mg/L	0.000281	0.00456	mg/L	0.001404	30.80%
Sb 206.836†	2.6	0.00128	mg/L	0.000326	0.00638	mg/L	0.001630	25.54%
Se 196.026†	6.2	0.00577	mg/L	0.004205	0.02885	mg/L	0.021026	72.88%
Si 288.158†	2344.8	1.966	mg/L	0.0231	9.831	mg/L	0.1155	1.17%
Sn 189.927†	-1.9	0.00034	mg/L	0.000148	0.00170	mg/L	0.000740	43.62%
Sr 421.552†	37995.6	0.08218	mg/L	0.000527	0.4109	mg/L	0.00264	0.64%
Ti 334.903†	-28.4	-0.00211	mg/L	0.001032	-0.01056	mg/L	0.005162	48.87%
Tl 190.801†	-1.3	-0.00108	mg/L	0.001533	-0.00542	mg/L	0.007665	141.30%
V 292.402†	38.2	0.00041	mg/L	0.000258	0.00206	mg/L	0.001292	62.70%
Zn 206.200†	206.6	0.09802	mg/L	0.000913	0.4901	mg/L	0.00457	0.93%

Sequence No.: 14  
 Sample ID: RH52 ASPK LEN

Autosampler Location: 30  
 Date Collected: 8/10/2010 1:04:01 PM  
 Data Type: Original

Dilution: 5X

Nebulizer Parameters: RH52 ASPK LEN

Analyte Back Pressure Flow  
 All 168.0 kPa 0.55 L/min

Mean Data: RH52 ASPK LEN

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1421393.4	99.48	%	0.880				0.88%
ScR 361.383	168180.1	103.1	%	1.26				1.23%
Ag 328.068†	36278.0	0.2023	mg/L	0.00142	1.011	mg/L	0.0071	0.70%
Al 308.215†	1178.4	0.9009	mg/L	0.00980	4.505	mg/L	0.0490	1.09%
As 188.979†	1282.5	0.8315	mg/L	0.00979	4.157	mg/L	0.0489	1.18%
B 249.677†	32.6	0.01570	mg/L	0.003404	0.07849	mg/L	0.017020	21.68%
Ba 233.527†	6407.4	0.8566	mg/L	0.00857	4.283	mg/L	0.0428	1.00%
Be 313.042†	53953.5	0.2062	mg/L	0.00060	1.031	mg/L	0.0030	0.29%
Ca 317.933†	157708.3	19.12	mg/L	0.059	95.61	mg/L	0.296	0.31%
Cd 228.802†	11079.1	0.2110	mg/L	0.00099	1.055	mg/L	0.0050	0.47%
Co 228.616†	9410.8	0.1951	mg/L	0.00182	0.9754	mg/L	0.00912	0.94%
Cr 267.716†	718.3	0.2040	mg/L	0.00105	1.020	mg/L	0.0052	0.51%
Cu 324.752†	42859.3	0.2206	mg/L	0.00116	1.103	mg/L	0.0058	0.53%
Fe 273.955†	906.1	0.8358	mg/L	0.01018	4.179	mg/L	0.0509	1.22%
K 766.490†	13567.1	5.678	mg/L	0.0143	28.39	mg/L	0.071	0.25%
Mg 279.077†	5699.0	5.621	mg/L	0.0421	28.10	mg/L	0.210	0.75%
Mn 257.610†	18424.7	0.4985	mg/L	0.00195	2.493	mg/L	0.0098	0.39%
Mo 202.031†	8.2	0.00072	mg/L	0.000449	0.00362	mg/L	0.002246	61.95%
Na 589.592†	1618206.3	262.4	mg/L	2.07	1312	mg/L	10.4	0.79%
Na 330.237†	6184.8	280.2	mg/L	0.39	1401	mg/L	2.0	0.14%
Ni 231.604†	334.2	0.2035	mg/L	0.00344	1.017	mg/L	0.0172	1.69%
Pb 220.353†	5752.7	0.7853	mg/L	0.00708	3.927	mg/L	0.0354	0.90%
Sb 206.836†	7.5	0.00088	mg/L	0.002058	0.00442	mg/L	0.010290	233.03%
Se 196.026†	865.2	0.8479	mg/L	0.00585	4.239	mg/L	0.0292	0.69%
Si 288.158†	2437.5	2.045	mg/L	0.0242	10.22	mg/L	0.121	1.18%
Sn 189.927†	-6.3	-0.00055	mg/L	0.000765	-0.00275	mg/L	0.003826	138.99%
Sr 421.552†	133268.4	0.2882	mg/L	0.00099	1.441	mg/L	0.0049	0.34%
Ti 334.903†	-19.0	-0.00182	mg/L	0.000264	-0.00909	mg/L	0.001318	14.50%
Tl 190.801†	1492.7	0.7723	mg/L	0.01000	3.861	mg/L	0.0500	1.29%
V 292.402†	22352.3	0.2114	mg/L	0.00132	1.057	mg/L	0.0066	0.62%
Zn 206.200†	624.3	0.2955	mg/L	0.00139	1.477	mg/L	0.0069	0.47%



Sequence No.: 15  
Sample ID: RG60 D SWC

Autosampler Location: 31  
Date Collected: 8/10/2010 1:10:21 PM  
Data Type: Original

Dilution: 5X

Nebulizer Parameters: RG60 D SWC

Analyte Back Pressure Flow  
All 169.0 kPa 0.55 L/min

Mean Data: RG60 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1505492.3	105.4 %	0.56			0.53%
ScR 361.383	176450.9	108.2 %	0.12			0.11%
Ag 328.068†	-755.3	0.00002 mg/L	0.000245	0.00008 mg/L	0.001225	>999.9%
Al 308.215†	100874.1	77.38 mg/L	0.034	386.9 mg/L	0.17	0.04%
As 188.979†	16.2	0.01474 mg/L	0.004582	0.07368 mg/L	0.022911	31.10%
B 249.677†	29.4	0.01453 mg/L	0.002384	0.07263 mg/L	0.011921	16.41%
Ba 233.527†	1629.2	0.2120 mg/L	0.00085	1.060 mg/L	0.0042	0.40%
Be 313.042†	409.1	0.00076 mg/L	0.000012	0.00381 mg/L	0.000062	1.63%
Ca 317.933†	262057.6	31.77 mg/L	0.051	158.9 mg/L	0.25	0.16%
Cd 228.802†	49.3	0.00097 mg/L	0.000015	0.00484 mg/L	0.000076	1.57%
Co 228.616†	3089.1	0.06027 mg/L	0.000344	0.3014 mg/L	0.00172	0.57%
Cr 267.716†	500.8	0.1432 mg/L	0.00080	0.7161 mg/L	0.00400	0.56%
Cu 324.752†	49317.1	0.2639 mg/L	0.00192	1.320 mg/L	0.0096	0.73%
Fe 273.955†	131429.2	121.3 mg/L	0.11	606.3 mg/L	0.57	0.09%
K 766.490†	4412.6	1.847 mg/L	0.0120	9.234 mg/L	0.0602	0.65%
Mg 279.077†	42004.0	41.36 mg/L	0.001	206.8 mg/L	0.01	0.00%
Mn 257.610†	64181.1	1.735 mg/L	0.0026	8.677 mg/L	0.0128	0.15%
Mo 202.031†	25.7	0.00234 mg/L	0.000174	0.01172 mg/L	0.000870	7.42%
Na 589.592†	20926.2	3.394 mg/L	0.0160	16.97 mg/L	0.080	0.47%
Na 330.237†	92.1	4.346 mg/L	0.2875	21.73 mg/L	1.437	6.61%
Ni 231.604†	272.4	0.1661 mg/L	0.00235	0.8307 mg/L	0.01175	1.42%
Pb 220.353†	537.0	0.08717 mg/L	0.001939	0.4359 mg/L	0.00969	2.22%
Sb 206.836†	57.8	-0.00563 mg/L	0.001047	-0.02816 mg/L	0.005237	18.60%
Se 196.026†	-45.9	-0.01078 mg/L	0.004726	-0.05392 mg/L	0.023630	43.83%
Si 288.158†	3022.0	2.539 mg/L	0.0200	12.70 mg/L	0.100	0.79%
Sn 189.927†	-20.0	-0.00183 mg/L	0.000411	-0.00915 mg/L	0.002057	22.49%
Sr 421.552†	114959.1	0.2486 mg/L	0.00031	1.243 mg/L	0.0015	0.12%
Ti 334.903†	40428.1	2.170 mg/L	0.0026	10.85 mg/L	0.013	0.12%
Tl 190.801†	-10.5	-0.01335 mg/L	0.002348	-0.06673 mg/L	0.011738	17.59%
V 292.402†	31949.1	0.2855 mg/L	0.00311	1.427 mg/L	0.0156	1.09%
Zn 206.200†	516.0	0.2454 mg/L	0.00239	1.227 mg/L	0.0120	0.97%

Sequence No.: 16  
Sample ID: RG62 BDUP SWC

Autosampler Location: 32  
Date Collected: 8/10/2010 1:16:21 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG62 BDUP SWC

Analyte Back Pressure Flow  
All 169.0 kPa 0.55 L/min

Mean Data: RG62 BDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1484021.2	103.9 %	0.09			0.09%
ScR 361.383	173997.5	106.7 %	1.49			1.40%
Ag 328.068†	-328.7	0.00024 mg/L	0.000217	0.00048 mg/L	0.000434	90.34%
Al 308.215†	104566.2	80.20 mg/L	1.130	160.4 mg/L	2.26	1.41%
As 188.979†	4.5	0.01588 mg/L	0.003075	0.03175 mg/L	0.006151	19.37%
B 249.677†	29.9	0.01486 mg/L	0.001823	0.02973 mg/L	0.003646	12.27%
Ba 233.527†	1393.0	0.1832 mg/L	0.00212	0.3664 mg/L	0.00425	1.16%
Be 313.042†	278.0	0.00005 mg/L	0.000056	0.00009 mg/L	0.000111	122.13%
Ca 317.933†	340614.9	41.30 mg/L	0.612	82.60 mg/L	1.223	1.48%
Cd 228.802†	30.0	0.00058 mg/L	0.000084	0.00117 mg/L	0.000167	14.36%
Co 228.616†	1360.5	0.01681 mg/L	0.000080	0.03362 mg/L	0.000160	0.48%
Cr 267.716†	351.6	0.1001 mg/L	0.00085	0.2003 mg/L	0.00169	0.85%
Cu 324.752†	26118.7	0.1382 mg/L	0.00046	0.2764 mg/L	0.00092	0.33%
Fe 273.955†	67222.4	62.02 mg/L	1.040	124.0 mg/L	2.08	1.68%
K 766.490†	9842.0	4.119 mg/L	0.0918	8.238 mg/L	0.1836	2.23%
Mg 279.077†	14986.4	14.74 mg/L	0.176	29.49 mg/L	0.353	1.20%
Mn 257.610†	20034.7	0.5413 mg/L	0.00710	1.083 mg/L	0.0142	1.31%
Mo 202.031†	42.6	0.00391 mg/L	0.000490	0.00782 mg/L	0.000980	12.53%
Na 589.592†	42749.7	6.933 mg/L	0.1153	13.87 mg/L	0.231	1.66%
Na 330.237†	155.6	8.087 mg/L	0.3015	16.17 mg/L	0.603	3.73%
Ni 231.604†	91.1	0.05557 mg/L	0.000599	0.1111 mg/L	0.00120	1.08%
Pb 220.353†	17.9	0.02106 mg/L	0.001510	0.04211 mg/L	0.003020	7.17%
Sb 206.836†	37.9	-0.00014 mg/L	0.003102	-0.00028 mg/L	0.006205	>999.9%
Se 196.026†	-23.9	0.00255 mg/L	0.005154	0.00511 mg/L	0.010309	201.85%
Si 288.158†	3126.6	2.624 mg/L	0.0292	5.247 mg/L	0.0585	1.11%
Sn 189.927†	-19.0	-0.00010 mg/L	0.002314	-0.00020 mg/L	0.004627	>999.9%
Sr 421.552†	237860.4	0.5144 mg/L	0.00710	1.029 mg/L	0.0142	1.38%
Ti 334.903†	122051.6	6.553 mg/L	0.0946	13.11 mg/L	0.189	1.44%
Tl 190.801†	12.3	-0.00729 mg/L	0.004876	-0.01458 mg/L	0.009753	66.89%
V 292.402†	38154.1	0.3466 mg/L	0.00072	0.6933 mg/L	0.00144	0.21%
Zn 206.200†	491.1	0.2334 mg/L	0.00524	0.4668 mg/L	0.01047	2.24%

Sequence No.: 17  
Sample ID: RG62 B SWC

Autosampler Location: 33  
Date Collected: 8/10/2010 1:22:25 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG62 B SWC

Analyte Back Pressure Flow  
All 169.0 kPa 0.55 L/min

Mean Data: RG62 B SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1485125.4	103.9	%	1.04			1.00%
ScR 361.383	173826.8	106.6	%	0.77			0.72%
Ag 328.068†	-403.5	-0.00001	mg/L	0.000170	-0.00002 mg/L	0.000340	>999.9%
Al 308.215†	106044.2	81.34	mg/L	0.135	162.7 mg/L	0.27	0.17%
As 188.979†	-2.1	0.01180	mg/L	0.002006	0.02359 mg/L	0.004013	17.01%
B 249.677†	31.8	0.01583	mg/L	0.004164	0.03167 mg/L	0.008327	26.30%
Ba 233.527†	1297.0	0.1701	mg/L	0.00105	0.3402 mg/L	0.00211	0.62%
Be 313.042†	298.0	0.00009	mg/L	0.000030	0.00018 mg/L	0.000059	33.37%
Ca 317.933†	354320.1	42.96	mg/L	0.069	85.92 mg/L	0.139	0.16%
Cd 228.802†	26.3	0.00052	mg/L	0.000121	0.00104 mg/L	0.000241	23.12%
Co 228.616†	1505.2	0.01967	mg/L	0.000344	0.03934 mg/L	0.000688	1.75%
Cr 267.716†	371.2	0.1057	mg/L	0.00165	0.2114 mg/L	0.00331	1.56%
Cu 324.752†	25235.6	0.1341	mg/L	0.00200	0.2682 mg/L	0.00399	1.49%
Fe 273.955†	72664.3	67.04	mg/L	0.103	134.1 mg/L	0.21	0.15%
K 766.490†	11005.7	4.606	mg/L	0.0195	9.212 mg/L	0.0389	0.42%
Mg 279.077†	18836.4	18.54	mg/L	0.018	37.08 mg/L	0.036	0.10%
Mn 257.610†	23987.2	0.6482	mg/L	0.00053	1.296 mg/L	0.0011	0.08%
Mo 202.031†	44.5	0.00409	mg/L	0.000368	0.00818 mg/L	0.000736	9.00%
Na 589.592†	41655.4	6.756	mg/L	0.0175	13.51 mg/L	0.035	0.26%
Na 330.237†	158.2	8.210	mg/L	0.2439	16.42 mg/L	0.488	2.97%
Ni 231.604†	100.3	0.06121	mg/L	0.002198	0.1224 mg/L	0.00440	3.59%
Pb 220.353†	-20.2	0.01586	mg/L	0.000562	0.03171 mg/L	0.001124	3.55%
Sb 206.836†	34.4	-0.00295	mg/L	0.003915	-0.00591 mg/L	0.007829	132.57%
Se 196.026†	-25.5	0.00186	mg/L	0.005071	0.00371 mg/L	0.010142	273.25%
Si 288.158†	3451.5	2.897	mg/L	0.0136	5.793 mg/L	0.0271	0.47%
Sn 189.927†	-21.9	-0.00068	mg/L	0.000639	-0.00137 mg/L	0.001278	93.56%
Sr 421.552†	209531.9	0.4532	mg/L	0.00029	0.9063 mg/L	0.00059	0.07%
Ti 334.903†	123629.7	6.638	mg/L	0.0046	13.28 mg/L	0.009	0.07%
Tl 190.801†	10.5	-0.00859	mg/L	0.001313	-0.01717 mg/L	0.002627	15.29%
V 292.402†	39474.4	0.3584	mg/L	0.00460	0.7169 mg/L	0.00920	1.28%
Zn 206.200†	474.8	0.2258	mg/L	0.00111	0.4517 mg/L	0.00223	0.49%

Sequence No.: 18  
Sample ID: RG62 BSPK SWC

Autosampler Location: 34  
Date Collected: 8/10/2010 1:28:28 PM  
Data Type: Original

Dilution: 2X

*222222*  
*8.10*

Nebulizer Parameters: RG62 BSPK SWC

Analyte Back Pressure Flow  
All 169.0 kPa 0.55 L/min

*tubing disconnect*

Mean Data: RG62 BSPK SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	28330.3	1.983	%	0.0334			1.68%
ScR 361.383	-64.0	-0.03922	%	0.007268			18.53%
Ag 328.068†	-9098.6	-0.04945	mg/L	0.005363	-0.09890 mg/L	0.010726	10.85%
Al 308.215†	394565.8	302.8	mg/L	53.84	605.6 mg/L	107.67	17.78%
As 188.979†	209.5	0.08731	mg/L	0.103818	0.1746 mg/L	0.20764	118.91%
B 249.677†	19801.2	9.926	mg/L	2.8092	19.85 mg/L	5.618	28.30%
Ba 233.527†	-22372.4	-2.997	mg/L	0.4850	-5.994 mg/L	0.9700	16.18%
Be 313.042†	-887488.3	-3.401	mg/L	0.6777	-6.802 mg/L	1.3555	19.93%
Ca 317.933†	144659.5	17.54	mg/L	5.263	35.08 mg/L	10.526	30.01%
Cd 228.802†	308.7	0.01552	mg/L	0.002867	0.03104 mg/L	0.005735	18.48%
Co 228.616†	-2807.9	-0.02749	mg/L	0.005921	-0.05497 mg/L	0.011843	21.54%
Cr 267.716†	42678.7	12.14	mg/L	2.009	24.29 mg/L	4.019	16.55%
Cu 324.752†	22034.9	0.1213	mg/L	0.00321	0.2425 mg/L	0.00643	2.65%
Fe 273.955†	30765.5	28.38	mg/L	8.902	56.75 mg/L	17.805	31.37%
K 766.490†	-5153893.8	-2157	mg/L	469.6	-4314 mg/L	939.2	21.77%
Mg 279.077†	65840.9	64.93	mg/L	10.986	129.9 mg/L	21.97	16.92%
Mn 257.610†	-70763.7	-1.916	mg/L	0.4761	-3.832 mg/L	0.9522	24.85%
Mo 202.031†	394.8	0.03498	mg/L	0.006576	0.06996 mg/L	0.013153	18.80%
Na 589.592†	-2208237.0	-358.1	mg/L	75.91	-716.2 mg/L	151.82	21.20%
Na 330.237†	259397.2	11750	mg/L	2815.5	23510 mg/L	5631.1	23.95%
Ni 231.604†	55573.8	33.89	mg/L	8.223	67.78 mg/L	16.446	24.26%
Pb 220.353†	3840.6	0.6260	mg/L	0.02229	1.252 mg/L	0.0446	3.56%
Sb 206.836†	2262.3	0.8695	mg/L	0.03337	1.739 mg/L	0.0667	3.84%
Se 196.026†	-787.3	-0.7458	mg/L	0.10966	-1.492 mg/L	0.2193	14.70%
Si 288.158†	4400.8	3.711	mg/L	4.2565	7.421 mg/L	8.5130	114.72%
Sn 189.927†	-109.6	-0.03488	mg/L	0.030532	-0.06976 mg/L	0.061065	87.54%
Sr 421.552†	-485268.2	-1.050	mg/L	0.1094	-2.099 mg/L	0.2188	10.42%
Ti 334.903†	-356857.7	-19.17	mg/L	5.620	-38.34 mg/L	11.240	29.32%
Tl 190.801†	-284.2	-0.1168	mg/L	0.05171	-0.2335 mg/L	0.10343	44.29%
V 292.402†	8770.2	0.1723	mg/L	0.01884	0.3446 mg/L	0.03768	10.93%
Zn 206.200†	14042.9	6.627	mg/L	2.1089	13.25 mg/L	4.218	31.82%

User canceled analysis.

Analysis Begun

Start Time: 8/10/2010 1:34:21 PM Plasma On Time: 8/10/2010 10:18:38 AM
Logged In Analyst: metals Technique: ICP Continuous
Spectrometer Model: Optima 4300 DV, S/N 077N0060101 Autosampler Model: S10

Sample Information File: C:\pe\metals\Sample Information\0810.sif
Batch ID:
Results Data Set: PE100810
Results Library: C:\pe\metals\Results\Results.mdb

Sequence No.: 19 Autosampler Location: 35
Sample ID: RG62 MB1SPK SWC Date Collected: 8/10/2010 1:34:23 PM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG62 MB1SPK SWC

Analyte Back Pressure Flow
All 170.0 kPa 0.55 L/min

Mean Data: RG62 MB1SPK SWC

Table with 8 columns: Analyte, Mean Corrected Intensity, Calib. Conc. Units, Std.Dev., Sample Conc. Units, Std.Dev., RSD. Lists various elements like ScA, ScR, Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Si, Sn, Sr, Ti, Tl, V, Zn with their respective values.

Sequence No.: 20

Sample ID: CV 2

Autosampler Location: 7

Date Collected: 8/10/2010 1:40:26 PM

Data Type: Original

Dilution: 1X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	170.0 kPa	0.55 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1472772.0	103.1	%	0.43			0.41%
ScR 361.383	171947.2	105.4	%	0.43			0.41%
Ag 328.068†	171576.9	0.9573	mg/L	0.00064	0.9573 mg/L	0.00064	0.07%
Al 308.215†	2630.0	1.980	mg/L	0.0106	1.980 mg/L	0.0106	0.54%
As 188.979†	3054.6	1.980	mg/L	0.0162	1.980 mg/L	0.0162	0.82%
B 249.677†	1876.7	0.9396	mg/L	0.00289	0.9396 mg/L	0.00289	0.31%
Ba 233.527†	7196.3	0.9618	mg/L	0.00483	0.9618 mg/L	0.00483	0.50%
Be 313.042†	252176.2	0.9639	mg/L	0.00092	0.9639 mg/L	0.00092	0.10%
Ca 317.933†	16599.8	2.013	mg/L	0.0080	2.013 mg/L	0.0080	0.40%
Cd 228.802†	52571.6	1.005	mg/L	0.0031	1.005 mg/L	0.0031	0.31%
Co 228.616†	46893.5	0.9715	mg/L	0.00460	0.9715 mg/L	0.00460	0.47%
Cr 267.716†	3424.2	0.9745	mg/L	0.00386	0.9745 mg/L	0.00386	0.40%
Cu 324.752†	203304.4	1.046	mg/L	0.0028	1.046 mg/L	0.0028	0.27%
Fe 273.955†	2090.4	1.928	mg/L	0.0074	1.928 mg/L	0.0074	0.38%
K 766.490†	47332.4	19.81	mg/L	0.035	19.81 mg/L	0.035	0.18%
Mg 279.077†	2005.3	1.981	mg/L	0.0117	1.981 mg/L	0.0117	0.59%
Mn 257.610†	35585.2	0.9630	mg/L	0.00431	0.9630 mg/L	0.00431	0.45%
Mo 202.031†	10496.6	0.9703	mg/L	0.00874	0.9703 mg/L	0.00874	0.90%
Na 589.592†	293458.0	47.59	mg/L	0.137	47.59 mg/L	0.137	0.29%
Na 330.237†	1117.9	50.57	mg/L	0.114	50.57 mg/L	0.114	0.23%
Ni 231.604†	1591.5	0.9713	mg/L	0.00341	0.9713 mg/L	0.00341	0.35%
Pb 220.353†	14431.7	1.971	mg/L	0.0064	1.971 mg/L	0.0064	0.32%
Sb 206.836†	4098.4	2.114	mg/L	0.0199	2.114 mg/L	0.0199	0.94%
Se 196.026†	2025.2	1.984	mg/L	0.0182	1.984 mg/L	0.0182	0.92%
Si 288.158†	2483.5	2.085	mg/L	0.0063	2.085 mg/L	0.0063	0.30%
Sn 189.927†	3341.4	0.9247	mg/L	0.00857	0.9247 mg/L	0.00857	0.93%
Sr 421.552†	459755.4	0.9944	mg/L	0.00131	0.9944 mg/L	0.00131	0.13%
Ti 334.903†	18121.2	0.9720	mg/L	0.00106	0.9720 mg/L	0.00106	0.11%
Tl 190.801†	3794.0	1.958	mg/L	0.0177	1.958 mg/L	0.0177	0.90%
V 292.402†	103661.7	0.9859	mg/L	0.00261	0.9859 mg/L	0.00261	0.26%
Zn 206.200†	2037.6	0.9618	mg/L	0.00399	0.9618 mg/L	0.00399	0.42%

Sequence No.: 21

Sample ID: CB 2

Autosampler Location: 1

Date Collected: 8/10/2010 1:46:27 PM

Data Type: Original

Dilution: 1X

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	170.0 kPa	0.55 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1487482.0	104.1 %	0.66			0.63%
ScR 361.383	171407.9	105.1 %	0.12			0.11%
Ag 328.068†	38.8	0.00022 mg/L	0.000138	0.00022 mg/L	0.000138	63.90%
Al 308.215†	-2.3	-0.00173 mg/L	0.004163	-0.00173 mg/L	0.004163	240.30%
As 188.979†	1.4	0.00089 mg/L	0.000999	0.00089 mg/L	0.000999	111.81%
B 249.677†	12.8	0.00642 mg/L	0.002298	0.00642 mg/L	0.002298	35.80%
Ba 233.527†	-2.1	-0.00028 mg/L	0.000651	-0.00028 mg/L	0.000651	235.46%
Be 313.042†	-1.5	-0.00001 mg/L	0.000062	-0.00001 mg/L	0.000062	>999.9%
Ca 317.933†	1.7	0.00021 mg/L	0.002283	0.00021 mg/L	0.002283	>999.9%
Cd 228.802†	-5.7	-0.00011 mg/L	0.000110	-0.00011 mg/L	0.000110	98.16%
Co 228.616†	7.6	0.00016 mg/L	0.000034	0.00016 mg/L	0.000034	20.75%
Cr 267.716†	-2.2	-0.00064 mg/L	0.000608	-0.00064 mg/L	0.000608	95.28%
Cu 324.752†	-169.3	-0.00087 mg/L	0.000286	-0.00087 mg/L	0.000286	32.86%
Fe 273.955†	-2.0	-0.00186 mg/L	0.001778	-0.00186 mg/L	0.001778	95.78%
K 766.490†	-114.6	-0.04796 mg/L	0.014695	-0.04796 mg/L	0.014695	30.64%
Mg 279.077†	4.9	0.00487 mg/L	0.004358	0.00487 mg/L	0.004358	89.52%
Mn 257.610†	-3.5	-0.00010 mg/L	0.000088	-0.00010 mg/L	0.000088	91.75%
Mo 202.031†	-5.6	-0.00052 mg/L	0.000535	-0.00052 mg/L	0.000535	103.61%
Na 589.592†	364.2	0.05906 mg/L	0.007245	0.05906 mg/L	0.007245	12.27%
Na 330.237†	18.1	0.8197 mg/L	0.40762	0.8197 mg/L	0.40762	49.73%
Ni 231.604†	0.1	0.00004 mg/L	0.002935	0.00004 mg/L	0.002935	>999.9%
Pb 220.353†	-2.6	-0.00036 mg/L	0.000882	-0.00036 mg/L	0.000882	248.23%
Sb 206.836†	-2.0	-0.00100 mg/L	0.000799	-0.00100 mg/L	0.000799	79.74%
Se 196.026†	5.4	0.00530 mg/L	0.000341	0.00530 mg/L	0.000341	6.42%
Si 288.158†	4.7	0.00392 mg/L	0.005704	0.00392 mg/L	0.005704	145.66%
Sn 189.927†	10.1	0.00280 mg/L	0.000046	0.00280 mg/L	0.000046	1.66%
Sr 421.552†	-61.6	-0.00013 mg/L	0.000032	-0.00013 mg/L	0.000032	23.82%
Ti 334.903†	-45.0	-0.00241 mg/L	0.001101	-0.00241 mg/L	0.001101	45.61%
Tl 190.801†	7.7	0.00401 mg/L	0.001322	0.00401 mg/L	0.001322	32.96%
V 292.402†	6.0	0.00005 mg/L	0.000123	0.00005 mg/L	0.000123	242.27%
Zn 206.200†	-0.1	-0.00003 mg/L	0.001191	-0.00003 mg/L	0.001191	>999.9%

Sequence No.: 22  
 Sample ID: RG63 MB WMN

Autosampler Location: 36  
 Date Collected: 8/10/2010 1:52:25 PM  
 Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG63 MB WMN

Analyte Back Pressure Flow  
 All 169.0 kPa 0.55 L/min

Mean Data: RG63 MB WMN

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1498413.5	104.9	%	1.02				0.98%
ScR 361.383	174037.5	106.7	%	1.15				1.07%
Ag 328.068†	79.2	0.00044	mg/L	0.000104	0.00044	mg/L	0.000104	23.46%
Al 308.215†	7.2	0.00555	mg/L	0.010434	0.00555	mg/L	0.010434	188.07%
As 188.979†	-2.8	-0.00181	mg/L	0.001289	-0.00181	mg/L	0.001289	71.25%
B 249.677†	2.1	0.00105	mg/L	0.003008	0.00105	mg/L	0.003008	286.68%
Ba 233.527†	-2.3	-0.00030	mg/L	0.000194	-0.00030	mg/L	0.000194	64.10%
Be 313.042†	11.4	0.00004	mg/L	0.000012	0.00004	mg/L	0.000012	27.73%
Ca 317.933†	-2.1	-0.00025	mg/L	0.003496	-0.00025	mg/L	0.003496	>999.9%
Cd 228.802†	-9.1	-0.00017	mg/L	0.000049	-0.00017	mg/L	0.000049	28.42%
Co 228.616†	5.0	0.00011	mg/L	0.000020	0.00011	mg/L	0.000020	18.56%
Cr 267.716†	-2.2	-0.00063	mg/L	0.000312	-0.00063	mg/L	0.000312	49.48%
Cu 324.752†	-609.2	-0.00313	mg/L	0.000200	-0.00313	mg/L	0.000200	6.39%
Fe 273.955†	-10.2	-0.00937	mg/L	0.001691	-0.00937	mg/L	0.001691	18.06%
K 766.490†	-182.1	-0.07622	mg/L	0.029240	-0.07622	mg/L	0.029240	38.36%
Mg 279.077†	7.2	0.00713	mg/L	0.005526	0.00713	mg/L	0.005526	77.46%
Mn 257.610†	-17.5	-0.00047	mg/L	0.000112	-0.00047	mg/L	0.000112	23.64%
Mo 202.031†	-4.9	-0.00045	mg/L	0.000344	-0.00045	mg/L	0.000344	75.74%
Na 589.592†	-74.1	-0.01202	mg/L	0.010251	-0.01202	mg/L	0.010251	85.27%
Na 330.237†	10.7	0.4825	mg/L	0.36580	0.4825	mg/L	0.36580	75.81%
Ni 231.604†	1.7	0.00103	mg/L	0.000701	0.00103	mg/L	0.000701	67.88%
Pb 220.353†	-11.1	-0.00151	mg/L	0.000840	-0.00151	mg/L	0.000840	55.71%
Sb 206.836†	-8.6	-0.00442	mg/L	0.001115	-0.00442	mg/L	0.001115	25.21%
Se 196.026†	10.4	0.01023	mg/L	0.003731	0.01023	mg/L	0.003731	36.46%
Si 288.158†	-11.4	-0.00955	mg/L	0.004770	-0.00955	mg/L	0.004770	49.93%
Sn 189.927†	2.1	0.00059	mg/L	0.000993	0.00059	mg/L	0.000993	169.60%
Sr 421.552†	-26.9	-0.00006	mg/L	0.000138	-0.00006	mg/L	0.000138	237.41%
Ti 334.903†	-49.1	-0.00264	mg/L	0.000353	-0.00264	mg/L	0.000353	13.38%
Tl 190.801†	2.1	0.00109	mg/L	0.003541	0.00109	mg/L	0.003541	325.84%
V 292.402†	-10.0	-0.00010	mg/L	0.000188	-0.00010	mg/L	0.000188	192.82%
Zn 206.200†	-1.3	-0.00063	mg/L	0.000885	-0.00063	mg/L	0.000885	141.29%



Sequence No.: 23  
Sample ID: RG63 A WMN

Autosampler Location: 37  
Date Collected: 8/10/2010 1:58:25 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG63 A WMN

Analyte Back Pressure Flow  
All 170.0 kPa 0.55 L/min

Mean Data: RG63 A WMN

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	1528801.1	107.0	%	0.79			0.74%
ScR 361.383	178713.7	109.6	%	0.25			0.23%
Ag 328.068†	-58.6	0.00024	mg/L	0.000161	0.00024 mg/L	0.000161	67.41%
Al 308.215†	43.1	0.03254	mg/L	0.010386	0.03254 mg/L	0.010386	31.92%
As 188.979†	191.5	0.1241	mg/L	0.00210	0.1241 mg/L	0.00210	1.69%
B 249.677†	44.9	0.02249	mg/L	0.001450	0.02249 mg/L	0.001450	6.45%
Ba 233.527†	99.0	0.01132	mg/L	0.000703	0.01132 mg/L	0.000703	6.21%
Be 313.042†	-13.0	-0.00010	mg/L	0.000038	-0.00010 mg/L	0.000038	36.85%
Ca 317.933†	312529.4	37.89	mg/L	0.227	37.89 mg/L	0.227	0.60%
Cd 228.802†	-1.0	-0.00024	mg/L	0.000075	-0.00024 mg/L	0.000075	31.26%
Co 228.616†	237.8	0.00493	mg/L	0.000253	0.00493 mg/L	0.000253	5.14%
Cr 267.716†	12.9	0.00344	mg/L	0.000970	0.00344 mg/L	0.000970	28.21%
Cu 324.752†	-1287.8	-0.00303	mg/L	0.000196	-0.00303 mg/L	0.000196	6.45%
Fe 273.955†	43733.6	40.35	mg/L	0.167	40.35 mg/L	0.167	0.41%
K 766.490†	3419.8	1.431	mg/L	0.0112	1.431 mg/L	0.0112	0.78%
Mg 279.077†	12758.4	12.56	mg/L	0.080	12.56 mg/L	0.080	0.64%
Mn 257.610†	148859.9	4.026	mg/L	0.0144	4.026 mg/L	0.0144	0.36%
Mo 202.031†	99.2	0.00917	mg/L	0.000373	0.00917 mg/L	0.000373	4.07%
Na 589.592†	67024.4	10.87	mg/L	0.039	10.87 mg/L	0.039	0.35%
Na 330.237†	295.1	13.13	mg/L	0.635	13.13 mg/L	0.635	4.83%
Ni 231.604†	12.7	0.00774	mg/L	0.000557	0.00774 mg/L	0.000557	7.19%
Pb 220.353†	4.5	-0.00201	mg/L	0.000943	-0.00201 mg/L	0.000943	46.91%
Sb 206.836†	-4.8	-0.00888	mg/L	0.001657	-0.00888 mg/L	0.001657	18.65%
Se 196.026†	-4.6	-0.00156	mg/L	0.003210	-0.00156 mg/L	0.003210	206.35%
Si 288.158†	36707.0	30.78	mg/L	0.073	30.78 mg/L	0.073	0.24%
Sn 189.927†	-16.1	-0.00206	mg/L	0.001056	-0.00206 mg/L	0.001056	51.23%
Sr 421.552†	91102.8	0.1970	mg/L	0.00037	0.1970 mg/L	0.00037	0.19%
Ti 334.903†	39.7	0.00065	mg/L	0.000504	0.00065 mg/L	0.000504	77.87%
Tl 190.801†	-1.5	-0.00620	mg/L	0.002394	-0.00620 mg/L	0.002394	38.59%
V 292.402†	2235.5	0.01694	mg/L	0.000105	0.01694 mg/L	0.000105	0.62%
Zn 206.200†	-10.0	-0.00339	mg/L	0.000923	-0.00339 mg/L	0.000923	27.24%

Sequence No.: 24  
Sample ID: RG63 B WMN

Autosampler Location: 38  
Date Collected: 8/10/2010 2:04:25 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG63 B WMN

Analyte Back Pressure Flow  
All 169.0 kPa 0.55 L/min

Mean Data: RG63 B WMN

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1519092.8	106.3 %	0.55			0.52%
ScR 361.383	181911.7	111.6 %	0.78			0.70%
Ag 328.068†	-394.9	0.00062 mg/L	0.000170	0.00062 mg/L	0.000170	27.41%
Al 308.215†	31.3	0.02343 mg/L	0.003049	0.02343 mg/L	0.003049	13.01%
As 188.979†	0.6	0.00038 mg/L	0.002477	0.00038 mg/L	0.002477	652.30%
B 249.677†	39.6	0.01984 mg/L	0.002404	0.01984 mg/L	0.002404	12.11%
Ba 233.527†	577.5	0.07168 mg/L	0.001327	0.07168 mg/L	0.001327	1.85%
Be 313.042†	-13.2	-0.00012 mg/L	0.000014	-0.00012 mg/L	0.000014	11.85%
Ca 317.933†	862953.1	104.6 mg/L	0.15	104.6 mg/L	0.15	0.15%
Cd 228.802†	-8.8	-0.00017 mg/L	0.000090	-0.00017 mg/L	0.000090	52.93%
Co 228.616†	154.5	0.00317 mg/L	0.000226	0.00317 mg/L	0.000226	7.14%
Cr 267.716†	9.0	0.00176 mg/L	0.000661	0.00176 mg/L	0.000661	37.65%
Cu 324.752†	-2544.6	-0.00262 mg/L	0.000241	-0.00262 mg/L	0.000241	9.20%
Fe 273.955†	127453.6	117.6 mg/L	0.49	117.6 mg/L	0.49	0.42%
K 766.490†	12366.6	5.176 mg/L	0.0557	5.176 mg/L	0.0557	1.08%
Mg 279.077†	48090.2	47.36 mg/L	0.591	47.36 mg/L	0.591	1.25%
Mn 257.610†	194646.7	5.265 mg/L	0.0063	5.265 mg/L	0.0063	0.12%
Mo 202.031†	84.4	0.00780 mg/L	0.000340	0.00780 mg/L	0.000340	4.36%
Na 589.592†	319343.3	51.79 mg/L	0.199	51.79 mg/L	0.199	0.38%
Na 330.237†	1238.0	55.44 mg/L	0.607	55.44 mg/L	0.607	1.09%
Ni 231.604†	1.0	0.00063 mg/L	0.000925	0.00063 mg/L	0.000925	146.21%
Pb 220.353†	44.7	-0.00160 mg/L	0.000808	-0.00160 mg/L	0.000808	50.48%
Sb 206.836†	18.7	-0.00885 mg/L	0.000375	-0.00885 mg/L	0.000375	4.24%
Se 196.026†	-19.1	-0.00388 mg/L	0.004555	-0.00388 mg/L	0.004555	117.35%
Si 288.158†	48060.4	40.30 mg/L	0.489	40.30 mg/L	0.489	1.21%
Sn 189.927†	-19.2	0.00166 mg/L	0.001846	0.00166 mg/L	0.001846	111.27%
Sr 421.552†	256091.1	0.5539 mg/L	0.00201	0.5539 mg/L	0.00201	0.36%
Ti 334.903†	151.9	0.00407 mg/L	0.000152	0.00407 mg/L	0.000152	3.73%
Tl 190.801†	-24.3	-0.01972 mg/L	0.005692	-0.01972 mg/L	0.005692	28.87%
V 292.402†	2944.5	0.01469 mg/L	0.000441	0.01469 mg/L	0.000441	3.01%
Zn 206.200†	-19.1	-0.00511 mg/L	0.001121	-0.00511 mg/L	0.001121	21.92%

Sequence No.: 1  
Sample ID: RG49 G WMN

Autosampler Location: 39  
Date Collected: 8/10/2010 2:10:44 PM  
Data Type: Reprocessed on 8/10/2010 3:21:46 PM

Logged In Analyst (Original) : metals  
Dilution: 1X

## Nebulizer Parameters: RG49 G WMN

Analyte Back Pressure Flow  
All 170.0 kPa 0.55 L/min

## Mean Data: RG49 G WMN

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1531859.1	107.2	%	0.54			0.51%
ScR 361.383	178321.9	109.4	%	0.39			0.36%
Ag 328.068†	99.2	0.00039	mg/L	0.000185	0.00039	mg/L	0.000185 47.88%
Al 308.215†	11.0	0.00844	mg/L	0.004569	0.00844	mg/L	0.004569 54.13%
As 188.979†	-3.0	-0.00193	mg/L	0.000750	-0.00193	mg/L	0.000750 38.88%
B 249.677†	28.6	0.01434	mg/L	0.001203	0.01434	mg/L	0.001203 8.39%
Ba 233.527†	93.9	0.01242	mg/L	0.000358	0.01242	mg/L	0.000358 2.88%
Be 313.042†	-13.5	-0.00005	mg/L	0.000023	-0.00005	mg/L	0.000023 44.55%
Ca 317.933†	189925.8	23.03	mg/L	0.159	23.03	mg/L	0.159 0.69%
Cd 228.802†	-12.2	-0.00023	mg/L	0.000129	-0.00023	mg/L	0.000129 56.18%
Co 228.616†	159.9	0.00332	mg/L	0.000080	0.00332	mg/L	0.000080 2.40%
Cr 267.716†	0.6	-0.00049	mg/L	0.000502	-0.00049	mg/L	0.000502 102.33%
Cu 324.752†	-709.4	-0.00339	mg/L	0.000289	-0.00339	mg/L	0.000289 8.51%
Fe 273.955†	3124.8	2.883	mg/L	0.0059	2.883	mg/L	0.0059 0.20%
K 766.490†	1228.7	0.5142	mg/L	0.01155	0.5142	mg/L	0.01155 2.25%
Mg 279.077†	12530.4	12.36	mg/L	0.072	12.36	mg/L	0.072 0.58%
Mn 257.610†	20277.8	0.5484	mg/L	0.00374	0.5484	mg/L	0.00374 0.68%
Mo 202.031†	10.8	0.00100	mg/L	0.000474	0.00100	mg/L	0.000474 47.35%
Na 589.592†	64725.3	10.50	mg/L	0.069	10.50	mg/L	0.069 0.66%
Na 330.237†	271.7	12.17	mg/L	0.696	12.17	mg/L	0.696 5.72%
Ni 231.604†	8.1	0.00492	mg/L	0.002385	0.00492	mg/L	0.002385 48.51%
Pb 220.353†	-18.9	-0.00276	mg/L	0.000858	-0.00276	mg/L	0.000858 31.12%
Sb 206.836†	-15.9	-0.00871	mg/L	0.001860	-0.00871	mg/L	0.001860 21.35%
Se 196.026†	6.9	0.00670	mg/L	0.001692	0.00670	mg/L	0.001692 25.25%
Si 288.158†	16849.3	14.13	mg/L	0.092	14.13	mg/L	0.092 0.65%
Sn 189.927†	-13.0	-0.00201	mg/L	0.000058	-0.00201	mg/L	0.000058 2.89%
Sr 421.552†	42033.3	0.09091	mg/L	0.000593	0.09091	mg/L	0.000593 0.65%
Ti 334.903†	-47.9	-0.00347	mg/L	0.000709	-0.00347	mg/L	0.000709 20.43%
Tl 190.801†	1.3	-0.00007	mg/L	0.000737	-0.00007	mg/L	0.000737 >999.9%
V 292.402†	27.0	0.00000	mg/L	0.000104	0.00000	mg/L	0.000104 >999.9%
Zn 206.200†	-2.4	-0.00024	mg/L	0.001310	-0.00024	mg/L	0.001310 546.86%

Sequence No.: 2  
Sample ID: RG60 B SWC

Autosampler Location: 40  
Date Collected: 8/10/2010 2:16:44 PM  
Data Type: Reprocessed on 8/10/2010 3:21:47 PM

Logged In Analyst (Original) : metals  
Dilution: 2X

Nebulizer Parameters: RG60 B SWC

Analyte Back Pressure Flow  
All 170.0 kPa 0.55 L/min

Mean Data: RG60 B SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1558712.9	109.1	%	0.36			0.33%
ScR 361.383	183906.2	112.8	%	0.75			0.66%
Ag 328.068†	-966.9	0.00042	mg/L	0.000100	0.00083 mg/L	0.000200	24.09%
Al 308.215†	199953.7	153.4	mg/L	0.93	306.8 mg/L	1.86	0.61%
As 188.979†	47.7	0.04632	mg/L	0.002972	0.09265 mg/L	0.005944	6.42%
B 249.677†	60.6	0.03005	mg/L	0.001024	0.06010 mg/L	0.002048	3.41%
Ba 233.527†	4785.9	0.6318	mg/L	0.00492	1.264 mg/L	0.0098	0.78%
Be 313.042†	770.5	0.00167	mg/L	0.000012	0.00334 mg/L	0.000023	0.70%
Cd 228.802†	404435.4	49.04	mg/L	0.350	98.07 mg/L	0.701	0.71%
Co 228.616†	103.4	0.00201	mg/L	0.000056	0.00402 mg/L	0.000113	2.80%
Cr 267.716†	3932.6	0.06789	mg/L	0.000593	0.1358 mg/L	0.00119	0.87%
Cu 324.752†	1006.3	0.2875	mg/L	0.00338	0.5750 mg/L	0.00675	1.17%
Cu 324.752†	42649.2	0.2325	mg/L	0.00082	0.4649 mg/L	0.00163	0.35%
Fe 273.955†	183097.2	168.9	mg/L	1.06	337.9 mg/L	2.13	0.63%
K 766.490†	13170.4	5.512	mg/L	0.0067	11.02 mg/L	0.013	0.12%
Mg 279.077†	51365.4	50.56	mg/L	0.331	101.1 mg/L	0.66	0.66%
Mn 257.610†	100899.5	2.728	mg/L	0.0183	5.456 mg/L	0.0366	0.67%
Mo 202.031†	42.1	0.00383	mg/L	0.000235	0.00766 mg/L	0.000470	6.13%
Na 589.592†	14537.2	2.358	mg/L	0.0166	4.715 mg/L	0.0333	0.71%
Na 330.237†	61.3	3.945	mg/L	0.2371	7.890 mg/L	0.4741	6.01%
Ni 231.604†	516.3	0.3149	mg/L	0.00594	0.6298 mg/L	0.01189	1.89%
Pb 220.353†	1860.1	0.2863	mg/L	0.00203	0.5726 mg/L	0.00406	0.71%
Sb 206.836†	98.7	-0.00376	mg/L	0.001566	-0.00752 mg/L	0.003132	41.66%
Se 196.026†	-60.1	-0.00256	mg/L	0.002609	-0.00512 mg/L	0.005218	101.98%
Si 288.158†	10063.4	8.445	mg/L	0.0194	16.89 mg/L	0.039	0.23%
Sn 189.927†	-23.3	0.00061	mg/L	0.000106	0.00121 mg/L	0.000212	17.50%
Sr 421.552†	136877.7	0.2960	mg/L	0.00130	0.5921 mg/L	0.00260	0.44%
Ti 334.903†	145203.9	7.796	mg/L	0.0479	15.59 mg/L	0.096	0.61%
Tl 190.801†	2.8	-0.01811	mg/L	0.001546	-0.03622 mg/L	0.003093	8.54%
V 292.402†	48290.6	0.4298	mg/L	0.00174	0.8597 mg/L	0.00348	0.40%
Zn 206.200†	998.4	0.4739	mg/L	0.00470	0.9478 mg/L	0.00940	0.99%

Sequence No.: 3  
Sample ID: RG76 Q SWC

Autosampler Location: 41  
Date Collected: 8/10/2010 2:22:46 PM  
Data Type: Reprocessed on 8/10/2010 3:21:47 PM

Logged In Analyst (Original) : metals  
Dilution: 5X

Nebulizer Parameters: RG76 Q SWC  
Analyte Back Pressure Flow  
All 170.0 kPa 0.55 L/min

## Mean Data: RG76 Q SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1516678.4	106.2 %	%	0.27			0.25%
ScR 361.383	173984.9	106.7 %	%	3.02			2.83%
Ag 328.068†	17852.2	0.1038 mg/L	mg/L	0.00110	0.5190 mg/L	0.00548	1.06%
Al 308.215†	34502.8	26.46 mg/L	mg/L	0.653	132.3 mg/L	3.26	2.47%
As 188.979†	20.2	0.01654 mg/L	mg/L	0.001332	0.08268 mg/L	0.006660	8.06%
B 249.677†	55.9	0.02783 mg/L	mg/L	0.002474	0.1391 mg/L	0.01237	8.89%
Ba 233.527†	1902.7	0.2489 mg/L	mg/L	0.00850	1.245 mg/L	0.0425	3.41%
Be 313.042†	132.7	0.00013 mg/L	mg/L	0.000062	0.00067 mg/L	0.000309	46.31%
Ca 317.933†	156002.2	18.92 mg/L	mg/L	0.463	94.58 mg/L	2.314	2.45%
Cd 228.802†	42596.4	0.8167 mg/L	mg/L	0.00626	4.084 mg/L	0.0313	0.77%
Co 228.616†	1430.8	0.02624 mg/L	mg/L	0.000124	0.1312 mg/L	0.00062	0.47%
Cr 267.716†	1860.2	0.5310 mg/L	mg/L	0.01569	2.655 mg/L	0.0785	2.96%
Cu 324.752†	298237.1	1.544 mg/L	mg/L	0.0021	7.719 mg/L	0.0106	0.14%
Fe 273.955†	125119.9	115.4 mg/L	mg/L	3.03	577.2 mg/L	15.16	2.63%
K 766.490†	3215.3	1.346 mg/L	mg/L	0.0610	6.728 mg/L	0.3052	4.54%
Mg 279.077†	11263.0	11.04 mg/L	mg/L	0.364	55.21 mg/L	1.818	3.29%
Mn 257.610†	34936.8	0.9454 mg/L	mg/L	0.02391	4.727 mg/L	0.1195	2.53%
Mo 202.031†	321.9	0.02928 mg/L	mg/L	0.000033	0.1464 mg/L	0.00017	0.11%
Na 589.592†	7677.6	1.245 mg/L	mg/L	0.0416	6.226 mg/L	0.2080	3.34%
Na 330.237†	81.2	1.837 mg/L	mg/L	0.4944	9.187 mg/L	2.4722	26.91%
Ni 231.604†	338.5	0.2064 mg/L	mg/L	0.00594	1.032 mg/L	0.0297	2.88%
Pb 220.353†	19220.4	2.622 mg/L	mg/L	0.0268	13.11 mg/L	0.134	1.02%
Sb 206.836†	58.0	0.00047 mg/L	mg/L	0.002191	0.00237 mg/L	0.010957	462.36%
Se 196.026†	-29.9	-0.00559 mg/L	mg/L	0.002153	-0.02796 mg/L	0.010767	38.51%
Si 288.158†	2420.9	2.032 mg/L	mg/L	0.0675	10.16 mg/L	0.338	3.32%
Sn 189.927†	210.0	0.06015 mg/L	mg/L	0.000881	0.3008 mg/L	0.00441	1.46%
Sr 421.552†	40358.7	0.08729 mg/L	mg/L	0.002189	0.4364 mg/L	0.01094	2.51%
Ti 334.903†	36380.9	1.953 mg/L	mg/L	0.0500	9.765 mg/L	0.2502	2.56%
Tl 190.801†	-8.5	-0.00992 mg/L	mg/L	0.002546	-0.04960 mg/L	0.012728	25.66%
V 292.402†	14307.1	0.1230 mg/L	mg/L	0.00109	0.6149 mg/L	0.00546	0.89%
Zn 206.200†	14226.3	6.721 mg/L	mg/L	0.1911	33.61 mg/L	0.955	2.84%

Sequence No.: 4

Sample ID: RG76 R SWC

Autosampler Location: 42

Date Collected: 8/10/2010 2:28:47 PM

Data Type: Reprocessed on 8/10/2010 3:21:48 PM

Logged In Analyst (Original) : metals

Dilution: 2X

Nebulizer Parameters: RG76 R SWC

Analyte	Back Pressure	Flow
All	171.0 kPa	0.55 L/min

Mean Data: RG76 R SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1509779.7	105.7	%	0.50				0.48%
ScR 361.383	177872.9	109.1	%	0.38				0.35%
Ag 328.068†	-877.2	0.00273	mg/L	0.000495	0.00546	mg/L	0.000990	18.13%
Al 308.215†	116635.7	89.46	mg/L	0.203	178.9	mg/L	0.41	0.23%
As 188.979†	42.2	0.03995	mg/L	0.001355	0.07991	mg/L	0.002711	3.39%
B 249.677†	174.1	0.08696	mg/L	0.002340	0.1739	mg/L	0.00468	2.69%
Ba 233.527†	9861.2	1.308	mg/L	0.0070	2.616	mg/L	0.0140	0.54%
Be 313.042†	502.4	0.00093	mg/L	0.000020	0.00187	mg/L	0.000040	2.16%
Ca 317.933†	577563.5	70.03	mg/L	0.093	140.1	mg/L	0.19	0.13%
Cd 228.802†	696.8	0.01341	mg/L	0.000169	0.02681	mg/L	0.000339	1.26%
Co 228.616†	3784.8	0.06672	mg/L	0.000475	0.1334	mg/L	0.00095	0.71%
Cr 267.716†	2220.0	0.6340	mg/L	0.00273	1.268	mg/L	0.0055	0.43%
Cu 324.752†	193714.1	1.015	mg/L	0.0105	2.029	mg/L	0.0211	1.04%
Fe 273.955†	242957.7	224.2	mg/L	1.01	448.3	mg/L	2.01	0.45%
K 766.490†	12370.0	5.177	mg/L	0.0078	10.35	mg/L	0.016	0.15%
Mg 279.077†	33392.4	32.80	mg/L	0.214	65.61	mg/L	0.428	0.65%
Mn 257.610†	129053.9	3.490	mg/L	0.0089	6.980	mg/L	0.0177	0.25%
Mo 202.031†	574.4	0.05248	mg/L	0.000225	0.1050	mg/L	0.00045	0.43%
Na 589.592†	25520.1	4.139	mg/L	0.0266	8.278	mg/L	0.0532	0.64%
Na 330.237†	146.7	4.766	mg/L	0.1110	9.532	mg/L	0.2220	2.33%
Ni 231.604†	584.9	0.3567	mg/L	0.00327	0.7135	mg/L	0.00653	0.92%
Pb 220.353†	3591.2	0.5010	mg/L	0.00327	1.002	mg/L	0.0065	0.65%
Sb 206.836†	112.9	0.00234	mg/L	0.002785	0.00468	mg/L	0.005569	118.97%
Se 196.026†	-67.7	-0.01419	mg/L	0.003844	-0.02839	mg/L	0.007687	27.08%
Si 288.158†	6782.8	5.692	mg/L	0.0329	11.38	mg/L	0.066	0.58%
Sn 189.927†	112.3	0.03828	mg/L	0.000647	0.07657	mg/L	0.001295	1.69%
Sr 421.552†	153143.6	0.3312	mg/L	0.00068	0.6624	mg/L	0.00135	0.20%
Ti 334.903†	123001.5	6.603	mg/L	0.0139	13.21	mg/L	0.028	0.21%
Tl 190.801†	-12.0	-0.02429	mg/L	0.005255	-0.04858	mg/L	0.010511	21.64%
V 292.402†	36958.9	0.3204	mg/L	0.00456	0.6409	mg/L	0.00912	1.42%
Zn 206.200†	18760.1	8.864	mg/L	0.0569	17.73	mg/L	0.114	0.64%

Sequence No.: 5  
Sample ID: RG76 S SWC

Autosampler Location: 43  
Date Collected: 8/10/2010 2:34:50 PM  
Data Type: Reprocessed on 8/10/2010 3:21:49 PM

Logged In Analyst (Original) : metals  
Dilution: 2X

## Nebulizer Parameters: RG76 S SWC

Analyte Back Pressure Flow  
All 171.0 kPa 0.55 L/min

## Mean Data: RG76 S SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1524887.6	106.7	%	0.37			0.35%
ScR 361.383	178240.2	109.3	%	1.06			0.97%
Ag 328.068†	314.6	0.00810	mg/L	0.000281	0.01621 mg/L	0.000562	3.47%
Al 308.215†	112207.4	86.06	mg/L	0.327	172.1 mg/L	0.65	0.38%
As 188.979†	202.5	0.1425	mg/L	0.00526	0.2850 mg/L	0.01051	3.69%
B 249.677†	116.6	0.05806	mg/L	0.001269	0.1161 mg/L	0.00254	2.19%
Ba 233.527†	5798.6	0.7664	mg/L	0.00825	1.533 mg/L	0.0165	1.08%
Be 313.042†	580.7	0.00082	mg/L	0.000050	0.00163 mg/L	0.000101	6.15%
Ca 317.933†	361220.1	43.80	mg/L	0.046	87.60 mg/L	0.091	0.10%
Cd 228.802†	814.6	0.01552	mg/L	0.000104	0.03103 mg/L	0.000209	0.67%
Co 228.616†	4454.3	0.08178	mg/L	0.000485	0.1636 mg/L	0.00097	0.59%
Cr 267.716†	2844.6	0.8116	mg/L	0.00962	1.623 mg/L	0.0192	1.19%
Cu 324.752†	292843.5	1.521	mg/L	0.0028	3.042 mg/L	0.0056	0.19%
Fe 273.955†	199899.8	184.4	mg/L	0.49	368.9 mg/L	0.98	0.27%
K 766.490†	10503.4	4.396	mg/L	0.0239	8.792 mg/L	0.0479	0.54%
Mg 279.077†	26591.6	26.12	mg/L	0.290	52.24 mg/L	0.580	1.11%
Mn 257.610†	124628.2	3.371	mg/L	0.0114	6.742 mg/L	0.0228	0.34%
Mo 202.031†	749.5	0.06876	mg/L	0.000629	0.1375 mg/L	0.00126	0.92%
Na 589.592†	28010.5	4.543	mg/L	0.0341	9.085 mg/L	0.0681	0.75%
Na 330.237†	148.2	5.363	mg/L	0.3537	10.73 mg/L	0.707	6.59%
Ni 231.604†	806.6	0.4920	mg/L	0.00373	0.9839 mg/L	0.00746	0.76%
Pb 220.353†	18063.7	2.477	mg/L	0.0060	4.955 mg/L	0.0121	0.24%
Sb 206.836†	132.5	0.01652	mg/L	0.000642	0.03304 mg/L	0.001283	3.88%
Se 196.026†	-51.2	-0.00562	mg/L	0.007371	-0.01125 mg/L	0.014741	131.09%
Si 288.158†	6708.2	5.629	mg/L	0.0505	11.26 mg/L	0.101	0.90%
Sn 189.927†	188.3	0.05748	mg/L	0.001261	0.1150 mg/L	0.00252	2.19%
Sr 421.552†	131713.4	0.2849	mg/L	0.00130	0.5697 mg/L	0.00260	0.46%
Ti 334.903†	112049.0	6.016	mg/L	0.0170	12.03 mg/L	0.034	0.28%
Tl 190.801†	-1.2	-0.01846	mg/L	0.002203	-0.03693 mg/L	0.004405	11.93%
V 292.402†	54514.7	0.4918	mg/L	0.00130	0.9837 mg/L	0.00259	0.26%
Zn 206.200†	15568.6	7.356	mg/L	0.0811	14.71 mg/L	0.162	1.10%

Sequence No.: 6  
 Sample ID: ~~RG76 T SWC~~

*RG62 BSPK SWC*  
*BW*  
*8.10*

Autosampler Location: 44  
 Date Collected: 8/10/2010 2:40:52 PM  
 Data Type: Reprocessed on 8/10/2010 3:21:49 PM

Logged In Analyst (Original) : metals  
 Dilution: 2X

Nebulizer Parameters: RG76 T SWC

Analyte Back Pressure Flow  
 All 171.0 kPa 0.55 L/min

Mean Data: RG76 T SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.	
ScA 357.253	1522483.5	106.6 %	0.64				0.60%
ScR 361.383	178489.6	109.5 %	0.11				0.10%
Ag 328.068†	85883.1	0.4813 mg/L	0.00097	0.9626 mg/L	0.00195	0.20%	
Al 308.215†	118273.6	90.71 mg/L	0.142	181.4 mg/L	0.28	0.16%	
As 188.979†	3001.2	1.959 mg/L	0.0240	3.918 mg/L	0.0480	1.23%	
B 249.677†	34.3	0.01556 mg/L	0.002734	0.03112 mg/L	0.005467	17.57%	
Ba 233.527†	15767.0	2.105 mg/L	0.0111	4.210 mg/L	0.0222	0.53%	
Be 313.042†	130892.9	0.4993 mg/L	0.00132	0.9986 mg/L	0.00265	0.26%	
Ca 317.933†	449506.9	54.50 mg/L	0.119	109.0 mg/L	0.24	0.22%	
Cd 228.802†	25446.0	0.4845 mg/L	0.00065	0.9690 mg/L	0.00131	0.14%	
Co 228.616†	23956.8	0.4851 mg/L	0.00667	0.9701 mg/L	0.01333	1.37%	
Cr 267.716†	2111.4	0.6006 mg/L	0.00185	1.201 mg/L	0.0037	0.31%	
Cu 324.752†	130362.4	0.6748 mg/L	0.00050	1.350 mg/L	0.0010	0.07%	
Fe 273.955†	70393.9	64.95 mg/L	0.186	129.9 mg/L	0.37	0.29%	
K 766.490†	33693.8	14.10 mg/L	0.008	28.20 mg/L	0.015	0.05%	
Mg 279.077†	26614.9	26.21 mg/L	0.139	52.43 mg/L	0.279	0.53%	
Mn 257.610†	38262.7	1.035 mg/L	0.0027	2.070 mg/L	0.0053	0.26%	
Mo 202.031†	54.4	0.00493 mg/L	0.000792	0.00987 mg/L	0.001583	16.04%	
Na 589.592†	105999.0	17.19 mg/L	0.065	34.38 mg/L	0.130	0.38%	
Na 330.237†	407.5	19.29 mg/L	0.248	38.58 mg/L	0.497	1.29%	
Ni 231.604†	883.4	0.5379 mg/L	0.00135	1.076 mg/L	0.0027	0.25%	
Pb 220.353†	13759.0	1.899 mg/L	0.0240	3.798 mg/L	0.0479	1.26%	
Sb 206.836†	42.3	-0.00263 mg/L	0.002270	-0.00526 mg/L	0.004539	86.30%	
Se 196.026†	1983.8	1.972 mg/L	0.0298	3.945 mg/L	0.0596	1.51%	
Si 288.158†	3937.8	3.306 mg/L	0.0143	6.612 mg/L	0.0287	0.43%	
Sn 189.927†	1513.2	0.4247 mg/L	0.00481	0.8495 mg/L	0.00962	1.13%	
Sr 421.552†	483620.6	1.046 mg/L	0.0006	2.092 mg/L	0.0012	0.06%	
Ti 334.903†	124077.7	6.661 mg/L	0.0112	13.32 mg/L	0.022	0.17%	
Tl 190.801†	3666.5	1.884 mg/L	0.0244	3.768 mg/L	0.0488	1.30%	
V 292.402†	91706.4	0.8529 mg/L	0.00365	1.706 mg/L	0.0073	0.43%	
Zn 206.200†	1493.5	0.7073 mg/L	0.00645	1.415 mg/L	0.0129	0.91%	



Sequence No.: 7

Sample ID: RG76 MBSPK SWC

Autosampler Location: 45

Date Collected: 8/10/2010 2:46:42 PM

Data Type: Reprocessed on 8/10/2010 3:21:50 PM

Logged In Analyst (Original) : metals

Dilution: 2X

Nebulizer Parameters: RG76 MBSPK SWC

Analyte	Back Pressure	Flow
All	171.0 kPa	0.55 L/min

Mean Data: RG76 MBSPK SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1545281.9	108.2	%	0.37				0.35%
ScR 361.383	179489.6	110.1	%	0.14				0.13%
Ag 328.068†	83471.7	0.4658	mg/L	0.00143	0.9315	mg/L	0.00286	0.31%
Al 308.215†	2578.9	1.971	mg/L	0.0058	3.943	mg/L	0.0117	0.30%
As 188.979†	2976.4	1.930	mg/L	0.0023	3.859	mg/L	0.0046	0.12%
B 249.677†	2.5	-0.00029	mg/L	0.000426	-0.00059	mg/L	0.000852	144.59%
Ba 233.527†	14349.8	1.918	mg/L	0.0062	3.837	mg/L	0.0123	0.32%
Be 313.042†	130053.6	0.4971	mg/L	0.00041	0.9943	mg/L	0.00083	0.08%
Ca 317.933†	82518.2	10.01	mg/L	0.008	20.01	mg/L	0.015	0.08%
Cd 228.802†	24874.1	0.4735	mg/L	0.00108	0.9471	mg/L	0.00216	0.23%
Co 228.616†	22613.1	0.4688	mg/L	0.00169	0.9376	mg/L	0.00337	0.36%
Cr 267.716†	1737.3	0.4941	mg/L	0.00143	0.9883	mg/L	0.00286	0.29%
Cu 324.752†	93309.3	0.4803	mg/L	0.00071	0.9606	mg/L	0.00141	0.15%
Fe 273.955†	2251.5	2.077	mg/L	0.0041	4.154	mg/L	0.0082	0.20%
K 766.490†	22907.9	9.587	mg/L	0.0217	19.17	mg/L	0.043	0.23%
Mg 279.077†	10240.1	10.10	mg/L	0.012	20.20	mg/L	0.024	0.12%
Mn 257.610†	17949.9	0.4860	mg/L	0.00162	0.9720	mg/L	0.00323	0.33%
Mo 202.031†	8.5	0.00071	mg/L	0.000047	0.00142	mg/L	0.000094	6.57%
Na 589.592†	57092.3	9.259	mg/L	0.0198	18.52	mg/L	0.040	0.21%
Na 330.237†	249.2	11.08	mg/L	0.117	22.15	mg/L	0.234	1.06%
Ni 231.604†	793.7	0.4832	mg/L	0.00109	0.9664	mg/L	0.00218	0.23%
Pb 220.353†	14011.4	1.913	mg/L	0.0104	3.825	mg/L	0.0208	0.54%
Sb 206.836†	4.7	-0.00480	mg/L	0.001138	-0.00960	mg/L	0.002276	23.71%
Se 196.026†	1976.8	1.938	mg/L	0.0065	3.876	mg/L	0.0129	0.33%
Si 288.158†	-5.1	-0.00246	mg/L	0.006833	-0.00491	mg/L	0.013667	278.34%
Sn 189.927†	-8.6	-0.00155	mg/L	0.000963	-0.00310	mg/L	0.001926	62.19%
Sr 421.552†	226626.5	0.4901	mg/L	0.00060	0.9803	mg/L	0.00121	0.12%
Ti 334.903†	-3.0	-0.00067	mg/L	0.000391	-0.00134	mg/L	0.000782	58.33%
Tl 190.801†	3702.1	1.917	mg/L	0.0044	3.833	mg/L	0.0088	0.23%
V 292.402†	51805.5	0.4900	mg/L	0.00140	0.9800	mg/L	0.00280	0.29%
Zn 206.200†	1035.6	0.4895	mg/L	0.00133	0.9790	mg/L	0.00266	0.27%

Sequence No.: 8  
 Sample ID: CV 3

Autosampler Location: 7  
 Date Collected: 8/10/2010 2:52:44 PM  
 Data Type: Reprocessed on 8/10/2010 3:21:50 PM

Logged In Analyst (Original) : metals  
 Dilution: 1X

Nebulizer Parameters: CV

Analyte Back Pressure Flow  
 All 171.0 kPa 0.55 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1523043.3	106.6 %		0.46			0.43%
ScR 361.383	180341.9	110.6 %		0.25			0.22%
Ag 328.068†	167865.3	0.9366 mg/L		0.00404	0.9366 mg/L	0.00404	0.43%
Al 308.215†	2607.1	1.963 mg/L		0.0030	1.963 mg/L	0.0030	0.15%
As 188.979†	3025.9	1.961 mg/L		0.0031	1.961 mg/L	0.0031	0.16%
B 249.677†	1884.4	0.9434 mg/L		0.00828	0.9434 mg/L	0.00828	0.88%
Ba 233.527†	7226.1	0.9657 mg/L		0.00284	0.9657 mg/L	0.00284	0.29%
Be 313.042†	255554.7	0.9768 mg/L		0.00051	0.9768 mg/L	0.00051	0.05%
Ca 317.933†	16871.0	2.046 mg/L		0.0066	2.046 mg/L	0.0066	0.32%
Cd 228.802†	51667.4	0.9873 mg/L		0.00331	0.9873 mg/L	0.00331	0.34%
Co 228.616†	46483.8	0.9630 mg/L		0.00234	0.9630 mg/L	0.00234	0.24%
Cr 267.716†	3459.2	0.9845 mg/L		0.00108	0.9845 mg/L	0.00108	0.11%
Cu 324.752†	200665.2	1.032 mg/L		0.0043	1.032 mg/L	0.0043	0.42%
Fe 273.955†	2127.8	1.962 mg/L		0.0091	1.962 mg/L	0.0091	0.46%
K 766.490†	45981.9	19.24 mg/L		0.073	19.24 mg/L	0.073	0.38%
Mg 279.077†	2022.3	1.998 mg/L		0.0118	1.998 mg/L	0.0118	0.59%
Mn 257.610†	35809.3	0.9690 mg/L		0.00236	0.9690 mg/L	0.00236	0.24%
Mo 202.031†	10377.0	0.9593 mg/L		0.00176	0.9593 mg/L	0.00176	0.18%
Na 589.592†	283148.4	45.92 mg/L		0.017	45.92 mg/L	0.017	0.04%
Na 330.237†	1104.1	49.93 mg/L		0.459	49.93 mg/L	0.459	0.92%
Ni 231.604†	1610.9	0.9831 mg/L		0.00419	0.9831 mg/L	0.00419	0.43%
Pb 220.353†	14302.4	1.953 mg/L		0.0132	1.953 mg/L	0.0132	0.67%
Sb 206.836†	4043.4	2.085 mg/L		0.0020	2.085 mg/L	0.0020	0.10%
Se 196.026†	2007.9	1.967 mg/L		0.0013	1.967 mg/L	0.0013	0.06%
Si 288.158†	2486.9	2.088 mg/L		0.0076	2.088 mg/L	0.0076	0.37%
Sn 189.927†	3299.0	0.9129 mg/L		0.00117	0.9129 mg/L	0.00117	0.13%
Sr 421.552†	457673.1	0.9898 mg/L		0.00079	0.9898 mg/L	0.00079	0.08%
Ti 334.903†	18041.7	0.9677 mg/L		0.00212	0.9677 mg/L	0.00212	0.22%
Tl 190.801†	3763.3	1.942 mg/L		0.0016	1.942 mg/L	0.0016	0.08%
V 292.402†	102756.4	0.9774 mg/L		0.00593	0.9774 mg/L	0.00593	0.61%
Zn 206.200†	2103.6	0.9930 mg/L		0.00199	0.9930 mg/L	0.00199	0.20%

Sequence No.: 33  
 Sample ID: CB 3  
 Dilution: 1X

Autosampler Location: 1  
 Date Collected: 8/10/2010 2:58:45 PM  
 Data Type: Original

## Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 172.0 kPa 0.55 L/min

## Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1553028.9	108.7	%	0.09				0.09%
ScR 361.383	179663.3	110.2	%	0.43				0.39%
Ag 328.068†	69.7	0.00039	mg/L	0.000127	0.00039	mg/L	0.000127	32.55%
Al 308.215†	18.2	0.01395	mg/L	0.020845	0.01395	mg/L	0.020845	149.42%
As 188.979†	-3.2	-0.00208	mg/L	0.001020	-0.00208	mg/L	0.001020	48.93%
B 249.677†	15.1	0.00759	mg/L	0.001017	0.00759	mg/L	0.001017	13.40%
Ba 233.527†	-4.3	-0.00058	mg/L	0.000313	-0.00058	mg/L	0.000313	53.96%
Be 313.042†	-20.2	-0.00008	mg/L	0.000038	-0.00008	mg/L	0.000038	49.60%
Ca 317.933†	20.4	0.00247	mg/L	0.000116	0.00247	mg/L	0.000116	4.69%
Cd 228.802†	0.7	0.00002	mg/L	0.000095	0.00002	mg/L	0.000095	560.88%
Co 228.616†	7.9	0.00017	mg/L	0.000112	0.00017	mg/L	0.000112	66.04%
Cr 267.716†	0.8	0.00023	mg/L	0.001037	0.00023	mg/L	0.001037	457.74%
Cu 324.752†	-39.7	-0.00020	mg/L	0.000067	-0.00020	mg/L	0.000067	33.15%
Fe 273.955†	-0.1	-0.00012	mg/L	0.003076	-0.00012	mg/L	0.003076	>999.9%
K 766.490†	-172.9	-0.07237	mg/L	0.001947	-0.07237	mg/L	0.001947	2.69%
Mg 279.077†	10.3	0.01013	mg/L	0.003071	0.01013	mg/L	0.003071	30.32%
Mn 257.610†	-6.0	-0.00016	mg/L	0.000166	-0.00016	mg/L	0.000166	101.62%
Mo 202.031†	-1.1	-0.00011	mg/L	0.000400	-0.00011	mg/L	0.000400	376.45%
Na 589.592†	141.4	0.02293	mg/L	0.007932	0.02293	mg/L	0.007932	34.59%
Na 330.237†	21.2	0.9615	mg/L	0.15816	0.9615	mg/L	0.15816	16.45%
Ni 231.604†	-0.1	-0.00006	mg/L	0.002726	-0.00006	mg/L	0.002726	>999.9%
Pb 220.353†	-11.5	-0.00157	mg/L	0.001092	-0.00157	mg/L	0.001092	69.55%
Sb 206.836†	-6.2	-0.00320	mg/L	0.003408	-0.00320	mg/L	0.003408	106.66%
Se 196.026†	6.7	0.00653	mg/L	0.004670	0.00653	mg/L	0.004670	71.50%
Si 288.158†	-0.7	-0.00061	mg/L	0.004370	-0.00061	mg/L	0.004370	714.53%
Sn 189.927†	5.2	0.00144	mg/L	0.000866	0.00144	mg/L	0.000866	60.32%
Sr 421.552†	-30.3	-0.00007	mg/L	0.000041	-0.00007	mg/L	0.000041	61.78%
Ti 334.903†	-63.1	-0.00339	mg/L	0.001284	-0.00339	mg/L	0.001284	37.87%
Tl 190.801†	7.2	0.00374	mg/L	0.001019	0.00374	mg/L	0.001019	27.28%
V 292.402†	-5.2	-0.00004	mg/L	0.000247	-0.00004	mg/L	0.000247	549.58%
Zn 206.200†	5.0	0.00237	mg/L	0.000663	0.00237	mg/L	0.000663	27.99%

=====  
Analysis Begun

Start Time: 8/10/2010 3:23:31 PM  
 Logged In Analyst: metals  
 Spectrometer Model: Optima 4300 DV, S/N 077N0060101

Plasma On Time: 8/10/2010 10:18:38 AM  
 Technique: ICP Continuous  
 Autosampler Model: S10

Sample Information File: C:\pe\metals\Sample Information\0810B.sif

Batch ID:

Results Data Set: PE100810

Results Library: C:\pe\metals\Results\Results.mdb

=====  
Sequence No.: 1

Sample ID: RG76 MB SWC

Autosampler Location: 46

Date Collected: 8/10/2010 3:23:34 PM

Data Type: Original

Dilution: 2X

=====  
Nebulizer Parameters: RG76 MB SWC

Analyte	Back Pressure	Flow
All	171.0 kPa	0.55 L/min

=====  
Mean Data: RG76 MB SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1554736.3	108.8	%	1.13			1.04%
ScR 361.383	181073.2	111.0	%	0.35			0.31%
Ag 328.068†	49.4	0.00028	mg/L	0.000259	0.00055 mg/L	0.000518	93.80%
Al 308.215†	9.6	0.00737	mg/L	0.015873	0.01473 mg/L	0.031747	215.48%
As 188.979†	1.1	0.00070	mg/L	0.001112	0.00139 mg/L	0.002223	159.60%
B 249.677†	0.9	0.00047	mg/L	0.002228	0.00094 mg/L	0.004456	473.49%
Ba 233.527†	-5.4	-0.00072	mg/L	0.000829	-0.00144 mg/L	0.001659	115.56%
Be 313.042†	-25.1	-0.00010	mg/L	0.000061	-0.00019 mg/L	0.000122	63.69%
Ca 317.933†	136.8	0.01659	mg/L	0.001259	0.03318 mg/L	0.002517	7.59%
Cd 228.802†	-5.4	-0.00010	mg/L	0.000101	-0.00021 mg/L	0.000202	96.43%
Co 228.616†	3.4	0.00007	mg/L	0.000144	0.00015 mg/L	0.000289	198.59%
Cr 267.716†	4.3	0.00122	mg/L	0.000599	0.00244 mg/L	0.001198	49.13%
Cu 324.752†	-346.3	-0.00178	mg/L	0.000255	-0.00356 mg/L	0.000510	14.34%
Fe 273.955†	15.0	0.01387	mg/L	0.000976	0.02774 mg/L	0.001952	7.04%
K 766.490†	-213.1	-0.08919	mg/L	0.011426	-0.1784 mg/L	0.02285	12.81%
Mg 279.077†	11.6	0.01145	mg/L	0.003055	0.02289 mg/L	0.006109	26.69%
Mn 257.610†	82.8	0.00224	mg/L	0.000097	0.00448 mg/L	0.000194	4.34%
Mo 202.031†	-4.5	-0.00041	mg/L	0.000197	-0.00082 mg/L	0.000393	47.72%
Na 589.592†	-149.6	-0.02425	mg/L	0.004575	-0.04851 mg/L	0.009150	18.86%
Na 330.237†	31.2	1.413	mg/L	0.3169	2.826 mg/L	0.6339	22.43%
Ni 231.604†	1.7	0.00103	mg/L	0.000989	0.00206 mg/L	0.001978	96.21%
Pb 220.353†	-10.7	-0.00146	mg/L	0.000550	-0.00292 mg/L	0.001101	37.68%
Sb 206.836†	-7.6	-0.00390	mg/L	0.001325	-0.00780 mg/L	0.002650	34.00%
Se 196.026†	8.8	0.00867	mg/L	0.001129	0.01734 mg/L	0.002258	13.02%
Si 288.158†	-3.1	-0.00260	mg/L	0.006722	-0.00520 mg/L	0.013444	258.74%
Sn 189.927†	10.4	0.00289	mg/L	0.000664	0.00577 mg/L	0.001328	22.99%
Sr 421.552†	-48.5	-0.00010	mg/L	0.000066	-0.00021 mg/L	0.000132	63.13%
Ti 334.903†	-31.0	-0.00166	mg/L	0.001043	-0.00333 mg/L	0.002085	62.67%
Tl 190.801†	2.5	0.00130	mg/L	0.001670	0.00261 mg/L	0.003340	128.19%
V 292.402†	0.1	0.00001	mg/L	0.000149	0.00001 mg/L	0.000298	>999.9%
Zn 206.200†	2.1	0.00101	mg/L	0.000316	0.00202 mg/L	0.000631	31.22%

Sequence No.: 2  
 Sample ID: RG82 MB TWC

Autosampler Location: 47  
 Date Collected: 8/10/2010 3:29:34 PM  
 Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG82 MB TWC

Analyte Back Pressure Flow  
 All 172.0 kPa 0.55 L/min

Mean Data: RG82 MB TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1570757.7	109.9	%	0.28			0.26%
ScR 361.383	180114.1	110.5	%	0.26			0.23%
Ag 328.068†	29.5	0.00016	mg/L	0.000246	0.00016 mg/L	0.000246	149.73%
Al 308.215†	6.4	0.00494	mg/L	0.015740	0.00494 mg/L	0.015740	318.32%
As 188.979†	-1.2	-0.00079	mg/L	0.002133	-0.00079 mg/L	0.002133	271.37%
B 249.677†	2.0	0.00100	mg/L	0.003000	0.00100 mg/L	0.003000	298.70%
Ba 233.527†	-4.6	-0.00062	mg/L	0.000106	-0.00062 mg/L	0.000106	17.16%
Be 313.042†	-28.4	-0.00011	mg/L	0.000102	-0.00011 mg/L	0.000102	93.40%
Ca 317.933†	91.0	0.01104	mg/L	0.003661	0.01104 mg/L	0.003661	33.16%
Cd 228.802†	-6.7	-0.00013	mg/L	0.000062	-0.00013 mg/L	0.000062	48.98%
Co 228.616†	4.1	0.00009	mg/L	0.000032	0.00009 mg/L	0.000032	34.43%
Cr 267.716†	-0.3	-0.00009	mg/L	0.001240	-0.00009 mg/L	0.001240	>999.9%
Cu 324.752†	-465.8	-0.00239	mg/L	0.000125	-0.00239 mg/L	0.000125	5.20%
Fe 273.955†	-0.2	-0.00023	mg/L	0.003061	-0.00023 mg/L	0.003061	>999.9%
K 766.490†	-232.9	-0.09746	mg/L	0.024093	-0.09746 mg/L	0.024093	24.72%
Mg 279.077†	10.2	0.01002	mg/L	0.008533	0.01002 mg/L	0.008533	85.12%
Mn 257.610†	-8.9	-0.00024	mg/L	0.000105	-0.00024 mg/L	0.000105	43.50%
Mo 202.031†	-2.0	-0.00019	mg/L	0.000301	-0.00019 mg/L	0.000301	160.99%
Na 589.592†	-160.9	-0.02610	mg/L	0.004014	-0.02610 mg/L	0.004014	15.38%
Na 330.237†	29.4	1.331	mg/L	0.2807	1.331 mg/L	0.2807	21.08%
Ni 231.604†	2.0	0.00123	mg/L	0.002789	0.00123 mg/L	0.002789	227.22%
Pb 220.353†	-19.3	-0.00263	mg/L	0.000318	-0.00263 mg/L	0.000318	12.07%
Sb 206.836†	-9.2	-0.00477	mg/L	0.001332	-0.00477 mg/L	0.001332	27.93%
Se 196.026†	10.1	0.00992	mg/L	0.001875	0.00992 mg/L	0.001875	18.90%
Si 288.158†	-2.8	-0.00238	mg/L	0.002862	-0.00238 mg/L	0.002862	120.30%
Sn 189.927†	1.1	0.00031	mg/L	0.001177	0.00031 mg/L	0.001177	382.59%
Sr 421.552†	-25.5	-0.00006	mg/L	0.000073	-0.00006 mg/L	0.000073	131.71%
Ti 334.903†	-76.9	-0.00413	mg/L	0.000868	-0.00413 mg/L	0.000868	21.02%
Tl 190.801†	1.4	0.00071	mg/L	0.001606	0.00071 mg/L	0.001606	225.11%
V 292.402†	5.4	0.00005	mg/L	0.000099	0.00005 mg/L	0.000099	189.55%
Zn 206.200†	0.5	0.00023	mg/L	0.000576	0.00023 mg/L	0.000576	255.14%

Sequence No.: 3  
Sample ID: RG63 C WMN

Autosampler Location: 48  
Date Collected: 8/10/2010 3:35:35 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG63 C WMN

Analyte Back Pressure Flow  
All 171.0 kPa 0.55 L/min

Mean Data: RG63 C WMN

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1560769.9	109.2	%	1.11			1.02%
ScR 361.383	186184.2	114.2	%	0.59			0.52%
Ag 328.068†	231.2	0.00033	mg/L	0.000020	0.00033	mg/L	0.000020 6.08%
Al 308.215†	41.3	0.03104	mg/L	0.005829	0.03104	mg/L	0.005829 18.78%
As 188.979†	62.3	0.04033	mg/L	0.002377	0.04033	mg/L	0.002377 5.89%
B 249.677†	80.5	0.04041	mg/L	0.000823	0.04041	mg/L	0.000823 2.04%
Ba 233.527†	146.3	0.01783	mg/L	0.000709	0.01783	mg/L	0.000709 3.97%
Be 313.042†	-36.4	-0.00016	mg/L	0.000019	-0.00016	mg/L	0.000019 12.04%
Ca 317.933†	618772.4	75.03	mg/L	0.359	75.03	mg/L	0.359 0.48%
Cd 228.802†	-19.2	-0.00044	mg/L	0.000026	-0.00044	mg/L	0.000026 5.86%
Co 228.616†	249.0	0.00516	mg/L	0.000052	0.00516	mg/L	0.000052 1.00%
Cr 267.716†	4.9	-0.00001	mg/L	0.000982	-0.00001	mg/L	0.000982 >999.9%
Cu 324.752†	-1266.3	-0.00324	mg/L	0.000266	-0.00324	mg/L	0.000266 8.22%
Fe 273.955†	39914.2	36.83	mg/L	0.403	36.83	mg/L	0.403 1.09%
K 766.490†	2719.2	1.138	mg/L	0.0106	1.138	mg/L	0.0106 0.93%
Mg 279.077†	30709.8	30.27	mg/L	0.140	30.27	mg/L	0.140 0.46%
Mn 257.610†	378923.7	10.25	mg/L	0.062	10.25	mg/L	0.062 0.60%
Mo 202.031†	250.3	0.02314	mg/L	0.000658	0.02314	mg/L	0.000658 2.84%
Na 589.592†	130166.9	21.11	mg/L	0.142	21.11	mg/L	0.142 0.67%
Na 330.237†	530.0	23.53	mg/L	0.524	23.53	mg/L	0.524 2.23%
Ni 231.604†	7.3	0.00442	mg/L	0.001275	0.00442	mg/L	0.001275 28.85%
Pb 220.353†	2.1	-0.00212	mg/L	0.000571	-0.00212	mg/L	0.000571 26.90%
Sb 206.836†	-9.6	-0.01087	mg/L	0.002235	-0.01087	mg/L	0.002235 20.56%
Se 196.026†	5.3	0.00143	mg/L	0.005461	0.00143	mg/L	0.005461 380.98%
Si 288.158†	37744.5	31.65	mg/L	0.339	31.65	mg/L	0.339 1.07%
Sn 189.927†	-35.1	-0.00480	mg/L	0.000695	-0.00480	mg/L	0.000695 14.48%
Sr 421.552†	154542.4	0.3342	mg/L	0.00292	0.3342	mg/L	0.00292 0.87%
Ti 334.903†	17.0	-0.00204	mg/L	0.000787	-0.00204	mg/L	0.000787 38.61%
Tl 190.801†	17.2	-0.00463	mg/L	0.000714	-0.00463	mg/L	0.000714 15.43%
V 292.402†	883.3	0.00562	mg/L	0.000122	0.00562	mg/L	0.000122 2.16%
Zn 206.200†	-13.2	-0.00352	mg/L	0.000334	-0.00352	mg/L	0.000334 9.50%

Sequence No.: 4  
Sample ID: RG63 D WMN

Autosampler Location: 49  
Date Collected: 8/10/2010 3:41:39 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG63 D WMN

Analyte	Back Pressure	Flow
All	172.0 kPa	0.55 L/min

Mean Data: RG63 D WMN

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.	
ScA 357.253	1542283.8	107.9 %		0.26			0.24%
ScR 361.383	186179.7	114.2 %		1.48			1.30%
Ag 328.068†	-41.3	0.00010 mg/L		0.000159	0.00010 mg/L	0.000159	156.26%
Al 308.215†	31.2	0.02357 mg/L		0.007267	0.02357 mg/L	0.007267	30.83%
As 188.979†	86.2	0.05586 mg/L		0.001182	0.05586 mg/L	0.001182	2.12%
B 249.677†	70.6	0.03538 mg/L		0.002602	0.03538 mg/L	0.002602	7.35%
Ba 233.527†	108.8	0.01172 mg/L		0.000049	0.01172 mg/L	0.000049	0.42%
Be 313.042†	-35.5	-0.00017 mg/L		0.000038	-0.00017 mg/L	0.000038	22.58%
Ca 317.933†	742791.8	90.06 mg/L		1.289	90.06 mg/L	1.289	1.43%
Cd 228.802†	-11.1	-0.00031 mg/L		0.000085	-0.00031 mg/L	0.000085	27.21%
Co 228.616†	167.3	0.00347 mg/L		0.000055	0.00347 mg/L	0.000055	1.59%
Cr 267.716†	8.6	0.00077 mg/L		0.000400	0.00077 mg/L	0.000400	51.86%
Cu 324.752†	-1663.3	-0.00321 mg/L		0.000223	-0.00321 mg/L	0.000223	6.95%
Fe 273.955†	65053.2	60.02 mg/L		0.938	60.02 mg/L	0.938	1.56%
K 766.490†	3869.9	1.620 mg/L		0.0463	1.620 mg/L	0.0463	2.86%
Mg 279.077†	49206.7	48.50 mg/L		0.942	48.50 mg/L	0.942	1.94%
Mn 257.610†	271494.7	7.343 mg/L		0.1107	7.343 mg/L	0.1107	1.51%
Mo 202.031†	90.3	0.00835 mg/L		0.000774	0.00835 mg/L	0.000774	9.26%
Na 589.592†	168431.0	27.32 mg/L		0.368	27.32 mg/L	0.368	1.35%
Na 330.237†	683.2	30.38 mg/L		0.231	30.38 mg/L	0.231	0.76%
Ni 231.604†	4.8	0.00292 mg/L		0.002602	0.00292 mg/L	0.002602	89.02%
Pb 220.353†	9.5	-0.00263 mg/L		0.000735	-0.00263 mg/L	0.000735	27.94%
Sb 206.836†	-0.7	-0.00995 mg/L		0.002663	-0.00995 mg/L	0.002663	26.75%
Se 196.026†	-4.6	-0.00148 mg/L		0.000557	-0.00148 mg/L	0.000557	37.65%
Si 288.158†	47415.5	39.76 mg/L		0.472	39.76 mg/L	0.472	1.19%
Sn 189.927†	-46.0	-0.00650 mg/L		0.000730	-0.00650 mg/L	0.000730	11.24%
Sr 421.552†	156991.6	0.3395 mg/L		0.00473	0.3395 mg/L	0.00473	1.39%
Ti 334.903†	18.5	-0.00253 mg/L		0.001350	-0.00253 mg/L	0.001350	53.40%
Tl 190.801†	1.9	-0.00878 mg/L		0.001882	-0.00878 mg/L	0.001882	21.44%
V 292.402†	1297.3	0.00628 mg/L		0.000168	0.00628 mg/L	0.000168	2.67%
Zn 206.200†	-15.4	-0.00373 mg/L		0.000504	-0.00373 mg/L	0.000504	13.52%

Sequence No.: 5  
Sample ID: RG63 E WMN

Autosampler Location: 50  
Date Collected: 8/10/2010 3:48:00 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG63 E WMN

Analyte	Back Pressure	Flow
All	172.0 kPa	0.55 L/min

Mean Data: RG63 E WMN

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1554930.9	108.8	%	1.00				0.92%
ScR 361.383	181941.8	111.6	%	1.36				1.22%
Ag 328.068†	-290.3	0.00031	mg/L	0.000226	0.00031	mg/L	0.000226	73.54%
Al 308.215†	55.8	0.04256	mg/L	0.009073	0.04256	mg/L	0.009073	21.32%
As 188.979†	71.2	0.04618	mg/L	0.001366	0.04618	mg/L	0.001366	2.96%
B 249.677†	45.2	0.02267	mg/L	0.001184	0.02267	mg/L	0.001184	5.22%
Ba 233.527†	191.5	0.02223	mg/L	0.001001	0.02223	mg/L	0.001001	4.50%
Be 313.042†	-15.5	-0.00009	mg/L	0.000083	-0.00009	mg/L	0.000083	91.79%
Ca 317.933†	240740.8	29.19	mg/L	0.233	29.19	mg/L	0.233	0.80%
Cd 228.802†	-2.4	-0.00013	mg/L	0.000098	-0.00013	mg/L	0.000098	76.20%
Co 228.616†	84.8	0.00175	mg/L	0.000083	0.00175	mg/L	0.000083	4.76%
Cr 267.716†	-2.4	-0.00006	mg/L	0.001383	-0.00006	mg/L	0.001383	>999.9%
Cu 324.752†	-1866.3	-0.00323	mg/L	0.000048	-0.00323	mg/L	0.000048	1.48%
Fe 273.955†	77528.6	71.53	mg/L	0.830	71.53	mg/L	0.830	1.16%
K 766.490†	4633.2	1.939	mg/L	0.0569	1.939	mg/L	0.0569	2.94%
Mg 279.077†	9134.9	8.968	mg/L	0.0665	8.968	mg/L	0.0665	0.74%
Mn 257.610†	131945.0	3.569	mg/L	0.0293	3.569	mg/L	0.0293	0.82%
Mo 202.031†	30.1	0.00278	mg/L	0.000393	0.00278	mg/L	0.000393	14.12%
Na 589.592†	51848.9	8.409	mg/L	0.0658	8.409	mg/L	0.0658	0.78%
Na 330.237†	226.6	10.08	mg/L	0.044	10.08	mg/L	0.044	0.44%
Ni 231.604†	3.1	0.00191	mg/L	0.002671	0.00191	mg/L	0.002671	139.97%
Pb 220.353†	29.5	-0.00065	mg/L	0.001505	-0.00065	mg/L	0.001505	230.23%
Sb 206.836†	7.1	-0.00754	mg/L	0.000641	-0.00754	mg/L	0.000641	8.50%
Se 196.026†	-8.7	0.00016	mg/L	0.006701	0.00016	mg/L	0.006701	>999.9%
Si 288.158†	40136.6	33.65	mg/L	0.342	33.65	mg/L	0.342	1.02%
Sn 189.927†	-8.8	-0.00060	mg/L	0.000433	-0.00060	mg/L	0.000433	71.62%
Sr 421.552†	83079.3	0.1797	mg/L	0.00177	0.1797	mg/L	0.00177	0.98%
Ti 334.903†	12.8	-0.00045	mg/L	0.001075	-0.00045	mg/L	0.001075	237.02%
Tl 190.801†	-2.9	-0.00629	mg/L	0.001574	-0.00629	mg/L	0.001574	25.03%
V 292.402†	1269.6	0.00406	mg/L	0.000031	0.00406	mg/L	0.000031	0.76%
Zn 206.200†	-6.0	-0.00182	mg/L	0.000750	-0.00182	mg/L	0.000750	41.23%



Sequence No.: 6  
Sample ID: RG82 A TWC

Autosampler Location: 51  
Date Collected: 8/10/2010 3:54:02 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG82 A TWC

Analyte Back Pressure Flow  
All 172.0 kPa 0.55 L/min

Mean Data: RG82 A TWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1526617.0	106.8	%	0.39				0.36%
ScR 361.383	178763.2	109.6	%	0.75				0.68%
Ag 328.068†	131.8	0.00028	mg/L	0.000336	0.00028	mg/L	0.000336	120.16%
Al 308.215†	16.9	0.01283	mg/L	0.004030	0.01283	mg/L	0.004030	31.40%
As 188.979†	-2.9	-0.00192	mg/L	0.002542	-0.00192	mg/L	0.002542	132.35%
B 249.677†	77.5	0.03886	mg/L	0.001448	0.03886	mg/L	0.001448	3.73%
Ba 233.527†	749.4	0.1002	mg/L	0.00063	0.1002	mg/L	0.00063	0.62%
Be 313.042†	-34.6	-0.00015	mg/L	0.000026	-0.00015	mg/L	0.000026	17.90%
Ca 317.933†	473216.5	57.38	mg/L	0.159	57.38	mg/L	0.159	0.28%
Cd 228.802†	-12.8	-0.00024	mg/L	0.000064	-0.00024	mg/L	0.000064	26.37%
Co 228.616†	2.8	0.00003	mg/L	0.000068	0.00003	mg/L	0.000068	199.13%
Cr 267.716†	8.6	0.00100	mg/L	0.001519	0.00100	mg/L	0.001519	152.02%
Cu 324.752†	-77.4	-0.00040	mg/L	0.000091	-0.00040	mg/L	0.000091	22.83%
Fe 273.955†	4.3	0.00398	mg/L	0.001054	0.00398	mg/L	0.001054	26.46%
K 766.490†	6490.3	2.716	mg/L	0.0049	2.716	mg/L	0.0049	0.18%
Mg 279.077†	17599.3	17.36	mg/L	0.030	17.36	mg/L	0.030	0.17%
Mn 257.610†	9.8	0.00026	mg/L	0.000076	0.00026	mg/L	0.000076	28.99%
Mo 202.031†	38.5	0.00355	mg/L	0.000351	0.00355	mg/L	0.000351	9.87%
Na 589.592†	153596.4	24.91	mg/L	0.055	24.91	mg/L	0.055	0.22%
Na 330.237†	627.1	28.04	mg/L	0.602	28.04	mg/L	0.602	2.15%
Ni 231.604†	-0.5	-0.00030	mg/L	0.001735	-0.00030	mg/L	0.001735	574.40%
Pb 220.353†	-17.9	-0.00243	mg/L	0.001146	-0.00243	mg/L	0.001146	47.11%
Sb 206.836†	-11.0	-0.00576	mg/L	0.001212	-0.00576	mg/L	0.001212	21.06%
Se 196.026†	4.2	0.00412	mg/L	0.000189	0.00412	mg/L	0.000189	4.60%
Si 288.158†	17408.6	14.60	mg/L	0.113	14.60	mg/L	0.113	0.77%
Sn 189.927†	-21.9	-0.00248	mg/L	0.001107	-0.00248	mg/L	0.001107	44.60%
Sr 421.552†	185039.7	0.4002	mg/L	0.00086	0.4002	mg/L	0.00086	0.21%
Ti 334.903†	-23.5	-0.00350	mg/L	0.000647	-0.00350	mg/L	0.000647	18.47%
Tl 190.801†	-5.3	-0.00280	mg/L	0.000871	-0.00280	mg/L	0.000871	31.13%
V 292.402†	579.8	0.00549	mg/L	0.000109	0.00549	mg/L	0.000109	1.99%
Zn 206.200†	48.7	0.02498	mg/L	0.000299	0.02498	mg/L	0.000299	1.20%

Sequence No.: 7  
Sample ID: RG82 B TWC

Autosampler Location: 52  
Date Collected: 8/10/2010 4:00:04 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG82 B TWC

Analyte Back Pressure Flow  
All 172.0 kPa 0.55 L/min

Mean Data: RG82 B TWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1541408.0	107.9	%	0.14				0.13%
ScR 361.383	180489.5	110.7	%	0.39				0.35%
Ag 328.068†	98.6	0.00030	mg/L	0.000091	0.00030	mg/L	0.000091	30.34%
Al 308.215†	22.5	0.01718	mg/L	0.008393	0.01718	mg/L	0.008393	48.86%
As 188.979†	-2.5	-0.00160	mg/L	0.004001	-0.00160	mg/L	0.004001	250.27%
B 249.677†	20.0	0.01006	mg/L	0.002841	0.01006	mg/L	0.002841	28.25%
Ba 233.527†	471.1	0.06299	mg/L	0.000241	0.06299	mg/L	0.000241	0.38%
Be 313.042†	-20.7	-0.00009	mg/L	0.000030	-0.00009	mg/L	0.000030	34.44%
Ca 317.933†	261216.6	31.67	mg/L	0.045	31.67	mg/L	0.045	0.14%
Cd 228.802†	-9.6	-0.00018	mg/L	0.000041	-0.00018	mg/L	0.000041	22.46%
Co 228.616†	3.9	0.00007	mg/L	0.000114	0.00007	mg/L	0.000114	169.65%
Cr 267.716†	2.7	0.00003	mg/L	0.000123	0.00003	mg/L	0.000123	459.87%
Cu 324.752†	7480.8	0.03848	mg/L	0.000308	0.03848	mg/L	0.000308	0.80%
Fe 273.955†	58.0	0.05353	mg/L	0.001265	0.05353	mg/L	0.001265	2.36%
K 766.490†	3524.2	1.475	mg/L	0.0091	1.475	mg/L	0.0091	0.62%
Mg 279.077†	7136.9	7.039	mg/L	0.0045	7.039	mg/L	0.0045	0.06%
Mn 257.610†	16.4	0.00044	mg/L	0.000085	0.00044	mg/L	0.000085	19.15%
Mo 202.031†	24.7	0.00228	mg/L	0.000250	0.00228	mg/L	0.000250	10.96%
Na 589.592†	51957.8	8.426	mg/L	0.0283	8.426	mg/L	0.0283	0.34%
Na 330.237†	243.6	10.83	mg/L	0.597	10.83	mg/L	0.597	5.51%
Ni 231.604†	2.8	0.00169	mg/L	0.003575	0.00169	mg/L	0.003575	211.99%
Pb 220.353†	-11.6	-0.00162	mg/L	0.000747	-0.00162	mg/L	0.000747	46.27%
Sb 206.836†	-10.1	-0.00529	mg/L	0.002801	-0.00529	mg/L	0.002801	53.00%
Se 196.026†	14.1	0.01385	mg/L	0.004794	0.01385	mg/L	0.004794	34.61%
Si 288.158†	17479.8	14.66	mg/L	0.034	14.66	mg/L	0.034	0.23%
Sn 189.927†	-12.0	-0.00140	mg/L	0.000590	-0.00140	mg/L	0.000590	42.13%
Sr 421.552†	80407.6	0.1739	mg/L	0.00013	0.1739	mg/L	0.00013	0.08%
Ti 334.903†	-30.3	-0.00286	mg/L	0.000362	-0.00286	mg/L	0.000362	12.63%
Tl 190.801†	-4.1	-0.00215	mg/L	0.001276	-0.00215	mg/L	0.001276	59.42%
V 292.402†	352.7	0.00333	mg/L	0.000093	0.00333	mg/L	0.000093	2.81%
Zn 206.200†	18.6	0.00980	mg/L	0.000091	0.00980	mg/L	0.000091	0.93%

Sequence No.: 8  
Sample ID: RG82 C TWC

Autosampler Location: 53  
Date Collected: 8/10/2010 4:06:05 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG82 C TWC

Analyte	Back Pressure	Flow
All	172.0 kPa	0.55 L/min

Mean Data: RG82 C TWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1552181.2	108.6	%	1.15			1.06%
ScR 361.383	183073.7	112.3	%	0.99			0.89%
Ag 328.068†	167.9	0.00045	mg/L	0.000215	0.00045	mg/L	0.000215 47.89%
Al 308.215†	26.5	0.02023	mg/L	0.002693	0.02023	mg/L	0.002693 13.31%
As 188.979†	-1.2	-0.00082	mg/L	0.001189	-0.00082	mg/L	0.001189 144.83%
B 249.677†	32.2	0.01616	mg/L	0.002866	0.01616	mg/L	0.002866 17.73%
Ba 233.527†	1090.2	0.1458	mg/L	0.00194	0.1458	mg/L	0.00194 1.33%
Be 313.042†	-41.6	-0.00017	mg/L	0.000019	-0.00017	mg/L	0.000019 11.10%
Ca 317.933†	508860.4	61.70	mg/L	0.324	61.70	mg/L	0.324 0.53%
Cd 228.802†	-6.4	-0.00012	mg/L	0.000073	-0.00012	mg/L	0.000073 59.51%
Co 228.616†	3.4	0.00003	mg/L	0.000144	0.00003	mg/L	0.000144 446.13%
Cr 267.716†	7.1	0.00068	mg/L	0.000400	0.00068	mg/L	0.000400 59.20%
Cu 324.752†	500.3	0.00258	mg/L	0.000251	0.00258	mg/L	0.000251 9.75%
Fe 273.955†	81.0	0.07475	mg/L	0.004048	0.07475	mg/L	0.004048 5.42%
K 766.490†	5474.1	2.291	mg/L	0.0213	2.291	mg/L	0.0213 0.93%
Mg 279.077†	9854.7	9.720	mg/L	0.0503	9.720	mg/L	0.0503 0.52%
Mn 257.610†	28.9	0.00078	mg/L	0.000084	0.00078	mg/L	0.000084 10.74%
Mo 202.031†	31.8	0.00294	mg/L	0.000024	0.00294	mg/L	0.000024 0.83%
Na 589.592†	74425.3	12.07	mg/L	0.020	12.07	mg/L	0.020 0.17%
Na 330.237†	326.9	14.41	mg/L	0.345	14.41	mg/L	0.345 2.39%
Ni 231.604†	-1.6	-0.00096	mg/L	0.001201	-0.00096	mg/L	0.001201 125.21%
Pb 220.353†	-2.7	-0.00037	mg/L	0.001506	-0.00037	mg/L	0.001506 412.11%
Sb 206.836†	-9.5	-0.00502	mg/L	0.000679	-0.00502	mg/L	0.000679 13.52%
Se 196.026†	6.7	0.00658	mg/L	0.004712	0.00658	mg/L	0.004712 71.65%
Si 288.158†	18228.4	15.28	mg/L	0.053	15.28	mg/L	0.053 0.35%
Sn 189.927†	-21.4	-0.00230	mg/L	0.001000	-0.00230	mg/L	0.001000 43.40%
Sr 421.552†	126814.3	0.2743	mg/L	0.00058	0.2743	mg/L	0.00058 0.21%
Ti 334.903†	-11.4	-0.00302	mg/L	0.000629	-0.00302	mg/L	0.000629 20.82%
Tl 190.801†	0.9	0.00046	mg/L	0.001269	0.00046	mg/L	0.001269 273.53%
V 292.402†	314.4	0.00298	mg/L	0.000247	0.00298	mg/L	0.000247 8.30%
Zn 206.200†	-1.0	0.00144	mg/L	0.000700	0.00144	mg/L	0.000700 48.54%

Sequence No.: 9  
Sample ID: RG82 D TWC

Autosampler Location: 54  
Date Collected: 8/10/2010 4:12:07 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG82 D TWC

Analyte	Back Pressure	Flow
All	172.0 kPa	0.55 L/min

Mean Data: RG82 D TWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1554414.8	108.8 %		0.57			0.53%
ScR 361.383	184327.9	113.0 %		0.62			0.55%
Ag 328.068†	135.2	0.00066 mg/L		0.000291	0.00066 mg/L	0.000291	43.84%
Al 308.215†	4140.1	3.176 mg/L		0.0202	3.176 mg/L	0.0202	0.64%
As 188.979†	1.1	0.00081 mg/L		0.001032	0.00081 mg/L	0.001032	127.47%
B 249.677†	29.0	0.01453 mg/L		0.000621	0.01453 mg/L	0.000621	4.28%
Ba 233.527†	329.3	0.04392 mg/L		0.000873	0.04392 mg/L	0.000873	1.99%
Be 313.042†	-11.9	-0.00007 mg/L		0.000045	-0.00007 mg/L	0.000045	68.45%
Ca 317.933†	178879.2	21.69 mg/L		0.063	21.69 mg/L	0.063	0.29%
Cd 228.802†	-7.8	-0.00015 mg/L		0.000051	-0.00015 mg/L	0.000051	34.43%
Co 228.616†	40.1	0.00070 mg/L		0.000049	0.00070 mg/L	0.000049	7.00%
Cr 267.716†	13.7	0.00343 mg/L		0.001953	0.00343 mg/L	0.001953	57.01%
Cu 324.752†	1754.7	0.00921 mg/L		0.000207	0.00921 mg/L	0.000207	2.25%
Fe 273.955†	2434.2	2.246 mg/L		0.0022	2.246 mg/L	0.0022	0.10%
K 766.490†	5572.9	2.332 mg/L		0.0155	2.332 mg/L	0.0155	0.66%
Mg 279.077†	5105.0	5.034 mg/L		0.0185	5.034 mg/L	0.0185	0.37%
Mn 257.610†	1301.0	0.03517 mg/L		0.000209	0.03517 mg/L	0.000209	0.60%
Mo 202.031†	36.7	0.00339 mg/L		0.000385	0.00339 mg/L	0.000385	11.36%
Na 589.592†	40695.2	6.600 mg/L		0.0377	6.600 mg/L	0.0377	0.57%
Na 330.237†	193.8	8.656 mg/L		0.5935	8.656 mg/L	0.5935	6.86%
Ni 231.604†	6.8	0.00415 mg/L		0.002019	0.00415 mg/L	0.002019	48.63%
Pb 220.353†	-12.3	-0.00093 mg/L		0.000613	-0.00093 mg/L	0.000613	65.92%
Sb 206.836†	-7.4	-0.00489 mg/L		0.003609	-0.00489 mg/L	0.003609	73.75%
Se 196.026†	8.3	0.00913 mg/L		0.002081	0.00913 mg/L	0.002081	22.79%
Si 288.158†	20320.3	17.04 mg/L		0.113	17.04 mg/L	0.113	0.66%
Sn 189.927†	-6.9	-0.00057 mg/L		0.001293	-0.00057 mg/L	0.001293	225.35%
Sr 421.552†	60019.8	0.1298 mg/L		0.00019	0.1298 mg/L	0.00019	0.14%
Ti 334.903†	1235.3	0.06549 mg/L		0.000601	0.06549 mg/L	0.000601	0.92%
Tl 190.801†	-1.4	-0.00092 mg/L		0.001487	-0.00092 mg/L	0.001487	161.16%
V 292.402†	805.8	0.00731 mg/L		0.000275	0.00731 mg/L	0.000275	3.77%
Zn 206.200†	16.9	0.00867 mg/L		0.001018	0.00867 mg/L	0.001018	11.75%

Sequence No.: 10  
 Sample ID: RG82 MBSPK TWC

Autosampler Location: 55  
 Date Collected: 8/10/2010 4:18:07 PM  
 Data Type: Original

Dilution: 1X

Nebulizer Parameters: RG82 MBSPK TWC

Analyte Back Pressure Flow  
 All 172.0 kPa 0.55 L/min

Mean Data: RG82 MBSPK TWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1548053.9	108.3	%	0.28				0.25%
ScR 361.383	183098.4	112.3	%	1.03				0.91%
Ag 328.068†	86075.8	0.4803	mg/L	0.00415	0.4803	mg/L	0.00415	0.86%
Al 308.215†	2587.8	1.978	mg/L	0.0258	1.978	mg/L	0.0258	1.30%
As 188.979†	3056.4	1.981	mg/L	0.0112	1.981	mg/L	0.0112	0.57%
B 249.677†	2.7	-0.00021	mg/L	0.001383	-0.00021	mg/L	0.001383	656.96%
Ba 233.527†	14421.7	1.928	mg/L	0.0189	1.928	mg/L	0.0189	0.98%
Be 313.042†	133696.7	0.5111	mg/L	0.00126	0.5111	mg/L	0.00126	0.25%
Ca 317.933†	84332.7	10.23	mg/L	0.018	10.23	mg/L	0.018	0.18%
Cd 228.802†	25681.2	0.4889	mg/L	0.00460	0.4889	mg/L	0.00460	0.94%
Co 228.616†	23145.7	0.4798	mg/L	0.00323	0.4798	mg/L	0.00323	0.67%
Cr 267.716†	1761.5	0.5010	mg/L	0.00727	0.5010	mg/L	0.00727	1.45%
Cu 324.752†	96080.2	0.4946	mg/L	0.00371	0.4946	mg/L	0.00371	0.75%
Fe 273.955†	2226.7	2.054	mg/L	0.0197	2.054	mg/L	0.0197	0.96%
K 766.490†	23425.2	9.804	mg/L	0.0134	9.804	mg/L	0.0134	0.14%
Mg 279.077†	10285.5	10.14	mg/L	0.098	10.14	mg/L	0.098	0.97%
Mn 257.610†	17940.6	0.4857	mg/L	0.00461	0.4857	mg/L	0.00461	0.95%
Mo 202.031†	11.7	0.00100	mg/L	0.000038	0.00100	mg/L	0.000038	3.76%
Na 589.592†	58029.7	9.411	mg/L	0.0328	9.411	mg/L	0.0328	0.35%
Na 330.237†	252.5	11.23	mg/L	0.361	11.23	mg/L	0.361	3.21%
Ni 231.604†	801.6	0.4880	mg/L	0.00410	0.4880	mg/L	0.00410	0.84%
Pb 220.353†	14354.6	1.960	mg/L	0.0184	1.960	mg/L	0.0184	0.94%
Sb 206.836†	4.4	-0.00499	mg/L	0.000266	-0.00499	mg/L	0.000266	5.32%
Se 196.026†	2050.3	2.010	mg/L	0.0129	2.010	mg/L	0.0129	0.64%
Si 288.158†	29.5	0.02656	mg/L	0.001558	0.02656	mg/L	0.001558	5.87%
Sn 189.927†	-8.4	-0.00149	mg/L	0.000726	-0.00149	mg/L	0.000726	48.84%
Sr 421.552†	232013.3	0.5018	mg/L	0.00062	0.5018	mg/L	0.00062	0.12%
Ti 334.903†	-51.1	-0.00326	mg/L	0.000526	-0.00326	mg/L	0.000526	16.13%
Tl 190.801†	3767.4	1.950	mg/L	0.0120	1.950	mg/L	0.0120	0.61%
V 292.402†	53084.0	0.5021	mg/L	0.00473	0.5021	mg/L	0.00473	0.94%
Zn 206.200†	1033.5	0.4885	mg/L	0.00519	0.4885	mg/L	0.00519	1.06%

Sequence No.: 11

Sample ID: CV

Dilution: 1X

222222  
AW 8-10

Autosampler Location: 7

Date Collected: 8/10/2010 4:24:09 PM

Data Type: Original

Nebulizer Parameters: CV

Analyte Back Pressure Flow  
All 172.0 kPa 0.55 L/min

tubing disconnect

Mean Data: CV

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	28200.6	1.974	%	0.0789			4.00%
ScR 361.383	1700.1	1.043	%	1.7824			170.95%
Ag 328.068†	-9595.4	-0.05167	mg/L	0.008108	-0.05167	mg/L	0.008108 15.69%
Al 308.215†	504879.7	387.4	mg/L	973.46	387.4	mg/L	973.46 251.26%
As 188.979†	121.9	0.01007	mg/L	0.126187	0.01007	mg/L	0.126187 >999.9%
B 249.677†	27461.3	13.77	mg/L	23.230	13.77	mg/L	23.230 168.75%
Ba 233.527†	-39072.0	-5.233	mg/L	12.6504	-5.233	mg/L	12.6504 241.75%
Be 313.042†	-1306254.6	-5.006	mg/L	13.1166	-5.006	mg/L	13.1166 262.04%
Ca 317.933†	207226.1	25.13	mg/L	57.947	25.13	mg/L	57.947 230.63%
Cd 228.802†	348.8	0.02166	mg/L	0.036102	0.02166	mg/L	0.036102 166.70%
Co 228.616†	-2981.0	-0.01757	mg/L	0.116696	-0.01757	mg/L	0.116696 664.13%
Cr 267.716†	57314.7	16.31	mg/L	41.066	16.31	mg/L	41.066 251.78%
Cu 324.752†	24923.2	0.1396	mg/L	0.03700	0.1396	mg/L	0.03700 26.51%
Fe 273.955†	44048.8	40.63	mg/L	103.819	40.63	mg/L	103.819 255.53%
K 766.490†	-7316180.3	-3062	mg/L	7713.6	-3062	mg/L	7713.6 251.91%
Mg 279.077†	63395.7	62.52	mg/L	165.338	62.52	mg/L	165.338 264.46%
Mn 257.610†	-99618.0	-2.697	mg/L	6.9136	-2.697	mg/L	6.9136 256.36%
Mo 202.031†	494.7	0.04378	mg/L	0.007750	0.04378	mg/L	0.007750 17.70%
Na 589.592†	-2878544.9	-466.8	mg/L	1234.00	-466.8	mg/L	1234.00 264.33%
Na 330.237†	350153.9	15870	mg/L	40877.9	15870	mg/L	40877.9 257.63%
Ni 231.604†	85309.6	52.02	mg/L	125.670	52.02	mg/L	125.670 241.57%
Pb 220.353†	3634.3	0.6257	mg/L	0.32561	0.6257	mg/L	0.32561 52.04%
Sb 206.836†	2165.3	0.7203	mg/L	0.97934	0.7203	mg/L	0.97934 135.96%
Se 196.026†	-927.2	-0.8852	mg/L	0.15834	-0.8852	mg/L	0.15834 17.89%
Si 288.158†	21863.5	18.36	mg/L	34.662	18.36	mg/L	34.662 188.83%
Sn 189.927†	-84.3	-0.03080	mg/L	0.008218	-0.03080	mg/L	0.008218 26.68%
Sr 421.552†	-498375.0	-1.078	mg/L	4.2530	-1.078	mg/L	4.2530 394.58%
Ti 334.903†	-514993.0	-27.66	mg/L	71.194	-27.66	mg/L	71.194 257.37%
Tl 190.801†	-278.4	-0.09974	mg/L	0.104367	-0.09974	mg/L	0.104367 104.64%
V 292.402†	8367.0	0.2006	mg/L	0.29831	0.2006	mg/L	0.29831 148.71%
Zn 206.200†	16009.3	7.553	mg/L	17.3850	7.553	mg/L	17.3850 230.18%

User canceled analysis.

=====  
Analysis Begun

Start Time: 8/10/2010 4:32:36 PM

Plasma On Time: 8/10/2010 10:18:38 AM

Logged In Analyst: metals

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N0060101Autosampler Model: S10

Sample Information File: C:\pe\metals\Sample Information\0810B.sif

Batch ID:

Results Data Set: PE100810

Results Library: C:\pe\metals\Results\Results.mdb

=====  
Sequence No.: 11

Autosampler Location: 7

Sample ID: CV

Date Collected: 8/10/2010 4:32:39 PM

Dilution: 1X

Data Type: Original

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Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	173.0 kPa	0.55 L/min

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Mean Data: CV

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity				Conc. Units			
ScA 357.253	1482967.2		103.8 %	0.12				0.11%
ScR 361.383	173215.4		106.2 %	0.66				0.62%
Ag 328.068†	169821.1		0.9475 mg/L	0.00076	0.9475 mg/L	0.00076		0.08%
Al 308.215†	2667.3		2.008 mg/L	0.0132	2.008 mg/L	0.0132		0.66%
As 188.979†	3019.5		1.957 mg/L	0.0026	1.957 mg/L	0.0026		0.13%
B 249.677†	1918.4		0.9604 mg/L	0.00895	0.9604 mg/L	0.00895		0.93%
Ba 233.527†	7303.9		0.9761 mg/L	0.00832	0.9761 mg/L	0.00832		0.85%
Be 313.042†	257656.3		0.9849 mg/L	0.00166	0.9849 mg/L	0.00166		0.17%
Ca 317.933†	16993.5		2.060 mg/L	0.0188	2.060 mg/L	0.0188		0.91%
Cd 228.802†	52277.9		0.9990 mg/L	0.00345	0.9990 mg/L	0.00345		0.35%
Co 228.616†	46856.1		0.9707 mg/L	0.00227	0.9707 mg/L	0.00227		0.23%
Cr 267.716†	3498.3		0.9956 mg/L	0.00941	0.9956 mg/L	0.00941		0.94%
Cu 324.752†	204196.8		1.050 mg/L	0.0015	1.050 mg/L	0.0015		0.14%
Fe 273.955†	2152.5		1.985 mg/L	0.0150	1.985 mg/L	0.0150		0.75%
K 766.490†	47050.3		19.69 mg/L	0.040	19.69 mg/L	0.040		0.21%
Mg 279.077†	2039.9		2.015 mg/L	0.0162	2.015 mg/L	0.0162		0.81%
Mn 257.610†	36116.2		0.9773 mg/L	0.00857	0.9773 mg/L	0.00857		0.88%
Mo 202.031†	10424.8		0.9637 mg/L	0.00300	0.9637 mg/L	0.00300		0.31%
Na 589.592†	289073.5		46.88 mg/L	0.088	46.88 mg/L	0.088		0.19%
Na 330.237†	1118.2		50.58 mg/L	0.482	50.58 mg/L	0.482		0.95%
Ni 231.604†	1620.4		0.9889 mg/L	0.00975	0.9889 mg/L	0.00975		0.99%
Pb 220.353†	14322.0		1.956 mg/L	0.0073	1.956 mg/L	0.0073		0.37%
Sb 206.836†	4069.0		2.098 mg/L	0.0065	2.098 mg/L	0.0065		0.31%
Se 196.026†	2002.1		1.961 mg/L	0.0042	1.961 mg/L	0.0042		0.21%
Si 288.158†	2546.6		2.138 mg/L	0.0171	2.138 mg/L	0.0171		0.80%
Sn 189.927†	3299.4		0.9131 mg/L	0.00181	0.9131 mg/L	0.00181		0.20%
Sr 421.552†	468206.8		1.013 mg/L	0.0018	1.013 mg/L	0.0018		0.18%
Ti 334.903†	18293.3		0.9812 mg/L	0.00181	0.9812 mg/L	0.00181		0.18%
Tl 190.801†	3771.4		1.946 mg/L	0.0017	1.946 mg/L	0.0017		0.09%
V 292.402†	104088.4		0.9900 mg/L	0.00262	0.9900 mg/L	0.00262		0.26%
Zn 206.200†	2097.5		0.9901 mg/L	0.01060	0.9901 mg/L	0.01060		1.07%

Sequence No.: 12

Autosampler Location: 1

Sample ID: CB 4

Date Collected: 8/10/2010 4:38:41 PM

Dilution: 1X

Data Type: Original

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	173.0 kPa	0.55 L/min

## Mean Data: CB

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1505062.1	105.3	%	0.59			0.56%
ScR 361.383	172996.6	106.1	%	0.51			0.48%
Ag 328.068†	63.0	0.00035	mg/L	0.000229	0.00035	mg/L	0.000229 65.17%
Al 308.215†	9.3	0.00714	mg/L	0.007672	0.00714	mg/L	0.007672 107.52%
As 188.979†	0.1	0.00003	mg/L	0.000763	0.00003	mg/L	0.000763 >999.9%
B 249.677†	14.0	0.00701	mg/L	0.000423	0.00701	mg/L	0.000423 6.03%
Ba 233.527†	3.0	0.00041	mg/L	0.000327	0.00041	mg/L	0.000327 80.21%
Be 313.042†	-0.2	0.00000	mg/L	0.000041	0.00000	mg/L	0.000041 >999.9%
Ca 317.933†	27.0	0.00328	mg/L	0.000858	0.00328	mg/L	0.000858 26.18%
Cd 228.802†	-3.7	-0.00007	mg/L	0.000061	-0.00007	mg/L	0.000061 85.47%
Co 228.616†	0.8	0.00002	mg/L	0.000215	0.00002	mg/L	0.000215 993.05%
Cr 267.716†	4.9	0.00140	mg/L	0.000559	0.00140	mg/L	0.000559 39.79%
Cu 324.752†	-272.5	-0.00140	mg/L	0.000122	-0.00140	mg/L	0.000122 8.71%
Fe 273.955†	-3.0	-0.00275	mg/L	0.001175	-0.00275	mg/L	0.001175 42.68%
K 766.490†	-110.3	-0.04618	mg/L	0.026168	-0.04618	mg/L	0.026168 56.67%
Mg 279.077†	3.7	0.00369	mg/L	0.010598	0.00369	mg/L	0.010598 286.98%
Mn 257.610†	-3.2	-0.00009	mg/L	0.000107	-0.00009	mg/L	0.000107 122.48%
Mo 202.031†	0.3	0.00003	mg/L	0.000111	0.00003	mg/L	0.000111 352.31%
Na 589.592†	132.5	0.02149	mg/L	0.005589	0.02149	mg/L	0.005589 26.01%
Na 330.237†	24.8	1.126	mg/L	0.4205	1.126	mg/L	0.4205 37.34%
Ni 231.604†	2.5	0.00151	mg/L	0.000869	0.00151	mg/L	0.000869 57.55%
Pb 220.353†	-9.9	-0.00135	mg/L	0.000438	-0.00135	mg/L	0.000438 32.49%
Sb 206.836†	-8.7	-0.00450	mg/L	0.001975	-0.00450	mg/L	0.001975 43.91%
Se 196.026†	5.6	0.00551	mg/L	0.007701	0.00551	mg/L	0.007701 139.82%
Si 288.158†	10.2	0.00856	mg/L	0.002796	0.00856	mg/L	0.002796 32.67%
Sn 189.927†	6.0	0.00165	mg/L	0.000340	0.00165	mg/L	0.000340 20.62%
Sr 421.552†	-27.6	-0.00006	mg/L	0.000084	-0.00006	mg/L	0.000084 140.05%
Ti 334.903†	-46.8	-0.00251	mg/L	0.000741	-0.00251	mg/L	0.000741 29.48%
Tl 190.801†	6.5	0.00337	mg/L	0.001685	0.00337	mg/L	0.001685 50.06%
V 292.402†	17.1	0.00017	mg/L	0.000147	0.00017	mg/L	0.000147 85.54%
Zn 206.200†	0.5	0.00022	mg/L	0.000063	0.00022	mg/L	0.000063 28.12%



Sequence No.: 13  
Sample ID: RH62 MB SWC

Autosampler Location: 56  
Date Collected: 8/10/2010 4:44:39 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH62 MB SWC

Analyte	Back Pressure	Flow
All	173.0 kPa	0.55 L/min

Mean Data: RH62 MB SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1539558.8	107.8	%	0.88				0.82%
ScR 361.383	177286.8	108.7	%	0.95				0.88%
Ag 328.068†	54.6	0.00030	mg/L	0.000197	0.00061	mg/L	0.000394	64.69%
Al 308.215†	18.7	0.01434	mg/L	0.001676	0.02868	mg/L	0.003353	11.69%
As 188.979†	-0.7	-0.00043	mg/L	0.001225	-0.00085	mg/L	0.002451	286.75%
B 249.677†	2.3	0.00114	mg/L	0.003815	0.00228	mg/L	0.007630	334.32%
Ba 233.527†	2.0	0.00027	mg/L	0.000555	0.00054	mg/L	0.001109	205.49%
Be 313.042†	-31.8	-0.00012	mg/L	0.000013	-0.00024	mg/L	0.000026	10.56%
Ca 317.933†	95.9	0.01163	mg/L	0.001473	0.02325	mg/L	0.002947	12.67%
Cd 228.802†	-1.2	-0.00002	mg/L	0.000041	-0.00004	mg/L	0.000083	184.25%
Co 228.616†	4.1	0.00009	mg/L	0.000113	0.00018	mg/L	0.000226	126.05%
Cr 267.716†	2.0	0.00056	mg/L	0.000411	0.00111	mg/L	0.000821	73.91%
Cu 324.752†	-420.6	-0.00216	mg/L	0.000093	-0.00432	mg/L	0.000186	4.29%
Fe 273.955†	1.7	0.00159	mg/L	0.002492	0.00317	mg/L	0.004984	157.05%
K 766.490†	-197.9	-0.08284	mg/L	0.033198	-0.1657	mg/L	0.06640	40.08%
Mg 279.077†	7.9	0.00781	mg/L	0.004017	0.01562	mg/L	0.008035	51.45%
Mn 257.610†	-3.2	-0.00009	mg/L	0.000111	-0.00017	mg/L	0.000222	127.49%
Mo 202.031†	-5.7	-0.00053	mg/L	0.000181	-0.00106	mg/L	0.000361	34.07%
Na 589.592†	-52.0	-0.00843	mg/L	0.001972	-0.01686	mg/L	0.003943	23.39%
Na 330.237†	17.8	0.8041	mg/L	0.64461	1.608	mg/L	1.2892	80.17%
Ni 231.604†	3.7	0.00225	mg/L	0.000735	0.00449	mg/L	0.001470	32.74%
Pb 220.353†	-7.5	-0.00102	mg/L	0.000922	-0.00204	mg/L	0.001844	90.21%
Sb 206.836†	-10.4	-0.00535	mg/L	0.002577	-0.01071	mg/L	0.005154	48.14%
Se 196.026†	13.8	0.01348	mg/L	0.005819	0.02697	mg/L	0.011639	43.16%
Si 288.158†	9.8	0.00826	mg/L	0.002311	0.01652	mg/L	0.004623	27.98%
Sn 189.927†	6.1	0.00169	mg/L	0.000546	0.00339	mg/L	0.001091	32.20%
Sr 421.552†	-38.7	-0.00008	mg/L	0.000048	-0.00017	mg/L	0.000096	57.00%
Ti 334.903†	-51.3	-0.00275	mg/L	0.001345	-0.00551	mg/L	0.002691	48.84%
Tl 190.801†	1.8	0.00096	mg/L	0.001782	0.00191	mg/L	0.003564	186.12%
V 292.402†	-14.5	-0.00013	mg/L	0.000050	-0.00027	mg/L	0.000100	37.11%
Zn 206.200†	1.0	0.00045	mg/L	0.001311	0.00091	mg/L	0.002623	289.74%

Sequence No.: 14  
Sample ID: RG76 T SWC

Autosampler Location: 57  
Date Collected: 8/10/2010 4:50:39 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG76 T SWC

Analyte Back Pressure Flow  
All 172.0 kPa 0.55 L/min

Mean Data: RG76 T SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1513457.3	105.9	%	0.17				0.16%
ScR 361.383	179183.0	109.9	%	1.38				1.25%
Ag 328.068†	-930.2	0.00176	mg/L	0.000506	0.00351	mg/L	0.001012	28.79%
Al 308.215†	119903.8	91.97	mg/L	0.304	183.9	mg/L	0.61	0.33%
As 188.979†	33.9	0.03207	mg/L	0.000743	0.06414	mg/L	0.001485	2.32%
B 249.677†	85.4	0.04225	mg/L	0.002227	0.08450	mg/L	0.004454	5.27%
Ba 233.527†	2592.9	0.3366	mg/L	0.00399	0.6732	mg/L	0.00799	1.19%
Be 313.042†	469.3	0.00078	mg/L	0.000054	0.00156	mg/L	0.000108	6.92%
Ca 317.933†	353285.5	42.84	mg/L	0.067	85.67	mg/L	0.133	0.16%
Cd 228.802†	316.5	0.00616	mg/L	0.000059	0.01232	mg/L	0.000118	0.96%
Co 228.616†	3191.5	0.05596	mg/L	0.000427	0.1119	mg/L	0.00085	0.76%
Cr 267.716†	6132.4	1.747	mg/L	0.0153	3.495	mg/L	0.0306	0.87%
Cu 324.752†	105911.6	0.5620	mg/L	0.00600	1.124	mg/L	0.0120	1.07%
Fe 273.955†	227722.1	210.1	mg/L	1.59	420.2	mg/L	3.17	0.76%
K 766.490†	15687.4	6.566	mg/L	0.0477	13.13	mg/L	0.095	0.73%
Mg 279.077†	41534.3	40.84	mg/L	0.098	81.69	mg/L	0.197	0.24%
Mn 257.610†	201768.0	5.457	mg/L	0.0090	10.91	mg/L	0.018	0.16%
Mo 202.031†	1062.9	0.09770	mg/L	0.000518	0.1954	mg/L	0.00104	0.53%
Na 589.592†	73195.2	11.87	mg/L	0.108	23.74	mg/L	0.217	0.91%
Na 330.237†	323.5	13.59	mg/L	0.176	27.18	mg/L	0.353	1.30%
Ni 231.604†	793.7	0.4841	mg/L	0.00204	0.9682	mg/L	0.00408	0.42%
Pb 220.353†	9929.9	1.370	mg/L	0.0231	2.741	mg/L	0.0462	1.69%
Sb 206.836†	196.0	0.02681	mg/L	0.002203	0.05362	mg/L	0.004407	8.22%
Se 196.026†	-58.3	-0.00895	mg/L	0.007550	-0.01790	mg/L	0.015100	84.35%
Si 288.158†	7169.9	6.019	mg/L	0.0662	12.04	mg/L	0.132	1.10%
Sn 189.927†	62.9	0.02311	mg/L	0.000811	0.04621	mg/L	0.001623	3.51%
Sr 421.552†	174050.9	0.3764	mg/L	0.00118	0.7529	mg/L	0.00237	0.31%
Ti 334.903†	109621.8	5.885	mg/L	0.0060	11.77	mg/L	0.012	0.10%
Tl 190.801†	-7.4	-0.02354	mg/L	0.001902	-0.04709	mg/L	0.003804	8.08%
V 292.402†	38485.8	0.3447	mg/L	0.00455	0.6894	mg/L	0.00909	1.32%
Zn 206.200†	13576.2	6.414	mg/L	0.0521	12.83	mg/L	0.104	0.81%

Sequence No.: 15  
Sample ID: RH55 B SWC

Autosampler Location: 58  
Date Collected: 8/10/2010 4:56:41 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 B SWC

Analyte Back Pressure Flow  
All 172.0 kPa 0.55 L/min

Mean Data: RH55 B SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1569568.6	109.9	%	0.65				0.60%
ScR 361.383	181656.8	111.4	%	0.30				0.27%
Ag 328.068†	-1055.6	0.00063	mg/L	0.000295	0.00125	mg/L	0.000591	47.24%
Al 308.215†	188843.0	144.9	mg/L	0.21	289.7	mg/L	0.43	0.15%
As 188.979†	106.5	0.08074	mg/L	0.000674	0.1615	mg/L	0.00135	0.84%
B 249.677†	39.4	0.01945	mg/L	0.002758	0.03890	mg/L	0.005516	14.18%
Ba 233.527†	2349.5	0.3055	mg/L	0.00127	0.6109	mg/L	0.00253	0.41%
Be 313.042†	778.9	0.00185	mg/L	0.000044	0.00370	mg/L	0.000088	2.38%
Ca 317.933†	242483.5	29.40	mg/L	0.050	58.80	mg/L	0.099	0.17%
Cd 228.802†	47.8	0.00085	mg/L	0.000100	0.00171	mg/L	0.000200	11.75%
Co 228.616†	3885.9	0.07026	mg/L	0.000493	0.1405	mg/L	0.00099	0.70%
Cr 267.716†	832.9	0.2392	mg/L	0.00037	0.4784	mg/L	0.00074	0.16%
Cu 324.752†	21090.1	0.1231	mg/L	0.00123	0.2462	mg/L	0.00245	1.00%
Fe 273.955†	196155.6	181.0	mg/L	0.73	362.0	mg/L	1.46	0.40%
K 766.490†	16920.7	7.082	mg/L	0.0068	14.16	mg/L	0.014	0.10%
Mg 279.077†	31621.8	31.08	mg/L	0.019	62.16	mg/L	0.038	0.06%
Mn 257.610†	81752.1	2.210	mg/L	0.0043	4.420	mg/L	0.0086	0.20%
Mo 202.031†	34.1	0.00311	mg/L	0.000419	0.00621	mg/L	0.000837	13.47%
Na 589.592†	5186.6	0.8411	mg/L	0.00522	1.682	mg/L	0.0104	0.62%
Na 330.237†	34.1	2.493	mg/L	0.2377	4.985	mg/L	0.4753	9.54%
Ni 231.604†	391.8	0.2390	mg/L	0.00306	0.4780	mg/L	0.00612	1.28%
Pb 220.353†	-62.2	0.02079	mg/L	0.001542	0.04158	mg/L	0.003085	7.42%
Sb 206.836†	94.1	-0.00806	mg/L	0.001847	-0.01613	mg/L	0.003695	22.91%
Se 196.026†	-61.1	-0.00253	mg/L	0.006995	-0.00506	mg/L	0.013990	276.62%
Si 288.158†	746.4	0.6303	mg/L	0.00557	1.261	mg/L	0.0111	0.88%
Sn 189.927†	-21.0	-0.00108	mg/L	0.001225	-0.00215	mg/L	0.002450	113.89%
Sr 421.552†	96472.4	0.2086	mg/L	0.00039	0.4173	mg/L	0.00077	0.19%
Ti 334.903†	110351.3	5.925	mg/L	0.0081	11.85	mg/L	0.016	0.14%
Tl 190.801†	-5.6	-0.01844	mg/L	0.002985	-0.03687	mg/L	0.005970	16.19%
V 292.402†	43263.8	0.3823	mg/L	0.00439	0.7647	mg/L	0.00878	1.15%
Zn 206.200†	685.1	0.3250	mg/L	0.00128	0.6500	mg/L	0.00255	0.39%

Sequence No.: 16  
Sample ID: RH55 C SWC

Autosampler Location: 59  
Date Collected: 8/10/2010 5:02:42 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 C SWC

Analyte Back Pressure Flow  
All 173.0 kPa 0.55 L/min

Mean Data: RH55 C SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1585952.5	111.0	%	0.36				0.33%
ScR 361.383	186256.9	114.2	%	0.78				0.68%
Ag 328.068†	-824.0	0.00060	mg/L	0.000262	0.00120	mg/L	0.000525	43.65%
Al 308.215†	163537.5	125.4	mg/L	0.39	250.9	mg/L	0.77	0.31%
As 188.979†	28.8	0.03100	mg/L	0.002426	0.06199	mg/L	0.004852	7.83%
B 249.677†	41.6	0.02063	mg/L	0.001971	0.04126	mg/L	0.003942	9.55%
Ba 233.527†	2836.1	0.3723	mg/L	0.00145	0.7446	mg/L	0.00290	0.39%
Be 313.042†	698.2	0.00167	mg/L	0.000052	0.00335	mg/L	0.000104	3.11%
Ca 317.933†	282243.0	34.22	mg/L	0.037	68.44	mg/L	0.075	0.11%
Cd 228.802†	58.6	0.00115	mg/L	0.000048	0.00230	mg/L	0.000097	4.22%
Co 228.616†	2626.5	0.04350	mg/L	0.000338	0.08699	mg/L	0.000675	0.78%
Cr 267.716†	1023.3	0.2926	mg/L	0.00282	0.5853	mg/L	0.00563	0.96%
Cu 324.752†	26133.3	0.1457	mg/L	0.00023	0.2913	mg/L	0.00047	0.16%
Fe 273.955†	155851.0	143.8	mg/L	1.05	287.6	mg/L	2.10	0.73%
K 766.490†	21287.8	8.909	mg/L	0.0391	17.82	mg/L	0.078	0.44%
Mg 279.077†	29085.8	28.60	mg/L	0.037	57.21	mg/L	0.075	0.13%
Mn 257.610†	43502.9	1.176	mg/L	0.0021	2.352	mg/L	0.0042	0.18%
Mo 202.031†	30.4	0.00276	mg/L	0.000438	0.00552	mg/L	0.000875	15.85%
Na 589.592†	5053.3	0.8195	mg/L	0.00595	1.639	mg/L	0.0119	0.73%
Na 330.237†	27.8	2.249	mg/L	0.2110	4.497	mg/L	0.4219	9.38%
Ni 231.604†	357.9	0.2183	mg/L	0.00235	0.4366	mg/L	0.00471	1.08%
Pb 220.353†	281.8	0.06481	mg/L	0.000859	0.1296	mg/L	0.00172	1.32%
Sb 206.836†	79.2	-0.00595	mg/L	0.004388	-0.01191	mg/L	0.008776	73.70%
Se 196.026†	-51.8	-0.00264	mg/L	0.001203	-0.00527	mg/L	0.002407	45.67%
Si 288.158†	1143.0	0.9625	mg/L	0.00303	1.925	mg/L	0.0061	0.31%
Sn 189.927†	-20.0	-0.00048	mg/L	0.000738	-0.00097	mg/L	0.001477	152.50%
Sr 421.552†	112807.7	0.2440	mg/L	0.00116	0.4880	mg/L	0.00232	0.48%
Ti 334.903†	116937.7	6.279	mg/L	0.0141	12.56	mg/L	0.028	0.22%
Tl 190.801†	-3.3	-0.01600	mg/L	0.000702	-0.03200	mg/L	0.001404	4.39%
V 292.402†	37560.9	0.3330	mg/L	0.00129	0.6660	mg/L	0.00257	0.39%
Zn 206.200†	709.9	0.3367	mg/L	0.00183	0.6735	mg/L	0.00367	0.54%

Sequence No.: 17  
 Sample ID: RH62 A SWC

Autosampler Location: 60  
 Date Collected: 8/10/2010 5:08:44 PM  
 Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH62 A SWC

Analyte Back Pressure Flow  
 All 173.0 kPa 0.55 L/min

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Mean Data: RH62 A SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1598843.6	111.9	%	0.47				0.42%
ScR 361.383	193468.4	118.6	%	1.15				0.97%
Ag 328.068†	-1851.6	-0.00013	mg/L	0.000496	-0.00027	mg/L	0.000993	370.66%
Al 308.215†	375153.4	287.8	mg/L	0.74	575.6	mg/L	1.47	0.26%
As 188.979†	2.5	0.01216	mg/L	0.001254	0.02432	mg/L	0.002507	10.31%
B 249.677†	42.1	0.02068	mg/L	0.002895	0.04136	mg/L	0.005791	14.00%
Ba 233.527†	2945.8	0.3805	mg/L	0.00409	0.7609	mg/L	0.00819	1.08%
Be 313.042†	955.5	0.00131	mg/L	0.000075	0.00262	mg/L	0.000150	5.71%
Ca 317.933†	526058.7	63.78	mg/L	0.092	127.6	mg/L	0.18	0.14%
Cd 228.802†	76.8	0.00151	mg/L	0.000024	0.00301	mg/L	0.000048	1.60%
Co 228.616†	4860.0	0.09119	mg/L	0.000331	0.1824	mg/L	0.00066	0.36%
Cr 267.716†	1807.6	0.5174	mg/L	0.00452	1.035	mg/L	0.0090	0.87%
Cu 324.752†	27597.1	0.1653	mg/L	0.00054	0.3305	mg/L	0.00108	0.33%
Fe 273.955†	300418.1	277.2	mg/L	0.84	554.3	mg/L	1.69	0.30%
K 766.490†	25613.3	10.72	mg/L	0.057	21.44	mg/L	0.113	0.53%
Mg 279.077†	48638.8	47.81	mg/L	0.012	95.62	mg/L	0.023	0.02%
Mn 257.610†	60610.7	1.637	mg/L	0.0020	3.275	mg/L	0.0041	0.12%
Mo 202.031†	57.3	0.00524	mg/L	0.000377	0.01048	mg/L	0.000753	7.18%
Na 589.592†	3537.7	0.5737	mg/L	0.00588	1.147	mg/L	0.0118	1.02%
Na 330.237†	38.4	2.439	mg/L	0.3122	4.877	mg/L	0.6244	12.80%
Ni 231.604†	262.9	0.1604	mg/L	0.00214	0.3209	mg/L	0.00427	1.33%
Pb 220.353†	-223.7	0.03330	mg/L	0.000892	0.06659	mg/L	0.001784	2.68%
Sb 206.836†	206.4	-0.00237	mg/L	0.004605	-0.00474	mg/L	0.009210	194.46%
Se 196.026†	-110.8	-0.00573	mg/L	0.004015	-0.01147	mg/L	0.008030	70.01%
Si 288.158†	1240.0	1.047	mg/L	0.0043	2.093	mg/L	0.0086	0.41%
Sn 189.927†	-31.1	-0.00172	mg/L	0.001988	-0.00344	mg/L	0.003975	115.48%
Sr 421.552†	255151.5	0.5518	mg/L	0.00189	1.104	mg/L	0.0038	0.34%
Ti 334.903†	102724.0	5.514	mg/L	0.0111	11.03	mg/L	0.022	0.20%
Tl 190.801†	-31.0	-0.03268	mg/L	0.003951	-0.06537	mg/L	0.007902	12.09%
V 292.402†	93703.0	0.8473	mg/L	0.00254	1.695	mg/L	0.0051	0.30%
Zn 206.200†	270.4	0.1302	mg/L	0.00211	0.2604	mg/L	0.00423	1.62%

Sequence No.: 18  
 Sample ID: RH62 B SWC

Autosampler Location: 61  
 Date Collected: 8/10/2010 5:14:34 PM  
 Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH62 B SWC

Analyte Back Pressure Flow  
 All 173.0 kPa 0.55 L/min

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Mean Data: RH62 B SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity				Conc. Units	Std.Dev.	
ScA 357.253	1572110.3		110.0 %	0.41			0.37%
ScR 361.383	186156.3		114.2 %	0.45			0.39%
Ag 328.068†	-1750.4	-0.00198	mg/L	0.000229	-0.00217	0.000458	21.12%
Al 308.215†	558040.2	428.1	mg/L	0.96	856.2	1.92	0.22%
As 188.979†	59.6	0.04989	mg/L	0.000841	0.09978	0.001681	1.68%
B 249.677†	28.6	0.01394	mg/L	0.001760	0.02789	0.003519	12.62%
Ba 233.527†	12300.2	1.634	mg/L	0.0059	3.267	0.0117	0.36%
Be 313.042†	2390.4	0.00769	mg/L	0.000063	0.01537	0.000126	0.82%
Ca 317.933†	102752.0	12.46	mg/L	0.044	24.92	0.089	0.36%
Cd 228.802†	67.1	0.00126	mg/L	0.000070	0.00253	0.000141	5.56%
Co 228.616†	4696.4	0.08696	mg/L	0.000567	0.1739	0.00113	0.65%
Cr 267.716†	1352.5	0.3879	mg/L	0.00145	0.7757	0.00290	0.37%
Cu 324.752†	13392.4	0.08814	mg/L	0.000219	0.1763	0.00044	0.25%
Fe 273.955†	251837.0	232.4	mg/L	1.03	464.7	2.07	0.44%
K 766.490†	25797.3	10.80	mg/L	0.018	21.59	0.036	0.17%
Mg 279.077†	51422.5	50.58	mg/L	0.155	101.2	0.31	0.31%
Mn 257.610†	81155.2	2.192	mg/L	0.0050	4.384	0.0100	0.23%
Mo 202.031†	36.9	0.00335	mg/L	0.001112	0.00670	0.002224	33.20%
Na 589.592†	4265.9	0.6918	mg/L	0.00128	1.384	0.0026	0.19%
Na 330.237†	26.4	2.182	mg/L	0.1136	4.364	0.2272	5.21%
Ni 231.604†	323.5	0.1974	mg/L	0.00247	0.3948	0.00494	1.25%
Pb 220.353†	-168.9	0.08299	mg/L	0.000905	0.1660	0.00181	1.09%
Sb 206.836†	264.4	0.00288	mg/L	0.003676	0.00576	0.007353	127.63%
Se 196.026†	-132.3	-0.00649	mg/L	0.006584	-0.01297	0.013169	101.53%
Si 288.158†	1955.2	1.646	mg/L	0.0071	3.293	0.0141	0.43%
Sn 189.927†	-28.1	-0.00348	mg/L	0.001130	-0.00696	0.002261	32.48%
Sr 421.552†	177257.8	0.3834	mg/L	0.00008	0.7667	0.00015	0.02%
Ti 334.903†	107814.4	5.790	mg/L	0.0072	11.58	0.014	0.12%
Tl 190.801†	-21.2	-0.02709	mg/L	0.000808	-0.05417	0.001615	2.98%
V 292.402†	57378.4	0.5100	mg/L	0.00010	1.020	0.0002	0.02%
Zn 206.200†	992.4	0.4700	mg/L	0.00421	0.9400	0.00841	0.89%

Sequence No.: 19  
Sample ID: RH62 C SWC

Autosampler Location: 62  
Date Collected: 8/10/2010 5:20:23 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH62 C SWC

Analyte Back Pressure Flow  
All 173.0 kPa 0.55 L/min

Mean Data: RH62 C SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	1565563.9	109.6	%	0.56			0.51%
ScR 361.383	187424.4	114.9	%	1.29			1.12%
Ag 328.068†	-1524.8	-0.00044	mg/L	0.000492	-0.00088 mg/L	0.000984	111.83%
Al 308.215†	238081.5	182.6	mg/L	0.07	365.2 mg/L	0.15	0.04%
As 188.979†	-12.2	0.01420	mg/L	0.002366	0.02840 mg/L	0.004731	16.66%
B 249.677†	24.7	0.01198	mg/L	0.002680	0.02397 mg/L	0.005361	22.37%
Ba 233.527†	4428.9	0.5814	mg/L	0.00901	1.163 mg/L	0.0180	1.55%
Be 313.042†	786.5	0.00135	mg/L	0.000055	0.00270 mg/L	0.000109	4.04%
Ca 317.933†	324616.9	39.36	mg/L	0.112	78.72 mg/L	0.224	0.28%
Cd 228.802†	66.8	0.00132	mg/L	0.000041	0.00264 mg/L	0.000082	3.12%
Co 228.616†	4971.1	0.08360	mg/L	0.000695	0.1672 mg/L	0.00139	0.83%
Cr 267.716†	1169.7	0.3348	mg/L	0.00381	0.6696 mg/L	0.00762	1.14%
Cu 324.752†	89561.5	0.4779	mg/L	0.00249	0.9558 mg/L	0.00498	0.52%
Fe 273.955†	244178.0	225.3	mg/L	0.85	450.6 mg/L	1.69	0.38%
K 766.490†	52664.1	22.04	mg/L	0.071	44.08 mg/L	0.143	0.32%
Mg 279.077†	68237.5	67.17	mg/L	0.169	134.3 mg/L	0.34	0.25%
Mn 257.610†	109747.0	2.967	mg/L	0.0063	5.934 mg/L	0.0126	0.21%
Mo 202.031†	67.1	0.00614	mg/L	0.000303	0.01229 mg/L	0.000607	4.94%
Na 589.592†	6263.5	1.016	mg/L	0.0085	2.032 mg/L	0.0170	0.84%
Na 330.237†	17.4	2.736	mg/L	0.1380	5.472 mg/L	0.2760	5.04%
Ni 231.604†	205.0	0.1251	mg/L	0.00092	0.2502 mg/L	0.00184	0.74%
Pb 220.353†	-96.6	0.02379	mg/L	0.000214	0.04757 mg/L	0.000428	0.90%
Sb 206.836†	120.0	-0.00417	mg/L	0.003579	-0.00834 mg/L	0.007158	85.83%
Se 196.026†	-86.8	-0.01327	mg/L	0.001649	-0.02654 mg/L	0.003297	12.42%
Si 288.158†	953.9	0.8091	mg/L	0.00755	1.618 mg/L	0.0151	0.93%
Sn 189.927†	-44.3	-0.00397	mg/L	0.000488	-0.00794 mg/L	0.000977	12.30%
Sr 421.552†	150512.0	0.3255	mg/L	0.00018	0.6510 mg/L	0.00036	0.06%
Ti 334.903†	208256.4	11.18	mg/L	0.010	22.37 mg/L	0.021	0.09%
Tl 190.801†	-1.7	-0.02726	mg/L	0.002815	-0.05451 mg/L	0.005631	10.33%
V 292.402†	61854.0	0.5482	mg/L	0.00588	1.096 mg/L	0.0118	1.07%
Zn 206.200†	954.7	0.4533	mg/L	0.00705	0.9066 mg/L	0.01410	1.55%

Sequence No.: 20

Autosampler Location: 63

Sample ID: RH62 D SWC

Date Collected: 8/10/2010 5:26:12 PM

Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH62 D SWC

Analyte	Back Pressure	Flow
All	173.0 kPa	0.55 L/min

Mean Data: RH62 D SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1575514.1	110.3	%	0.36				0.33%
ScR 361.383	188740.7	115.7	%	0.31				0.27%
Ag 328.068†	-1336.6	-0.00002	mg/L	0.000132	-0.00004	mg/L	0.000264	612.04%
Al 308.215†	251752.3	193.1	mg/L	0.64	386.2	mg/L	1.28	0.33%
As 188.979†	-1.6	0.02151	mg/L	0.000846	0.04302	mg/L	0.001692	3.93%
B 249.677†	27.6	0.01347	mg/L	0.002569	0.02694	mg/L	0.005137	19.07%
Ba 233.527†	6453.2	0.8529	mg/L	0.00277	1.706	mg/L	0.0055	0.33%
Be 313.042†	941.4	0.00207	mg/L	0.000018	0.00413	mg/L	0.000036	0.87%
Ca 317.933†	294058.1	35.65	mg/L	0.067	71.31	mg/L	0.134	0.19%
Cd 228.802†	45.3	0.00089	mg/L	0.000047	0.00178	mg/L	0.000095	5.31%
Co 228.616†	4456.6	0.07245	mg/L	0.000367	0.1449	mg/L	0.00073	0.51%
Cr 267.716†	1141.3	0.3266	mg/L	0.00127	0.6531	mg/L	0.00254	0.39%
Cu 324.752†	49000.1	0.2676	mg/L	0.00020	0.5352	mg/L	0.00040	0.08%
Fe 273.955†	224524.0	207.2	mg/L	1.46	414.3	mg/L	2.92	0.71%
K 766.490†	85628.9	35.84	mg/L	0.267	71.68	mg/L	0.535	0.75%
Mg 279.077†	62449.1	61.47	mg/L	0.196	122.9	mg/L	0.39	0.32%
Mn 257.610†	98143.5	2.653	mg/L	0.0060	5.306	mg/L	0.0121	0.23%
Mo 202.031†	48.2	0.00441	mg/L	0.000495	0.00882	mg/L	0.000990	11.23%
Na 589.592†	5855.5	0.9496	mg/L	0.00985	1.899	mg/L	0.0197	1.04%
Na 330.237†	16.1	2.784	mg/L	0.1904	5.569	mg/L	0.3808	6.84%
Ni 231.604†	175.0	0.1068	mg/L	0.00295	0.2136	mg/L	0.00590	2.76%
Pb 220.353†	-132.4	0.02320	mg/L	0.000795	0.04640	mg/L	0.001590	3.43%
Sb 206.836†	116.0	-0.00555	mg/L	0.003938	-0.01110	mg/L	0.007875	70.96%
Se 196.026†	-76.2	-0.00352	mg/L	0.004322	-0.00704	mg/L	0.008645	122.78%
Si 288.158†	890.8	0.7555	mg/L	0.00370	1.511	mg/L	0.0074	0.49%
Sn 189.927†	-41.5	-0.00346	mg/L	0.001290	-0.00692	mg/L	0.002581	37.28%
Sr 421.552†	90170.4	0.1950	mg/L	0.00105	0.3900	mg/L	0.00209	0.54%
Ti 334.903†	212525.7	11.41	mg/L	0.024	22.82	mg/L	0.048	0.21%
Tl 190.801†	0.7	-0.02565	mg/L	0.002185	-0.05131	mg/L	0.004370	8.52%
V 292.402†	56739.0	0.5020	mg/L	0.00187	1.004	mg/L	0.0037	0.37%
Zn 206.200†	708.6	0.3368	mg/L	0.00196	0.6737	mg/L	0.00392	0.58%



Sequence No.: 21  
Sample ID: RH62 E SWC

Autosampler Location: 64  
Date Collected: 8/10/2010 5:32:03 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH62 E SWC

Analyte Back Pressure Flow  
All 173.0 kPa 0.55 L/min

Mean Data: RH62 E SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1540618.2	107.8	%	0.58				0.54%
ScR 361.383	181785.1	111.5	%	0.53				0.48%
Ag 328.068†	-1408.0	-0.00010	mg/L	0.000092	-0.00019	mg/L	0.000183	95.44%
Al 308.215†	211604.5	162.3	mg/L	0.15	324.6	mg/L	0.30	0.09%
As 188.979†	-42.0	0.00839	mg/L	0.003095	0.01678	mg/L	0.006189	36.89%
B 249.677†	29.1	0.01411	mg/L	0.003969	0.02822	mg/L	0.007937	28.12%
Ba 233.527†	9068.9	1.202	mg/L	0.0023	2.404	mg/L	0.0045	0.19%
Be 313.042†	843.8	0.00109	mg/L	0.000102	0.00219	mg/L	0.000203	9.28%
Ca 317.933†	620284.1	75.21	mg/L	0.072	150.4	mg/L	0.14	0.10%
Cd 228.802†	49.3	0.00103	mg/L	0.000117	0.00205	mg/L	0.000234	11.37%
Co 228.616†	5738.4	0.08752	mg/L	0.000943	0.1750	mg/L	0.00189	1.08%
Cr 267.716†	1826.3	0.5199	mg/L	0.00116	1.040	mg/L	0.0023	0.22%
Cu 324.752†	28066.3	0.1597	mg/L	0.00054	0.3194	mg/L	0.00107	0.34%
Fe 273.955†	241747.2	223.0	mg/L	0.47	446.1	mg/L	0.93	0.21%
K 766.490†	149786.8	62.69	mg/L	0.159	125.4	mg/L	0.32	0.25%
Mg 279.077†	113373.0	111.7	mg/L	0.25	223.4	mg/L	0.51	0.23%
Mn 257.610†	103655.5	2.802	mg/L	0.0053	5.605	mg/L	0.0106	0.19%
Mo 202.031†	43.0	0.00390	mg/L	0.000253	0.00780	mg/L	0.000506	6.48%
Na 589.592†	8489.7	1.377	mg/L	0.0016	2.754	mg/L	0.0031	0.11%
Na 330.237†	-5.5	2.907	mg/L	0.2251	5.813	mg/L	0.4502	7.74%
Ni 231.604†	246.2	0.1502	mg/L	0.00126	0.3004	mg/L	0.00253	0.84%
Pb 220.353†	-53.7	0.02473	mg/L	0.001229	0.04945	mg/L	0.002457	4.97%
Sb 206.836†	85.4	-0.00986	mg/L	0.000996	-0.01973	mg/L	0.001992	10.10%
Se 196.026†	-79.9	-0.01099	mg/L	0.005796	-0.02199	mg/L	0.011591	52.72%
Si 288.158†	779.8	0.6693	mg/L	0.01708	1.339	mg/L	0.0342	2.55%
Sn 189.927†	-62.8	-0.00331	mg/L	0.001219	-0.00661	mg/L	0.002439	36.89%
Sr 421.552†	109958.4	0.2378	mg/L	0.00049	0.4756	mg/L	0.00098	0.21%
Ti 334.903†	335246.3	18.00	mg/L	0.027	36.00	mg/L	0.054	0.15%
Tl 190.801†	19.0	-0.02862	mg/L	0.000654	-0.05725	mg/L	0.001308	2.29%
V 292.402†	77446.1	0.6905	mg/L	0.00166	1.381	mg/L	0.0033	0.24%
Zn 206.200†	880.1	0.4199	mg/L	0.00144	0.8399	mg/L	0.00288	0.34%

Sequence No.: 22  
Sample ID: RH62 MBSPK SWC

Autosampler Location: 65  
Date Collected: 8/10/2010 5:37:55 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH62 MBSPK SWC

Analyte Back Pressure Flow  
All 173.0 kPa 0.55 L/min

Mean Data: RH62 MBSPK SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1515458.0	106.1	%	5.03				4.74%
ScR 361.383	180034.8	110.4	%	0.76				0.68%
Ag 328.068†	87045.4	0.4857	mg/L	0.02146	0.9714	mg/L	0.04293	4.42%
Al 308.215†	2601.9	1.989	mg/L	0.0103	3.977	mg/L	0.0207	0.52%
As 188.979†	3081.3	1.998	mg/L	0.0870	3.995	mg/L	0.1740	4.36%
B 249.677†	-0.8	-0.00198	mg/L	0.002173	-0.00396	mg/L	0.004346	109.86%
Ba 233.527†	14410.4	1.927	mg/L	0.0123	3.853	mg/L	0.0245	0.64%
Be 313.042†	130454.4	0.4986	mg/L	0.00200	0.9973	mg/L	0.00399	0.40%
Ca 317.933†	82631.9	10.02	mg/L	0.040	20.04	mg/L	0.079	0.39%
Cd 228.802†	25862.3	0.4924	mg/L	0.02030	0.9847	mg/L	0.04060	4.12%
Co 228.616†	23431.1	0.4858	mg/L	0.01972	0.9715	mg/L	0.03943	4.06%
Cr 267.716†	1757.9	0.5000	mg/L	0.00285	1.0000	mg/L	0.00571	0.57%
Cu 324.752†	96662.1	0.4975	mg/L	0.02098	0.9951	mg/L	0.04196	4.22%
Fe 273.955†	2228.8	2.056	mg/L	0.0145	4.112	mg/L	0.0291	0.71%
K 766.490†	23472.2	9.824	mg/L	0.0061	19.65	mg/L	0.012	0.06%
Mg 279.077†	10263.0	10.12	mg/L	0.064	20.24	mg/L	0.127	0.63%
Mn 257.610†	17880.5	0.4841	mg/L	0.00278	0.9682	mg/L	0.00556	0.57%
Mo 202.031†	9.2	0.00077	mg/L	0.000368	0.00154	mg/L	0.000737	47.81%
Na 589.592†	58020.6	9.410	mg/L	0.0301	18.82	mg/L	0.060	0.32%
Na 330.237†	249.6	11.10	mg/L	0.227	22.19	mg/L	0.455	2.05%
Ni 231.604†	802.3	0.4884	mg/L	0.00621	0.9768	mg/L	0.01242	1.27%
Pb 220.353†	14484.4	1.977	mg/L	0.0818	3.955	mg/L	0.1636	4.14%
Sb 206.836†	7.9	-0.00317	mg/L	0.001629	-0.00633	mg/L	0.003257	51.46%
Se 196.026†	2066.1	2.025	mg/L	0.0799	4.051	mg/L	0.1597	3.94%
Si 288.158†	-7.9	-0.00478	mg/L	0.003789	-0.00957	mg/L	0.007578	79.19%
Sn 189.927†	-7.8	-0.00133	mg/L	0.001266	-0.00266	mg/L	0.002533	95.35%
Sr 421.552†	229882.3	0.4972	mg/L	0.00056	0.9944	mg/L	0.00113	0.11%
Ti 334.903†	-23.7	-0.00178	mg/L	0.000316	-0.00356	mg/L	0.000632	17.75%
Tl 190.801†	3824.4	1.980	mg/L	0.0839	3.960	mg/L	0.1679	4.24%
V 292.402†	53783.4	0.5086	mg/L	0.02041	1.017	mg/L	0.0408	4.01%
Zn 206.200†	1025.4	0.4847	mg/L	0.00518	0.9694	mg/L	0.01036	1.07%

Sequence No.: 23

Sample ID: CV

Autosampler Location: 7

Date Collected: 8/10/2010 5:43:58 PM

Data Type: Original

Dilution: 1X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	173.0 kPa	0.55 L/min

## Mean Data: CV

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD	
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1547459.6	108.3	%	0.56			0.51%	
ScR 361.383	181706.7	111.4	%	0.47			0.42%	
Ag 328.068†	165990.2	0.9261	mg/L	0.00606	0.9261	mg/L	0.00606	0.65%
Al 308.215†	2625.4	1.977	mg/L	0.0112	1.977	mg/L	0.0112	0.57%
As 188.979†	2982.7	1.933	mg/L	0.0061	1.933	mg/L	0.0061	0.32%
B 249.677†	1896.0	0.9493	mg/L	0.00326	0.9493	mg/L	0.00326	0.34%
Ba 233.527†	7271.8	0.9719	mg/L	0.00333	0.9719	mg/L	0.00333	0.34%
Be 313.042†	260087.7	0.9942	mg/L	0.00134	0.9942	mg/L	0.00134	0.13%
Ca 317.933†	17025.8	2.064	mg/L	0.0069	2.064	mg/L	0.0069	0.33%
Cd 228.802†	51077.5	0.9760	mg/L	0.00611	0.9760	mg/L	0.00611	0.63%
Co 228.616†	46056.3	0.9541	mg/L	0.00659	0.9541	mg/L	0.00659	0.69%
Cr 267.716†	3493.8	0.9943	mg/L	0.00263	0.9943	mg/L	0.00263	0.26%
Cu 324.752†	199020.6	1.024	mg/L	0.0060	1.024	mg/L	0.0060	0.59%
Fe 273.955†	2160.7	1.993	mg/L	0.0022	1.993	mg/L	0.0022	0.11%
K 766.490†	46242.3	19.35	mg/L	0.074	19.35	mg/L	0.074	0.38%
Mg 279.077†	2030.1	2.005	mg/L	0.0092	2.005	mg/L	0.0092	0.46%
Mn 257.610†	36447.3	0.9863	mg/L	0.00149	0.9863	mg/L	0.00149	0.15%
Mo 202.031†	10221.9	0.9449	mg/L	0.00605	0.9449	mg/L	0.00605	0.64%
Na 589.592†	285001.4	46.22	mg/L	0.044	46.22	mg/L	0.044	0.10%
Na 330.237†	1099.8	49.74	mg/L	0.313	49.74	mg/L	0.313	0.63%
Ni 231.604†	1618.7	0.9879	mg/L	0.00238	0.9879	mg/L	0.00238	0.24%
Pb 220.353†	14112.4	1.927	mg/L	0.0140	1.927	mg/L	0.0140	0.72%
Sb 206.836†	3985.9	2.055	mg/L	0.0117	2.055	mg/L	0.0117	0.57%
Se 196.026†	1978.8	1.938	mg/L	0.0075	1.938	mg/L	0.0075	0.39%
Si 288.158†	2505.2	2.103	mg/L	0.0136	2.103	mg/L	0.0136	0.65%
Sn 189.927†	3241.7	0.8971	mg/L	0.00399	0.8971	mg/L	0.00399	0.44%
Sr 421.552†	461994.6	0.9992	mg/L	0.00261	0.9992	mg/L	0.00261	0.26%
Ti 334.903†	18267.5	0.9798	mg/L	0.00173	0.9798	mg/L	0.00173	0.18%
Tl 190.801†	3723.5	1.921	mg/L	0.0114	1.921	mg/L	0.0114	0.60%
V 292.402†	102146.5	0.9716	mg/L	0.00757	0.9716	mg/L	0.00757	0.78%
Zn 206.200†	2123.1	1.002	mg/L	0.0032	1.002	mg/L	0.0032	0.32%

Sequence No.: 24  
 Sample ID: CB

Autosampler Location: 1  
 Date Collected: 8/10/2010 5:49:59 PM  
 Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 173.0 kPa 0.55 L/min

Mean Data: CB

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1554078.8	108.8	%	0.51			0.46%
ScR 361.383	178509.2	109.5	%	0.07			0.06%
Ag 328.068†	92.2	0.00051	mg/L	0.000129	0.00051	mg/L	0.000129 24.99%
Al 308.215†	20.2	0.01550	mg/L	0.016124	0.01550	mg/L	0.016124 104.00%
As 188.979†	0.1	0.00004	mg/L	0.000087	0.00004	mg/L	0.000087 207.49%
B 249.677†	8.8	0.00440	mg/L	0.004522	0.00440	mg/L	0.004522 102.82%
Ba 233.527†	1.2	0.00015	mg/L	0.000395	0.00015	mg/L	0.000395 256.86%
Be 313.042†	-13.4	-0.00005	mg/L	0.000086	-0.00005	mg/L	0.000086 167.97%
Ca 317.933†	16.3	0.00197	mg/L	0.001939	0.00197	mg/L	0.001939 98.27%
Cd 228.802†	-4.4	-0.00008	mg/L	0.000099	-0.00008	mg/L	0.000099 118.60%
Co 228.616†	5.4	0.00012	mg/L	0.000095	0.00012	mg/L	0.000095 80.41%
Cr 267.716†	-1.4	-0.00039	mg/L	0.001482	-0.00039	mg/L	0.001482 382.80%
Cu 324.752†	-279.9	-0.00144	mg/L	0.000140	-0.00144	mg/L	0.000140 9.73%
Fe 273.955†	-0.8	-0.00072	mg/L	0.000210	-0.00072	mg/L	0.000210 29.25%
K 766.490†	-149.6	-0.06263	mg/L	0.002415	-0.06263	mg/L	0.002415 3.86%
Mg 279.077†	7.2	0.00715	mg/L	0.001084	0.00715	mg/L	0.001084 15.17%
Mn 257.610†	-5.2	-0.00014	mg/L	0.000028	-0.00014	mg/L	0.000028 19.92%
Mo 202.031†	-2.5	-0.00023	mg/L	0.000221	-0.00023	mg/L	0.000221 96.09%
Na 589.592†	37.9	0.00614	mg/L	0.004238	0.00614	mg/L	0.004238 69.00%
Na 330.237†	21.0	0.9533	mg/L	0.80189	0.9533	mg/L	0.80189 84.12%
Ni 231.604†	1.0	0.00060	mg/L	0.002724	0.00060	mg/L	0.002724 451.16%
Pb 220.353†	-12.5	-0.00170	mg/L	0.000727	-0.00170	mg/L	0.000727 42.85%
Sb 206.836†	-5.3	-0.00273	mg/L	0.001272	-0.00273	mg/L	0.001272 46.56%
Se 196.026†	8.9	0.00871	mg/L	0.002570	0.00871	mg/L	0.002570 29.51%
Si 288.158†	-0.5	-0.00045	mg/L	0.003520	-0.00045	mg/L	0.003520 781.75%
Sn 189.927†	3.6	0.00099	mg/L	0.000633	0.00099	mg/L	0.000633 64.06%
Sr 421.552†	-46.9	-0.00010	mg/L	0.000061	-0.00010	mg/L	0.000061 60.35%
Ti 334.903†	-52.1	-0.00280	mg/L	0.001091	-0.00280	mg/L	0.001091 39.03%
Tl 190.801†	9.2	0.00481	mg/L	0.001893	0.00481	mg/L	0.001893 39.39%
V 292.402†	-13.4	-0.00013	mg/L	0.000176	-0.00013	mg/L	0.000176 137.46%
Zn 206.200†	1.0	0.00049	mg/L	0.000781	0.00049	mg/L	0.000781 159.19%

User canceled analysis.

=====  
**Analysis Begun**

Start Time: 8/10/2010 5:54:35 PM

Plasma On Time: 8/10/2010 10:18:38 AM

Logged In Analyst: metals

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N0060101Autosampler Model: S10

Sample Information File: C:\pe\metals\Sample Information\0810B.sif

Batch ID:

Results Data Set: PE100810

Results Library: C:\pe\metals\Results\Results.mdb

=====  
 Sequence No.: 25

Autosampler Location: 66

Sample ID: RH55 MB SWC

Date Collected: 8/10/2010 5:54:37 PM

Data Type: Original

Dilution: 2X

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**Nebulizer Parameters: RH55 MB SWC**

<b>Analyte</b>	<b>Back Pressure</b>	<b>Flow</b>
All	173.0 kPa	0.55 L/min

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**Mean Data: RH55 MB SWC**

<b>Analyte</b>	<b>Mean Corrected Intensity</b>	<b>Conc.</b>	<b>Calib. Units</b>	<b>Std.Dev.</b>	<b>Conc. Units</b>	<b>Std.Dev.</b>	<b>RSD</b>
ScA 357.253	1571682.3	110.0	%	1.39			1.26%
ScR 361.383	182095.9	111.7	%	0.52			0.47%
Ag 328.068†	104.8	0.00058	mg/L	0.000034	0.00117 mg/L	0.000068	5.82%
Al 308.215†	27.9	0.02144	mg/L	0.018803	0.04288 mg/L	0.037607	87.70%
As 188.979†	-1.3	-0.00086	mg/L	0.001178	-0.00172 mg/L	0.002355	136.69%
B 249.677†	5.5	0.00278	mg/L	0.001778	0.00556 mg/L	0.003556	64.01%
Ba 233.527†	0.9	0.00012	mg/L	0.000877	0.00024 mg/L	0.001754	716.09%
Be 313.042†	-42.7	-0.00016	mg/L	0.000024	-0.00033 mg/L	0.000049	14.83%
Ca 317.933†	83.8	0.01016	mg/L	0.001356	0.02033 mg/L	0.002711	13.34%
Cd 228.802†	-6.7	-0.00013	mg/L	0.000072	-0.00025 mg/L	0.000143	57.14%
Co 228.616†	10.9	0.00023	mg/L	0.000178	0.00046 mg/L	0.000356	77.69%
Cr 267.716†	6.7	0.00191	mg/L	0.000373	0.00382 mg/L	0.000747	19.53%
Cu 324.752†	-422.7	-0.00217	mg/L	0.000086	-0.00435 mg/L	0.000173	3.98%
Fe 273.955†	7.9	0.00728	mg/L	0.000755	0.01456 mg/L	0.001510	10.37%
K 766.490†	-288.2	-0.1206	mg/L	0.02234	-0.2412 mg/L	0.04469	18.52%
Mg 279.077†	8.5	0.00841	mg/L	0.002827	0.01681 mg/L	0.005654	33.63%
Mn 257.610†	6.0	0.00016	mg/L	0.000129	0.00032 mg/L	0.000258	80.52%
Mo 202.031†	-6.1	-0.00057	mg/L	0.000878	-0.00113 mg/L	0.001756	155.03%
Na 589.592†	-138.9	-0.02252	mg/L	0.006328	-0.04504 mg/L	0.012656	28.10%
Na 330.237†	22.2	1.008	mg/L	0.3643	2.015 mg/L	0.7286	36.15%
Ni 231.604†	5.7	0.00349	mg/L	0.000904	0.00699 mg/L	0.001809	25.89%
Pb 220.353†	-15.7	-0.00213	mg/L	0.000625	-0.00426 mg/L	0.001251	29.39%
Sb 206.836†	-12.9	-0.00671	mg/L	0.002871	-0.01342 mg/L	0.005742	42.77%
Se 196.026†	8.1	0.00790	mg/L	0.000728	0.01580 mg/L	0.001456	9.21%
Si 288.158†	-3.9	-0.00325	mg/L	0.007359	-0.00650 mg/L	0.014718	226.30%
Sn 189.927†	-0.0	-0.00001	mg/L	0.000610	-0.00002 mg/L	0.001220	>999.9%
Sr 421.552†	-46.4	-0.00010	mg/L	0.000030	-0.00020 mg/L	0.000059	29.44%
Ti 334.903†	-41.6	-0.00224	mg/L	0.000499	-0.00447 mg/L	0.000999	22.33%
Tl 190.801†	4.7	0.00245	mg/L	0.002811	0.00490 mg/L	0.005623	114.86%
V 292.402†	6.8	0.00007	mg/L	0.000138	0.00015 mg/L	0.000276	187.11%
Zn 206.200†	2.5	0.00118	mg/L	0.001985	0.00235 mg/L	0.003969	168.87%

Sequence No.: 26  
Sample ID: RH55 D SWC

Autosampler Location: 67  
Date Collected: 8/10/2010 6:00:38 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 D SWC

Analyte Back Pressure Flow  
All 173.0 kPa 0.55 L/min

Mean Data: RH55 D SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1599843.7	112.0	%	0.60				0.53%
ScR 361.383	186653.8	114.5	%	1.03				0.90%
Ag 328.068†	-841.6	0.00065	mg/L	0.000192	0.00130	mg/L	0.000384	29.51%
Al 308.215†	160673.1	123.3	mg/L	1.03	246.5	mg/L	2.07	0.84%
As 188.979†	-0.0	0.01209	mg/L	0.001129	0.02418	mg/L	0.002258	9.34%
B 249.677†	34.7	0.01715	mg/L	0.002095	0.03430	mg/L	0.004189	12.21%
Ba 233.527†	2820.2	0.3695	mg/L	0.00301	0.7390	mg/L	0.00603	0.82%
Be 313.042†	601.8	0.00134	mg/L	0.000012	0.00267	mg/L	0.000024	0.91%
Ca 317.933†	273244.7	33.13	mg/L	0.322	66.26	mg/L	0.644	0.97%
Cd 228.802†	66.7	0.00133	mg/L	0.000023	0.00266	mg/L	0.000045	1.71%
Co 228.616†	3224.0	0.05615	mg/L	0.000587	0.1123	mg/L	0.00117	1.05%
Cr 267.716†	729.3	0.2093	mg/L	0.00158	0.4185	mg/L	0.00317	0.76%
Cu 324.752†	18940.5	0.1099	mg/L	0.00045	0.2199	mg/L	0.00091	0.41%
Fe 273.955†	171029.5	157.8	mg/L	2.02	315.6	mg/L	4.05	1.28%
K 766.490†	13045.8	5.460	mg/L	0.0439	10.92	mg/L	0.088	0.80%
Mg 279.077†	28988.4	28.50	mg/L	0.235	57.00	mg/L	0.471	0.83%
Mn 257.610†	128481.2	3.474	mg/L	0.0272	6.948	mg/L	0.0543	0.78%
Mo 202.031†	16.5	0.00149	mg/L	0.000312	0.00297	mg/L	0.000623	20.96%
Na 589.592†	4985.7	0.8086	mg/L	0.00325	1.617	mg/L	0.0065	0.40%
Na 330.237†	30.1	2.343	mg/L	0.1003	4.687	mg/L	0.2007	4.28%
Ni 231.604†	336.7	0.2054	mg/L	0.00156	0.4108	mg/L	0.00311	0.76%
Pb 220.353†	-33.5	0.02010	mg/L	0.000809	0.04020	mg/L	0.001618	4.02%
Sb 206.836†	73.8	-0.00929	mg/L	0.000640	-0.01858	mg/L	0.001280	6.89%
Se 196.026†	-51.6	-0.00269	mg/L	0.003123	-0.00538	mg/L	0.006246	116.10%
Si 288.158†	723.2	0.6104	mg/L	0.00751	1.221	mg/L	0.0150	1.23%
Sn 189.927†	-24.5	-0.00185	mg/L	0.001820	-0.00371	mg/L	0.003641	98.15%
Sr 421.552†	89271.5	0.1931	mg/L	0.00157	0.3861	mg/L	0.00314	0.81%
Ti 334.903†	114214.9	6.133	mg/L	0.0474	12.27	mg/L	0.095	0.77%
Tl 190.801†	2.4	-0.01584	mg/L	0.000479	-0.03168	mg/L	0.000958	3.02%
V 292.402†	36338.7	0.3198	mg/L	0.00180	0.6395	mg/L	0.00360	0.56%
Zn 206.200†	600.7	0.2852	mg/L	0.00346	0.5703	mg/L	0.00693	1.21%

Sequence No.: 27  
Sample ID: RH55 E SWC

Autosampler Location: 68  
Date Collected: 8/10/2010 6:06:40 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 E SWC

Analyte Back Pressure Flow  
All 173.0 kPa 0.55 L/min

Mean Data: RH55 E SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1607657.9	112.5	%	0.86				0.77%
ScR 361.383	185300.7	113.6	%	0.75				0.66%
Ag 328.068†	-826.1	0.00175	mg/L	0.000169	0.00351	mg/L	0.000339	9.65%
Al 308.215†	279060.1	214.1	mg/L	0.40	428.1	mg/L	0.80	0.19%
As 188.979†	39.5	0.04708	mg/L	0.003528	0.09415	mg/L	0.007056	7.49%
B 249.677†	44.4	0.02197	mg/L	0.002083	0.04394	mg/L	0.004166	9.48%
Ba 233.527†	6446.7	0.8532	mg/L	0.00687	1.706	mg/L	0.0137	0.80%
Be 313.042†	902.3	0.00213	mg/L	0.000050	0.00425	mg/L	0.000100	2.36%
Ca 317.933†	240318.0	29.14	mg/L	0.031	58.28	mg/L	0.063	0.11%
Cd 228.802†	77.7	0.00147	mg/L	0.000047	0.00295	mg/L	0.000093	3.16%
Co 228.616†	4037.9	0.06481	mg/L	0.000623	0.1296	mg/L	0.00125	0.96%
Cr 267.716†	709.5	0.2043	mg/L	0.00245	0.4086	mg/L	0.00490	1.20%
Cu 324.752†	39027.1	0.2144	mg/L	0.00244	0.4288	mg/L	0.00487	1.14%
Fe 273.955†	199253.3	183.8	mg/L	0.95	367.7	mg/L	1.89	0.52%
K 766.490†	20509.8	8.584	mg/L	0.0294	17.17	mg/L	0.059	0.34%
Mg 279.077†	24990.1	24.54	mg/L	0.064	49.08	mg/L	0.128	0.26%
Mn 257.610†	139875.5	3.782	mg/L	0.0077	7.563	mg/L	0.0153	0.20%
Mo 202.031†	44.3	0.00405	mg/L	0.000415	0.00811	mg/L	0.000830	10.24%
Na 589.592†	15417.6	2.500	mg/L	0.0136	5.001	mg/L	0.0273	0.55%
Na 330.237†	46.6	4.059	mg/L	0.1366	8.119	mg/L	0.2733	3.37%
Ni 231.604†	214.0	0.1305	mg/L	0.00212	0.2611	mg/L	0.00423	1.62%
Pb 220.353†	385.0	0.1010	mg/L	0.00115	0.2020	mg/L	0.00231	1.14%
Sb 206.836†	116.2	-0.00569	mg/L	0.003413	-0.01139	mg/L	0.006826	59.93%
Se 196.026†	-73.7	-0.00185	mg/L	0.002187	-0.00371	mg/L	0.004374	117.99%
Si 288.158†	2324.3	1.952	mg/L	0.0216	3.905	mg/L	0.0431	1.11%
Sn 189.927†	-15.2	0.00219	mg/L	0.000334	0.00439	mg/L	0.000669	15.24%
Sr 421.552†	146251.0	0.3163	mg/L	0.00051	0.6326	mg/L	0.00101	0.16%
Ti 334.903†	201182.3	10.80	mg/L	0.013	21.61	mg/L	0.025	0.12%
Tl 190.801†	11.8	-0.01989	mg/L	0.003928	-0.03979	mg/L	0.007856	19.74%
V 292.402†	48481.3	0.4270	mg/L	0.00645	0.8540	mg/L	0.01291	1.51%
Zn 206.200†	876.1	0.4151	mg/L	0.00373	0.8302	mg/L	0.00746	0.90%

Sequence No.: 28  
Sample ID: RH55 F SWC

Autosampler Location: 69  
Date Collected: 8/10/2010 6:12:43 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 F SWC

Analyte Back Pressure Flow  
All 173.0 kPa 0.55 L/min

Mean Data: RH55 F SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1587024.7	111.1	%	0.70				0.63%
ScR 361.383	183248.1	112.4	%	0.55				0.49%
Ag 328.068†	-944.6	0.00148	mg/L	0.000129	0.00297	mg/L	0.000259	8.72%
Al 308.215†	266086.9	204.1	mg/L	0.22	408.2	mg/L	0.44	0.11%
As 188.979†	25.5	0.03845	mg/L	0.000723	0.07690	mg/L	0.001446	1.88%
B 249.677†	44.7	0.02211	mg/L	0.002554	0.04421	mg/L	0.005108	11.55%
Ba 233.527†	5994.8	0.7924	mg/L	0.00593	1.585	mg/L	0.0119	0.75%
Be 313.042†	883.3	0.00205	mg/L	0.000073	0.00410	mg/L	0.000146	3.55%
Ca 317.933†	265195.1	32.15	mg/L	0.069	64.31	mg/L	0.138	0.21%
Cd 228.802†	63.2	0.00121	mg/L	0.000071	0.00241	mg/L	0.000143	5.93%
Co 228.616†	4057.9	0.06486	mg/L	0.000641	0.1297	mg/L	0.00128	0.99%
Cr 267.716†	606.3	0.1750	mg/L	0.00096	0.3500	mg/L	0.00191	0.55%
Cu 324.752†	37197.6	0.2056	mg/L	0.00127	0.4111	mg/L	0.00255	0.62%
Fe 273.955†	206954.5	190.9	mg/L	1.09	381.9	mg/L	2.18	0.57%
K 766.490†	20166.8	8.440	mg/L	0.0108	16.88	mg/L	0.022	0.13%
Mg 279.077†	25909.5	25.44	mg/L	0.045	50.88	mg/L	0.090	0.18%
Mn 257.610†	110778.1	2.995	mg/L	0.0018	5.990	mg/L	0.0036	0.06%
Mo 202.031†	38.5	0.00352	mg/L	0.000307	0.00703	mg/L	0.000614	8.74%
Na 589.592†	21268.3	3.449	mg/L	0.0150	6.898	mg/L	0.0300	0.44%
Na 330.237†	66.5	4.996	mg/L	0.1428	9.992	mg/L	0.2855	2.86%
Ni 231.604†	181.3	0.1106	mg/L	0.00017	0.2212	mg/L	0.00035	0.16%
Pb 220.353†	225.1	0.07585	mg/L	0.000871	0.1517	mg/L	0.00174	1.15%
Sb 206.836†	115.0	-0.00433	mg/L	0.000357	-0.00866	mg/L	0.000713	8.23%
Se 196.026†	-68.5	0.00321	mg/L	0.004137	0.00643	mg/L	0.008274	128.71%
Si 288.158†	3527.8	2.961	mg/L	0.0297	5.923	mg/L	0.0594	1.00%
Sn 189.927†	-20.6	0.00096	mg/L	0.001315	0.00192	mg/L	0.002629	136.87%
Sr 421.552†	177222.3	0.3833	mg/L	0.00037	0.7666	mg/L	0.00075	0.10%
Ti 334.903†	205337.0	11.03	mg/L	0.015	22.05	mg/L	0.030	0.14%
Tl 190.801†	9.8	-0.02025	mg/L	0.002868	-0.04049	mg/L	0.005735	14.16%
V 292.402†	48463.0	0.4255	mg/L	0.00164	0.8510	mg/L	0.00328	0.39%
Zn 206.200†	829.2	0.3930	mg/L	0.00430	0.7861	mg/L	0.00860	1.09%



Sequence No.: 29  
Sample ID: RH55 G SWC

Autosampler Location: 70  
Date Collected: 8/10/2010 6:18:45 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 G SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RH55 G SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	1569181.1	109.8	%	0.49				0.44%
ScR 361.383	183477.9	112.5	%	0.42				0.37%
Ag 328.068†	-991.3	0.00099	mg/L	0.000242	0.00198	mg/L	0.000484	24.45%
Al 308.215†	250903.5	192.5	mg/L	0.46	384.9	mg/L	0.91	0.24%
As 188.979†	39.0	0.04444	mg/L	0.001807	0.08888	mg/L	0.003615	4.07%
B 249.677†	48.5	0.02403	mg/L	0.001968	0.04806	mg/L	0.003937	8.19%
Ba 233.527†	5382.5	0.7108	mg/L	0.00444	1.422	mg/L	0.0089	0.62%
Be 313.042†	921.3	0.00210	mg/L	0.000032	0.00420	mg/L	0.000064	1.53%
Ca 317.933†	297631.2	36.09	mg/L	0.214	72.18	mg/L	0.427	0.59%
Cd 228.802†	60.2	0.00115	mg/L	0.000081	0.00229	mg/L	0.000161	7.03%
Co 228.616†	3878.2	0.06350	mg/L	0.000301	0.1270	mg/L	0.00060	0.47%
Cr 267.716†	723.3	0.2080	mg/L	0.00227	0.4159	mg/L	0.00455	1.09%
Cu 324.752†	42695.8	0.2336	mg/L	0.00267	0.4672	mg/L	0.00535	1.14%
Fe 273.955†	200204.9	184.7	mg/L	0.23	369.4	mg/L	0.46	0.13%
K 766.490†	20190.8	8.450	mg/L	0.0402	16.90	mg/L	0.080	0.48%
Mg 279.077†	30981.7	30.45	mg/L	0.172	60.90	mg/L	0.344	0.57%
Mn 257.610†	104465.7	2.824	mg/L	0.0080	5.648	mg/L	0.0160	0.28%
Mo 202.031†	44.0	0.00403	mg/L	0.000374	0.00805	mg/L	0.000747	9.28%
Na 589.592†	19027.4	3.086	mg/L	0.0076	6.172	mg/L	0.0152	0.25%
Na 330.237†	60.8	4.417	mg/L	0.3578	8.834	mg/L	0.7155	8.10%
Ni 231.604†	257.4	0.1570	mg/L	0.00272	0.3141	mg/L	0.00545	1.73%
Pb 220.353†	645.6	0.1304	mg/L	0.00141	0.2608	mg/L	0.00281	1.08%
Sb 206.836†	111.5	-0.00468	mg/L	0.001669	-0.00936	mg/L	0.003338	35.67%
Se 196.026†	-71.4	-0.00297	mg/L	0.005216	-0.00593	mg/L	0.010432	175.89%
Si 288.158†	2684.4	2.255	mg/L	0.0173	4.510	mg/L	0.0346	0.77%
Sn 189.927†	-11.2	0.00341	mg/L	0.000622	0.00682	mg/L	0.001244	18.25%
Sr 421.552†	187901.2	0.4064	mg/L	0.00018	0.8128	mg/L	0.00035	0.04%
Ti 334.903†	180129.7	9.672	mg/L	0.0224	19.34	mg/L	0.045	0.23%
Tl 190.801†	4.3	-0.02082	mg/L	0.002745	-0.04165	mg/L	0.005490	13.18%
V 292.402†	53159.6	0.4717	mg/L	0.00293	0.9434	mg/L	0.00586	0.62%
Zn 206.200†	897.6	0.4256	mg/L	0.00297	0.8511	mg/L	0.00593	0.70%

Sequence No.: 30  
Sample ID: RH55 H SWC

Autosampler Location: 71  
Date Collected: 8/10/2010 6:24:47 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 H SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RH55 H SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1578797.0	110.5	%	0.27				0.24%
ScR 361.383	184239.6	113.0	%	0.83				0.74%
Ag 328.068†	-961.1	0.00082	mg/L	0.000178	0.00164	mg/L	0.000357	21.81%
Al 308.215†	242400.0	185.9	mg/L	0.31	371.9	mg/L	0.63	0.17%
As 188.979†	38.6	0.04340	mg/L	0.001274	0.08680	mg/L	0.002547	2.93%
B 249.677†	40.7	0.02011	mg/L	0.000469	0.04022	mg/L	0.000939	2.33%
Ba 233.527†	5387.8	0.7119	mg/L	0.00303	1.424	mg/L	0.0061	0.43%
Be 313.042†	808.2	0.00171	mg/L	0.000035	0.00343	mg/L	0.000070	2.04%
Ca 317.933†	311354.6	37.75	mg/L	0.014	75.50	mg/L	0.029	0.04%
Cd 228.802†	76.6	0.00147	mg/L	0.000004	0.00294	mg/L	0.000009	0.30%
Co 228.616†	3935.0	0.06537	mg/L	0.000597	0.1307	mg/L	0.00119	0.91%
Cr 267.716†	714.1	0.2052	mg/L	0.00094	0.4103	mg/L	0.00189	0.46%
Cu 324.752†	56773.5	0.3054	mg/L	0.00248	0.6108	mg/L	0.00496	0.81%
Fe 273.955†	191054.2	176.3	mg/L	1.57	352.5	mg/L	3.14	0.89%
K 766.490†	19872.7	8.317	mg/L	0.0527	16.63	mg/L	0.105	0.63%
Mg 279.077†	31872.1	31.33	mg/L	0.016	62.66	mg/L	0.031	0.05%
Mn 257.610†	103657.2	2.802	mg/L	0.0011	5.605	mg/L	0.0022	0.04%
Mo 202.031†	40.3	0.00368	mg/L	0.000329	0.00736	mg/L	0.000658	8.94%
Na 589.592†	22949.0	3.722	mg/L	0.0042	7.444	mg/L	0.0084	0.11%
Na 330.237†	83.2	5.331	mg/L	0.1811	10.66	mg/L	0.362	3.40%
Ni 231.604†	300.2	0.1831	mg/L	0.00180	0.3662	mg/L	0.00361	0.99%
Pb 220.353†	1292.0	0.2172	mg/L	0.00232	0.4345	mg/L	0.00464	1.07%
Sb 206.836†	107.3	-0.00452	mg/L	0.002250	-0.00904	mg/L	0.004499	49.78%
Se 196.026†	-65.6	-0.00008	mg/L	0.001130	-0.00015	mg/L	0.002261	>999.9%
Si 288.158†	2665.5	2.239	mg/L	0.0030	4.479	mg/L	0.0060	0.13%
Sn 189.927†	0.9	0.00670	mg/L	0.001199	0.01339	mg/L	0.002399	17.91%
Sr 421.552†	185075.9	0.4003	mg/L	0.00148	0.8006	mg/L	0.00295	0.37%
Ti 334.903†	172675.9	9.272	mg/L	0.0095	18.54	mg/L	0.019	0.10%
Tl 190.801†	7.1	-0.01860	mg/L	0.002460	-0.03720	mg/L	0.004920	13.23%
V 292.402†	51501.1	0.4574	mg/L	0.00590	0.9148	mg/L	0.01181	1.29%
Zn 206.200†	944.9	0.4480	mg/L	0.00325	0.8959	mg/L	0.00649	0.72%

Sequence No.: 31  
Sample ID: RH55 ADUP SWC

Autosampler Location: 72  
Date Collected: 8/10/2010 6:30:50 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 ADUP SWC

Analyte	Back Pressure	Flow
All	173.0 kPa	0.55 L/min

Mean Data: RH55 ADUP SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1589342.3	111.2	%	0.30				0.27%
ScR 361.383	180928.4	111.0	%	0.75				0.68%
Ag 328.068†	-686.0	0.00040	mg/L	0.000195	0.00080	mg/L	0.000390	48.47%
Al 308.215†	182402.5	139.9	mg/L	0.26	279.8	mg/L	0.52	0.19%
As 188.979†	16.2	0.02191	mg/L	0.002622	0.04383	mg/L	0.005243	11.96%
B 249.677†	28.8	0.01426	mg/L	0.002686	0.02851	mg/L	0.005371	18.84%
Ba 233.527†	2456.4	0.3229	mg/L	0.00109	0.6457	mg/L	0.00219	0.34%
Be 313.042†	670.1	0.00157	mg/L	0.000014	0.00314	mg/L	0.000029	0.91%
Ca 317.933†	213616.6	25.90	mg/L	0.030	51.80	mg/L	0.059	0.11%
Cd 228.802†	29.2	0.00057	mg/L	0.000061	0.00115	mg/L	0.000122	10.61%
Co 228.616†	2483.2	0.04135	mg/L	0.000259	0.08271	mg/L	0.000518	0.63%
Cr 267.716†	733.1	0.2098	mg/L	0.00188	0.4195	mg/L	0.00376	0.90%
Cu 324.752†	20108.1	0.1122	mg/L	0.00031	0.2245	mg/L	0.00062	0.28%
Fe 273.955†	124950.8	115.3	mg/L	0.17	230.6	mg/L	0.35	0.15%
K 766.490†	6503.4	2.722	mg/L	0.0273	5.444	mg/L	0.0546	1.00%
Mg 279.077†	25911.6	25.49	mg/L	0.028	50.98	mg/L	0.056	0.11%
Mn 257.610†	27951.1	0.7550	mg/L	0.00024	1.510	mg/L	0.0005	0.03%
Mo 202.031†	39.0	0.00357	mg/L	0.000569	0.00714	mg/L	0.001137	15.92%
Na 589.592†	5845.3	0.9480	mg/L	0.00917	1.896	mg/L	0.0183	0.97%
Na 330.237†	38.5	2.729	mg/L	0.0674	5.457	mg/L	0.1348	2.47%
Ni 231.604†	225.0	0.1373	mg/L	0.00069	0.2745	mg/L	0.00137	0.50%
Pb 220.353†	-62.9	0.02359	mg/L	0.000425	0.04717	mg/L	0.000850	1.80%
Sb 206.836†	71.3	-0.00824	mg/L	0.001005	-0.01647	mg/L	0.002010	12.20%
Se 196.026†	-50.0	-0.00232	mg/L	0.001728	-0.00464	mg/L	0.003456	74.44%
Si 288.158†	1428.4	1.201	mg/L	0.0071	2.402	mg/L	0.0143	0.60%
Sn 189.927†	-25.1	-0.00260	mg/L	0.001907	-0.00520	mg/L	0.003813	73.30%
Sr 421.552†	90022.3	0.1947	mg/L	0.00037	0.3894	mg/L	0.00074	0.19%
Ti 334.903†	108217.9	5.811	mg/L	0.0088	11.62	mg/L	0.018	0.15%
Tl 190.801†	-2.8	-0.01436	mg/L	0.001255	-0.02873	mg/L	0.002510	8.74%
V 292.402†	37626.4	0.3368	mg/L	0.00084	0.6735	mg/L	0.00168	0.25%
Zn 206.200†	450.4	0.2139	mg/L	0.00036	0.4278	mg/L	0.00071	0.17%

Sequence No.: 32  
Sample ID: RH55 A SWC

Autosampler Location: 73  
Date Collected: 8/10/2010 6:36:51 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 A SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RH55 A SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1589804.0	111.3	%	0.60			0.54%
ScR 361.383	186835.0	114.6	%	0.16			0.14%
Ag 328.068†	-674.9	0.00043	mg/L	0.000050	0.00086	mg/L	0.000099 11.62%
Al 308.215†	177441.7	136.1	mg/L	0.26	272.2	mg/L	0.51 0.19%
As 188.979†	11.0	0.01907	mg/L	0.001317	0.03815	mg/L	0.002633 6.90%
B 249.677†	35.0	0.01736	mg/L	0.002524	0.03472	mg/L	0.005047 14.54%
Ba 233.527†	2325.6	0.3053	mg/L	0.00116	0.6107	mg/L	0.00232 0.38%
Be 313.042†	715.0	0.00167	mg/L	0.000008	0.00335	mg/L	0.000016 0.48%
Ca 317.933†	284489.0	34.49	mg/L	0.058	68.99	mg/L	0.116 0.17%
Cd 228.802†	33.6	0.00067	mg/L	0.000045	0.00133	mg/L	0.000089 6.72%
Co 228.616†	2278.7	0.03665	mg/L	0.000594	0.07331	mg/L	0.001188 1.62%
Cr 267.716†	722.5	0.2066	mg/L	0.00100	0.4132	mg/L	0.00200 0.48%
Cu 324.752†	20112.6	0.1123	mg/L	0.00041	0.2245	mg/L	0.00082 0.36%
Fe 273.955†	125870.4	116.1	mg/L	0.45	232.3	mg/L	0.90 0.39%
K 766.490†	5983.4	2.504	mg/L	0.0168	5.008	mg/L	0.0336 0.67%
Mg 279.077†	25473.3	25.06	mg/L	0.033	50.11	mg/L	0.065 0.13%
Mn 257.610†	29432.5	0.7951	mg/L	0.00143	1.590	mg/L	0.0029 0.18%
Mo 202.031†	37.9	0.00347	mg/L	0.000337	0.00695	mg/L	0.000674 9.70%
Na 589.592†	6060.5	0.9829	mg/L	0.00351	1.966	mg/L	0.0070 0.36%
Na 330.237†	40.6	2.824	mg/L	0.1378	5.648	mg/L	0.2755 4.88%
Ni 231.604†	218.7	0.1334	mg/L	0.00012	0.2669	mg/L	0.00024 0.09%
Pb 220.353†	-53.7	0.02371	mg/L	0.000481	0.04742	mg/L	0.000961 2.03%
Sb 206.836†	69.9	-0.00768	mg/L	0.004334	-0.01537	mg/L	0.008667 56.39%
Se 196.026†	-39.1	0.00775	mg/L	0.004234	0.01549	mg/L	0.008468 54.66%
Si 288.158†	1239.4	1.043	mg/L	0.0023	2.085	mg/L	0.0045 0.22%
Sn 189.927†	-26.0	-0.00231	mg/L	0.001324	-0.00462	mg/L	0.002648 57.37%
Sr 421.552†	93083.3	0.2013	mg/L	0.00060	0.4026	mg/L	0.00120 0.30%
Ti 334.903†	113177.0	6.077	mg/L	0.0059	12.15	mg/L	0.012 0.10%
Tl 190.801†	-0.3	-0.01368	mg/L	0.002330	-0.02736	mg/L	0.004660 17.03%
V 292.402†	40359.9	0.3621	mg/L	0.00229	0.7243	mg/L	0.00458 0.63%
Zn 206.200†	437.2	0.2079	mg/L	0.00131	0.4158	mg/L	0.00262 0.63%

Sequence No.: 33  
Sample ID: RH55 ASPK SWC

Autosampler Location: 74  
Date Collected: 8/10/2010 6:42:53 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 ASPK SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RH55 ASPK SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1582149.2	110.7	%	1.15				1.04%
ScR 361.383	186661.5	114.5	%	0.52				0.45%
Ag 328.068†	82745.3	0.4662	mg/L	0.00183	0.9323	mg/L	0.00366	0.39%
Al 308.215†	181937.2	139.6	mg/L	0.08	279.1	mg/L	0.16	0.06%
As 188.979†	2867.3	1.870	mg/L	0.0264	3.740	mg/L	0.0528	1.41%
B 249.677†	36.9	0.01687	mg/L	0.001245	0.03374	mg/L	0.002491	7.38%
Ba 233.527†	16601.5	2.214	mg/L	0.0113	4.427	mg/L	0.0227	0.51%
Be 313.042†	129786.1	0.4952	mg/L	0.00051	0.9903	mg/L	0.00102	0.10%
Ca 317.933†	308104.7	37.36	mg/L	0.028	74.71	mg/L	0.056	0.07%
Cd 228.802†	24618.2	0.4688	mg/L	0.00030	0.9376	mg/L	0.00060	0.06%
Co 228.616†	23802.6	0.4837	mg/L	0.00678	0.9674	mg/L	0.01356	1.40%
Cr 267.716†	2418.2	0.6891	mg/L	0.00216	1.378	mg/L	0.0043	0.31%
Cu 324.752†	115426.5	0.6034	mg/L	0.00215	1.207	mg/L	0.0043	0.36%
Fe 273.955†	133302.2	123.0	mg/L	0.17	246.0	mg/L	0.35	0.14%
K 766.490†	28708.1	12.01	mg/L	0.001	24.03	mg/L	0.001	0.01%
Mg 279.077†	35809.2	35.25	mg/L	0.044	70.49	mg/L	0.087	0.12%
Mn 257.610†	44775.5	1.211	mg/L	0.0014	2.421	mg/L	0.0028	0.12%
Mo 202.031†	48.6	0.00439	mg/L	0.000519	0.00877	mg/L	0.001038	11.83%
Na 589.592†	62013.6	10.06	mg/L	0.036	20.11	mg/L	0.073	0.36%
Na 330.237†	257.1	12.37	mg/L	0.453	24.74	mg/L	0.906	3.66%
Ni 231.604†	994.0	0.6054	mg/L	0.00068	1.211	mg/L	0.0014	0.11%
Pb 220.353†	13235.3	1.838	mg/L	0.0226	3.676	mg/L	0.0453	1.23%
Sb 206.836†	89.4	-0.00654	mg/L	0.001709	-0.01308	mg/L	0.003417	26.13%
Se 196.026†	1873.3	1.884	mg/L	0.0252	3.767	mg/L	0.0504	1.34%
Si 288.158†	1276.9	1.076	mg/L	0.0156	2.152	mg/L	0.0312	1.45%
Sn 189.927†	-28.1	-0.00262	mg/L	0.000169	-0.00525	mg/L	0.000338	6.45%
Sr 421.552†	330665.0	0.7152	mg/L	0.00076	1.430	mg/L	0.0015	0.11%
Ti 334.903†	104145.9	5.592	mg/L	0.0046	11.18	mg/L	0.009	0.08%
Tl 190.801†	3529.7	1.815	mg/L	0.0217	3.630	mg/L	0.0435	1.20%
V 292.402†	88000.2	0.8127	mg/L	0.00181	1.625	mg/L	0.0036	0.22%
Zn 206.200†	1439.6	0.6815	mg/L	0.00455	1.363	mg/L	0.0091	0.67%

Sequence No.: 34  
Sample ID: RH55 MBSPK SWC

Autosampler Location: 75  
Date Collected: 8/10/2010 6:48:43 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 MBSPK SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

*gem*

Mean Data: RH55 MBSPK SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1560978.0	109.3	%	0.36				0.33%
ScR 361.383	151337.4	92.81	%	33.106				35.67%
Ag 328.068†	86551.7	0.4829	mg/L ✓	0.00456	0.9659	mg/L	0.00911	0.94%
Al 308.215†	3551.3	2.717	mg/L ✓	1.1300	5.434	mg/L	2.2599	41.59%
As 188.979†	3044.1	1.973	mg/L ✓	0.0109	3.947	mg/L	0.0218	0.55%
B 249.677†	-7.3	-0.00530	mg/L	0.007534	-0.01060	mg/L	0.015067	142.10%
Ba 233.527†	19780.0	2.645	mg/L ✓	1.1697	5.289	mg/L	2.3394	44.23%
Be 313.042†	182474.5	0.6980	mg/L	0.31783	1.396	mg/L	0.6357	45.53%
Ca 317.933†	115244.1	13.97	mg/L	6.318	27.95	mg/L	12.635	45.21%
Cd 228.802†	25830.3	0.4918	mg/L ✓	0.00457	0.9837	mg/L	0.00914	0.93%
Co 228.616†	23305.4	0.4829	mg/L	0.00559	0.9659	mg/L	0.01117	1.16%
Cr 267.716†	2399.5	0.6824	mg/L ✓	0.29673	1.365	mg/L	0.5935	43.48%
Cu 324.752†	96475.6	0.4967	mg/L	0.00417	0.9933	mg/L	0.00833	0.84%
Fe 273.955†	3147.7	2.904	mg/L	1.2777	5.807	mg/L	2.5554	44.00%
K 766.490†	33684.6	14.10	mg/L	7.175	28.20	mg/L	14.350	50.89%
Mg 279.077†	14098.4	13.90	mg/L	6.118	27.81	mg/L	12.236	44.00%
Mn 257.610†	24587.8	0.6655	mg/L	0.29474	1.331	mg/L	0.5895	44.29%
Mo 202.031†	8.3	0.00066	mg/L	0.000124	0.00133	mg/L	0.000248	18.73%
Na 589.592†	80584.3	13.07	mg/L	6.107	26.14	mg/L	12.215	46.73%
Na 330.237†	251.5	11.10	mg/L	0.278	22.20	mg/L	0.556	2.50%
Ni 231.604†	1080.6	0.6581	mg/L	0.27584	1.316	mg/L	0.5517	41.92%
Pb 220.353†	14335.7	1.958	mg/L ✓	0.0202	3.915	mg/L	0.0404	1.03%
Sb 206.836†	1.4	-0.00986	mg/L	0.003847	-0.01972	mg/L	0.007695	39.01%
Se 196.026†	2047.1	2.007	mg/L ✓	0.0167	4.013	mg/L	0.0334	0.83%
Si 288.158†	-6.4	-0.00287	mg/L	0.002502	-0.00573	mg/L	0.005004	87.28%
Sn 189.927†	-7.0	-0.00079	mg/L	0.000652	-0.00157	mg/L	0.001303	82.89%
Sr 421.552†	318762.1	0.6894	mg/L	0.31643	1.379	mg/L	0.6329	45.90%
Ti 334.903†	68.6	0.00298	mg/L	0.007340	0.00595	mg/L	0.014679	246.61%
Tl 190.801†	3805.2	1.970	mg/L	0.0164	3.939	mg/L	0.0329	0.83%
V 292.402†	53016.7	0.5025	mg/L	0.00336	1.005	mg/L	0.0067	0.67%
Zn 206.200†	1419.1	0.6707	mg/L	0.29400	1.341	mg/L	0.5880	43.83%

Sequence No.: 35  
 Sample ID: CV

Autosampler Location: 7  
 Date Collected: 8/10/2010 6:54:45 PM  
 Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte Back Pressure Flow  
 All 173.0 kPa 0.55 L/min

Mean Data: CV

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	1530320.4	107.1	%	0.64				0.59%
ScR 361.383	174370.2	106.9	%	0.74				0.69%
Ag 328.068†	166869.9	0.9311	mg/L	0.00289	0.9311	mg/L	0.00289	0.31%
Al 308.215†	2657.4	2.001	mg/L	0.0143	2.001	mg/L	0.0143	0.71%
As 188.979†	2986.0	1.936	mg/L	0.0216	1.936	mg/L	0.0216	1.11%
B 249.677†	1892.9	0.9477	mg/L	0.00624	0.9477	mg/L	0.00624	0.66%
Ba 233.527†	7248.5	0.9687	mg/L	0.00349	0.9687	mg/L	0.00349	0.36%
Be 313.042†	251814.5	0.9625	mg/L	0.00033	0.9625	mg/L	0.00033	0.03%
Ca 317.933†	16757.3	2.032	mg/L	0.0081	2.032	mg/L	0.0081	0.40%
Cd 228.802†	51361.4	0.9815	mg/L	0.00544	0.9815	mg/L	0.00544	0.55%
Co 228.616†	46188.9	0.9569	mg/L	0.00652	0.9569	mg/L	0.00652	0.68%
Cr 267.716†	3459.4	0.9845	mg/L	0.00343	0.9845	mg/L	0.00343	0.35%
Cu 324.752†	201142.3	1.035	mg/L	0.0037	1.035	mg/L	0.0037	0.36%
Fe 273.955†	2125.2	1.960	mg/L	0.0128	1.960	mg/L	0.0128	0.65%
K 766.490†	47647.3	19.94	mg/L	0.071	19.94	mg/L	0.071	0.36%
Mg 279.077†	2014.8	1.990	mg/L	0.0054	1.990	mg/L	0.0054	0.27%
Mn 257.610†	35676.6	0.9654	mg/L	0.00365	0.9654	mg/L	0.00365	0.38%
Mo 202.031†	10220.7	0.9448	mg/L	0.01313	0.9448	mg/L	0.01313	1.39%
Na 589.592†	291264.5	47.24	mg/L	0.069	47.24	mg/L	0.069	0.15%
Na 330.237†	1119.3	50.63	mg/L	0.339	50.63	mg/L	0.339	0.67%
Ni 231.604†	1603.8	0.9788	mg/L	0.00327	0.9788	mg/L	0.00327	0.33%
Pb 220.353†	14137.6	1.930	mg/L	0.0058	1.930	mg/L	0.0058	0.30%
Sb 206.836†	3990.7	2.058	mg/L	0.0228	2.058	mg/L	0.0228	1.11%
Se 196.026†	1974.4	1.934	mg/L	0.0192	1.934	mg/L	0.0192	0.99%
Si 288.158†	2537.9	2.131	mg/L	0.0182	2.131	mg/L	0.0182	0.86%
Sn 189.927†	3240.5	0.8968	mg/L	0.00936	0.8968	mg/L	0.00936	1.04%
Sr 421.552†	465373.3	1.007	mg/L	0.0012	1.007	mg/L	0.0012	0.12%
Ti 334.903†	18149.3	0.9735	mg/L	0.00180	0.9735	mg/L	0.00180	0.19%
Tl 190.801†	3728.4	1.924	mg/L	0.0209	1.924	mg/L	0.0209	1.08%
V 292.402†	102829.3	0.9780	mg/L	0.00424	0.9780	mg/L	0.00424	0.43%
Zn 206.200†	2073.7	0.9789	mg/L	0.00388	0.9789	mg/L	0.00388	0.40%

Sequence No.: 36  
 Sample ID: CB *6*

Autosampler Location: 1  
 Date Collected: 8/10/2010 7:00:46 PM  
 Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 174.0 kPa 0.55 L/min

Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1566009.8	109.6	%	0.21				0.19%
ScR 361.383	178781.4	109.6	%	0.10				0.09%
Ag 328.068†	95.3	0.00053	mg/L	0.000441	0.00053	mg/L	0.000441	82.85%
Al 308.215†	23.6	0.01810	mg/L	0.010084	0.01810	mg/L	0.010084	55.72%
As 188.979†	-2.5	-0.00165	mg/L	0.001758	-0.00165	mg/L	0.001758	106.70%
B 249.677†	12.2	0.00612	mg/L	0.001462	0.00612	mg/L	0.001462	23.90%
Ba 233.527†	-4.2	-0.00056	mg/L	0.000668	-0.00056	mg/L	0.000668	119.55%
Be 313.042†	-15.9	-0.00006	mg/L	0.000035	-0.00006	mg/L	0.000035	56.95%
Ca 317.933†	20.0	0.00242	mg/L	0.003892	0.00242	mg/L	0.003892	160.62%
Cd 228.802†	-2.3	-0.00004	mg/L	0.000040	-0.00004	mg/L	0.000040	97.17%
Co 228.616†	4.3	0.00009	mg/L	0.000011	0.00009	mg/L	0.000011	11.20%
Cr 267.716†	-1.3	-0.00038	mg/L	0.002031	-0.00038	mg/L	0.002031	530.34%
Cu 324.752†	-159.7	-0.00082	mg/L	0.000182	-0.00082	mg/L	0.000182	22.24%
Fe 273.955†	-1.5	-0.00136	mg/L	0.001723	-0.00136	mg/L	0.001723	126.80%
K 766.490†	-147.2	-0.06159	mg/L	0.008443	-0.06159	mg/L	0.008443	13.71%
Mg 279.077†	7.5	0.00745	mg/L	0.003607	0.00745	mg/L	0.003607	48.45%
Mn 257.610†	-7.7	-0.00021	mg/L	0.000197	-0.00021	mg/L	0.000197	94.14%
Mo 202.031†	-1.1	-0.00010	mg/L	0.000238	-0.00010	mg/L	0.000238	238.04%
Na 589.592†	12.3	0.00199	mg/L	0.005550	0.00199	mg/L	0.005550	278.75%
Na 330.237†	26.2	1.189	mg/L	0.8493	1.189	mg/L	0.8493	71.43%
Ni 231.604†	1.6	0.00098	mg/L	0.000455	0.00098	mg/L	0.000455	46.58%
Pb 220.353†	-15.1	-0.00205	mg/L	0.001079	-0.00205	mg/L	0.001079	52.65%
Sb 206.836†	-12.4	-0.00641	mg/L	0.001321	-0.00641	mg/L	0.001321	20.63%
Se 196.026†	13.4	0.01317	mg/L	0.003323	0.01317	mg/L	0.003323	25.23%
Si 288.158†	-3.9	-0.00330	mg/L	0.000266	-0.00330	mg/L	0.000266	8.05%
Sn 189.927†	2.8	0.00076	mg/L	0.000802	0.00076	mg/L	0.000802	104.81%
Sr 421.552†	-25.6	-0.00006	mg/L	0.000028	-0.00006	mg/L	0.000028	51.02%
Ti 334.903†	-58.8	-0.00316	mg/L	0.000179	-0.00316	mg/L	0.000179	5.67%
Tl 190.801†	3.8	0.00200	mg/L	0.002114	0.00200	mg/L	0.002114	105.60%
V 292.402†	2.6	0.00002	mg/L	0.000080	0.00002	mg/L	0.000080	334.92%
Zn 206.200†	-0.1	-0.00005	mg/L	0.000029	-0.00005	mg/L	0.000029	58.75%



Sequence No.: 37  
Sample ID: RH55 I SWC

Autosampler Location: 76  
Date Collected: 8/10/2010 7:06:45 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 I SWC

Analyte Back Pressure Flow  
All 173.0 kPa 0.55 L/min

Mean Data: RH55 I SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1619516.3	113.3	%	0.43				0.38%
ScR 361.383	186982.3	114.7	%	1.25				1.09%
Ag 328.068†	-880.2	0.00201	mg/L	0.000287	0.00402	mg/L	0.000574	14.30%
Al 308.215†	310142.3	237.9	mg/L	1.86	475.8	mg/L	3.71	0.78%
As 188.979†	263.1	0.1933	mg/L	0.00096	0.3865	mg/L	0.00193	0.50%
B 249.677†	44.3	0.02189	mg/L	0.001004	0.04377	mg/L	0.002008	4.59%
Ba 233.527†	7227.5	0.9566	mg/L	0.01370	1.913	mg/L	0.0274	1.43%
Be 313.042†	1126.4	0.00289	mg/L	0.000066	0.00578	mg/L	0.000131	2.27%
Ca 317.933†	230394.5	27.94	mg/L	0.192	55.87	mg/L	0.384	0.69%
Cd 228.802†	126.4	0.00214	mg/L	0.000051	0.00428	mg/L	0.000102	2.37%
Co 228.616†	4894.1	0.08147	mg/L	0.000900	0.1629	mg/L	0.00180	1.10%
Cr 267.716†	703.6	0.2031	mg/L	0.00367	0.4062	mg/L	0.00735	1.81%
Cu 324.752†	70639.9	0.3787	mg/L	0.00034	0.7574	mg/L	0.00068	0.09%
Fe 273.955†	222274.2	205.1	mg/L	1.48	410.2	mg/L	2.97	0.72%
K 766.490†	18724.9	7.837	mg/L	0.1029	15.67	mg/L	0.206	1.31%
Mg 279.077†	23707.3	23.26	mg/L	0.170	46.52	mg/L	0.339	0.73%
Mn 257.610†	200266.9	5.415	mg/L	0.0466	10.83	mg/L	0.093	0.86%
Mo 202.031†	236.1	0.02176	mg/L	0.000653	0.04353	mg/L	0.001307	3.00%
Na 589.592†	13951.4	2.263	mg/L	0.0141	4.525	mg/L	0.0283	0.63%
Na 330.237†	43.1	3.932	mg/L	0.3178	7.864	mg/L	0.6356	8.08%
Ni 231.604†	197.9	0.1208	mg/L	0.00145	0.2415	mg/L	0.00290	1.20%
Pb 220.353†	976.5	0.1869	mg/L	0.00163	0.3738	mg/L	0.00326	0.87%
Sb 206.836†	204.4	0.03196	mg/L	0.002118	0.06393	mg/L	0.004237	6.63%
Se 196.026†	-82.3	-0.00354	mg/L	0.003551	-0.00708	mg/L	0.007103	100.36%
Si 288.158†	3706.0	3.111	mg/L	0.0436	6.221	mg/L	0.0872	1.40%
Sn 189.927†	9.1	0.00906	mg/L	0.001257	0.01811	mg/L	0.002514	13.88%
Sr 421.552†	136191.1	0.2946	mg/L	0.00241	0.5891	mg/L	0.00482	0.82%
Ti 334.903†	212849.5	11.43	mg/L	0.093	22.86	mg/L	0.186	0.81%
Tl 190.801†	18.4	-0.01996	mg/L	0.000703	-0.03991	mg/L	0.001405	3.52%
V 292.402†	51928.9	0.4567	mg/L	0.00146	0.9134	mg/L	0.00291	0.32%
Zn 206.200†	1600.0	0.7570	mg/L	0.01139	1.514	mg/L	0.0228	1.50%

Sequence No.: 38  
Sample ID: RH55 J SWC

Autosampler Location: 77  
Date Collected: 8/10/2010 7:12:33 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 J SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RH55 J SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1589605.6	111.3	%	0.35				0.31%
ScR 361.383	186007.7	114.1	%	0.65				0.57%
Ag 328.068†	-936.0	0.00132	mg/L	0.000245	0.00264	mg/L	0.000491	18.62%
Al 308.215†	301298.3	231.1	mg/L	0.34	462.3	mg/L	0.68	0.15%
As 188.979†	192.3	0.1458	mg/L	0.00146	0.2916	mg/L	0.00293	1.00%
B 249.677†	43.1	0.02131	mg/L	0.002396	0.04261	mg/L	0.004792	11.25%
Ba 233.527†	8337.5	1.106	mg/L	0.0108	2.211	mg/L	0.0217	0.98%
Be 313.042†	1098.4	0.00296	mg/L	0.000050	0.00592	mg/L	0.000100	1.68%
Ca 317.933†	215487.3	26.13	mg/L	0.024	52.26	mg/L	0.048	0.09%
Cd 228.802†	113.7	0.00198	mg/L	0.000062	0.00397	mg/L	0.000123	3.11%
Co 228.616†	4463.1	0.07386	mg/L	0.000316	0.1477	mg/L	0.00063	0.43%
Cr 267.716†	686.9	0.1980	mg/L	0.00119	0.3959	mg/L	0.00238	0.60%
Cu 324.752†	61106.0	0.3285	mg/L	0.00045	0.6570	mg/L	0.00089	0.14%
Fe 273.955†	205324.4	189.4	mg/L	0.56	378.9	mg/L	1.11	0.29%
K 766.490†	19949.4	8.349	mg/L	0.0344	16.70	mg/L	0.069	0.41%
Mg 279.077†	27508.9	27.02	mg/L	0.013	54.04	mg/L	0.027	0.05%
Mn 257.610†	151575.4	4.098	mg/L	0.0037	8.196	mg/L	0.0073	0.09%
Mo 202.031†	205.2	0.01891	mg/L	0.000477	0.03782	mg/L	0.000953	2.52%
Na 589.592†	13100.3	2.125	mg/L	0.0016	4.249	mg/L	0.0031	0.07%
Na 330.237†	41.5	3.711	mg/L	0.2620	7.422	mg/L	0.5241	7.06%
Ni 231.604†	218.1	0.1331	mg/L	0.00184	0.2662	mg/L	0.00367	1.38%
Pb 220.353†	692.4	0.1473	mg/L	0.00103	0.2945	mg/L	0.00205	0.70%
Sb 206.836†	190.5	0.02756	mg/L	0.002912	0.05511	mg/L	0.005824	10.57%
Se 196.026†	-78.3	-0.00229	mg/L	0.006021	-0.00457	mg/L	0.012041	263.23%
Si 288.158†	3401.8	2.856	mg/L	0.0153	5.712	mg/L	0.0305	0.53%
Sn 189.927†	3.3	0.00715	mg/L	0.000844	0.01429	mg/L	0.001688	11.81%
Sr 421.552†	122705.2	0.2654	mg/L	0.00059	0.5308	mg/L	0.00119	0.22%
Ti 334.903†	198049.6	10.64	mg/L	0.010	21.27	mg/L	0.021	0.10%
Tl 190.801†	5.9	-0.02299	mg/L	0.002385	-0.04597	mg/L	0.004769	10.37%
V 292.402†	45041.2	0.3942	mg/L	0.00080	0.7884	mg/L	0.00161	0.20%
Zn 206.200†	1552.7	0.7347	mg/L	0.00902	1.469	mg/L	0.0180	1.23%

Sequence No.: 39  
Sample ID: RH55 K SWC

Autosampler Location: 78  
Date Collected: 8/10/2010 7:18:20 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 K SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RH55 K SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1572028.7	110.0	%	0.22				0.20%
ScR 361.383	183461.1	112.5	%	0.77				0.68%
Ag 328.068†	-805.5	0.00104	mg/L	0.000286	0.00209	mg/L	0.000573	27.46%
Al 308.215†	196200.5	150.5	mg/L	0.26	301.0	mg/L	0.51	0.17%
As 188.979†	628.0	0.4214	mg/L	0.00381	0.8428	mg/L	0.00762	0.90%
B 249.677†	45.5	0.02257	mg/L	0.002521	0.04514	mg/L	0.005042	11.17%
Ba 233.527†	5277.8	0.6980	mg/L	0.00483	1.396	mg/L	0.0097	0.69%
Be 313.042†	750.7	0.00176	mg/L	0.000009	0.00353	mg/L	0.000018	0.52%
Ca 317.933†	315166.2	38.21	mg/L	0.037	76.43	mg/L	0.075	0.10%
Cd 228.802†	111.1	0.00145	mg/L	0.000078	0.00290	mg/L	0.000157	5.40%
Co 228.616†	3984.9	0.06995	mg/L	0.000441	0.1399	mg/L	0.00088	0.63%
Cr 267.716†	648.7	0.1859	mg/L	0.00104	0.3719	mg/L	0.00208	0.56%
Cu 324.752†	98788.4	0.5206	mg/L	0.00132	1.041	mg/L	0.0026	0.25%
Fe 273.955†	174136.7	160.7	mg/L	0.40	321.3	mg/L	0.79	0.25%
K 766.490†	19857.1	8.311	mg/L	0.0316	16.62	mg/L	0.063	0.38%
Mg 279.077†	43508.3	42.82	mg/L	0.005	85.64	mg/L	0.010	0.01%
Mn 257.610†	104923.8	2.837	mg/L	0.0043	5.674	mg/L	0.0085	0.15%
Mo 202.031†	318.7	0.02939	mg/L	0.000956	0.05878	mg/L	0.001912	3.25%
Na 589.592†	12036.6	1.952	mg/L	0.0035	3.904	mg/L	0.0070	0.18%
Na 330.237†	59.5	3.688	mg/L	0.2332	7.376	mg/L	0.4664	6.32%
Ni 231.604†	356.1	0.2172	mg/L	0.00136	0.4345	mg/L	0.00273	0.63%
Pb 220.353†	1244.5	0.2016	mg/L	0.00201	0.4032	mg/L	0.00403	1.00%
Sb 206.836†	160.5	0.03081	mg/L	0.004083	0.06162	mg/L	0.008166	13.25%
Se 196.026†	-51.6	0.00384	mg/L	0.003974	0.00768	mg/L	0.007948	103.52%
Si 288.158†	1747.9	1.471	mg/L	0.0054	2.943	mg/L	0.0109	0.37%
Sn 189.927†	-2.8	0.00524	mg/L	0.001617	0.01048	mg/L	0.003233	30.86%
Sr 421.552†	182002.5	0.3936	mg/L	0.00135	0.7873	mg/L	0.00270	0.34%
Ti 334.903†	134707.3	7.233	mg/L	0.0069	14.47	mg/L	0.014	0.09%
Tl 190.801†	-2.7	-0.01983	mg/L	0.002708	-0.03966	mg/L	0.005416	13.65%
V 292.402†	41553.0	0.3675	mg/L	0.00234	0.7349	mg/L	0.00467	0.64%
Zn 206.200†	1859.2	0.8802	mg/L	0.00599	1.760	mg/L	0.0120	0.68%

Sequence No.: 40  
Sample ID: RH55 L SWC

Autosampler Location: 79  
Date Collected: 8/10/2010 7:24:09 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 L SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RH55 L SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1589920.1	111.3	%	0.47				0.42%
ScR 361.383	182631.7	112.0	%	0.43				0.38%
Ag 328.068†	-671.2	0.00051	mg/L	0.000232	0.00103	mg/L	0.000463	45.04%
Al 308.215†	218280.2	167.4	mg/L	0.44	334.9	mg/L	0.89	0.27%
As 188.979†	142.9	0.1053	mg/L	0.00340	0.2107	mg/L	0.00680	3.23%
B 249.677†	39.8	0.01973	mg/L	0.001961	0.03946	mg/L	0.003921	9.94%
Ba 233.527†	5721.0	0.7592	mg/L	0.00343	1.518	mg/L	0.0069	0.45%
Be 313.042†	863.5	0.00239	mg/L	0.000080	0.00478	mg/L	0.000160	3.35%
Ca 317.933†	234529.9	28.44	mg/L	0.059	56.87	mg/L	0.118	0.21%
Cd 228.802†	91.8	0.00162	mg/L	0.000085	0.00324	mg/L	0.000171	5.27%
Co 228.616†	3011.3	0.05115	mg/L	0.000736	0.1023	mg/L	0.00147	1.44%
Cr 267.716†	499.6	0.1434	mg/L	0.00152	0.2868	mg/L	0.00303	1.06%
Cu 324.752†	31801.5	0.1727	mg/L	0.00096	0.3454	mg/L	0.00193	0.56%
Fe 273.955†	131003.5	120.9	mg/L	0.30	241.7	mg/L	0.60	0.25%
K 766.490†	15537.1	6.503	mg/L	0.0172	13.01	mg/L	0.034	0.26%
Mg 279.077†	24343.2	23.94	mg/L	0.061	47.88	mg/L	0.123	0.26%
Mn 257.610†	61589.5	1.665	mg/L	0.0045	3.329	mg/L	0.0090	0.27%
Mo 202.031†	57.0	0.00523	mg/L	0.000635	0.01046	mg/L	0.001270	12.15%
Na 589.592†	26540.6	4.304	mg/L	0.0144	8.609	mg/L	0.0287	0.33%
Na 330.237†	110.0	6.026	mg/L	0.1657	12.05	mg/L	0.331	2.75%
Ni 231.604†	179.0	0.1092	mg/L	0.00289	0.2184	mg/L	0.00579	2.65%
Pb 220.353†	374.7	0.09049	mg/L	0.000778	0.1810	mg/L	0.00156	0.86%
Sb 206.836†	127.6	0.01533	mg/L	0.006191	0.03067	mg/L	0.012382	40.37%
Se 196.026†	-50.9	0.00251	mg/L	0.004950	0.00501	mg/L	0.009901	197.58%
Si 288.158†	2748.4	2.308	mg/L	0.0099	4.615	mg/L	0.0198	0.43%
Sn 189.927†	-17.0	-0.00004	mg/L	0.000630	-0.00008	mg/L	0.001259	>999.9%
Sr 421.552†	128860.7	0.2787	mg/L	0.00061	0.5574	mg/L	0.00122	0.22%
Ti 334.903†	119480.1	6.416	mg/L	0.0164	12.83	mg/L	0.033	0.26%
Tl 190.801†	5.2	-0.01231	mg/L	0.003188	-0.02463	mg/L	0.006377	25.89%
V 292.402†	34157.2	0.3027	mg/L	0.00225	0.6054	mg/L	0.00451	0.74%
Zn 206.200†	798.2	0.3783	mg/L	0.00114	0.7566	mg/L	0.00229	0.30%

Sequence No.: 41  
Sample ID: RH55 M SWC

Autosampler Location: 80  
Date Collected: 8/10/2010 7:30:12 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 M SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RH55 M SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1627503.2	113.9	%	0.39			0.34%
ScR 361.383	187182.0	114.8	%	1.44			1.25%
Ag 328.068†	-916.3	0.00107	mg/L	0.000179	0.00215	mg/L	0.000358 16.69%
Al 308.215†	268053.3	205.6	mg/L	0.66	411.2	mg/L	1.33 0.32%
As 188.979†	60.8	0.05977	mg/L	0.002281	0.1195	mg/L	0.00456 3.82%
B 249.677†	49.6	0.02461	mg/L	0.003725	0.04922	mg/L	0.007449 15.13%
Ba 233.527†	7311.5	0.9693	mg/L	0.01304	1.939	mg/L	0.0261 1.35%
Be 313.042†	892.0	0.00224	mg/L	0.000060	0.00448	mg/L	0.000120 2.67%
Ca 317.933†	183394.3	22.24	mg/L	0.087	44.47	mg/L	0.174 0.39%
Cd 228.802†	68.3	0.00126	mg/L	0.000089	0.00252	mg/L	0.000178 7.06%
Co 228.616†	3780.4	0.06039	mg/L	0.000456	0.1208	mg/L	0.00091 0.75%
Cr 267.716†	655.9	0.1890	mg/L	0.00488	0.3780	mg/L	0.00977 2.58%
Cu 324.752†	33883.6	0.1871	mg/L	0.00056	0.3742	mg/L	0.00111 0.30%
Fe 273.955†	187670.8	173.2	mg/L	0.56	346.3	mg/L	1.12 0.32%
K 766.490†	22335.3	9.348	mg/L	0.0363	18.70	mg/L	0.073 0.39%
Mg 279.077†	23361.1	22.94	mg/L	0.123	45.88	mg/L	0.245 0.53%
Mn 257.610†	98609.5	2.666	mg/L	0.0112	5.331	mg/L	0.0224 0.42%
Mo 202.031†	63.4	0.00582	mg/L	0.000543	0.01164	mg/L	0.001086 9.33%
Na 589.592†	36846.5	5.976	mg/L	0.0226	11.95	mg/L	0.045 0.38%
Na 330.237†	137.4	8.096	mg/L	0.1301	16.19	mg/L	0.260 1.61%
Ni 231.604†	180.4	0.1101	mg/L	0.00439	0.2201	mg/L	0.00879 3.99%
Pb 220.353†	315.8	0.08987	mg/L	0.000207	0.1797	mg/L	0.00041 0.23%
Sb 206.836†	119.9	-0.00086	mg/L	0.001438	-0.00172	mg/L	0.002876 167.00%
Se 196.026†	-65.5	0.00379	mg/L	0.001784	0.00758	mg/L	0.003568 47.05%
Si 288.158†	3382.6	2.839	mg/L	0.0382	5.679	mg/L	0.0763 1.34%
Sn 189.927†	-11.5	0.00258	mg/L	0.001187	0.00516	mg/L	0.002374 46.03%
Sr 421.552†	122760.5	0.2655	mg/L	0.00065	0.5310	mg/L	0.00129 0.24%
Ti 334.903†	190928.6	10.25	mg/L	0.031	20.51	mg/L	0.062 0.30%
Tl 190.801†	8.8	-0.01876	mg/L	0.003627	-0.03751	mg/L	0.007255 19.34%
V 292.402†	42533.0	0.3725	mg/L	0.00176	0.7450	mg/L	0.00352 0.47%
Zn 206.200†	940.0	0.4450	mg/L	0.00653	0.8901	mg/L	0.01307 1.47%

Sequence No.: 42  
Sample ID: RH55 N SWC

Autosampler Location: 81  
Date Collected: 8/10/2010 7:36:15 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RH55 N SWC

Analyte Back Pressure Flow  
All 175.0 kPa 0.55 L/min

Mean Data: RH55 N SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1559446.8	109.1	%	0.53				0.48%
ScR 361.383	182723.9	112.1	%	0.96				0.85%
Ag 328.068†	-544.2	0.00033	mg/L	0.000270	0.00066	mg/L	0.000539	81.30%
Al 308.215†	138346.4	106.1	mg/L	0.04	212.3	mg/L	0.07	0.03%
As 188.979†	22.6	0.02393	mg/L	0.002845	0.04785	mg/L	0.005691	11.89%
B 249.677†	29.1	0.01440	mg/L	0.001003	0.02879	mg/L	0.002006	6.97%
Ba 233.527†	1692.4	0.2216	mg/L	0.00190	0.4432	mg/L	0.00380	0.86%
Be 313.042†	523.4	0.00098	mg/L	0.000080	0.00197	mg/L	0.000160	8.16%
Ca 317.933†	328287.0	39.80	mg/L	0.119	79.61	mg/L	0.238	0.30%
Cd 228.802†	29.9	0.00056	mg/L	0.000182	0.00113	mg/L	0.000365	32.27%
Co 228.616†	2272.5	0.03896	mg/L	0.000285	0.07792	mg/L	0.000570	0.73%
Cr 267.716†	448.0	0.1281	mg/L	0.00272	0.2562	mg/L	0.00544	2.12%
Cu 324.752†	26050.0	0.1414	mg/L	0.00072	0.2828	mg/L	0.00145	0.51%
Fe 273.955†	104731.4	96.63	mg/L	0.430	193.3	mg/L	0.86	0.44%
K 766.490†	9003.1	3.768	mg/L	0.0274	7.536	mg/L	0.0547	0.73%
Mg 279.077†	21723.1	21.37	mg/L	0.069	42.74	mg/L	0.138	0.32%
Mn 257.610†	34219.5	0.9248	mg/L	0.00068	1.850	mg/L	0.0014	0.07%
Mo 202.031†	29.1	0.00267	mg/L	0.000162	0.00534	mg/L	0.000324	6.08%
Na 589.592†	68515.9	11.11	mg/L	0.054	22.22	mg/L	0.109	0.49%
Na 330.237†	278.3	13.29	mg/L	0.167	26.58	mg/L	0.334	1.26%
Ni 231.604†	123.8	0.07555	mg/L	0.001407	0.1511	mg/L	0.00281	1.86%
Pb 220.353†	83.7	0.03512	mg/L	0.000796	0.07024	mg/L	0.001592	2.27%
Sb 206.836†	54.8	-0.00603	mg/L	0.004333	-0.01206	mg/L	0.008666	71.87%
Se 196.026†	-38.0	-0.00061	mg/L	0.002773	-0.00121	mg/L	0.005545	457.14%
Si 288.158†	1844.1	1.549	mg/L	0.0115	3.098	mg/L	0.0231	0.74%
Sn 189.927†	-17.4	-0.00028	mg/L	0.001105	-0.00056	mg/L	0.002209	393.49%
Sr 421.552†	224522.9	0.4856	mg/L	0.00069	0.9712	mg/L	0.00138	0.14%
Ti 334.903†	87356.2	4.690	mg/L	0.0032	9.380	mg/L	0.0064	0.07%
Tl 190.801†	3.0	-0.00972	mg/L	0.000707	-0.01944	mg/L	0.001413	7.27%
V 292.402†	39408.8	0.3562	mg/L	0.00124	0.7123	mg/L	0.00247	0.35%
Zn 206.200†	346.4	0.1651	mg/L	0.00185	0.3303	mg/L	0.00371	1.12%

Sequence No.: 43

Autosampler Location: 82

Sample ID: RH58 A SWC

Date Collected: 8/10/2010 7:42:18 PM

Dilution: 2X

Data Type: Original

Nebulizer Parameters: RH58 A SWC

Analyte	Back Pressure	Flow
All	174.0 kPa	0.55 L/min

Mean Data: RH58 A SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity				Conc. Units	Std.Dev.	
ScA 357.253	1582293.1		110.7 %	0.62			0.56%
ScR 361.383	186498.1		114.4 %	1.81			1.58%
Ag 328.068†	-1011.4	0.00035	mg/L	0.000362	0.00070	mg/L	103.23%
Al 308.215†	211236.9	162.0	mg/L	0.49	324.1	mg/L	0.30%
As 188.979†	29.9	0.03520	mg/L	0.000779	0.07039	mg/L	2.21%
B 249.677†	51.0	0.02524	mg/L	0.003232	0.05048	mg/L	12.81%
Ba 233.527†	5306.3	0.7011	mg/L	0.01068	1.402	mg/L	1.52%
Be 313.042†	791.8	0.00181	mg/L	0.000073	0.00361	mg/L	4.01%
Ca 317.933†	339612.5	41.18	mg/L	0.169	82.36	mg/L	0.41%
Cd 228.802†	76.0	0.00152	mg/L	0.000058	0.00305	mg/L	3.84%
Co 228.616†	4201.4	0.07302	mg/L	0.000544	0.1460	mg/L	0.75%
Cr 267.716†	1152.7	0.3293	mg/L	0.00468	0.6586	mg/L	1.42%
Cu 324.752†	32221.5	0.1792	mg/L	0.00117	0.3585	mg/L	0.65%
Fe 273.955†	188739.6	174.1	mg/L	0.64	348.3	mg/L	0.37%
K 766.490†	13508.5	5.654	mg/L	0.0360	11.31	mg/L	0.64%
Mg 279.077†	54205.6	53.36	mg/L	0.167	106.7	mg/L	0.31%
Mn 257.610†	116972.5	3.163	mg/L	0.0073	6.325	mg/L	0.23%
Mo 202.031†	50.2	0.00459	mg/L	0.000320	0.00917	mg/L	6.97%
Na 589.592†	7451.5	1.208	mg/L	0.0106	2.417	mg/L	0.88%
Na 330.237†	32.1	2.748	mg/L	0.1574	5.496	mg/L	5.73%
Ni 231.604†	615.6	0.3754	mg/L	0.00683	0.7509	mg/L	1.82%
Pb 220.353†	229.2	0.06597	mg/L	0.001205	0.1319	mg/L	1.83%
Sb 206.836†	90.8	-0.01118	mg/L	0.001787	-0.02235	mg/L	15.99%
Se 196.026†	-63.2	-0.00346	mg/L	0.008152	-0.00691	mg/L	235.90%
Si 288.158†	3048.3	2.563	mg/L	0.0376	5.127	mg/L	1.47%
Sn 189.927†	-33.5	-0.00248	mg/L	0.001488	-0.00495	mg/L	60.07%
Sr 421.552†	123015.1	0.2661	mg/L	0.00064	0.5321	mg/L	0.24%
Ti 334.903†	149735.9	8.040	mg/L	0.0191	16.08	mg/L	0.24%
Tl 190.801†	-3.9	-0.02252	mg/L	0.002403	-0.04505	mg/L	10.67%
V 292.402†	45805.6	0.4060	mg/L	0.00301	0.8120	mg/L	0.74%
Zn 206.200†	834.8	0.3964	mg/L	0.00587	0.7929	mg/L	1.48%

RG58 : 01583

Sequence No.: 44

Autosampler Location: 83

Sample ID: RH58 B SWC

Date Collected: 8/10/2010 7:48:20 PM

Dilution: 2X

Data Type: Original

RG58  
au 8.11

Nebulizer Parameters: RH58 B SWC

Analyte	Back Pressure	Flow
All	175.0 kPa	0.55 L/min

Mean Data: RH58 B SWC

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	1575028.3	110.2	%	1.16			1.05%
ScR 361.383	185869.7	114.0	%	0.42			0.37%
Ag 328.068†	-1097.1	0.00003	mg/L	0.000266	0.00007	mg/L	779.85%
Al 308.215†	207292.4	159.0	mg/L	0.53	318.0	mg/L	0.33%
As 188.979†	29.8	0.03421	mg/L	0.002508	0.06842	mg/L	7.33%
B 249.677†	55.2	0.02734	mg/L	0.002150	0.05468	mg/L	0.21%
Ba 233.527†	4676.8	0.6167	mg/L	0.00131	1.233	mg/L	0.21%
Be 313.042†	856.4	0.00191	mg/L	0.000036	0.00383	mg/L	1.89%
Ca 317.933†	382634.4	46.39	mg/L	0.230	92.79	mg/L	0.50%
Cd 228.802†	84.9	0.00169	mg/L	0.000062	0.00338	mg/L	3.66%
Co 228.616†	3992.2	0.06956	mg/L	0.001063	0.1391	mg/L	1.53%
Cr 267.716†	921.3	0.2635	mg/L	0.00053	0.5270	mg/L	0.20%
Cu 324.752†	32368.3	0.1806	mg/L	0.00158	0.3611	mg/L	0.87%
Fe 273.955†	194439.9	179.4	mg/L	1.07	358.8	mg/L	0.59%
K 766.490†	11223.9	4.697	mg/L	0.0284	9.395	mg/L	0.60%
Mg 279.077†	52565.4	51.74	mg/L	0.189	103.5	mg/L	0.37%
Mn 257.610†	120195.3	3.250	mg/L	0.0114	6.500	mg/L	0.35%
Mo 202.031†	38.1	0.00348	mg/L	0.000236	0.00696	mg/L	6.79%
Na 589.592†	7087.0	1.149	mg/L	0.0027	2.299	mg/L	0.23%
Na 330.237†	37.1	2.847	mg/L	0.0455	5.695	mg/L	1.60%
Ni 231.604†	586.3	0.3576	mg/L	0.00123	0.7152	mg/L	0.34%
Pb 220.353†	263.1	0.06925	mg/L	0.001299	0.1385	mg/L	1.88%
Sb 206.836†	95.0	-0.00846	mg/L	0.000420	-0.01691	mg/L	4.97%
Se 196.026†	-57.2	0.00266	mg/L	0.002769	0.00531	mg/L	104.25%
Si 288.158†	2406.3	2.025	mg/L	0.0055	4.049	mg/L	0.27%
Sn 189.927†	-26.4	-0.00046	mg/L	0.001663	-0.00092	mg/L	360.24%
Sr 421.552†	114836.1	0.2484	mg/L	0.00117	0.4967	mg/L	0.47%
Ti 334.903†	140566.4	7.547	mg/L	0.0240	15.09	mg/L	0.32%
Tl 190.801†	-6.3	-0.02329	mg/L	0.001346	-0.04659	mg/L	5.78%
V 292.402†	51909.6	0.4628	mg/L	0.00506	0.9255	mg/L	1.09%
Zn 206.200†	771.5	0.3667	mg/L	0.00121	0.7334	mg/L	0.33%

RG58: 01584



Sequence No.: 45

Autosampler Location: 84

Sample ID: RH58 C SWC

Date Collected: 8/10/2010 7:54:22 PM

Dilution: 2X

Data Type: Original

RG58  
@w/6.11

## Nebulizer Parameters: RH58 C SWC

Analyte	Back Pressure	Flow
All	175.0 kPa	0.55 L/min

## Mean Data: RH58 C SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1585057.4	110.9	%	0.22			0.20%
ScR 361.383	186333.4	114.3	%	0.18			0.16%
Ag 328.068†	-1031.4	0.00028	mg/L	0.000166	0.00056	mg/L	0.000333 59.60%
Al 308.215†	230474.9	176.8	mg/L	0.27	353.6	mg/L	0.55 0.15%
As 188.979†	33.4	0.03710	mg/L	0.000856	0.07420	mg/L	0.001712 2.31%
B 249.677†	54.4	0.02693	mg/L	0.000916	0.05387	mg/L	0.001832 3.40%
Ba 233.527†	5175.3	0.6836	mg/L	0.00136	1.367	mg/L	0.0027 0.20%
Be 313.042†	773.3	0.00173	mg/L	0.000028	0.00345	mg/L	0.000056 1.62%
Ca 317.933†	358505.6	43.47	mg/L	0.091	86.94	mg/L	0.183 0.21%
Cd 228.802†	81.6	0.00162	mg/L	0.000117	0.00324	mg/L	0.000233 7.21%
Co 228.616†	4172.9	0.07278	mg/L	0.000097	0.1456	mg/L	0.00019 0.13%
Cr 267.716†	1065.2	0.3044	mg/L	0.00074	0.6089	mg/L	0.00148 0.24%
Cu 324.752†	31451.9	0.1754	mg/L	0.00147	0.3508	mg/L	0.00293 0.84%
Fe 273.955†	189436.8	174.8	mg/L	0.23	349.6	mg/L	0.45 0.13%
K 766.490†	11858.2	4.963	mg/L	0.0251	9.926	mg/L	0.0501 0.51%
Mg 279.077†	51569.7	50.76	mg/L	0.078	101.5	mg/L	0.16 0.15%
Mn 257.610†	110307.7	2.982	mg/L	0.0043	5.965	mg/L	0.0086 0.14%
Mo 202.031†	32.0	0.00291	mg/L	0.000128	0.00582	mg/L	0.000255 4.38%
Na 589.592†	7202.7	1.168	mg/L	0.0046	2.336	mg/L	0.0091 0.39%
Na 330.237†	38.2	2.977	mg/L	0.2017	5.954	mg/L	0.4033 6.77%
Ni 231.604†	568.4	0.3467	mg/L	0.00289	0.6933	mg/L	0.00578 0.83%
Pb 220.353†	230.1	0.07015	mg/L	0.000802	0.1403	mg/L	0.00160 1.14%
Sb 206.836†	104.9	-0.00733	mg/L	0.002008	-0.01467	mg/L	0.004016 27.38%
Se 196.026†	-68.6	-0.00546	mg/L	0.003290	-0.01092	mg/L	0.006581 60.25%
Si 288.158†	3117.9	2.621	mg/L	0.0094	5.243	mg/L	0.0187 0.36%
Sn 189.927†	-34.7	-0.00284	mg/L	0.000726	-0.00568	mg/L	0.001452 25.54%
Sr 421.552†	114626.3	0.2479	mg/L	0.00020	0.4958	mg/L	0.00041 0.08%
Ti 334.903†	146079.7	7.843	mg/L	0.0106	15.69	mg/L	0.021 0.13%
Tl 190.801†	-3.9	-0.02197	mg/L	0.002941	-0.04394	mg/L	0.005882 13.38%
V 292.402†	46358.8	0.4111	mg/L	0.00297	0.8222	mg/L	0.00594 0.72%
Zn 206.200†	775.2	0.3683	mg/L	0.00039	0.7366	mg/L	0.00079 0.11%

Sequence No.: 46

Autosampler Location: 85

Sample ID: RH58 D SWC

Date Collected: 8/10/2010 8:00:25 PM

Dilution: 2X

RG58 aw 6/11

Data Type: Original

Nebulizer Parameters: RH58 D SWC

Analyte	Back Pressure	Flow
All	175.0 kPa	0.55 L/min

Mean Data: RH58 D SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1617518.7	113.2	%	0.40				0.36%
ScR 361.383	188647.9	115.7	%	0.66				0.57%
Ag 328.068†	-865.5	0.00037	mg/L	0.000201	0.00075	mg/L	0.000401	53.80%
Al 308.215†	162372.9	124.6	mg/L	0.30	249.1	mg/L	0.60	0.24%
As 188.979†	19.4	0.02501	mg/L	0.002661	0.05003	mg/L	0.005323	10.64%
B 249.677†	38.0	0.01877	mg/L	0.002042	0.03753	mg/L	0.004085	10.88%
Ba 233.527†	3341.7	0.4395	mg/L	0.00322	0.8791	mg/L	0.00644	0.73%
Be 313.042†	615.2	0.00126	mg/L	0.000082	0.00253	mg/L	0.000165	6.53%
Ca 317.933†	274567.5	33.29	mg/L	0.048	66.58	mg/L	0.096	0.14%
Cd 228.802†	53.9	0.00110	mg/L	0.000113	0.00220	mg/L	0.000225	10.22%
Co 228.616†	3831.1	0.06841	mg/L	0.000275	0.1368	mg/L	0.00055	0.40%
Cr 267.716†	991.7	0.2833	mg/L	0.00307	0.5666	mg/L	0.00613	1.08%
Cu 324.752†	26336.5	0.1473	mg/L	0.00119	0.2946	mg/L	0.00238	0.81%
Fe 273.955†	163269.7	150.6	mg/L	0.41	301.3	mg/L	0.81	0.27%
K 766.490†	9631.7	4.031	mg/L	0.0181	8.062	mg/L	0.0361	0.45%
Mg 279.077†	48494.4	47.74	mg/L	0.018	95.48	mg/L	0.036	0.04%
Mn 257.610†	102326.8	2.767	mg/L	0.0051	5.534	mg/L	0.0102	0.18%
Mo 202.031†	46.7	0.00427	mg/L	0.000570	0.00854	mg/L	0.001140	13.35%
Na 589.592†	7974.4	1.293	mg/L	0.0078	2.587	mg/L	0.0157	0.61%
Na 330.237†	45.5	3.081	mg/L	0.1925	6.162	mg/L	0.3850	6.25%
Ni 231.604†	554.6	0.3382	mg/L	0.00345	0.6764	mg/L	0.00691	1.02%
Pb 220.353†	117.5	0.04164	mg/L	0.001723	0.08328	mg/L	0.003446	4.14%
Sb 206.836†	67.3	-0.01263	mg/L	0.003039	-0.02525	mg/L	0.006078	24.07%
Se 196.026†	-51.0	-0.00263	mg/L	0.008421	-0.00525	mg/L	0.016842	320.71%
Si 288.158†	3293.8	2.768	mg/L	0.0527	5.537	mg/L	0.1054	1.90%
Sn 189.927†	-31.4	-0.00315	mg/L	0.000466	-0.00631	mg/L	0.000931	14.76%
Sr 421.552†	104596.8	0.2262	mg/L	0.00040	0.4524	mg/L	0.00079	0.18%
Ti 334.903†	117517.8	6.310	mg/L	0.0052	12.62	mg/L	0.010	0.08%
Tl 190.801†	-1.9	-0.01781	mg/L	0.001882	-0.03562	mg/L	0.003764	10.57%
V 292.402†	41368.5	0.3681	mg/L	0.00312	0.7363	mg/L	0.00624	0.85%
Zn 206.200†	601.1	0.2857	mg/L	0.00104	0.5714	mg/L	0.00209	0.37%

Sequence No.: 47

Sample ID: CV 7

Autosampler Location: 7

Date Collected: 8/10/2010 8:06:28 PM

Data Type: Original

Dilution: 1X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	175.0 kPa	0.55 L/min

## Mean Data: CV

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1552474.9	108.7	%	0.20				0.19%
ScR 361.383	184287.3	113.0	%	0.65				0.58%
Ag 328.068†	166026.6	0.9263	mg/L	0.00610	0.9263	mg/L	0.00610	0.66%
Al 308.215†	2577.1	1.940	mg/L	0.0099	1.940	mg/L	0.0099	0.51%
As 188.979†	2927.8	1.898	mg/L	0.0033	1.898	mg/L	0.0033	0.18%
B 249.677†	1856.2	0.9293	mg/L	0.00724	0.9293	mg/L	0.00724	0.78%
Ba 233.527†	7100.2	0.9489	mg/L	0.00462	0.9489	mg/L	0.00462	0.49%
Be 313.042†	255280.5	0.9758	mg/L	0.00295	0.9758	mg/L	0.00295	0.30%
Ca 317.933†	16596.0	2.012	mg/L	0.0100	2.012	mg/L	0.0100	0.50%
Cd 228.802†	50875.8	0.9722	mg/L	0.00170	0.9722	mg/L	0.00170	0.17%
Co 228.616†	45889.4	0.9507	mg/L	0.00435	0.9507	mg/L	0.00435	0.46%
Cr 267.716†	3416.9	0.9724	mg/L	0.00480	0.9724	mg/L	0.00480	0.49%
Cu 324.752†	199186.2	1.025	mg/L	0.0033	1.025	mg/L	0.0033	0.32%
Fe 273.955†	2107.8	1.944	mg/L	0.0101	1.944	mg/L	0.0101	0.52%
K 766.490†	45634.6	19.10	mg/L	0.120	19.10	mg/L	0.120	0.63%
Mg 279.077†	1992.1	1.968	mg/L	0.0082	1.968	mg/L	0.0082	0.41%
Mn 257.610†	35903.2	0.9716	mg/L	0.00111	0.9716	mg/L	0.00111	0.11%
Mo 202.031†	10034.6	0.9276	mg/L	0.00163	0.9276	mg/L	0.00163	0.18%
Na 589.592†	283041.6	45.90	mg/L	0.152	45.90	mg/L	0.152	0.33%
Na 330.237†	1087.4	49.18	mg/L	0.346	49.18	mg/L	0.346	0.70%
Ni 231.604†	1587.0	0.9686	mg/L	0.00279	0.9686	mg/L	0.00279	0.29%
Pb 220.353†	13983.5	1.909	mg/L	0.0039	1.909	mg/L	0.0039	0.20%
Sb 206.836†	3920.8	2.022	mg/L	0.0077	2.022	mg/L	0.0077	0.38%
Se 196.026†	1941.6	1.902	mg/L	0.0038	1.902	mg/L	0.0038	0.20%
Si 288.158†	2452.9	2.059	mg/L	0.0064	2.059	mg/L	0.0064	0.31%
Sn 189.927†	3178.8	0.8797	mg/L	0.00231	0.8797	mg/L	0.00231	0.26%
Sr 421.552†	455957.5	0.9861	mg/L	0.00299	0.9861	mg/L	0.00299	0.30%
Ti 334.903†	18004.5	0.9657	mg/L	0.00210	0.9657	mg/L	0.00210	0.22%
Tl 190.801†	3635.8	1.876	mg/L	0.0033	1.876	mg/L	0.0033	0.18%
V 292.402†	101995.1	0.9700	mg/L	0.00559	0.9700	mg/L	0.00559	0.58%
Zn 206.200†	2076.8	0.9804	mg/L	0.00459	0.9804	mg/L	0.00459	0.47%

Sequence No.: 48

Sample ID: CB 7

Autosampler Location: 1

Date Collected: 8/10/2010 8:12:31 PM

Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 175.0 kPa 0.55 L/min

Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1570638.1	109.9	%	1.03			0.94%
ScR 361.383	179175.3	109.9	%	0.69			0.63%
Ag 328.068†	95.7	0.00053	mg/L	0.000218	0.00053	mg/L	0.000218 40.86%
Al 308.215†	11.0	0.00848	mg/L	0.007313	0.00848	mg/L	0.007313 86.29%
As 188.979†	-3.1	-0.00201	mg/L	0.001858	-0.00201	mg/L	0.001858 92.42%
B 249.677†	9.1	0.00454	mg/L	0.002055	0.00454	mg/L	0.002055 45.24%
Ba 233.527†	-2.8	-0.00037	mg/L	0.000172	-0.00037	mg/L	0.000172 46.09%
Be 313.042†	-13.0	-0.00005	mg/L	0.000042	-0.00005	mg/L	0.000042 85.29%
Ca 317.933†	7.1	0.00086	mg/L	0.001016	0.00086	mg/L	0.001016 118.77%
Cd 228.802†	-5.7	-0.00010	mg/L	0.000096	-0.00010	mg/L	0.000096 91.58%
Co 228.616†	10.1	0.00021	mg/L	0.000074	0.00021	mg/L	0.000074 34.46%
Cr 267.716†	0.2	0.00006	mg/L	0.000736	0.00006	mg/L	0.000736 >999.9%
Cu 324.752†	-344.8	-0.00177	mg/L	0.000145	-0.00177	mg/L	0.000145 8.20%
Fe 273.955†	-0.6	-0.00059	mg/L	0.002654	-0.00059	mg/L	0.002654 447.54%
K 766.490†	-203.3	-0.08509	mg/L	0.006031	-0.08509	mg/L	0.006031 7.09%
Mg 279.077†	4.8	0.00474	mg/L	0.004119	0.00474	mg/L	0.004119 86.89%
Mn 257.610†	-2.9	-0.00008	mg/L	0.000104	-0.00008	mg/L	0.000104 133.03%
Mo 202.031†	-2.3	-0.00022	mg/L	0.000447	-0.00022	mg/L	0.000447 207.81%
Na 589.592†	4.9	0.00079	mg/L	0.004753	0.00079	mg/L	0.004753 603.14%
Na 330.237†	27.0	1.225	mg/L	0.3434	1.225	mg/L	0.3434 28.03%
Ni 231.604†	5.6	0.00338	mg/L	0.000913	0.00338	mg/L	0.000913 27.01%
Pb 220.353†	-15.5	-0.00211	mg/L	0.001019	-0.00211	mg/L	0.001019 48.39%
Sb 206.836†	-10.6	-0.00546	mg/L	0.002163	-0.00546	mg/L	0.002163 39.64%
Se 196.026†	13.4	0.01309	mg/L	0.002656	0.01309	mg/L	0.002656 20.29%
Si 288.158†	-7.4	-0.00624	mg/L	0.002695	-0.00624	mg/L	0.002695 43.16%
Sn 189.927†	6.1	0.00168	mg/L	0.000513	0.00168	mg/L	0.000513 30.61%
Sr 421.552†	12.0	0.00003	mg/L	0.000074	0.00003	mg/L	0.000074 285.98%
Ti 334.903†	-46.5	-0.00250	mg/L	0.000598	-0.00250	mg/L	0.000598 23.95%
Tl 190.801†	5.6	0.00294	mg/L	0.001057	0.00294	mg/L	0.001057 36.00%
V 292.402†	-10.2	-0.00009	mg/L	0.000162	-0.00009	mg/L	0.000162 170.43%
Zn 206.200†	0.6	0.00026	mg/L	0.000727	0.00026	mg/L	0.000727 275.20%

Sequence No.: 49  
Sample ID: RG58 MB1 SWC

Autosampler Location: 86  
Date Collected: 8/10/2010 8:18:29 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 MB1 SWC

Analyte	Back Pressure	Flow
All	174.0 kPa	0.55 L/min

Mean Data: RG58 MB1 SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1584452.6	110.9	%	1.06			0.95%
ScR 361.383	182459.4	111.9	%	0.53			0.47%
Ag 328.068†	70.5	0.00039	mg/L	0.000150	0.00079	mg/L	0.000299 38.07%
Al 308.215†	20.5	0.01577	mg/L	0.004846	0.03154	mg/L	0.009693 30.74%
As 188.979†	-1.7	-0.00113	mg/L	0.000873	-0.00225	mg/L	0.001745 77.51%
B 249.677†	0.2	0.00008	mg/L	0.001563	0.00017	mg/L	0.003126 >999.9%
Ba 233.527†	14.3	0.00192	mg/L	0.000042	0.00383	mg/L	0.000084 2.18%
Be 313.042†	-35.5	-0.00014	mg/L	0.000016	-0.00027	mg/L	0.000032 11.61%
Ca 317.933†	82.1	0.00995	mg/L	0.000694	0.01990	mg/L	0.001387 6.97%
Cd 228.802†	-2.8	-0.00005	mg/L	0.000057	-0.00010	mg/L	0.000113 110.58%
Co 228.616†	9.8	0.00021	mg/L	0.000181	0.00042	mg/L	0.000361 86.65%
Cr 267.716†	0.4	0.00012	mg/L	0.000957	0.00023	mg/L	0.001915 818.56%
Cu 324.752†	-460.3	-0.00237	mg/L	0.000035	-0.00473	mg/L	0.000070 1.48%
Fe 273.955†	1.8	0.00165	mg/L	0.001892	0.00329	mg/L	0.003785 114.87%
K 766.490†	-288.7	-0.1208	mg/L	0.00492	-0.2417	mg/L	0.00984 4.07%
Mg 279.077†	8.7	0.00856	mg/L	0.004221	0.01711	mg/L	0.008441 49.32%
Mn 257.610†	1.2	0.00003	mg/L	0.000054	0.00006	mg/L	0.000109 177.33%
Mo 202.031†	-4.9	-0.00046	mg/L	0.000411	-0.00091	mg/L	0.000822 90.24%
Na 589.592†	-151.5	-0.02458	mg/L	0.003390	-0.04915	mg/L	0.006781 13.80%
Na 330.237†	29.6	1.343	mg/L	0.6141	2.686	mg/L	1.2281 45.73%
Ni 231.604†	3.8	0.00232	mg/L	0.002523	0.00465	mg/L	0.005047 108.58%
Pb 220.353†	-25.2	-0.00343	mg/L	0.000964	-0.00687	mg/L	0.001929 28.09%
Sb 206.836†	-17.6	-0.00909	mg/L	0.001848	-0.01817	mg/L	0.003696 20.34%
Se 196.026†	10.1	0.00994	mg/L	0.002435	0.01987	mg/L	0.004870 24.50%
Si 288.158†	-8.6	-0.00721	mg/L	0.007381	-0.01441	mg/L	0.014763 102.45%
Sn 189.927†	5.4	0.00148	mg/L	0.000182	0.00296	mg/L	0.000364 12.31%
Sr 421.552†	-42.1	-0.00009	mg/L	0.000089	-0.00018	mg/L	0.000178 97.87%
Ti 334.903†	-62.6	-0.00336	mg/L	0.000505	-0.00672	mg/L	0.001011 15.04%
Tl 190.801†	2.5	0.00129	mg/L	0.002558	0.00257	mg/L	0.005116 198.99%
V 292.402†	4.5	0.00004	mg/L	0.000269	0.00009	mg/L	0.000538 626.25%
Zn 206.200†	1.8	0.00083	mg/L	0.000298	0.00166	mg/L	0.000595 35.88%

Sequence No.: 50  
Sample ID: RG58 E SWC

Autosampler Location: 87  
Date Collected: 8/10/2010 8:24:29 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 E SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RG58 E SWC

Analyte	Mean Corrected			Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.	Calib. Units		Conc.	Units		
ScA 357.253	1590216.0	111.3	%	1.02				0.92%
ScR 361.383	186316.7	114.3	%	0.45				0.40%
Ag 328.068†	-830.2	0.00054	mg/L	0.000147	0.00107	mg/L	0.000294	27.38%
Al 308.215†	149702.0	114.8	mg/L	0.14	229.7	mg/L	0.27	0.12%
As 188.979†	8.0	0.01418	mg/L	0.001094	0.02837	mg/L	0.002188	7.72%
B 249.677†	34.8	0.01714	mg/L	0.002855	0.03428	mg/L	0.005711	16.66%
Ba 233.527†	3572.0	0.4703	mg/L	0.00352	0.9406	mg/L	0.00703	0.75%
Be 313.042†	555.1	0.00116	mg/L	0.000050	0.00231	mg/L	0.000100	4.32%
Ca 317.933†	319657.1	38.76	mg/L	0.061	77.52	mg/L	0.122	0.16%
Cd 228.802†	34.2	0.00075	mg/L	0.000119	0.00151	mg/L	0.000238	15.79%
Co 228.616†	3976.7	0.07439	mg/L	0.000777	0.1488	mg/L	0.00155	1.04%
Cr 267.716†	1022.6	0.2918	mg/L	0.00303	0.5836	mg/L	0.00605	1.04%
Cu 324.752†	34654.5	0.1906	mg/L	0.00219	0.3813	mg/L	0.00438	1.15%
Fe 273.955†	164482.3	151.8	mg/L	0.43	303.5	mg/L	0.86	0.28%
K 766.490†	11763.8	4.923	mg/L	0.0134	9.847	mg/L	0.0267	0.27%
Mg 279.077†	58285.2	57.40	mg/L	0.114	114.8	mg/L	0.23	0.20%
Mn 257.610†	107544.9	2.908	mg/L	0.0032	5.816	mg/L	0.0065	0.11%
Mo 202.031†	31.0	0.00282	mg/L	0.000187	0.00564	mg/L	0.000373	6.62%
Na 589.592†	12162.6	1.972	mg/L	0.0067	3.945	mg/L	0.0135	0.34%
Na 330.237†	67.9	3.700	mg/L	0.2242	7.400	mg/L	0.4485	6.06%
Ni 231.604†	648.2	0.3953	mg/L	0.00121	0.7907	mg/L	0.00242	0.31%
Pb 220.353†	-63.6	0.01409	mg/L	0.001135	0.02817	mg/L	0.002271	8.06%
Sb 206.836†	68.3	-0.01271	mg/L	0.002528	-0.02542	mg/L	0.005056	19.89%
Se 196.026†	-48.1	-0.00167	mg/L	0.001572	-0.00333	mg/L	0.003145	94.33%
Si 288.158†	1564.9	1.320	mg/L	0.0178	2.640	mg/L	0.0355	1.35%
Sn 189.927†	-29.3	-0.00266	mg/L	0.000675	-0.00531	mg/L	0.001350	25.41%
Sr 421.552†	162988.8	0.3525	mg/L	0.00040	0.7050	mg/L	0.00080	0.11%
Ti 334.903†	85643.0	4.598	mg/L	0.0057	9.196	mg/L	0.0114	0.12%
Tl 190.801†	-8.0	-0.01814	mg/L	0.002366	-0.03628	mg/L	0.004733	13.04%
V 292.402†	37359.0	0.3318	mg/L	0.00454	0.6636	mg/L	0.00907	1.37%
Zn 206.200†	606.5	0.2887	mg/L	0.00282	0.5773	mg/L	0.00565	0.98%

Sequence No.: 51  
Sample ID: RG58 F SWC

Autosampler Location: 88  
Date Collected: 8/10/2010 8:30:32 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 F SWC

Analyte Back Pressure Flow  
All 175.0 kPa 0.55 L/min

Mean Data: RG58 F SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1598215.6	111.9	%	0.48				0.43%
ScR 361.383	187994.2	115.3	%	0.60				0.52%
Ag 328.068†	-778.1	0.00071	mg/L	0.000115	0.00142	mg/L	0.000230	16.20%
Al 308.215†	133655.6	102.5	mg/L	0.09	205.1	mg/L	0.18	0.09%
As 188.979†	5.7	0.01368	mg/L	0.001491	0.02735	mg/L	0.002983	10.91%
B 249.677†	35.2	0.01733	mg/L	0.001963	0.03465	mg/L	0.003926	11.33%
Ba 233.527†	3186.7	0.4190	mg/L	0.00377	0.8380	mg/L	0.00754	0.90%
Be 313.042†	503.2	0.00097	mg/L	0.000019	0.00195	mg/L	0.000037	1.90%
Ca 317.933†	306949.8	37.22	mg/L	0.143	74.43	mg/L	0.286	0.38%
Cd 228.802†	38.2	0.00083	mg/L	0.000120	0.00166	mg/L	0.000240	14.48%
Co 228.616†	3730.3	0.06841	mg/L	0.000211	0.1368	mg/L	0.00042	0.31%
Cr 267.716†	1184.0	0.3378	mg/L	0.00345	0.6755	mg/L	0.00689	1.02%
Cu 324.752†	28557.8	0.1587	mg/L	0.00095	0.3174	mg/L	0.00190	0.60%
Fe 273.955†	159438.2	147.1	mg/L	0.59	294.2	mg/L	1.19	0.40%
K 766.490†	11689.1	4.892	mg/L	0.0101	9.784	mg/L	0.0203	0.21%
Mg 279.077†	53737.4	52.91	mg/L	0.143	105.8	mg/L	0.29	0.27%
Mn 257.610†	96052.4	2.597	mg/L	0.0031	5.194	mg/L	0.0063	0.12%
Mo 202.031†	29.5	0.00268	mg/L	0.000386	0.00537	mg/L	0.000773	14.39%
Na 589.592†	11563.5	1.875	mg/L	0.0043	3.751	mg/L	0.0087	0.23%
Na 330.237†	66.4	3.751	mg/L	0.1717	7.503	mg/L	0.3433	4.58%
Ni 231.604†	623.4	0.3802	mg/L	0.00326	0.7604	mg/L	0.00653	0.86%
Pb 220.353†	-40.9	0.01416	mg/L	0.000949	0.02831	mg/L	0.001899	6.71%
Sb 206.836†	60.8	-0.01303	mg/L	0.000919	-0.02606	mg/L	0.001839	7.06%
Se 196.026†	-47.1	-0.00364	mg/L	0.009004	-0.00728	mg/L	0.018009	247.46%
Si 288.158†	1163.1	0.9826	mg/L	0.01439	1.965	mg/L	0.0288	1.46%
Sn 189.927†	-32.9	-0.00365	mg/L	0.001280	-0.00731	mg/L	0.002560	35.02%
Sr 421.552†	132153.7	0.2858	mg/L	0.00049	0.5716	mg/L	0.00098	0.17%
Ti 334.903†	95169.7	5.110	mg/L	0.0041	10.22	mg/L	0.008	0.08%
Tl 190.801†	-1.7	-0.01520	mg/L	0.000591	-0.03041	mg/L	0.001181	3.89%
V 292.402†	36315.4	0.3224	mg/L	0.00249	0.6447	mg/L	0.00498	0.77%
Zn 206.200†	575.0	0.2736	mg/L	0.00183	0.5472	mg/L	0.00366	0.67%

Sequence No.: 52  
Sample ID: RG58 G SWC

Autosampler Location: 89  
Date Collected: 8/10/2010 8:36:35 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 G SWC

Analyte Back Pressure Flow  
All 175.0 kPa 0.55 L/min

Mean Data: RG58 G SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1566237.8	109.6	%	1.13				1.03%
ScR 361.383	183587.0	112.6	%	0.57				0.51%
Ag 328.068†	-578.5	0.00064	mg/L	0.000186	0.00127	mg/L	0.000371	29.12%
Al 308.215†	156524.4	120.1	mg/L	0.36	240.1	mg/L	0.72	0.30%
As 188.979†	86.1	0.06549	mg/L	0.003093	0.1310	mg/L	0.00619	4.72%
B 249.677†	37.7	0.01867	mg/L	0.001890	0.03733	mg/L	0.003780	10.13%
Ba 233.527†	5344.1	0.7092	mg/L	0.00383	1.418	mg/L	0.0077	0.54%
Be 313.042†	755.3	0.00200	mg/L	0.000038	0.00400	mg/L	0.000077	1.92%
Ca 317.933†	242892.9	29.45	mg/L	0.059	58.90	mg/L	0.117	0.20%
Cd 228.802†	188.4	0.00358	mg/L	0.000109	0.00715	mg/L	0.000218	3.05%
Co 228.616†	2488.5	0.04285	mg/L	0.000720	0.08571	mg/L	0.001440	1.68%
Cr 267.716†	930.2	0.2657	mg/L	0.00234	0.5313	mg/L	0.00468	0.88%
Cu 324.752†	32264.1	0.1747	mg/L	0.00159	0.3494	mg/L	0.00318	0.91%
Fe 273.955†	121493.5	112.1	mg/L	0.41	224.2	mg/L	0.83	0.37%
K 766.490†	7652.9	3.203	mg/L	0.0411	6.406	mg/L	0.0822	1.28%
Mg 279.077†	28338.2	27.88	mg/L	0.017	55.77	mg/L	0.033	0.06%
Mn 257.610†	70965.7	1.919	mg/L	0.0034	3.837	mg/L	0.0069	0.18%
Mo 202.031†	61.7	0.00565	mg/L	0.000154	0.01129	mg/L	0.000308	2.73%
Na 589.592†	5382.9	0.8730	mg/L	0.00567	1.746	mg/L	0.0113	0.65%
Na 330.237†	42.9	2.596	mg/L	0.1790	5.192	mg/L	0.3581	6.90%
Ni 231.604†	397.7	0.2426	mg/L	0.00238	0.4851	mg/L	0.00476	0.98%
Pb 220.353†	3320.7	0.4799	mg/L	0.00713	0.9599	mg/L	0.01426	1.49%
Sb 206.836†	69.9	-0.00604	mg/L	0.001734	-0.01209	mg/L	0.003468	28.69%
Se 196.026†	-35.1	0.00658	mg/L	0.004891	0.01316	mg/L	0.009783	74.33%
Si 288.158†	2053.3	1.726	mg/L	0.0053	3.451	mg/L	0.0105	0.31%
Sn 189.927†	-3.1	0.00340	mg/L	0.000543	0.00681	mg/L	0.001085	15.94%
Sr 421.552†	86308.9	0.1867	mg/L	0.00074	0.3733	mg/L	0.00148	0.40%
Ti 334.903†	92066.6	4.943	mg/L	0.0103	9.886	mg/L	0.0205	0.21%
Tl 190.801†	-0.1	-0.01291	mg/L	0.004064	-0.02582	mg/L	0.008129	31.48%
V 292.402†	33980.9	0.3041	mg/L	0.00279	0.6083	mg/L	0.00559	0.92%
Zn 206.200†	1288.8	0.6101	mg/L	0.00377	1.220	mg/L	0.0075	0.62%



Sequence No.: 53  
Sample ID: RG58 H SWC

Autosampler Location: 90  
Date Collected: 8/10/2010 8:42:36 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 H SWC

Analyte Back Pressure Flow  
All 176.0 kPa 0.55 L/min

Mean Data: RG58 H SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1572048.5	110.0	%	0.68				0.62%
ScR 361.383	179127.2	109.9	%	0.41				0.37%
Ag 328.068†	-792.4	0.00043	mg/L	0.000174	0.00086	mg/L	0.000348	40.43%
Al 308.215†	191613.7	147.0	mg/L	0.05	294.0	mg/L	0.09	0.03%
As 188.979†	88.8	0.07054	mg/L	0.002092	0.1411	mg/L	0.00418	2.97%
B 249.677†	47.6	0.02356	mg/L	0.000706	0.04713	mg/L	0.001412	3.00%
Ba 233.527†	5020.4	0.6645	mg/L	0.00650	1.329	mg/L	0.0130	0.98%
Be 313.042†	752.2	0.00184	mg/L	0.000034	0.00367	mg/L	0.000069	1.87%
Ca 317.933†	247240.9	29.98	mg/L	0.035	59.96	mg/L	0.071	0.12%
Cd 228.802†	128.4	0.00245	mg/L	0.000023	0.00489	mg/L	0.000045	0.93%
Co 228.616†	3282.6	0.05648	mg/L	0.000304	0.1130	mg/L	0.00061	0.54%
Cr 267.716†	1027.2	0.2936	mg/L	0.00384	0.5872	mg/L	0.00768	1.31%
Cu 324.752†	25849.4	0.1439	mg/L	0.00141	0.2878	mg/L	0.00282	0.98%
Fe 273.955†	153017.6	141.2	mg/L	0.18	282.4	mg/L	0.36	0.13%
K 766.490†	9479.5	3.967	mg/L	0.0184	7.935	mg/L	0.0369	0.46%
Mg 279.077†	36806.0	36.22	mg/L	0.044	72.44	mg/L	0.089	0.12%
Mn 257.610†	103208.5	2.791	mg/L	0.0017	5.581	mg/L	0.0033	0.06%
Mo 202.031†	43.3	0.00395	mg/L	0.000291	0.00790	mg/L	0.000581	7.36%
Na 589.592†	6565.0	1.065	mg/L	0.0062	2.129	mg/L	0.0125	0.59%
Na 330.237†	35.5	2.649	mg/L	0.1294	5.299	mg/L	0.2587	4.88%
Ni 231.604†	538.1	0.3282	mg/L	0.00287	0.6563	mg/L	0.00573	0.87%
Pb 220.353†	1458.3	0.2316	mg/L	0.00104	0.4631	mg/L	0.00208	0.45%
Sb 206.836†	85.8	-0.00668	mg/L	0.001988	-0.01335	mg/L	0.003977	29.78%
Se 196.026†	-49.0	0.00231	mg/L	0.002758	0.00462	mg/L	0.005516	119.41%
Si 288.158†	2494.0	2.096	mg/L	0.0095	4.192	mg/L	0.0190	0.45%
Sn 189.927†	-21.1	-0.00068	mg/L	0.001006	-0.00136	mg/L	0.002012	147.61%
Sr 421.552†	84495.7	0.1827	mg/L	0.00031	0.3655	mg/L	0.00062	0.17%
Ti 334.903†	122687.0	6.588	mg/L	0.0051	13.18	mg/L	0.010	0.08%
Tl 190.801†	-0.7	-0.01748	mg/L	0.001624	-0.03496	mg/L	0.003248	9.29%
V 292.402†	39213.5	0.3488	mg/L	0.00383	0.6976	mg/L	0.00767	1.10%
Zn 206.200†	983.2	0.4659	mg/L	0.00465	0.9318	mg/L	0.00930	1.00%

Sequence No.: 54  
Sample ID: RG58 IDUP SWC

Autosampler Location: 91  
Date Collected: 8/10/2010 8:48:39 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 IDUP SWC

Analyte Back Pressure Flow  
All 175.0 kPa 0.55 L/min

Mean Data: RG58 IDUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	1585780.9	111.0	%	0.93			0.84%
ScR 361.383	181907.5	111.6	%	0.09			0.08%
Ag 328.068†	-772.7	0.00074	mg/L	0.000186	0.00149 mg/L	0.000371	24.98%
Al 308.215†	199037.8	152.7	mg/L	0.07	305.4 mg/L	0.14	0.05%
As 188.979†	79.4	0.06441	mg/L	0.001211	0.1288 mg/L	0.00242	1.88%
B 249.677†	40.6	0.02007	mg/L	0.002485	0.04014 mg/L	0.004969	12.38%
Ba 233.527†	5113.7	0.6767	mg/L	0.00127	1.353 mg/L	0.0025	0.19%
Be 313.042†	746.1	0.00179	mg/L	0.000030	0.00357 mg/L	0.000060	1.69%
Ca 317.933†	265025.6	32.13	mg/L	0.050	64.27 mg/L	0.101	0.16%
Cd 228.802†	102.8	0.00196	mg/L	0.000045	0.00393 mg/L	0.000090	2.29%
Co 228.616†	3325.9	0.05739	mg/L	0.000383	0.1148 mg/L	0.00077	0.67%
Cr 267.716†	1093.8	0.3125	mg/L	0.00028	0.6251 mg/L	0.00055	0.09%
Cu 324.752†	24222.4	0.1360	mg/L	0.00130	0.2720 mg/L	0.00261	0.96%
Fe 273.955†	159056.2	146.7	mg/L	0.04	293.5 mg/L	0.09	0.03%
K 766.490†	9579.6	4.009	mg/L	0.0069	8.019 mg/L	0.0138	0.17%
Mg 279.077†	39749.2	39.12	mg/L	0.074	78.24 mg/L	0.148	0.19%
Mn 257.610†	102991.1	2.785	mg/L	0.0013	5.569 mg/L	0.0026	0.05%
Mo 202.031†	44.5	0.00406	mg/L	0.000308	0.00813 mg/L	0.000617	7.59%
Na 589.592†	7322.5	1.188	mg/L	0.0058	2.375 mg/L	0.0116	0.49%
Na 330.237†	39.1	2.814	mg/L	0.1971	5.627 mg/L	0.3942	7.01%
Ni 231.604†	519.2	0.3167	mg/L	0.00591	0.6333 mg/L	0.01181	1.86%
Pb 220.353†	1067.3	0.1795	mg/L	0.00101	0.3590 mg/L	0.00201	0.56%
Sb 206.836†	84.1	-0.01008	mg/L	0.003817	-0.02016 mg/L	0.007634	37.87%
Se 196.026†	-55.4	-0.00187	mg/L	0.001314	-0.00373 mg/L	0.002628	70.38%
Si 288.158†	2144.1	1.803	mg/L	0.0164	3.607 mg/L	0.0328	0.91%
Sn 189.927†	-19.4	-0.00002	mg/L	0.000562	-0.00004 mg/L	0.001124	>999.9%
Sr 421.552†	93011.7	0.2012	mg/L	0.00011	0.4023 mg/L	0.00022	0.05%
Ti 334.903†	122606.3	6.583	mg/L	0.0008	13.17 mg/L	0.002	0.01%
Tl 190.801†	-0.4	-0.01736	mg/L	0.004556	-0.03473 mg/L	0.009112	26.24%
V 292.402†	40327.1	0.3588	mg/L	0.00353	0.7175 mg/L	0.00705	0.98%
Zn 206.200†	878.9	0.4167	mg/L	0.00132	0.8334 mg/L	0.00264	0.32%

Sequence No.: 55  
Sample ID: RG58 I SWC

Autosampler Location: 92  
Date Collected: 8/10/2010 8:54:42 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 I SWC

Analyte Back Pressure Flow  
All 176.0 kPa 0.55 L/min

Mean Data: RG58 I SWC

Analyte	Mean Corrected			Std.Dev.	Sample			RSD
	Intensity	Conc.	Calib. Units		Conc.	Units	Std.Dev.	
ScA 357.253	1561951.3	109.3	%	0.91				0.83%
ScR 361.383	182995.2	112.2	%	0.61				0.54%
Ag 328.068†	-770.1	0.00076	mg/L	0.000244	0.00152	mg/L	0.000488	32.16%
Al 308.215†	194887.0	149.5	mg/L	0.16	299.0	mg/L	0.33	0.11%
As 188.979†	70.7	0.05832	mg/L	0.002248	0.1166	mg/L	0.00450	3.85%
B 249.677†	39.5	0.01955	mg/L	0.001705	0.03910	mg/L	0.003409	8.72%
Ba 233.527†	4313.4	0.5696	mg/L	0.00403	1.139	mg/L	0.0081	0.71%
Be 313.042†	705.3	0.00163	mg/L	0.000007	0.00326	mg/L	0.000013	0.40%
Ca 317.933†	356923.0	43.28	mg/L	0.086	86.55	mg/L	0.171	0.20%
Cd 228.802†	96.3	0.00184	mg/L	0.000139	0.00368	mg/L	0.000278	7.56%
Co 228.616†	3140.9	0.05398	mg/L	0.000731	0.1080	mg/L	0.00146	1.35%
Cr 267.716†	893.5	0.2554	mg/L	0.00309	0.5108	mg/L	0.00617	1.21%
Cu 324.752†	23593.5	0.1330	mg/L	0.00108	0.2660	mg/L	0.00217	0.81%
Fe 273.955†	161215.1	148.7	mg/L	0.21	297.5	mg/L	0.42	0.14%
K 766.490†	8925.6	3.736	mg/L	0.0111	7.471	mg/L	0.0222	0.30%
Mg 279.077†	38789.2	38.17	mg/L	0.001	76.34	mg/L	0.002	0.00%
Mn 257.610†	100307.7	2.712	mg/L	0.0011	5.424	mg/L	0.0021	0.04%
Mo 202.031†	48.5	0.00444	mg/L	0.000801	0.00888	mg/L	0.001603	18.05%
Na 589.592†	7593.8	1.232	mg/L	0.0023	2.463	mg/L	0.0047	0.19%
Na 330.237†	42.0	2.829	mg/L	0.1818	5.658	mg/L	0.3635	6.42%
Ni 231.604†	461.5	0.2815	mg/L	0.00220	0.5630	mg/L	0.00440	0.78%
Pb 220.353†	921.6	0.1585	mg/L	0.00264	0.3169	mg/L	0.00529	1.67%
Sb 206.836†	83.9	-0.00913	mg/L	0.001239	-0.01826	mg/L	0.002477	13.57%
Se 196.026†	-48.6	0.00462	mg/L	0.004776	0.00925	mg/L	0.009552	103.31%
Si 288.158†	2274.1	1.912	mg/L	0.0262	3.824	mg/L	0.0524	1.37%
Sn 189.927†	-22.4	-0.00036	mg/L	0.001896	-0.00073	mg/L	0.003792	519.71%
Sr 421.552†	166092.5	0.3592	mg/L	0.00019	0.7184	mg/L	0.00037	0.05%
Ti 334.903†	118325.4	6.353	mg/L	0.0041	12.71	mg/L	0.008	0.07%
Tl 190.801†	-4.0	-0.01874	mg/L	0.001860	-0.03747	mg/L	0.003721	9.93%
V 292.402†	40408.6	0.3591	mg/L	0.00319	0.7182	mg/L	0.00639	0.89%
Zn 206.200†	816.3	0.3875	mg/L	0.00187	0.7749	mg/L	0.00373	0.48%

Sequence No.: 56  
Sample ID: RG58 ISPK SWC

Autosampler Location: 93  
Date Collected: 8/10/2010 9:00:45 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 ISPK SWC

Analyte Back Pressure Flow  
All 176.0 kPa 0.55 L/min

Mean Data: RG58 ISPK SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD	
	Intensity	Conc.			Conc.	Units		Std.Dev.
ScA 357.253	1551529.0	108.6	%	0.29			0.26%	
ScR 361.383	185320.0	113.7	%	0.58			0.51%	
Ag 328.068†	79115.5	0.4469	mg/L	0.00072	0.8939	mg/L	0.00145	0.16%
Al 308.215†	208002.5	159.6	mg/L	0.18	319.1	mg/L	0.35	0.11%
As 188.979†	2824.7	1.846	mg/L	0.0164	3.691	mg/L	0.0329	0.89%
B 249.677†	46.1	0.02141	mg/L	0.001065	0.04282	mg/L	0.002130	4.97%
Ba 233.527†	18472.6	2.462	mg/L	0.0046	4.924	mg/L	0.0092	0.19%
Be 313.042†	124356.5	0.4742	mg/L	0.00047	0.9483	mg/L	0.00094	0.10%
Ca 317.933†	357676.4	43.37	mg/L	0.031	86.74	mg/L	0.061	0.07%
Cd 228.802†	23734.4	0.4519	mg/L	0.00103	0.9039	mg/L	0.00206	0.23%
Co 228.616†	24259.3	0.4901	mg/L	0.00287	0.9801	mg/L	0.00575	0.59%
Cr 267.716†	2689.8	0.7666	mg/L	0.00221	1.533	mg/L	0.0044	0.29%
Cu 324.752†	118189.1	0.6208	mg/L	0.00026	1.242	mg/L	0.0005	0.04%
Fe 273.955†	177025.5	163.3	mg/L	0.71	326.7	mg/L	1.42	0.43%
K 766.490†	30485.2	12.76	mg/L	0.006	25.52	mg/L	0.012	0.05%
Mg 279.077†	51716.2	50.91	mg/L	0.014	101.8	mg/L	0.03	0.03%
Mn 257.610†	148079.2	4.004	mg/L	0.0075	8.009	mg/L	0.0151	0.19%
Mo 202.031†	68.6	0.00622	mg/L	0.000459	0.01244	mg/L	0.000917	7.37%
Na 589.592†	60995.7	9.892	mg/L	0.0365	19.78	mg/L	0.073	0.37%
Na 330.237†	237.8	11.76	mg/L	0.156	23.53	mg/L	0.313	1.33%
Ni 231.604†	1232.5	0.7509	mg/L	0.00437	1.502	mg/L	0.0087	0.58%
Pb 220.353†	13799.9	1.918	mg/L	0.0128	3.836	mg/L	0.0257	0.67%
Sb 206.836†	105.9	-0.00767	mg/L	0.001973	-0.01534	mg/L	0.003946	25.72%
Se 196.026†	1780.4	1.800	mg/L	0.0073	3.601	mg/L	0.0145	0.40%
Si 288.158†	2517.7	2.119	mg/L	0.0129	4.237	mg/L	0.0258	0.61%
Sn 189.927†	-29.8	-0.00167	mg/L	0.000535	-0.00334	mg/L	0.001070	32.04%
Sr 421.552†	305150.8	0.6600	mg/L	0.00104	1.320	mg/L	0.0021	0.16%
Ti 334.903†	136576.6	7.333	mg/L	0.0097	14.67	mg/L	0.019	0.13%
Tl 190.801†	3361.6	1.720	mg/L	0.0138	3.441	mg/L	0.0276	0.80%
V 292.402†	94434.8	0.8679	mg/L	0.00237	1.736	mg/L	0.0047	0.27%
Zn 206.200†	1822.9	0.8630	mg/L	0.00537	1.726	mg/L	0.0107	0.62%

Sequence No.: 57  
Sample ID: RG58 REF1 SWC

Autosampler Location: 94  
Date Collected: 8/10/2010 9:06:37 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 REF1 SWC

Analyte Back Pressure Flow  
All 176.0 kPa 0.55 L/min

Mean Data: RG58 REF1 SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD	
	Intensity	Conc.			Conc.	Units		Std.Dev.
ScA 357.253	1573871.2	110.2	%	0.41			0.37%	
ScR 361.383	182019.6	111.6	%	1.04			0.93%	
Ag 328.068†	176836.6	0.9913	mg/L	0.00373	1.983	mg/L	0.0075	0.38%
Al 308.215†	105698.8	81.07	mg/L	0.271	162.1	mg/L	0.54	0.33%
As 188.979†	1937.2	1.259	mg/L	0.0065	2.517	mg/L	0.0130	0.52%
B 249.677†	1943.3	0.9729	mg/L	0.00177	1.946	mg/L	0.0035	0.18%
Ba 233.527†	22581.9	3.012	mg/L	0.0218	6.025	mg/L	0.0436	0.72%
Be 313.042†	229375.1	0.8769	mg/L	0.00220	1.754	mg/L	0.0044	0.25%
Ca 317.933†	322301.9	39.08	mg/L	0.096	78.16	mg/L	0.192	0.25%
Cd 228.802†	35791.6	0.6841	mg/L	0.00275	1.368	mg/L	0.0055	0.40%
Co 228.616†	33691.6	0.6953	mg/L	0.00141	1.391	mg/L	0.0028	0.20%
Cr 267.716†	2543.9	0.7254	mg/L	0.00506	1.451	mg/L	0.0101	0.70%
Cu 324.752†	130533.8	0.6838	mg/L	0.00052	1.368	mg/L	0.0010	0.08%
Fe 273.955†	154845.7	142.9	mg/L	0.41	285.7	mg/L	0.82	0.29%
K 766.490†	79221.5	33.16	mg/L	0.178	66.31	mg/L	0.355	0.54%
Mg 279.077†	26195.7	25.76	mg/L	0.174	51.51	mg/L	0.348	0.68%
Mn 257.610†	162529.4	4.396	mg/L	0.0077	8.791	mg/L	0.0155	0.18%
Mo 202.031†	4544.8	0.4200	mg/L	0.00128	0.8400	mg/L	0.00257	0.31%
Na 589.592†	32404.8	5.255	mg/L	0.0182	10.51	mg/L	0.036	0.35%
Na 330.237†	155.4	6.632	mg/L	0.2487	13.26	mg/L	0.497	3.75%
Ni 231.604†	894.0	0.5451	mg/L	0.00348	1.090	mg/L	0.0070	0.64%
Pb 220.353†	8884.9	1.227	mg/L	0.0037	2.453	mg/L	0.0074	0.30%
Sb 206.836†	1131.3	0.5517	mg/L	0.00711	1.103	mg/L	0.0142	1.29%
Se 196.026†	1613.9	1.618	mg/L	0.0038	3.236	mg/L	0.0076	0.23%
Si 288.158†	2791.1	2.345	mg/L	0.0252	4.690	mg/L	0.0504	1.07%
Sn 189.927†	5418.0	1.502	mg/L	0.0094	3.004	mg/L	0.0187	0.62%
Sr 421.552†	253062.3	0.5473	mg/L	0.00195	1.095	mg/L	0.0039	0.36%
Ti 334.903†	34067.9	1.828	mg/L	0.0047	3.655	mg/L	0.0094	0.26%
Tl 190.801†	2564.4	1.315	mg/L	0.0046	2.629	mg/L	0.0092	0.35%
V 292.402†	87349.9	0.8107	mg/L	0.00182	1.621	mg/L	0.0036	0.22%
Zn 206.200†	3598.3	1.701	mg/L	0.0088	3.402	mg/L	0.0177	0.52%

Sequence No.: 58  
Sample ID: RG58 MB1SPK SWC

Autosampler Location: 95  
Date Collected: 8/10/2010 9:12:27 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 MB1SPK SWC

Analyte Back Pressure Flow  
All 176.0 kPa 0.55 L/min

Mean Data: RG58 MB1SPK SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1603308.7	112.2	%	1.19				1.06%
ScR 361.383	180421.7	110.6	%	0.16				0.14%
Ag 328.068†	84705.8	0.4727	mg/L	0.00789	0.9453	mg/L	0.01578	1.67%
Al 308.215†	2641.0	2.019	mg/L	0.0040	4.038	mg/L	0.0080	0.20%
As 188.979†	2959.5	1.919	mg/L	0.0312	3.837	mg/L	0.0625	1.63%
B 249.677†	14.1	0.00553	mg/L	0.000667	0.01106	mg/L	0.001335	12.06%
Ba 233.527†	14453.3	1.932	mg/L	0.0056	3.865	mg/L	0.0112	0.29%
Be 313.042†	129414.8	0.4947	mg/L	0.00220	0.9894	mg/L	0.00440	0.45%
Ca 317.933†	82385.9	9.989	mg/L	0.0486	19.98	mg/L	0.097	0.49%
Cd 228.802†	25167.2	0.4792	mg/L	0.00689	0.9583	mg/L	0.01377	1.44%
Co 228.616†	22705.6	0.4707	mg/L	0.00802	0.9414	mg/L	0.01604	1.70%
Cr 267.716†	1742.2	0.4955	mg/L	0.00197	0.9910	mg/L	0.00395	0.40%
Cu 324.752†	94149.9	0.4846	mg/L	0.00812	0.9693	mg/L	0.01624	1.68%
Fe 273.955†	2259.6	2.084	mg/L	0.0089	4.169	mg/L	0.0178	0.43%
K 766.490†	23728.3	9.931	mg/L	0.0251	19.86	mg/L	0.050	0.25%
Mg 279.077†	10224.7	10.08	mg/L	0.032	20.17	mg/L	0.063	0.31%
Mn 257.610†	18089.8	0.4898	mg/L	0.00130	0.9795	mg/L	0.00260	0.27%
Mo 202.031†	9.7	0.00082	mg/L	0.000288	0.00164	mg/L	0.000577	35.18%
Na 589.592†	58826.7	9.540	mg/L	0.0278	19.08	mg/L	0.056	0.29%
Na 330.237†	256.3	11.40	mg/L	0.236	22.80	mg/L	0.471	2.07%
Ni 231.604†	798.4	0.4860	mg/L	0.00319	0.9720	mg/L	0.00639	0.66%
Pb 220.353†	13994.8	1.910	mg/L	0.0342	3.821	mg/L	0.0683	1.79%
Sb 206.836†	-4.8	-0.00972	mg/L	0.001663	-0.01943	mg/L	0.003325	17.11%
Se 196.026†	1986.8	1.948	mg/L	0.0213	3.895	mg/L	0.0426	1.09%
Si 288.158†	19.2	0.01795	mg/L	0.003657	0.03590	mg/L	0.007314	20.37%
Sn 189.927†	-4.7	-0.00048	mg/L	0.000525	-0.00096	mg/L	0.001050	109.42%
Sr 421.552†	230910.7	0.4994	mg/L	0.00212	0.9988	mg/L	0.00424	0.42%
Ti 334.903†	-29.4	-0.00209	mg/L	0.000434	-0.00417	mg/L	0.000867	20.80%
Tl 190.801†	3702.7	1.917	mg/L	0.0260	3.834	mg/L	0.0520	1.36%
V 292.402†	52109.0	0.4929	mg/L	0.00795	0.9857	mg/L	0.01589	1.61%
Zn 206.200†	1033.0	0.4883	mg/L	0.00380	0.9765	mg/L	0.00761	0.78%

Sequence No.: 59

Sample ID: CV 8

Autosampler Location: 7

Date Collected: 8/10/2010 9:18:30 PM

Data Type: Original

Dilution: 1X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	175.0 kPa	0.55 L/min

## Mean Data: CV

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	1604682.9	112.3	%	0.24				0.21%
ScR 361.383	186624.1	114.4	%	0.16				0.14%
Ag 328.068†	164060.6	0.9154	mg/L	0.00215	0.9154	mg/L	0.00215	0.23%
Al 308.215†	2579.0	1.942	mg/L	0.0082	1.942	mg/L	0.0082	0.42%
As 188.979†	2901.6	1.881	mg/L	0.0070	1.881	mg/L	0.0070	0.37%
B 249.677†	1850.6	0.9265	mg/L	0.00365	0.9265	mg/L	0.00365	0.39%
Ba 233.527†	7092.6	0.9479	mg/L	0.00562	0.9479	mg/L	0.00562	0.59%
Be 313.042†	252573.8	0.9654	mg/L	0.00289	0.9654	mg/L	0.00289	0.30%
Ca 317.933†	16525.2	2.004	mg/L	0.0137	2.004	mg/L	0.0137	0.68%
Cd 228.802†	50464.3	0.9644	mg/L	0.00294	0.9644	mg/L	0.00294	0.31%
Co 228.616†	45651.7	0.9457	mg/L	0.00475	0.9457	mg/L	0.00475	0.50%
Cr 267.716†	3402.8	0.9684	mg/L	0.00522	0.9684	mg/L	0.00522	0.54%
Cu 324.752†	198011.2	1.018	mg/L	0.0060	1.018	mg/L	0.0060	0.59%
Fe 273.955†	2098.3	1.935	mg/L	0.0086	1.935	mg/L	0.0086	0.44%
K 766.490†	45631.6	19.10	mg/L	0.013	19.10	mg/L	0.013	0.07%
Mg 279.077†	1979.0	1.955	mg/L	0.0154	1.955	mg/L	0.0154	0.79%
Mn 257.610†	35590.0	0.9631	mg/L	0.00064	0.9631	mg/L	0.00064	0.07%
Mo 202.031†	9940.0	0.9189	mg/L	0.00197	0.9189	mg/L	0.00197	0.21%
Na 589.592†	282363.9	45.79	mg/L	0.038	45.79	mg/L	0.038	0.08%
Na 330.237†	1080.9	48.88	mg/L	0.412	48.88	mg/L	0.412	0.84%
Ni 231.604†	1584.0	0.9667	mg/L	0.00729	0.9667	mg/L	0.00729	0.75%
Pb 220.353†	13954.6	1.905	mg/L	0.0125	1.905	mg/L	0.0125	0.66%
Sb 206.836†	3866.2	1.993	mg/L	0.0054	1.993	mg/L	0.0054	0.27%
Se 196.026†	1920.2	1.881	mg/L	0.0158	1.881	mg/L	0.0158	0.84%
Si 288.158†	2448.1	2.055	mg/L	0.0116	2.055	mg/L	0.0116	0.56%
Sn 189.927†	3145.5	0.8705	mg/L	0.00238	0.8705	mg/L	0.00238	0.27%
Sr 421.552†	453412.7	0.9806	mg/L	0.00188	0.9806	mg/L	0.00188	0.19%
Ti 334.903†	17849.4	0.9574	mg/L	0.00130	0.9574	mg/L	0.00130	0.14%
Tl 190.801†	3615.5	1.865	mg/L	0.0056	1.865	mg/L	0.0056	0.30%
V 292.402†	101354.6	0.9639	mg/L	0.00533	0.9639	mg/L	0.00533	0.55%
Zn 206.200†	2076.9	0.9804	mg/L	0.00779	0.9804	mg/L	0.00779	0.79%

Sequence No.: 60

Sample ID: CB 8

Autosampler Location: 1

Date Collected: 8/10/2010 9:24:31 PM

Data Type: Original

Dilution: 1X

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	175.0 kPa	0.55 L/min

## Mean Data: CB

Analyte	Mean Corrected			Std.Dev.	Sample			RSD
	Intensity	Conc.	Calib. Units		Conc.	Units	Std.Dev.	
ScA 357.253	1613727.5	112.9	%	0.42				0.37%
ScR 361.383	177715.9	109.0	%	4.18				3.84%
Ag 328.068†	86.3	0.00048	mg/L	0.000236	0.00048	mg/L	0.000236	49.04%
Al 308.215†	19.7	0.01515	mg/L	0.003105	0.01515	mg/L	0.003105	20.50%
As 188.979†	-1.3	-0.00082	mg/L	0.001830	-0.00082	mg/L	0.001830	222.47%
B 249.677†	15.7	0.00785	mg/L	0.002315	0.00785	mg/L	0.002315	29.48%
Ba 233.527†	-1.6	-0.00022	mg/L	0.000392	-0.00022	mg/L	0.000392	179.72%
Be 313.042†	-9.2	-0.00003	mg/L	0.000067	-0.00003	mg/L	0.000067	191.60%
Ca 317.933†	6.9	0.00084	mg/L	0.001879	0.00084	mg/L	0.001879	224.59%
Cd 228.802†	-0.4	-0.00001	mg/L	0.000026	-0.00001	mg/L	0.000026	478.22%
Co 228.616†	16.2	0.00034	mg/L	0.000066	0.00034	mg/L	0.000066	19.27%
Cr 267.716†	0.7	0.00019	mg/L	0.001120	0.00019	mg/L	0.001120	596.16%
Cu 324.752†	-220.5	-0.00113	mg/L	0.000024	-0.00113	mg/L	0.000024	2.14%
Fe 273.955†	-2.2	-0.00201	mg/L	0.002771	-0.00201	mg/L	0.002771	137.52%
K 766.490†	-190.8	-0.07984	mg/L	0.050494	-0.07984	mg/L	0.050494	63.25%
Mg 279.077†	15.3	0.01512	mg/L	0.004878	0.01512	mg/L	0.004878	32.26%
Mn 257.610†	-2.9	-0.00008	mg/L	0.000065	-0.00008	mg/L	0.000065	82.49%
Mo 202.031†	1.9	0.00018	mg/L	0.000079	0.00018	mg/L	0.000079	44.65%
Na 589.592†	29.8	0.00483	mg/L	0.009298	0.00483	mg/L	0.009298	192.67%
Na 330.237†	22.5	1.019	mg/L	0.4690	1.019	mg/L	0.4690	46.01%
Ni 231.604†	4.9	0.00297	mg/L	0.001802	0.00297	mg/L	0.001802	60.62%
Pb 220.353†	-22.2	-0.00302	mg/L	0.000341	-0.00302	mg/L	0.000341	11.30%
Sb 206.836†	-17.9	-0.00922	mg/L	0.000417	-0.00922	mg/L	0.000417	4.52%
Se 196.026†	14.4	0.01416	mg/L	0.000255	0.01416	mg/L	0.000255	1.80%
Si 288.158†	-2.2	-0.00182	mg/L	0.005794	-0.00182	mg/L	0.005794	318.02%
Sn 189.927†	5.9	0.00163	mg/L	0.000731	0.00163	mg/L	0.000731	44.92%
Sr 421.552†	-34.2	-0.00007	mg/L	0.000097	-0.00007	mg/L	0.000097	130.80%
Ti 334.903†	-57.3	-0.00308	mg/L	0.000854	-0.00308	mg/L	0.000854	27.75%
Tl 190.801†	3.6	0.00188	mg/L	0.001832	0.00188	mg/L	0.001832	97.34%
V 292.402†	-13.4	-0.00012	mg/L	0.000051	-0.00012	mg/L	0.000051	42.46%
Zn 206.200†	2.0	0.00094	mg/L	0.000660	0.00094	mg/L	0.000660	70.47%



Sequence No.: 61  
Sample ID: RG58 J SWC

Autosampler Location: 96  
Date Collected: 8/10/2010 9:30:29 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 J SWC

Analyte Back Pressure Flow  
All 174.0 kPa 0.55 L/min

Mean Data: RG58 J SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1592255.8	111.4	%	0.16				0.15%
ScR 361.383	183236.1	112.4	%	1.30				1.15%
Ag 328.068†	-778.6	0.00095	mg/L	0.000231	0.00191	mg/L	0.000462	24.18%
Al 308.215†	207331.9	159.0	mg/L	0.22	318.1	mg/L	0.43	0.14%
As 188.979†	41.4	0.04271	mg/L	0.001068	0.08541	mg/L	0.002136	2.50%
B 249.677†	49.8	0.02469	mg/L	0.001674	0.04938	mg/L	0.003348	6.78%
Ba 233.527†	4293.0	0.5667	mg/L	0.00588	1.133	mg/L	0.0118	1.04%
Be 313.042†	742.4	0.00166	mg/L	0.000063	0.00332	mg/L	0.000126	3.81%
Ca 317.933†	281069.9	34.08	mg/L	0.077	68.16	mg/L	0.154	0.23%
Cd 228.802†	88.5	0.00173	mg/L	0.000061	0.00347	mg/L	0.000121	3.50%
Co 228.616†	3511.2	0.05873	mg/L	0.000162	0.1175	mg/L	0.00032	0.28%
Cr 267.716†	1029.8	0.2944	mg/L	0.00334	0.5887	mg/L	0.00668	1.13%
Cu 324.752†	20157.9	0.1152	mg/L	0.00012	0.2303	mg/L	0.00024	0.10%
Fe 273.955†	164335.2	151.6	mg/L	0.74	303.2	mg/L	1.47	0.48%
K 766.490†	8722.7	3.651	mg/L	0.0321	7.301	mg/L	0.0642	0.88%
Mg 279.077†	40299.5	39.66	mg/L	0.108	79.32	mg/L	0.216	0.27%
Mn 257.610†	89879.8	2.430	mg/L	0.0009	4.860	mg/L	0.0017	0.04%
Mo 202.031†	43.9	0.00401	mg/L	0.000171	0.00802	mg/L	0.000342	4.26%
Na 589.592†	7148.1	1.159	mg/L	0.0077	2.318	mg/L	0.0154	0.66%
Na 330.237†	33.1	2.856	mg/L	0.1046	5.713	mg/L	0.2092	3.66%
Ni 231.604†	517.9	0.3159	mg/L	0.00385	0.6318	mg/L	0.00771	1.22%
Pb 220.353†	665.4	0.1261	mg/L	0.00048	0.2522	mg/L	0.00096	0.38%
Sb 206.836†	87.1	-0.00829	mg/L	0.000630	-0.01659	mg/L	0.001259	7.59%
Se 196.026†	-46.4	0.00942	mg/L	0.005150	0.01884	mg/L	0.010299	54.66%
Si 288.158†	2953.4	2.482	mg/L	0.0331	4.964	mg/L	0.0662	1.33%
Sn 189.927†	-22.2	-0.00010	mg/L	0.002334	-0.00021	mg/L	0.004667	>999.9%
Sr 421.552†	96867.7	0.2095	mg/L	0.00080	0.4190	mg/L	0.00161	0.38%
Ti 334.903†	149784.1	8.043	mg/L	0.0049	16.09	mg/L	0.010	0.06%
Tl 190.801†	5.0	-0.01676	mg/L	0.001560	-0.03352	mg/L	0.003120	9.31%
V 292.402†	44159.7	0.3928	mg/L	0.00185	0.7857	mg/L	0.00369	0.47%
Zn 206.200†	719.2	0.3413	mg/L	0.00402	0.6827	mg/L	0.00805	1.18%

Sequence No.: 62  
Sample ID: RG58 K SWC

Autosampler Location: 97  
Date Collected: 8/10/2010 9:36:33 PM  
Data Type: Original

Dilution: 2X

## Nebulizer Parameters: RG58 K SWC

Analyte	Back Pressure	Flow
All	174.0 kPa	0.55 L/min

## Mean Data: RG58 K SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1622266.6	113.5	%	0.63			0.56%
ScR 361.383	185078.0	113.5	%	0.57			0.50%
Ag 328.068†	-750.1	0.00129	mg/L	0.000128	0.00258 mg/L	0.000256	9.93%
Al 308.215†	183839.6	141.0	mg/L	0.28	282.0 mg/L	0.56	0.20%
As 188.979†	24.2	0.02981	mg/L	0.002104	0.05963 mg/L	0.004207	7.06%
B 249.677†	47.1	0.02333	mg/L	0.001343	0.04666 mg/L	0.002685	5.76%
Ba 233.527†	7036.6	0.9330	mg/L	0.00631	1.866 mg/L	0.0126	0.68%
Be 313.042†	505.7	0.00087	mg/L	0.000017	0.00174 mg/L	0.000034	1.96%
Ca 317.933†	343264.1	41.62	mg/L	0.038	83.24 mg/L	0.075	0.09%
Cd 228.802†	62.0	0.00124	mg/L	0.000109	0.00248 mg/L	0.000218	8.77%
Co 228.616†	3627.6	0.06257	mg/L	0.000223	0.1251 mg/L	0.00045	0.36%
Cr 267.716†	981.7	0.2805	mg/L	0.00179	0.5610 mg/L	0.00357	0.64%
Cu 324.752†	27637.3	0.1549	mg/L	0.00213	0.3097 mg/L	0.00426	1.37%
Fe 273.955†	176384.0	162.7	mg/L	0.51	325.5 mg/L	1.03	0.32%
K 766.490†	12826.2	5.368	mg/L	0.0330	10.74 mg/L	0.066	0.62%
Mg 279.077†	50255.2	49.47	mg/L	0.051	98.94 mg/L	0.103	0.10%
Mn 257.610†	128977.6	3.487	mg/L	0.0065	6.975 mg/L	0.0131	0.19%
Mo 202.031†	54.7	0.00502	mg/L	0.000134	0.01004 mg/L	0.000267	2.66%
Na 589.592†	12511.6	2.029	mg/L	0.0026	4.058 mg/L	0.0053	0.13%
Na 330.237†	55.4	3.653	mg/L	0.1409	7.306 mg/L	0.2819	3.86%
Ni 231.604†	498.9	0.3043	mg/L	0.00630	0.6086 mg/L	0.01260	2.07%
Pb 220.353†	-33.3	0.02491	mg/L	0.000523	0.04982 mg/L	0.001046	2.10%
Sb 206.836†	75.8	-0.01281	mg/L	0.001391	-0.02561 mg/L	0.002783	10.87%
Se 196.026†	-55.1	-0.00188	mg/L	0.007088	-0.00377 mg/L	0.014177	376.53%
Si 288.158†	1834.1	1.545	mg/L	0.0212	3.089 mg/L	0.0425	1.37%
Sn 189.927†	-27.0	-0.00111	mg/L	0.000595	-0.00221 mg/L	0.001189	53.79%
Sr 421.552†	216795.2	0.4689	mg/L	0.00128	0.9378 mg/L	0.00256	0.27%
Ti 334.903†	133431.5	7.164	mg/L	0.0108	14.33 mg/L	0.022	0.15%
Tl 190.801†	1.3	-0.01839	mg/L	0.001949	-0.03679 mg/L	0.003899	10.60%
V 292.402†	39839.9	0.3517	mg/L	0.00639	0.7034 mg/L	0.01277	1.82%
Zn 206.200†	583.9	0.2779	mg/L	0.00182	0.5558 mg/L	0.00365	0.66%

Sequence No.: 63  
Sample ID: RG58 L SWC

Autosampler Location: 98  
Date Collected: 8/10/2010 9:42:36 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 L SWC

Analyte Back Pressure Flow  
All 175.0 kPa 0.55 L/min

Mean Data: RG58 L SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity				Conc. Units			
ScA 357.253	1605103.5		112.3 %	1.04				0.92%
ScR 361.383	174720.7		107.1 %	9.56				8.92%
Ag 328.068†	-709.9	0.00080	mg/L	0.000424	0.00161	mg/L	0.000848	52.72%
Al 308.215†	130135.2	99.82	mg/L	10.279	199.6	mg/L	20.56	10.30%
As 188.979†	5.2	0.01592	mg/L	0.002995	0.03184	mg/L	0.005990	18.81%
B 249.677†	47.2	0.02339	mg/L	0.002865	0.04677	mg/L	0.005730	12.25%
Ba 233.527†	2681.9	0.3516	mg/L	0.03585	0.7033	mg/L	0.07171	10.20%
Be 313.042†	539.0	0.00112	mg/L	0.000380	0.00224	mg/L	0.000760	33.93%
Ca 317.933†	369764.8	44.83	mg/L	4.859	89.67	mg/L	9.717	10.84%
Cd 228.802†	33.4	0.00072	mg/L	0.000078	0.00144	mg/L	0.000156	10.79%
Co 228.616†	3250.0	0.05626	mg/L	0.000751	0.1125	mg/L	0.00150	1.33%
Cr 267.716†	1033.4	0.2946	mg/L	0.02931	0.5893	mg/L	0.05861	9.95%
Cu 324.752†	22580.4	0.1274	mg/L	0.00154	0.2549	mg/L	0.00308	1.21%
Fe 273.955†	156782.5	144.7	mg/L	14.48	289.3	mg/L	28.95	10.01%
K 766.490†	14281.5	5.977	mg/L	0.7297	11.95	mg/L	1.459	12.21%
Mg 279.077†	57273.3	56.40	mg/L	6.011	112.8	mg/L	12.02	10.66%
Mn 257.610†	122982.0	3.326	mg/L	0.3479	6.651	mg/L	0.6958	10.46%
Mo 202.031†	31.5	0.00287	mg/L	0.000428	0.00574	mg/L	0.000857	14.93%
Na 589.592†	17871.5	2.898	mg/L	0.3239	5.797	mg/L	0.6479	11.18%
Na 330.237†	70.1	4.136	mg/L	0.7860	8.272	mg/L	1.5721	19.00%
Ni 231.604†	535.8	0.3267	mg/L	0.02789	0.6535	mg/L	0.05578	8.54%
Pb 220.353†	-27.9	0.01527	mg/L	0.003016	0.03055	mg/L	0.006032	19.75%
Sb 206.836†	52.6	-0.01381	mg/L	0.004222	-0.02761	mg/L	0.008443	30.58%
Se 196.026†	-42.8	-0.00107	mg/L	0.006165	-0.00214	mg/L	0.012330	576.14%
Si 288.158†	1289.7	1.089	mg/L	0.1206	2.178	mg/L	0.2412	11.07%
Sn 189.927†	-32.3	-0.00249	mg/L	0.001539	-0.00498	mg/L	0.003078	61.80%
Sr 421.552†	120654.1	0.2609	mg/L	0.02707	0.5219	mg/L	0.05415	10.38%
Ti 334.903†	118735.3	6.375	mg/L	0.6638	12.75	mg/L	1.328	10.41%
Tl 190.801†	-0.9	-0.01775	mg/L	0.000966	-0.03550	mg/L	0.001931	5.44%
V 292.402†	35166.9	0.3106	mg/L	0.00336	0.6213	mg/L	0.00673	1.08%
Zn 206.200†	569.0	0.2711	mg/L	0.02507	0.5421	mg/L	0.05014	9.25%

Sequence No.: 64  
Sample ID: RG58 M SWC

Autosampler Location: 99  
Date Collected: 8/10/2010 9:48:37 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 M SWC

Analyte Back Pressure Flow  
All 175.0 kPa 0.55 L/min

Mean Data: RG58 M SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1600036.3	112.0	%	0.50				0.44%
ScR 361.383	183996.9	112.8	%	0.68				0.60%
Ag 328.068†	-769.1	0.00085	mg/L	0.000404	0.00170	mg/L	0.000809	47.54%
Al 308.215†	206487.9	158.4	mg/L	0.34	316.8	mg/L	0.69	0.22%
As 188.979†	118.7	0.09082	mg/L	0.001292	0.1816	mg/L	0.00258	1.42%
B 249.677†	44.9	0.02224	mg/L	0.000342	0.04447	mg/L	0.000684	1.54%
Ba 233.527†	5298.0	0.7012	mg/L	0.00043	1.402	mg/L	0.0009	0.06%
Be 313.042†	808.0	0.00199	mg/L	0.000019	0.00398	mg/L	0.000039	0.98%
Ca 317.933†	256458.4	31.10	mg/L	0.006	62.19	mg/L	0.012	0.02%
Cd 228.802†	187.0	0.00353	mg/L	0.000059	0.00706	mg/L	0.000119	1.68%
Co 228.616†	3328.1	0.05660	mg/L	0.000527	0.1132	mg/L	0.00105	0.93%
Cr 267.716†	1117.4	0.3193	mg/L	0.00123	0.6385	mg/L	0.00245	0.38%
Cu 324.752†	32438.2	0.1784	mg/L	0.00117	0.3568	mg/L	0.00233	0.65%
Fe 273.955†	162055.4	149.5	mg/L	0.67	299.0	mg/L	1.34	0.45%
K 766.490†	10476.7	4.385	mg/L	0.0382	8.769	mg/L	0.0764	0.87%
Mg 279.077†	41978.3	41.32	mg/L	0.056	82.63	mg/L	0.111	0.13%
Mn 257.610†	109520.0	2.961	mg/L	0.0018	5.922	mg/L	0.0037	0.06%
Mo 202.031†	45.6	0.00415	mg/L	0.000150	0.00829	mg/L	0.000299	3.61%
Na 589.592†	6639.6	1.077	mg/L	0.0092	2.154	mg/L	0.0185	0.86%
Na 330.237†	35.3	2.684	mg/L	0.2197	5.369	mg/L	0.4395	8.19%
Ni 231.604†	510.0	0.3111	mg/L	0.00308	0.6221	mg/L	0.00617	0.99%
Pb 220.353†	2008.7	0.3094	mg/L	0.00098	0.6187	mg/L	0.00195	0.32%
Sb 206.836†	83.6	-0.01153	mg/L	0.002428	-0.02305	mg/L	0.004856	21.07%
Se 196.026†	-45.4	0.00936	mg/L	0.008048	0.01873	mg/L	0.016097	85.94%
Si 288.158†	2850.9	2.396	mg/L	0.0255	4.792	mg/L	0.0509	1.06%
Sn 189.927†	-20.7	-0.00020	mg/L	0.001532	-0.00041	mg/L	0.003065	750.34%
Sr 421.552†	72249.5	0.1563	mg/L	0.00064	0.3125	mg/L	0.00129	0.41%
Ti 334.903†	131501.7	7.061	mg/L	0.0067	14.12	mg/L	0.013	0.10%
Tl 190.801†	3.5	-0.01647	mg/L	0.002788	-0.03294	mg/L	0.005576	16.93%
V 292.402†	41450.7	0.3687	mg/L	0.00256	0.7373	mg/L	0.00512	0.69%
Zn 206.200†	1305.6	0.6183	mg/L	0.00270	1.237	mg/L	0.0054	0.44%

Sequence No.: 65  
Sample ID: RG58 N SWC

Autosampler Location: 100  
Date Collected: 8/10/2010 9:54:40 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 N SWC

Analyte Back Pressure Flow  
All 177.0 kPa 0.55 L/min

Mean Data: RG58 N SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1608143.3	112.6	%	0.39				0.35%
ScR 361.383	185097.7	113.5	%	0.32				0.28%
Ag 328.068†	-768.9	0.00102	mg/L	0.000210	0.00203	mg/L	0.000421	20.71%
Al 308.215†	242010.1	185.7	mg/L	0.24	371.3	mg/L	0.48	0.13%
As 188.979†	50.8	0.04711	mg/L	0.001319	0.09423	mg/L	0.002637	2.80%
B 249.677†	54.4	0.02696	mg/L	0.001101	0.05392	mg/L	0.002202	4.08%
Ba 233.527†	5964.3	0.7900	mg/L	0.00624	1.580	mg/L	0.0125	0.79%
Be 313.042†	838.3	0.00210	mg/L	0.000023	0.00420	mg/L	0.000047	1.11%
Ca 317.933†	281513.1	34.13	mg/L	0.054	68.27	mg/L	0.107	0.16%
Cd 228.802†	96.0	0.00188	mg/L	0.000048	0.00377	mg/L	0.000096	2.56%
Co 228.616†	3693.4	0.06392	mg/L	0.000607	0.1278	mg/L	0.00121	0.95%
Cr 267.716†	1037.5	0.2966	mg/L	0.00306	0.5932	mg/L	0.00611	1.03%
Cu 324.752†	27787.7	0.1550	mg/L	0.00127	0.3099	mg/L	0.00253	0.82%
Fe 273.955†	168277.5	155.3	mg/L	0.41	310.5	mg/L	0.83	0.27%
K 766.490†	10074.3	4.216	mg/L	0.0228	8.433	mg/L	0.0456	0.54%
Mg 279.077†	42086.5	41.42	mg/L	0.065	82.84	mg/L	0.130	0.16%
Mn 257.610†	116983.4	3.163	mg/L	0.0067	6.326	mg/L	0.0134	0.21%
Mo 202.031†	39.8	0.00363	mg/L	0.000431	0.00727	mg/L	0.000861	11.85%
Na 589.592†	6994.7	1.134	mg/L	0.0085	2.269	mg/L	0.0171	0.75%
Na 330.237†	37.6	2.871	mg/L	0.1369	5.741	mg/L	0.2737	4.77%
Ni 231.604†	625.0	0.3812	mg/L	0.00422	0.7623	mg/L	0.00844	1.11%
Pb 220.353†	208.0	0.07091	mg/L	0.001217	0.1418	mg/L	0.00243	1.72%
Sb 206.836†	94.9	-0.01240	mg/L	0.003120	-0.02480	mg/L	0.006241	25.16%
Se 196.026†	-59.1	0.00213	mg/L	0.002349	0.00427	mg/L	0.004699	110.16%
Si 288.158†	1325.0	1.117	mg/L	0.0135	2.233	mg/L	0.0270	1.21%
Sn 189.927†	-27.4	-0.00183	mg/L	0.001628	-0.00365	mg/L	0.003256	89.19%
Sr 421.552†	79032.6	0.1709	mg/L	0.00015	0.3419	mg/L	0.00031	0.09%
Ti 334.903†	133973.2	7.194	mg/L	0.0081	14.39	mg/L	0.016	0.11%
Tl 190.801†	6.3	-0.01553	mg/L	0.001916	-0.03106	mg/L	0.003833	12.34%
V 292.402†	41642.5	0.3696	mg/L	0.00463	0.7391	mg/L	0.00926	1.25%
Zn 206.200†	816.3	0.3873	mg/L	0.00459	0.7746	mg/L	0.00918	1.18%

Sequence No.: 66  
Sample ID: RG58 O SWC

Autosampler Location: 101  
Date Collected: 8/10/2010 10:00:43 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 O SWC

Analyte Back Pressure Flow  
All 176.0 kPa 0.55 L/min

Mean Data: RG58 O SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1608777.6	112.6	%	0.62				0.55%
ScR 361.383	184190.4	113.0	%	0.89				0.79%
Ag 328.068†	-789.8	0.00108	mg/L	0.000187	0.00216	mg/L	0.000374	17.31%
Al 308.215†	236797.1	181.7	mg/L	0.26	363.3	mg/L	0.52	0.14%
As 188.979†	22.1	0.02984	mg/L	0.002222	0.05969	mg/L	0.004444	7.44%
B 249.677†	44.7	0.02212	mg/L	0.003527	0.04423	mg/L	0.007054	15.95%
Ba 233.527†	6312.2	0.8365	mg/L	0.00814	1.673	mg/L	0.0163	0.97%
Be 313.042†	738.1	0.00172	mg/L	0.000080	0.00344	mg/L	0.000159	4.64%
Ca 317.933†	239274.5	29.01	mg/L	0.034	58.02	mg/L	0.069	0.12%
Cd 228.802†	62.9	0.00128	mg/L	0.000064	0.00255	mg/L	0.000129	5.05%
Co 228.616†	3652.5	0.06189	mg/L	0.000429	0.1238	mg/L	0.00086	0.69%
Cr 267.716†	916.2	0.2621	mg/L	0.00242	0.5242	mg/L	0.00484	0.92%
Cu 324.752†	22685.9	0.1285	mg/L	0.00107	0.2570	mg/L	0.00214	0.83%
Fe 273.955†	167904.4	154.9	mg/L	0.31	309.8	mg/L	0.62	0.20%
K 766.490†	9177.0	3.841	mg/L	0.0148	7.682	mg/L	0.0295	0.38%
Mg 279.077†	44862.1	44.16	mg/L	0.051	88.31	mg/L	0.102	0.12%
Mn 257.610†	84607.4	2.287	mg/L	0.0021	4.574	mg/L	0.0042	0.09%
Mo 202.031†	35.4	0.00323	mg/L	0.000181	0.00646	mg/L	0.000361	5.59%
Na 589.592†	6224.7	1.009	mg/L	0.0121	2.019	mg/L	0.0241	1.19%
Na 330.237†	34.5	2.926	mg/L	0.3512	5.852	mg/L	0.7025	12.00%
Ni 231.604†	574.7	0.3505	mg/L	0.00152	0.7011	mg/L	0.00304	0.43%
Pb 220.353†	10.3	0.04278	mg/L	0.000597	0.08555	mg/L	0.001193	1.39%
Sb 206.836†	93.4	-0.01072	mg/L	0.003125	-0.02143	mg/L	0.006250	29.16%
Se 196.026†	-55.8	0.00540	mg/L	0.008740	0.01080	mg/L	0.017480	161.78%
Si 288.158†	3142.9	2.641	mg/L	0.0327	5.283	mg/L	0.0655	1.24%
Sn 189.927†	-28.4	-0.00204	mg/L	0.001560	-0.00407	mg/L	0.003119	76.59%
Sr 421.552†	99683.5	0.2156	mg/L	0.00012	0.4312	mg/L	0.00023	0.05%
Ti 334.903†	146508.9	7.867	mg/L	0.0072	15.73	mg/L	0.014	0.09%
Tl 190.801†	2.5	-0.01744	mg/L	0.002889	-0.03487	mg/L	0.005778	16.57%
V 292.402†	41101.5	0.3636	mg/L	0.00228	0.7272	mg/L	0.00456	0.63%
Zn 206.200†	672.5	0.3193	mg/L	0.00332	0.6385	mg/L	0.00665	1.04%

Sequence No.: 67  
Sample ID: RG58 P SWC

Autosampler Location: 102  
Date Collected: 8/10/2010 10:06:47 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 P SWC

Analyte Back Pressure Flow  
All 177.0 kPa 0.55 L/min

Mean Data: RG58 P SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1614052.2	113.0	%	0.93				0.82%
ScR 361.383	182343.3	111.8	%	0.10				0.09%
Ag 328.068†	-785.3	0.00084	mg/L	0.000095	0.00167	mg/L	0.000190	11.35%
Al 308.215†	230822.8	177.1	mg/L	0.04	354.1	mg/L	0.07	0.02%
As 188.979†	20.3	0.02770	mg/L	0.002651	0.05541	mg/L	0.005301	9.57%
B 249.677†	39.5	0.01951	mg/L	0.003225	0.03901	mg/L	0.006449	16.53%
Ba 233.527†	6402.1	0.8489	mg/L	0.00623	1.698	mg/L	0.0125	0.73%
Be 313.042†	685.6	0.00157	mg/L	0.000028	0.00315	mg/L	0.000056	1.77%
Ca 317.933†	233000.2	28.25	mg/L	0.032	56.50	mg/L	0.065	0.11%
Cd 228.802†	58.2	0.00118	mg/L	0.000080	0.00236	mg/L	0.000160	6.76%
Co 228.616†	3410.2	0.05774	mg/L	0.000668	0.1155	mg/L	0.00134	1.16%
Cr 267.716†	961.7	0.2749	mg/L	0.00209	0.5498	mg/L	0.00419	0.76%
Cu 324.752†	21084.5	0.1197	mg/L	0.00121	0.2394	mg/L	0.00242	1.01%
Fe 273.955†	159553.7	147.2	mg/L	0.21	294.4	mg/L	0.41	0.14%
K 766.490†	8856.8	3.707	mg/L	0.0070	7.414	mg/L	0.0139	0.19%
Mg 279.077†	44516.4	43.82	mg/L	0.017	87.64	mg/L	0.034	0.04%
Mn 257.610†	78440.8	2.120	mg/L	0.0013	4.241	mg/L	0.0026	0.06%
Mo 202.031†	36.3	0.00331	mg/L	0.000136	0.00663	mg/L	0.000273	4.12%
Na 589.592†	5885.5	0.9545	mg/L	0.00909	1.909	mg/L	0.0182	0.95%
Na 330.237†	34.5	2.833	mg/L	0.2413	5.666	mg/L	0.4826	8.52%
Ni 231.604†	543.5	0.3315	mg/L	0.00358	0.6630	mg/L	0.00716	1.08%
Pb 220.353†	10.6	0.04208	mg/L	0.000344	0.08417	mg/L	0.000688	0.82%
Sb 206.836†	85.9	-0.01328	mg/L	0.002372	-0.02657	mg/L	0.004744	17.86%
Se 196.026†	-56.2	0.00299	mg/L	0.003249	0.00598	mg/L	0.006497	108.68%
Si 288.158†	2628.7	2.210	mg/L	0.0234	4.420	mg/L	0.0467	1.06%
Sn 189.927†	-26.0	-0.00164	mg/L	0.000661	-0.00327	mg/L	0.001323	40.41%
Sr 421.552†	88357.1	0.1911	mg/L	0.00021	0.3822	mg/L	0.00042	0.11%
Ti 334.903†	137124.3	7.363	mg/L	0.0035	14.73	mg/L	0.007	0.05%
Tl 190.801†	3.4	-0.01577	mg/L	0.002682	-0.03153	mg/L	0.005364	17.01%
V 292.402†	39008.3	0.3453	mg/L	0.00360	0.6906	mg/L	0.00721	1.04%
Zn 206.200†	624.0	0.2963	mg/L	0.00308	0.5926	mg/L	0.00617	1.04%

Sequence No.: 68  
Sample ID: RG58 Q SWC

Autosampler Location: 103  
Date Collected: 8/10/2010 10:12:50 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 Q SWC

Analyte Back Pressure Flow  
All 177.0 kPa 0.55 L/min

Mean Data: RG58 Q SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1656279.2	115.9	%	0.37			0.31%
ScR 361.383	190974.5	117.1	%	0.90			0.77%
Ag 328.068†	-754.9	0.00061	mg/L	0.000290	0.00123	mg/L	0.000580 47.23%
Al 308.215†	172319.6	132.2	mg/L	0.65	264.4	mg/L	1.31 0.49%
As 188.979†	4.8	0.01592	mg/L	0.001648	0.03183	mg/L	0.003296 10.35%
B 249.677†	29.3	0.01445	mg/L	0.001944	0.02890	mg/L	0.003888 13.45%
Ba 233.527†	2788.4	0.3663	mg/L	0.00204	0.7326	mg/L	0.00407 0.56%
Be 313.042†	577.3	0.00125	mg/L	0.000044	0.00250	mg/L	0.000088 3.51%
Ca 317.933†	187718.3	22.76	mg/L	0.125	45.52	mg/L	0.250 0.55%
Cd 228.802†	32.8	0.00071	mg/L	0.000059	0.00141	mg/L	0.000119 8.42%
Co 228.616†	3172.1	0.05442	mg/L	0.000168	0.1088	mg/L	0.00034 0.31%
Cr 267.716†	835.6	0.2390	mg/L	0.00180	0.4779	mg/L	0.00360 0.75%
Cu 324.752†	15884.2	0.09209	mg/L	0.000403	0.1842	mg/L	0.00081 0.44%
Fe 273.955†	146295.1	135.0	mg/L	0.75	270.0	mg/L	1.51 0.56%
K 766.490†	9603.1	4.019	mg/L	0.0199	8.038	mg/L	0.0398 0.50%
Mg 279.077†	42022.6	41.37	mg/L	0.176	82.74	mg/L	0.351 0.42%
Mn 257.610†	68160.2	1.843	mg/L	0.0078	3.685	mg/L	0.0155 0.42%
Mo 202.031†	19.7	0.00178	mg/L	0.000229	0.00357	mg/L	0.000458 12.84%
Na 589.592†	5297.7	0.8592	mg/L	0.00592	1.718	mg/L	0.0118 0.69%
Na 330.237†	36.6	2.804	mg/L	0.2724	5.609	mg/L	0.5449 9.71%
Ni 231.604†	507.7	0.3096	mg/L	0.00149	0.6193	mg/L	0.00298 0.48%
Pb 220.353†	-65.1	0.01986	mg/L	0.001348	0.03972	mg/L	0.002696 6.79%
Sb 206.836†	67.8	-0.01088	mg/L	0.000918	-0.02176	mg/L	0.001836 8.44%
Se 196.026†	-44.9	0.00321	mg/L	0.004488	0.00643	mg/L	0.008975 139.63%
Si 288.158†	5437.1	4.565	mg/L	0.0203	9.129	mg/L	0.0407 0.45%
Sn 189.927†	-26.7	-0.00253	mg/L	0.000181	-0.00505	mg/L	0.000361 7.15%
Sr 421.552†	83429.5	0.1804	mg/L	0.00049	0.3609	mg/L	0.00098 0.27%
Ti 334.903†	121081.5	6.502	mg/L	0.0245	13.00	mg/L	0.049 0.38%
Tl 190.801†	2.4	-0.01432	mg/L	0.002032	-0.02863	mg/L	0.004064 14.19%
V 292.402†	35708.3	0.3162	mg/L	0.00108	0.6323	mg/L	0.00216 0.34%
Zn 206.200†	475.4	0.2259	mg/L	0.00176	0.4519	mg/L	0.00352 0.78%



Sequence No.: 69  
Sample ID: RG58 R SWC

Autosampler Location: 104  
Date Collected: 8/10/2010 10:18:53 PM  
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 R SWC

Analyte Back Pressure Flow  
All 176.0 kPa 0.55 L/min

Mean Data: RG58 R SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1653789.5	115.7	%	0.68			0.59%
ScR 361.383	191621.5	117.5	%	0.23			0.20%
Ag 328.068†	-824.8	0.00024	mg/L	0.000164	0.00049 mg/L	0.000329	67.37%
Al 308.215†	135075.7	103.6	mg/L	0.17	207.2 mg/L	0.33	0.16%
As 188.979†	20.9	0.02555	mg/L	0.002532	0.05110 mg/L	0.005064	9.91%
B 249.677†	33.5	0.01652	mg/L	0.001865	0.03305 mg/L	0.003730	11.29%
Ba 233.527†	3119.7	0.4104	mg/L	0.00030	0.8207 mg/L	0.00059	0.07%
Be 313.042†	505.5	0.00092	mg/L	0.000031	0.00185 mg/L	0.000062	3.35%
Ca 317.933†	292743.3	35.49	mg/L	0.035	70.99 mg/L	0.070	0.10%
Cd 228.802†	42.5	0.00088	mg/L	0.000064	0.00175 mg/L	0.000127	7.25%
Co 228.616†	3116.4	0.05394	mg/L	0.000572	0.1079 mg/L	0.00114	1.06%
Cr 267.716†	927.0	0.2648	mg/L	0.00114	0.5295 mg/L	0.00228	0.43%
Cu 324.752†	21617.6	0.1222	mg/L	0.00041	0.2443 mg/L	0.00081	0.33%
Fe 273.955†	152125.4	140.4	mg/L	0.51	280.7 mg/L	1.01	0.36%
K 766.490†	10151.2	4.249	mg/L	0.0124	8.497 mg/L	0.0248	0.29%
Mg 279.077†	44367.5	43.68	mg/L	0.033	87.35 mg/L	0.065	0.07%
Mn 257.610†	87778.4	2.373	mg/L	0.0048	4.747 mg/L	0.0095	0.20%
Mo 202.031†	53.9	0.00494	mg/L	0.000210	0.00988 mg/L	0.000419	4.24%
Na 589.592†	9228.1	1.497	mg/L	0.0051	2.993 mg/L	0.0103	0.34%
Na 330.237†	54.7	3.450	mg/L	0.2125	6.900 mg/L	0.4250	6.16%
Ni 231.604†	512.4	0.3125	mg/L	0.00194	0.6251 mg/L	0.00387	0.62%
Pb 220.353†	24.1	0.02367	mg/L	0.000625	0.04734 mg/L	0.001251	2.64%
Sb 206.836†	55.9	-0.01205	mg/L	0.003006	-0.02409 mg/L	0.006012	24.95%
Se 196.026†	-36.3	0.00629	mg/L	0.004326	0.01259 mg/L	0.008652	68.75%
Si 288.158†	2383.5	2.005	mg/L	0.0043	4.009 mg/L	0.0085	0.21%
Sn 189.927†	-25.8	-0.00166	mg/L	0.001304	-0.00332 mg/L	0.002608	78.51%
Sr 421.552†	91800.0	0.1985	mg/L	0.00062	0.3971 mg/L	0.00123	0.31%
Ti 334.903†	113805.6	6.110	mg/L	0.0085	12.22 mg/L	0.017	0.14%
Tl 190.801†	-1.1	-0.01626	mg/L	0.002220	-0.03253 mg/L	0.004439	13.65%
V 292.402†	38133.4	0.3389	mg/L	0.00172	0.6779 mg/L	0.00344	0.51%
Zn 206.200†	532.4	0.2533	mg/L	0.00089	0.5065 mg/L	0.00178	0.35%

Sequence No.: 70  
 Sample ID: RG58 S SWC

Autosampler Location: 105  
 Date Collected: 8/10/2010 10:24:56 PM  
 Data Type: Original

Dilution: 2X

Nebulizer Parameters: RG58 S SWC

Analyte Back Pressure Flow  
 All 177.0 kPa 0.55 L/min

Mean Data: RG58 S SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1631329.1	114.2	%	0.49			0.43%
ScR 361.383	190711.6	117.0	%	1.96			1.68%
Ag 328.068†	-784.2	0.00059	mg/L	0.000233	0.00118	mg/L	0.000466 39.34%
Al 308.215†	126132.8	96.75	mg/L	1.947	193.5	mg/L	3.89 2.01%
As 188.979†	10.7	0.01921	mg/L	0.003284	0.03841	mg/L	0.006569 17.10%
B 249.677†	35.1	0.01732	mg/L	0.001244	0.03464	mg/L	0.002487 7.18%
Ba 233.527†	2749.3	0.3606	mg/L	0.00529	0.7211	mg/L	0.01057 1.47%
Be 313.042†	473.7	0.00079	mg/L	0.000062	0.00157	mg/L	0.000124 7.87%
Ca 317.933†	330302.1	40.05	mg/L	0.780	80.10	mg/L	1.561 1.95%
Cd 228.802†	42.4	0.00090	mg/L	0.000044	0.00179	mg/L	0.000088 4.94%
Co 228.616†	3568.0	0.06310	mg/L	0.000133	0.1262	mg/L	0.00027 0.21%
Cr 267.716†	1018.9	0.2907	mg/L	0.00363	0.5814	mg/L	0.00727 1.25%
Cu 324.752†	21633.4	0.1227	mg/L	0.00083	0.2454	mg/L	0.00165 0.67%
Fe 273.955†	158109.6	145.9	mg/L	3.26	291.8	mg/L	6.51 2.23%
K 766.490†	11318.4	4.737	mg/L	0.1423	9.474	mg/L	0.2846 3.00%
Mg 279.077†	53447.0	52.63	mg/L	1.071	105.3	mg/L	2.14 2.04%
Mn 257.610†	99989.1	2.704	mg/L	0.0551	5.407	mg/L	0.1103 2.04%
Mo 202.031†	35.0	0.00319	mg/L	0.000177	0.00638	mg/L	0.000355 5.56%
Na 589.592†	13422.3	2.177	mg/L	0.0417	4.354	mg/L	0.0833 1.91%
Na 330.237†	74.4	4.336	mg/L	0.1974	8.671	mg/L	0.3948 4.55%
Ni 231.604†	580.8	0.3542	mg/L	0.00592	0.7085	mg/L	0.01183 1.67%
Pb 220.353†	-39.7	0.01271	mg/L	0.001556	0.02542	mg/L	0.003112 12.25%
Sb 206.836†	56.6	-0.01119	mg/L	0.003372	-0.02239	mg/L	0.006743 30.12%
Se 196.026†	-41.0	0.00090	mg/L	0.006992	0.00180	mg/L	0.013983 777.31%
Si 288.158†	1418.4	1.197	mg/L	0.0244	2.393	mg/L	0.0487 2.04%
Sn 189.927†	-29.4	-0.00212	mg/L	0.002424	-0.00424	mg/L	0.004848 114.42%
Sr 421.552†	110676.3	0.2394	mg/L	0.00516	0.4787	mg/L	0.01031 2.15%
Ti 334.903†	116126.2	6.235	mg/L	0.1255	12.47	mg/L	0.251 2.01%
Tl 190.801†	-3.3	-0.01816	mg/L	0.003351	-0.03632	mg/L	0.006703 18.45%
V 292.402†	38697.1	0.3437	mg/L	0.00109	0.6874	mg/L	0.00218 0.32%
Zn 206.200†	559.6	0.2664	mg/L	0.00407	0.5328	mg/L	0.00814 1.53%

Sequence No.: 71  
 Sample ID: CV

Autosampler Location: 7  
 Date Collected: 8/10/2010 10:30:59 PM  
 Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte Back Pressure Flow  
 All 177.0 kPa 0.55 L/min

Mean Data: CV

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1598068.2	111.8	%	0.54			0.48%
ScR 361.383	184308.5	113.0	%	0.87			0.77%
Ag 328.068†	161948.6	0.9036	mg/L	0.01031	0.9036	mg/L	0.01031 1.14%
Al 308.215†	2588.8	1.950	mg/L	0.0117	1.950	mg/L	0.0117 0.60%
As 188.979†	2865.1	1.857	mg/L	0.0062	1.857	mg/L	0.0062 0.33%
B 249.677†	1842.2	0.9223	mg/L	0.00310	0.9223	mg/L	0.00310 0.34%
Ba 233.527†	7090.0	0.9476	mg/L	0.00704	0.9476	mg/L	0.00704 0.74%
Be 313.042†	248226.2	0.9488	mg/L	0.00217	0.9488	mg/L	0.00217 0.23%
Ca 317.933†	16454.2	1.995	mg/L	0.0179	1.995	mg/L	0.0179 0.90%
Cd 228.802†	49686.7	0.9495	mg/L	0.00774	0.9495	mg/L	0.00774 0.81%
Co 228.616†	44973.8	0.9317	mg/L	0.00872	0.9317	mg/L	0.00872 0.94%
Cr 267.716†	3392.5	0.9655	mg/L	0.00789	0.9655	mg/L	0.00789 0.82%
Cu 324.752†	195983.6	1.008	mg/L	0.0099	1.008	mg/L	0.0099 0.98%
Fe 273.955†	2103.3	1.940	mg/L	0.0213	1.940	mg/L	0.0213 1.10%
K 766.490†	45415.4	19.01	mg/L	0.086	19.01	mg/L	0.086 0.45%
Mg 279.077†	1981.0	1.957	mg/L	0.0160	1.957	mg/L	0.0160 0.82%
Mn 257.610†	34921.1	0.9450	mg/L	0.00812	0.9450	mg/L	0.00812 0.86%
Mo 202.031†	9836.3	0.9093	mg/L	0.00379	0.9093	mg/L	0.00379 0.42%
Na 589.592†	282715.2	45.85	mg/L	0.275	45.85	mg/L	0.275 0.60%
Na 330.237†	1083.6	49.00	mg/L	0.362	49.00	mg/L	0.362 0.74%
Ni 231.604†	1576.5	0.9621	mg/L	0.00928	0.9621	mg/L	0.00928 0.96%
Pb 220.353†	13690.0	1.869	mg/L	0.0265	1.869	mg/L	0.0265 1.42%
Sb 206.836†	3832.4	1.976	mg/L	0.0094	1.976	mg/L	0.0094 0.48%
Se 196.026†	1894.2	1.855	mg/L	0.0069	1.855	mg/L	0.0069 0.37%
Si 288.158†	2473.0	2.076	mg/L	0.0235	2.076	mg/L	0.0235 1.13%
Sn 189.927†	3103.7	0.8589	mg/L	0.00459	0.8589	mg/L	0.00459 0.53%
Sr 421.552†	449591.0	0.9724	mg/L	0.00246	0.9724	mg/L	0.00246 0.25%
Ti 334.903†	17685.2	0.9486	mg/L	0.00051	0.9486	mg/L	0.00051 0.05%
Tl 190.801†	3575.1	1.844	mg/L	0.0050	1.844	mg/L	0.0050 0.27%
V 292.402†	100304.6	0.9539	mg/L	0.01154	0.9539	mg/L	0.01154 1.21%
Zn 206.200†	2071.2	0.9777	mg/L	0.00709	0.9777	mg/L	0.00709 0.73%

Sequence No.: 72  
Sample ID: CB 9

Autosampler Location: 1  
Date Collected: 8/10/2010 10:37:00 PM  
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
All 177.0 kPa 0.55 L/min

Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	1636207.1	114.5	%	0.66			0.58%
ScR 361.383	179897.4	110.3	%	1.13			1.03%
Ag 328.068†	5.1	0.00003	mg/L	0.000384	0.00003	mg/L	0.000384 >999.9%
Al 308.215†	16.0	0.01228	mg/L	0.008420	0.01228	mg/L	0.008420 68.56%
As 188.979†	-0.7	-0.00048	mg/L	0.002039	-0.00048	mg/L	0.002039 423.63%
B 249.677†	9.9	0.00496	mg/L	0.002747	0.00496	mg/L	0.002747 55.38%
Ba 233.527†	-6.3	-0.00084	mg/L	0.000064	-0.00084	mg/L	0.000064 7.67%
Be 313.042†	-11.4	-0.00004	mg/L	0.000057	-0.00004	mg/L	0.000057 134.77%
Ca 317.933†	22.9	0.00278	mg/L	0.001393	0.00278	mg/L	0.001393 50.19%
Cd 228.802†	-4.5	-0.00009	mg/L	0.000008	-0.00009	mg/L	0.000008 9.66%
Co 228.616†	15.8	0.00033	mg/L	0.000054	0.00033	mg/L	0.000054 16.36%
Cr 267.716†	1.7	0.00048	mg/L	0.001799	0.00048	mg/L	0.001799 377.27%
Cu 324.752†	-407.9	-0.00210	mg/L	0.000172	-0.00210	mg/L	0.000172 8.18%
Fe 273.955†	-0.4	-0.00038	mg/L	0.004964	-0.00038	mg/L	0.004964 >999.9%
K 766.490†	-262.5	-0.1099	mg/L	0.01174	-0.1099	mg/L	0.01174 10.69%
Mg 279.077†	13.1	0.01288	mg/L	0.006074	0.01288	mg/L	0.006074 47.15%
Mn 257.610†	-5.0	-0.00014	mg/L	0.000088	-0.00014	mg/L	0.000088 64.19%
Mo 202.031†	-3.0	-0.00028	mg/L	0.000188	-0.00028	mg/L	0.000188 67.90%
Na 589.592†	-36.6	-0.00594	mg/L	0.005835	-0.00594	mg/L	0.005835 98.20%
Na 330.237†	32.1	1.455	mg/L	0.4552	1.455	mg/L	0.4552 31.28%
Ni 231.604†	5.0	0.00304	mg/L	0.000190	0.00304	mg/L	0.000190 6.27%
Pb 220.353†	-24.6	-0.00335	mg/L	0.000242	-0.00335	mg/L	0.000242 7.23%
Sb 206.836†	-16.9	-0.00871	mg/L	0.002337	-0.00871	mg/L	0.002337 26.83%
Se 196.026†	14.6	0.01435	mg/L	0.005118	0.01435	mg/L	0.005118 35.67%
Si 288.158†	-7.2	-0.00603	mg/L	0.001843	-0.00603	mg/L	0.001843 30.57%
Sn 189.927†	5.2	0.00144	mg/L	0.000552	0.00144	mg/L	0.000552 38.26%
Sr 421.552†	-28.0	-0.00006	mg/L	0.000013	-0.00006	mg/L	0.000013 20.95%
Ti 334.903†	-45.4	-0.00244	mg/L	0.000692	-0.00244	mg/L	0.000692 28.37%
Tl 190.801†	3.5	0.00184	mg/L	0.003847	0.00184	mg/L	0.003847 209.08%
V 292.402†	-40.9	-0.00038	mg/L	0.000089	-0.00038	mg/L	0.000089 23.36%
Zn 206.200†	2.1	0.00098	mg/L	0.000531	0.00098	mg/L	0.000531 54.07%

*end package*

**General Chemistry Raw Data  
Analyst Notes and Raw Data**

**ARI Job ID: RG58**

8-2-10

**TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET**

**SOLIDS** (dry at 104 (12-24 hr) then combust at 550 (30 min)) **DATE:** 7/30/2010 **ANALYST:** KE / CDE / RR 19:10

**Instrumentation** **Drying Ovens:** 12 **Analytical Balance:** 1123230597

**Muffle Furnace:** N / A

**Batch drying time**  
 record times as mm/dd/yy hh:mm  
 7/30/2010 19:10 KE  
 7/31/2010 14:30 RR  
 elapsed hrs = 19.3

**Cal Weight ID**  
 CV-02 7/30/10 17:46 KE  
 10.0000  
 Cal:OK!

**Cal Wt (g)**  
 record weights to 4 places

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams)		dry Wt (g)	TS (%)	ASH WT 550C (grams)		Ash Wt (g)	TVS (mg/kg) (%)
				CV-02	CV-02			1	2		
Blank			1.1129	1.1129	1.1129	0.00					
RG51 D3		6.1385	1.1033	5.8990	5.8990	4.80	95.2%				
RG51 E1		6.2249	1.1038	5.9965	5.9965	4.89	95.5%				
RG51 F6		6.2874	1.1480	5.9022	5.9022	4.75	92.5%				
RG51 F6 dup		6.2747	1.0995	5.8516	5.8516	4.75	91.8%				

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

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"

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams)		dry Wt (g)	TS (%)	ASH WT 550C (grams)		Ash Wt (g)	TVS (mg/kg) (%)
				CV-02	CV-02			1	2		
RG51 F6 trp		6.1652	1.1451	5.7450	5.7450	4.60	91.6%				NA
RG54 E6		6.3388	1.1551	5.7556	5.7556	4.60	88.7%				
RG54 F6		6.9543	1.0916	6.3131	6.3131	5.22	89.1%				
RG54 K6		6.4966	1.1538	5.3935	5.3935	4.24	79.4%				
RG58 E8		6.1694	1.1331	5.4653	5.4653	4.33	86.0%				
RG58 F8		6.2314	1.0902	5.3668	5.3668	4.28	83.2%				
RG58 K8		6.7517	1.1191	6.1708	6.1708	5.05	89.7%				
RG58 L8		6.2854	1.1000	5.6066	5.6066	4.51	86.9%				
RG58 R8		6.4034	1.1513	5.9219	5.9219	4.77	90.8%				
RG58 S8		6.8870	1.1213	6.3245	6.3245	5.20	90.2%				
RG60 E8		6.4681	1.1254	6.0312	6.0312	4.91	91.8%				
RG60 F8		6.7541	1.1268	6.2698	6.2698	5.14	91.4%				
RG43 A1		5.5283	1.1292	4.8556	4.8556	3.73	84.7%				
RG43 A1 dup		5.1486	1.1108	4.2117	4.2117	3.10	76.8%				

RPD = 0.74%      RSD = 0.50%      RPD = 9.80%      RPD = NA

RG58 : 01614

**TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET**

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

DATE: 7/30/2010  
ANALYST: KE / CDE / RR 19:10

Instrumentation: Drying Ovens: 12 Muffle Furnace: N/A Analytical Balance: 1123230597

Batch drying time		TS (%) calculated as:		CV-02		CV-02		CV-02		CV-02		CV-02	
record times as mm/dd/yy hh:mm	date/time in oven	Final dry wt (g) = (Dry Wt - Tare Wt)	TS = (Final Dry Wt)/(grams Sample-Tare)	dry wt (g)	dry wt (g)	ASH WT 550C (grams)	Ash Wt (g)	TS (%)	TS (%)	TS (%)	TS (%)	TS (%)	TS (%)
7/30/2010 19:10	KE	10.0000	10.0000	7/30/10 17:10 KE	7/31/10 14:30 RR	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
7/31/2010 14:30	RR	5.5697	5.5697	Cal. OK!	Cal. OK!	Cal. OK!	Cal. OK!	Cal. OK!	Cal. OK!	Cal. OK!	Cal. OK!	Cal. OK!	Cal. OK!
elapsed hrs =	19.3												
Cal Wt (g)	10.0000												
SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams)	dry wt (g)	TS (%)	TS (%)	TS (%)	TS (%)	TS (%)	TS (%)	TS (%)	TS (%)
RG43 A1 trp		5.5697	1.1196	4.7123	3.59	80.7%	80.7%	80.7%	80.7%	80.7%	80.7%	80.7%	80.7%

RG43 B1	6.5779	1.1286	5.4363	4.31	79.1%	4.90%	79.1%	4.90%	79.1%	4.90%	79.1%	4.90%	79.1%
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Analytical Resources, Incorporated  
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

Analyst: <u>CD</u> / <u>CD</u>		Date: <u>7-30-70</u>	Oven ID: <u>012</u>	Balance ID: <u>1123230597</u>	
Time in Oven: <u>19:10</u>		Time Out of Oven: <u>14:15</u>	Elapsed Time (> 12 Hrs): <u>(A)</u>		
Sample ID	Dish #	Sample	CV-02		
			CV-02	CV-02	CV-02
Cal Weight ID		CV-02	CV-02	CV-02	CV-02
Date & Time:		CV-02	CV-02	CV-02	CV-02
Cal Weight (10.0000):		CV-02	CV-02	CV-02	CV-02
Sample ID	Dish #	Sample	Dry Weight 104°C		
			1	2	3
Sample ID	Dish #	Sample	Dry Weight 550°C		
			1	2	3
BLANK	1	1.1129			
RS57	2	6.1385	1.1033	5.8970	
EP	3	6.2249	1.1038	5.9965	
FL	4	6.2874	1.1480	5.9622	
DF6	5	6.2747	1.0995	5.8576	
QPF6	6	6.2652	1.1451	5.7450	
RG54	7	6.4495	1.1551	5.7556	
FL	8	6.2895	1.0916	6.3151	
K6	9	6.2488	1.1538	5.8985	
RG58	10	6.4966	1.1331	5.4653	
FL	11	6.2314	1.0902	5.9668	
K9	12	6.2517	1.1191	6.1708	
L8	13	6.2854	1.1000	5.6866	
RS	14	6.4034	1.1513	5.9219	
S6	15	6.8870	1.1213	6.5245	
RG60	16	6.4681	1.1254	6.0512	
L8	17	6.7541	1.1268	6.2698	
RG43	18	5.5283	1.1292	4.8556	
PA1	19	5.1486	1.1108	4.2117	
PA	20	5.5697	1.1196	4.7123	
B1	21	6.5779	1.1286	5.4363	

TS (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

6053F

Page 00449

Revision 002  
12/28/09

RG58: 01616

② 6.3388  
③ ~~6.3388~~ 6.9543  
④ 6.4966  
⑤ 6.1166

7-30-70 (A)



W  
8-4-10

TOC Solids Prep Log						DATE:	7/30/2010
acid purging to remove IC and drying at 70°C for TOC analysis General notes regarding prep method and samples (identify the acid used)						ANALYST:	KE 19:30 (A)
						<i>make no entry to shaded cells, they are calculated</i>	
Sample ID		IC Test + / -	Gravimetric Data (grams)			% Solids	Sample description & notes (homogeneity and exclusions)
ARI #	Client		Tare Wt.	Wet wt.	70°C dry wt		
Blank			13.1088		13.1088	0 mg	
RG51 D3		-	13.2258	18.0648	17.9648	97.93%	
RG51 E3		-	13.1478	18.5727	18.4813	98.32%	
RG51 F3		-	13.2387	18.4485	18.1578	94.42%	
RG51 F3 DUP		-	13.2621	18.6455	18.3746	94.97%	
RG51 F3 TRIP		-	13.1517	18.8582	18.5545	94.68%	
RG54 E6		-	12.8131	18.0133	17.7049	94.07%	
RG54 F6		-	13.0790	18.3047	17.8947	92.15%	
RG54 K6		-	13.2288	18.2421	17.2378	79.97%	
RG58 E8		-	13.1709	18.5807	17.9854	89.00%	
RG58 F8		-	13.1603	18.9466	18.0800	85.02%	
RG58 K8		-	13.2105	18.4043	17.9875	91.98%	
RG58 L8		-	13.0982	18.7507	18.1468	89.32%	
RG58 R8		-	12.9965	18.9213	18.4918	92.75%	
RG58 S8		-	13.0830	18.3251	17.7781	89.57%	
RG60 E8		-	13.1423	18.5458	18.2656	94.81%	
RG60 F8		-	13.1331	18.1632	17.8433	93.64%	
RG43 B1		+++	13.1604	18.7234	17.8416	84.15%	



### TOC Solids Preparation Log

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

Analyst 7-30-10 (W) / CWC Date 7-30-10 19:32(A)

Sample Identification		IC Test	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID		Tare	Wet	70 °C		
Blank			13.1088	Ø	13.1088		
RG51 D3		-	13.2258	18.0648	17.9648		Sand & Rocks
E1		-	13.1478	18.5727	18.4813		
F6		-	13.2387	18.4485	18.1578		
OP F6		-	13.2621	18.6455	18.3746		
MP F6		-	13.1517	18.8582	18.5545		
RG54 E6		-	12.8131	18.0133	17.9854	17.7049	
F6		-	13.0790	18.3047	17.8947		
K6		-	13.2288	18.2421	17.2378		Very wet
RG58 E8		-	13.1709	18.5807	17.9854		Damp Sand
F8		-	13.1603	18.9466	18.0800		
K8		-	13.2105	18.4043	17.9875		Mud Sand & Rock
L8		-	13.0982	18.7507	18.1468		
R8		-	12.9965	18.9213	18.4919		
S8		-	13.0830	18.3251	17.781		
RG60 E8		-	13.1423	18.5459	18.2650		
F8		-	13.1331	18.1632	17.8433		
RG43 A		+++	13.2487	18.3062			Re-run un-purged (no acid)
OP A1		+++	13.1292	18.8937			
MP A1		+++	13.1972	18.673			
Ø B1		+++	13.1604	18.7234			

7-30-10  
(W)

RG43  
Ø B1 +++ - 131604-187234 - 17.8416

8-3-10 (W)

8-9-10

**TOC, Solids Data Analysis** DATE: 8/6/2010  
 Instrument: Apollo 2 ANALYST: KE/CR 9:05  
 Mode: NPOC Inlet: Boat  
 Spike Std = 2,500 ppm C

**Calibration Data**  
 Cal Curve ID: CAL 072210 Conc: 5,000 ppm  
 Calibration Curve Standard: ARI # 00103 - 1 Curve Date: 07/22/10  
 CalFact: 2.599E+05 intercept: -120606 r2: 0.99983  
 Curve Range (µgC): 8 to 100

**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

**Silica Blanks**

Replicate determinations					Mean	RSD	condition
77.17	51.9	71.6			66.9	19.8%	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)	
ICV				1.00		40.0	960	960	96.00%
Blank				1.00		40.0	49.99	50	Blank OK
NIST 8704				1.00		2.3	32215	32,215	96.14%
SB 1				1.00		34.3	77.17	77	Range OK!
SB 2				1.00		33.6	51.90	52	Range OK!
SB 3				1.00		31.5	71.55	72	Range OK!
RG11 A1				1.00		2.2	30742	30,742	Range OK!
RG11 A1 dup				1.00		2.1	36857	36,857	RPD=18.1%
RG11 A1 trp				1.00		2.1	32757	32,757	RSD=9.3%
RG11 A1 ms				1.00	10	1.0	54802	54,802	Range OK!
Spike = 0.025 mg C to 1.0 mg samp = 25,000 ppm 96%									
RG43 B1				1.00		2.2	3760	3,760	Range OK!
RG79 G9				1.00		2.5	16592	16,592	Range OK!
CCV				1.00		40.0	924	924	92.40%
Blank				1.00		40.0	29.96	30	Blank OK
RG79 H9				1.00		2.9	16884	16,884	Range OK!
RG79 O9				1.00		3.3	18223	18,223	Range OK!
RG79 P9				1.00		3.6	5580	5,580	Range OK!
RG79 Q9				1.00		3.5	4300	4,300	Range OK!
RG60 E8				1.00		4.0	3952	3,952	Range OK!
RG60 F8				1.00		2.1	5644	5,644	Range OK!
RG58 E3				1.00		3.1	775	775	Range OK!
RG58 F8				1.00		2.8	765	765	Range OK!
RG58 K8				1.00		2.6	2829	2,829	Range OK!
RG58 L8				1.00		4.0	62.07	62	Low Scale
CCV				1.00		40.0	955	955	95.50%
Blank				1.00		40.0	28.24	28	Blank OK

<b>Sample Data</b>									
<i>"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor</i>									
Sample ID	Dilution Data				Spike ( $\mu$ L Std)	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor		Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
RG58 L8				1.00		11.2	580	580	Range OK!
RG58 R8				1.00		5.5	1809	1,809	Range OK!
RG58 S8				1.00		6.4	655	655	Range OK!
NIST 8704				1.00		2.4	33931	33,931	101.26%
CCV				1.00		40.0	928	928	92.80%
Blank				1.00		40.0	38.55	39	Blank OK



OH  
8-6-10  
10F1

TOC Solids Sample Run Log  
Apollo 9000

Set-Up Parameters		MODE:	NPOC BOAT		INLET:	BOAT SAMPLER	
Standards:	Source			Conc (ppm)			
Calibration:	ARC 00103-01			8600			
Verification:	EWA 1513-10-06			SD 10 1000 FOR CVS			
SRM:	NBS 8704			33 570			
Sample Sequence:							
Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments	
	Sample	+ Silica Gel	mg	mg/L	µL added		
ICV			40				
ICB			40				
NBS 8704			2.3				
SB 1			34.3				
SB 2			33.6				
SB 3			31.5				
RG11 A1			2.2				
↓ A1 DNF			2.1				
↓ A1 TPD			2.1				
↓ A1 MS			1.0	2500	10		
RG13 D1			2.2				
RG74 G9			2.5				
CCV HT			402.4				
CCB			40				
RG79 H9			2.9				
↓ O9			3.3				
↓ P9			3.6				
↓ Q9			3.5				
RG60 E8			4.0				
↓ F8			2.1				
RG58 G7			3.1				
↓ F8			2.8				
↓ K8			2.0				
↓ L8			4.0				
CCV			40				
CCD			40				
RG58 L8			11.2				
R8			8.5				
S8			6.4				
NBS 8704			2.4				
CCV			40				
CCB			40				

```

=====
Sample ID:   CVS BOAT 1000           Mode:       TOC
Method:     Boat Sampler            Filename:   08060906
Cal. Curve: BOAT CAL 07232010      Timestamp: 2010/08/06 09:09
Operator ID: CARLOS                 Sample Type: Cal. Verification
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	959.6354	38.3854	9841737	16.833	17.832	130

```

=====
Sample ID:   ICB BOAT              Mode:       TOC
Method:     Boat Sampler            Filename:   08060913
Cal. Curve: BOAT CAL 07232010      Timestamp: 2010/08/06 09:16
Operator ID: CARLOS                 Sample Type: Cal. Verification
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	49.9912	1.9996	278635	16.420	17.417	82

```

=====
Sample ID:   NBS 8704              Mode:       TOC
Method:     Boat Sampler            Filename:   08060921
Cal. Curve: BOAT CAL 07232010      Timestamp: 2010/08/06 09:25
Operator ID: CARLOS                 Sample Type: Cal. Verification
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	32214.5332	74.0934	19226708	16.470	17.465	214

```

=====
Sample ID:   SB 1                  Mode:       TOC
Method:     Boat Sampler            Filename:   08060935
Cal. Curve: BOAT CAL 07232010      Timestamp: 2010/08/06 09:38
Operator ID: CARLOS                 Sample Type: Sample
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	77.1690	2.6469	695672	16.468	17.460	75

```

=====
Sample ID:   SB 2                  Mode:       TOC
Method:     Boat Sampler            Filename:   08060943
Cal. Curve: BOAT CAL 07232010      Timestamp: 2010/08/06 09:45
Operator ID: CARLOS                 Sample Type: Sample
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	51.8982	1.7438	458309	16.622	17.616	73

```

=====
Sample ID:   SB 3                  Mode:       TOC
Method:     Boat Sampler            Filename:   08060957
Cal. Curve: BOAT CAL 07232010      Timestamp: 2010/08/06 10:01
Operator ID: CARLOS                 Sample Type: Sample
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	71.5530	2.2539	592387	16.894	17.888	68

```

=====
Sample ID:   RG11 A1              Mode:       TOC
Method:     Boat Sampler            Filename:   08061013
Cal. Curve: BOAT CAL 07232010      Timestamp: 2010/08/06 10:17
Operator ID: CARLOS                 Sample Type: Sample
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	30741.6855	67.6317	17775328	17.045	18.044	189

Sample ID: RG11 A1 DUP Mode: TOC  
 Method: Boat Sampler Filename: 08061027  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 10:33  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36856.5938	77.3988	20342378	16.839	17.838	213

Sample ID: RG11 A1 TRP Mode: TOC  
 Method: Boat Sampler Filename: 08061037  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 10:41  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	32756.6602	68.7890	18079488	16.838	17.838	191

Sample ID: RG11 A1 MS Mode: TOC  
 Method: Boat Sampler Filename: 08061047  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 10:50  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	54801.9219	54.8019	14403334	17.185	18.178	136

Sample ID: RG43 B1 Mode: TOC  
 Method: Boat Sampler Filename: 08061104  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 11:08  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3759.7234	8.2714	2173931	16.580	17.571	179

Sample ID: RG79 G9 Mode: TOC  
 Method: Boat Sampler Filename: 08061155  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 11:59  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16592.3281	41.4808	10902210	16.535	17.535	177

Sample ID: CVS BOAT 1000 Mode: TOC  
 Method: Boat Sampler Filename: 08061202  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 12:06  
 Operator ID: CARLOS Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	923.9921	36.9597	9467019	17.061	18.059	124

Sample ID: ICB BOAT Mode: TOC  
 Method: Boat Sampler Filename: 08061241  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 12:43  
 Operator ID: CARLOS Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29.9630	1.1985	68079	17.012	18.011	49

Sample ID: RG79 H9 Mode: TOC  
 Method: Boat Sampler Filename: 08061249  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 12:53  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16883.8418	48.9631	12868755	16.895	17.895	174

Sample ID: RG79 O9 Mode: TOC  
 Method: Boat Sampler Filename: 08061300  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 13:04  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18222.8262	60.1353	15805088	17.134	18.133	184

Sample ID: RG79 P9 Mode: TOC  
 Method: Boat Sampler Filename: 08061311  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 13:15  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5580.1279	20.0885	5279756	17.033	18.029	146

Sample ID: RG79 Q9 Mode: TOC  
 Method: Boat Sampler Filename: 08061326  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 13:32  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4300.2119	15.0507	3955716	17.208	18.207	141

Sample ID: RG60 E8 Mode: TOC  
 Method: Boat Sampler Filename: 08061336  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 13:39  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3951.7202	15.8069	4154449	17.411	18.408	125

Sample ID: RG60 F8 Mode: TOC  
 Method: Boat Sampler Filename: 08061347  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 13:50  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5644.4658	11.8534	3115368	17.319	18.317	99

Sample ID: RG58 E3 Mode: TOC  
 Method: Boat Sampler Filename: 08061356  
 Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 13:59  
 Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	774.5266	2.4010	631052	17.259	18.256	86



Sample ID: RG58 F8 Mode: TOC  
Method: Boat Sampler Filename: 08061406  
Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 14:09  
Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	765.3978	2.1431	563265	17.274	18.269	79

Sample ID: RG58 K8 Mode: TOC  
Method: Boat Sampler Filename: 08061447  
Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 14:50  
Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2828.6350	7.3545	1932936	17.166	18.159	103

Sample ID: RG58 L8 Mode: TOC  
Method: Boat Sampler Filename: 08061453  
Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 14:58  
Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	62.0718	0.2483	65256	17.161	17.388	120

Last Message: Low Sample Detected

Sample ID: CVS BOAT 1000 Mode: TOC  
Method: Boat Sampler Filename: 08061502  
Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 15:05  
Operator ID: CARLOS Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	954.7472	38.1899	9790347	17.542	18.539	135

Sample ID: ICB BOAT Mode: TOC  
Method: Boat Sampler Filename: 08061509  
Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 15:12  
Operator ID: CARLOS Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28.2403	1.1296	49967	17.467	17.415	120

Last Message: Low Sample Detected

Sample ID: RG58 L8 Mode: TOC  
Method: Boat Sampler Filename: 08061517  
Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 15:21  
Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	580.3285	6.4997	1708281	17.293	18.291	171

Sample ID: RG58 R8 Mode: TOC  
Method: Boat Sampler Filename: 08061524  
Cal. Curve: BOAT CAL 07232010 Timestamp: 2010/08/06 15:27  
Operator ID: CARLOS Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1809.1215	9.9502	2615156	17.521	18.518	136

=====  
Sample ID: RG58 S8  
Method: Boat Sampler  
Cal. Curve: BOAT CAL 07232010  
Operator ID: CARLOS

Mode: TOC  
Filename: 08061530  
Timestamp: 2010/08/06 15:33  
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	655.3009	4.1939	1102270	17.660	18.658	124

=====

Sample ID: NBS 8704  
Method: Boat Sampler  
Cal. Curve: BOAT CAL 07232010  
Operator ID: CARLOS

Mode: TOC  
Filename: 08061536  
Timestamp: 2010/08/06 15:44  
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	33930.9727	81.4343	21156084	17.790	18.785	262

=====

Sample ID: CVS BOAT 1000  
Method: Boat Sampler  
Cal. Curve: BOAT CAL 07232010  
Operator ID: CARLOS

Mode: TOC  
Filename: 08061547  
Timestamp: 2010/08/06 15:51  
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	927.8040	37.1122	9507094	18.574	19.570	142

=====

Sample ID: ICB BOAT  
Method: Boat Sampler  
Cal. Curve: BOAT CAL 07232010  
Operator ID: CARLOS

Mode: TOC  
Filename: 08061554  
Timestamp: 2010/08/06 15:56  
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	38.5515	1.5421	158370	18.680	19.680	61

=====



## Analytical Resources, Incorporated

Analytical Chemists and Consultants

August 30, 2010

Jessi Massingale  
Floyd-Snyder Inc.  
601 Union Street, Suite 600  
Seattle, WA 98101-2341

**RE: Client Project: Lora Lake RI, POS-LLA**  
**ARI Job No: RG59**

Dear Ms. Massingale:

Please find enclosed the original Chain-of-Custody (COC) record, sample receipt documentation, and the final data package for samples from the project referenced above.

Analytical Resources, Inc. (ARI) accepted twenty-one soil samples on July 28, 2010 under ARI job RG59. The cooler temperatures measured by IR thermometer following ARI SOP were 0.1, 2.7 and 5.7°C. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form. Selected samples were placed on hold.

Dioxin/Furan analyses were subcontracted to Frontier Analytical Laboratory in El Dorado Hills, CA. On August 9, ARI was contacted about sample volumes that did not appear to be the same sample, specifically the QC volume for sample PSB06-0-0.5-072810, and PSB06-1.5-2.0-072810 versus PSB06-1.5-2.0-072810D. Based on photos it was determined that water had leaked into the QC sample containers. The 'dry' samples were used for analysis. ARI SOP was modified to pull all ice from sample coolers if not immediately logged.

The dioxin data on CD as generated by Frontier is forwarded here.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Susan D. Dunnihoo  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile RG59

SD/sdrd

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: RG59 Turn-around Requested: Standard Page: 1 of 3

ARI Client Company: Floyd Sailer Phone: 206-292-2078 Date: 7/28/10 Ice Present?

Client Contact: M. McCullough / J. Massjoh No. of Coolers: 1 Cooler Temps:

Client Project Name: Lava Lake RI

Analytical Resources, Incorporated  
Analytical Chemists and Consultants  
4611 South 134th Place, Suite 100  
Tukwila, WA 98168  
206-695-6200 206-695-6201 (fax)



Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested		Notes/Comments	
					Dioxin EPA 1613	ARCHIVE		
PSB04-0-0.5-072810	07/28/10	09:30	S	1	✓			
PSB04-1.5-2.0-072810		09:33		1	✓			
PSB04-2-4-072810		09:36		1	✓			
PSB04-4-6-072810		09:35		1	✓			
PSB05-0-0.5-072810		09:00		1	✓			
PSB05-1.5-2.0-072810		09:01		1	✓			
PSB05-2-4-072810		09:05		1	✓			
PSB06-0-0.5-072810		10:08		2	✓		RAW MS/MCD	
PSB06-1.5-2.0-072810		10:22		1	✓			
Comments/Special Instructions	Relinquished by: <u>[Signature]</u> Date & Time: <u>7/28/10 17:55</u>		Received by: <u>[Signature]</u> Date & Time: <u>7/28/10 17:55</u>		Relinquished by: <u>[Signature]</u> Date & Time: <u></u>		Received by: <u>[Signature]</u> Date & Time: <u></u>	
	Printed Name: <u>Floyd Sailer</u> Company: <u>FIS</u>		Printed Name: <u>Jennifer M. Hays</u> Company: <u>ARI</u>		Printed Name: <u></u> Company: <u></u>		Printed Name: <u></u> Company: <u></u>	

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release 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 Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

20000 : RG59

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **KG59**  
 Turn-around Requested: **ST-Just**  
 Page: **2** of **3**  
 Ice Present?   
 Date: **7/25/10**  
 No. of Coolers:   
 Cooler Temps:   
 Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)



ARI Client Company: **Floyd Shiden**  
 Phone: **206-292-2078**  
 Client Contact: **M. McLoughlin / J. Massi-jala**  
 Client Project Name: **Low Rate RI**  
 Client Project #: **POS-LUA**  
 Samplers: **MM, AM, KA**

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested		Notes/Comments
					Diopix	EXA ICLB	
PSB06-1.5-2.0-072810-D	7/28/10	10:20	S	1	✓		
PSB06-2-4-072810		10:30		1	✓		
PSB06-4-6-072810		10:25		1	✓		
PSB07-0-0.5-072810		07:59		1	✓		
PSB07-1.5-2.0-072810		07:59		1	✓		
PSB07-2-4-072810		08:03		1	✓		
PSB07-4-6-072810		08:03		1	✓		
PSB08-0.0-0.5-072810		11:03		1	✓		
PSB08-1.5-2.0-072810		11:06		1	✓		
PSB08-2-4-072810		11:12		1	✓		
Comments/Special Instructions	Relinquished by: <b>[Signature]</b> Printed Name: <b>Jennifer Miltsof</b> Company: <b>ARI</b> Date & Time: <b>7/28/10 17:55</b>		Received by: <b>[Signature]</b> Printed Name: <b>Jennifer Miltsof</b> Company: <b>ARI</b> Date & Time: <b>7/28/10 17:55</b>		Relinquished by: <b>[Signature]</b> Printed Name: <b>Jennifer Miltsof</b> Company: <b>ARI</b> Date & Time: <b>7/28/10 17:55</b>		

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release 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 Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

KG59 : 00000





# Cooler Receipt Form

ARI Client: Floyd Snider

Project Name: Lora Lake

COC No(s): \_\_\_\_\_ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_

Assigned ARI Job No: RG59

Tracking No: \_\_\_\_\_ NA

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO  
 Were custody papers included with the cooler? YES NO  
 Were custody papers properly filled out (ink, signed, etc.) YES NO  
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 7.5 5.7 0.1 2.7  
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 9087952

Cooler Accepted by: W/Jm Date: 7/28/10 Time: 1800

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? YES NO  
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_  
 Was sufficient ice used (if appropriate)? NA YES NO  
 Were all bottles sealed in individual plastic bags? YES NO  
 Did all bottles arrive in good condition (unbroken)? YES NO  
 Were all bottle labels complete and legible? YES NO  
 Did the number of containers listed on COC match with the number of containers received? YES NO  
 Did all bottle labels and tags agree with custody papers? YES NO  
 Were all bottles used correct for the requested analyses? YES NO  
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO  
 Were all VOC vials free of air bubbles? NA YES NO  
 Was sufficient amount of sample sent in each bottle? YES NO  
 Date VOC Trip Blank was made at ARI: NA  
 Was Sample Split by ARI: NA YES Date/Time: \_\_\_\_\_ Equipment: \_\_\_\_\_ Split by: \_\_\_\_\_

Samples Logged by: Jm Date: 7/30/10 Time: 1330

**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**

By: \_\_\_\_\_ Date: \_\_\_\_\_

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"



# Analytical Resources, Incorporated

Analytical Chemists and Consultants

August 30, 2010

Jessi Massingale  
Floyd-Snyder Inc.  
601 Union Street, Suite 600  
Seattle, WA 98101-2341

**RE: Client Project: Lora Lake RI, POS-LLA**  
**ARI Job No: RG61**

Dear Ms. Massingale:

Please find enclosed the original Chain-of-Custody (COC) record, sample receipt documentation, and the final data package for samples from the project referenced above.

Analytical Resources, Inc. (ARI) accepted thirteen soil samples on July 29, 2010 under ARI job RG61. The cooler temperature measured by IR thermometer following ARI SOP was 4.3°C. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form. Selected samples were placed on hold.

Dioxin/Furan analyses were subcontracted to Frontier Analytical Laboratory in El Dorado Hills, CA.

The dioxin data on CD as generated by Frontier is forwarded here.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Susan D. Dunnihoo  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile RG61

SD/sdrd



# Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)



Page: 1 of 2  
 Date: 7/29/10 Ice Present? YES  
 No. of Coolers: 4 Cooler Temps: 4.3°C

ARI Assigned Number: 2961 Turn-around Requested: Standard  
 ARI Client Company: Floyd Snider Phone: 206-292-2078  
 Client Contact: M. McLulloy / J. Messigale  
 Client Project Name: Lava Lake RI  
 Client Project #: POS-LLA Samplers: MM

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments			
					Dioxin (1613)	ARCHIVE						
PSB1-0-0.5-072910	7/29/10	15:59	S	1	✓							
PSB1-1.5-2.0-072910		16:01		3	✓				Run MS/MSD			
PSB1-2-4-072910		16:05		1		✓						
PSB1-4-6-072910		16:03		1		✓						
PSB2-0-0.5-072910		15:20		1	✓							
PSB2-1.5-2-072910		15:22		1	✓							
PSB2-2-4-072910		15:25		1	✓							
PSB2-2-4-072910-D		15:25		1	✓							
PSB2-4-6-072910		15:30		1	✓							
PSB3-0-0.5-072910		16:30		1	✓							
Comments/Special Instructions	Relinquished by: <u>[Signature]</u> Date & Time: <u>7/29/10 18:25</u> Printed Name: <u>Megan McLulloy</u> Company: <u>F/S</u> Received by: <u>[Signature]</u> Date & Time: <u>07/29/10 18:25</u> Printed Name: <u>Susan D Downham</u> Company: <u>ARL</u>				Relinquished by: <u>[Signature]</u> Date & Time: <u>7/29/10 18:25</u> Printed Name: <u>Susan D Downham</u> Company: <u>ARL</u>				Received by: <u>[Signature]</u> Date & Time: <u>07/29/10 18:25</u> Printed Name: <u>Susan D Downham</u> Company: <u>ARL</u>			

ANALYSIS FOR  
 TIOXINS  
 F/S

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release 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 Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.





# Cooler Receipt Form

ARI Client: Floyd Snider

Project Name: Lora Lake RI

COC No(s): \_\_\_\_\_ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other

Assigned ARI Job No: \_\_\_\_\_

Tracking No: \_\_\_\_\_ NA

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES  NO

Were custody papers included with the cooler? YES  NO

Were custody papers properly filled out (ink, signed, etc.) YES  NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 43 5.6 0.0 3.6 13

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: \_\_\_\_\_

Cooler Accepted by: [Signature] Date: 07/29/10 Time: 18:30

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? YES  NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? NA  YES  NO

Were all bottles sealed in individual plastic bags? YES  NO

Did all bottles arrive in good condition (unbroken)? YES  NO

Were all bottle labels complete and legible? YES  NO

Did the number of containers listed on COC match with the number of containers received? YES  NO

Did all bottle labels and tags agree with custody papers? YES  NO

Were all bottles used correct for the requested analyses? YES  NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA  YES  NO

Were all VOC vials free of air bubbles? NA  YES  NO

Was sufficient amount of sample sent in each bottle? YES  NO

Date VOC Trip Blank was made at ARI... NA

Was Sample Split by ARI : NA  YES  Date/Time: JJM Equipment: \_\_\_\_\_ Split by: \_\_\_\_\_

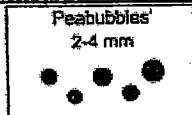
Samples Logged by: JJM Date: 8/4/10 Time: 1340

**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**

By: \_\_\_\_\_ Date: \_\_\_\_\_



Small → "sm"

Peabubbles → "pb"

Large → "lg"

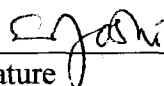
Headspace → "hs"

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Client: Floyd/Snider

Project: POS-LLA Lora Lake RI

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 \_\_\_\_\_  
 Signature

Sept 2, 2010  
~~August 10, 2010~~  
 \_\_\_\_\_  
 Date

Table of Contents: ARI Job RG60

Client: Floyd/Snider

Project: POS-LLA Lora Lake RI

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ES Snider  
Signature

Sept. 2, 2010  
~~August 10, 2010~~  
Date



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

September 1, 2010

Jessi Massingale  
Floyd-Snyder Inc.  
601 Union Street, Suite 600  
Seattle, WA 98101-2341

**RE: Client Project: Lora Lake RI, POS-LLA**  
**ARI Job No: RG60**

Dear Ms. Massingale:

Please find enclosed the original Chain-of-Custody (COC) record, sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and detail of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Susan D. Dunnihoo".

Susan D. Dunnihoo  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile RG60

SD/co

## **Chain of Custody Documentation**

**ARI Job ID: RG60**

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **RG-60**  
 Turn-around Requested: **Standard**  
 ARI Client Company: **Floyd Snider** Phone: **206-292-2078**  
 Client Contact: **M. McMullin / J. Massigale**  
 Client Project Name: **Low Lake RI**  
 Client Project #: **Pos-LWA** Samplers: **MM**

Page: **1** of **1**  
 Date: **7/29/10** Ice Present? **Yes**  
 No. of Coolers: **5.6** Cooler Temps:

Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments			
					PCP	NMTPH-DX	NMTPH-SX	AS+PB (600)		VOCs-S&C (8200)	TOC (P&M 6)	Diagn (1618)
PSB13-0-0-5-072910	7/29/10	14:10	S	8	✓	✓	✓	✓	✓	✓	✓	
PSB13-1-5-2-072910		14:05		8	✓	✓	✓	✓	✓	✓	✓	
PSB13-2-4-072910		14:30		8	✓	✓	✓	✓	✓	✓	✓	
PSB13-4-6-072910		14:35		8	✓	✓	✓	✓	✓	✓	✓	
PSB13-11-13-072910		14:15		9	✓	✓	✓	✓	✓	✓	✓	
PSB13-14-5-16.5-072910		14:20		9	✓	✓	✓	✓	✓	✓	✓	
PSB13-TB		17:44	W	2	✓	✓	✓	✓	✓	✓	✓	

Comments/Special Instructions <b>See project list for VOCs</b>	Relinquished by: (Signature) <i>[Signature]</i> Printed Name: <b>Megan McMullin</b> Company: <b>F/S</b>	Received by: (Signature) <i>[Signature]</i> Printed Name: <b>Susan D Donivato</b> Company: <b>ARI</b>	Relinquished by: (Signature) <i>[Signature]</i> Printed Name: Company:	Received by: (Signature) Printed Name: Company:
	Date & Time: <b>7/29/10 18:25</b>	Date & Time: <b>7/29/10 18:25</b>	Date & Time:	Date & Time:

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release 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 Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

RG60-00000





# Cooler Receipt Form

ARI Client: Floyd Snider  
 COC No(s): \_\_\_\_\_ NA  
 Assigned ARI Job No: RG60

Project Name: Lora Lake RI  
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other  
 Tracking No: \_\_\_\_\_ NA

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO  
 Were custody papers included with the cooler? ..... YES NO  
 Were custody papers properly filled out (ink, signed, etc.) ..... YES NO  
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 43 5.6 0.0 5.6 13  
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: \_\_\_\_\_  
 Cooler Accepted by: [Signature] Date: 07/29/10 Time: 18:30

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? ..... YES NO  
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_  
 Was sufficient ice used (if appropriate)? ..... NA YES NO  
 Were all bottles sealed in individual plastic bags? ..... YES NO  
 Did all bottles arrive in good condition (unbroken)? ..... YES NO  
 Were all bottle labels complete and legible? ..... YES NO  
 Did the number of containers listed on COC match with the number of containers received? ..... YES NO  
 Did all bottle labels and tags agree with custody papers? ..... YES NO  
 Were all bottles used correct for the requested analyses? ..... YES NO  
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO  
 Were all VOC vials free of air bubbles? ..... NA YES NO  
 Was sufficient amount of sample sent in each bottle? ..... YES NO  
 Date VOC Trip Blank was made at ARI..... NA 7/23/10  
 Was Sample Split by ARI : NA YES Date/Time: \_\_\_\_\_ Equipment: \_\_\_\_\_ Split by: \_\_\_\_\_  
 Samples Logged by: JM Date: 7/30/10 Time: 1415

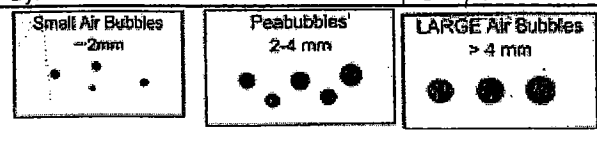
**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
PSB13-0.0-0.5-072910	PSB13-0-0.5-072910		
PSB13-1.5-2.0-072910	PSB13-1.5-2-072910		

**Additional Notes, Discrepancies, & Resolutions:**

PSB13-TB=pb in 2.0.92

By: JM Date: 7/30/10



- Small → "sm"
- Peabubbles → "pb"
- Large → "lg"
- Headspace → "hs"

**Case Narrative, Data Qualifiers, Control Limits**

**ARI Job ID: RG60**



## Case Narrative

**Client:** Floyd Snider  
**Project:** Lora Lake RI, POS-LLA  
**ARI Job No.:** RG60

### Sample receipt

Analytical Resources, Inc. (ARI) accepted six soil samples and a trip blank on July 29, 2010 under ARI job RG60. The cooler temperatures measured by IR thermometer following ARI SOP were between 0.0 and 5.6°C. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

Dioxin/Furan analyses were subcontracted to Frontier Analytical Laboratory in El Dorado Hills, CA. The dioxin data on CD as generated by Frontier is forwarded with this package.

### Volatiles by SW8260C

The samples were analyzed within method recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within control limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

### PAHs by SW8270D

The samples were initially screened to determine if a response was present that would require modifications in the extraction process. No modifications were required. The samples and associated laboratory QC were initially extracted and analyzed within the method recommended holding times.

Samples **PSB13-0-0.5-072910**, **PSB-1.5-2-072910**, and **PSB13-2-4-072910** were re-extracted within method recommended holding times for samples stored frozen. Lower sample amounts were used to reduce matrix effect. Both sets of data have been reported for review.

Initial and continuing calibrations were within method requirements. Internal standards were within limits.



The surrogate percent recoveries of d14-p-Terphenyl fell outside the control limits low for samples **PSB13-0-0.5-072910**, **PSB-1.5-2-072910**, and **PSB13-2-4-072910**. The samples were re-extracted and all surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limit. The LCS percent recoveries were within control limits.

The batch matrix spike and matrix spike duplicate analyzed under ARI job RG51 had percent recoveries within advisory limits.

In response to comments from NELAP and DOD auditors, ARI will now report the 'total' benzofluoranthenes rather than the individual compounds. This total will include the response of the b, k and j isomers.

#### **Pentachlorophenol by SW8041**

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS percent recovery was within control limits.

The batch matrix spike and matrix spike duplicate analyzed under ARI job RG54 had percent recoveries within advisory limits.

#### **Acid/Silica Cleaned NWTPH-Dx**

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.



**BETX by SW8021B Mod and NWTPH-Gx**

The samples and associated laboratory QC were analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements. .

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

The batch matrix spike percent recovery of Ethylbenzene fell outside the advisory control limits with a wide RPD for sample **PSB14-12-14-072810**. No corrective action is required for matrix QC.

**Total Arsenic and Lead by SW846 6010B**

The samples and associated laboratory QC were digested and analyzed within the method recommended holding time.

The method blank was clean at the reporting limits. The LCS percent recoveries were within control limits.

The SRM results were within advisory ranges.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

**General Chemistry (TOC/TS)**

The samples and associated laboratory QC were prepared and analyzed within the method recommended holding time.

The method blanks were clean at the reporting limits. The LCS percent recovery was within control limits.

The SRM percent recovery was within limits.

The batch matrix spike percent recovery and replicate RSDs were within control limit. Copies of the summary form have been included in this report.



## Data Reporting Qualifiers

Effective 7/10/2009

### Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but  $\geq$  the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  RL instead of the normal 20% RPD

### Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ( $< 20\%$  RSD,  $< 20\%$  Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte



- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by  $\geq 40\%$  RPD with no obvious chromatographic interference

### Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

## SURRE SOLUTIONS

LABEL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
A	1732-2	ABN	100/150	MEOH	07/30/10
B	1747-2	SIM PNA	15/75	MEOH	10/07/10
C	1705-4	SIM ABN	25/37.5	MEOH	07/30/10
D	1742-1	LOW PCB	0.2	ACETONE	12/29/10
E	1661-2	HERB	62.5	MEOH	10/02/10
F	1683-3	PCP	12.5	ACETONE	12/09/10
G	1707-2	1,4DIOXANE	100	MEOH	03/19/11
H	1723-2	OP-PEST	25	MEOH	04/02/11
I	1747-1	LOW S. PNA	1.5	MEOH	10/07/10
J	1681-2	TBT-PORE	0.125	MECL2	12/01/10
K	1689-1	MED PCB	20	ACETONE	12/29/10
L	1681-1	TBT	2.5	MECL2	12/01/10
M	1682-1	EPH	1500	MECL2	09/17/10
N	1689-3	PCB	2	ACETONE	12/29/10
O	1740-1	TPH	450	MECL2	12/11/10
P	1742-2	HCID	2250	MECL2	05/13/11
Q	1620-2	EDB	1	MEOH	06/22/10
R	1615-1	RESIN ACID	250	ACETONE	06/17/10
S*	1568-5	PBDE	.25	MEOH	01/13/11
T	1674-2	ALKYL PNA	10	MEOH	07/30/10
U	1633-1	CONGENER	2.5	ACETONE	08/11/10
V					
		*reverified solution			



# LCS SOLUTIONS

7/3/2010

LABL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
1	1716-1	PCB 1660	20	ACETONE	03/30/11
2#		BCOC PEST	10	ACETONE	NA
3	1705-3	PEST	02/04/20	ACETONE	03/08/11
4	1744-3	LOW PEST	0.2/0.4/2	ACETONE	03/08/11
5	1677-1	EPH	1500	MECL2	11/12/10
6	1702-2	PCP	12.5/125	ACETONE	02/18/11
7	1738-2	ABN	100	ACETONE	01/31/11
8	1681-4	TBT	2.5	MECL2	12/01/10
9	1682-2	PORE TBT	.125/.25	MECL2	12/01/10
10	1698-2	ABN ACID	100/200	MECL2	07/14/10
11	1730-2	TPHD	15000	ACETONE	04/26/11
12	1741-2	ABN BASE	200	MEOH	07/24/10
13	1716-2	LOW PCB	2	ACETONE	03/30/11
14	1730-1	LOW ABN ACID	10/20	MEOH	07/14/10
15	1726-3	SIM PNA	15/75	MEOH	10/07/10
16	1707-1	DIOXANE	100	MEOH	11/05/10
17	1644-1	1248 PCB	10	ACETONE	09/10/10
18	1726-4	LOW SIM PNA	1.5	ACETONE	10/07/10
19	1746-3	AK103	7500	ACETONE	12/01/10
20	1682-4	PNA	100	ACETONE	12/04/10
21	1725-1	SKY/BHT	100	MEOH	03/18/11
22	1728-1	HERB	12.5/12500	MEOH	10/20/10
23	1706-1	LW ABN BASE	20	MEOH	03/08/11
24	1696-1	LOW ABN	10	ACETONE	01/13/11
25#		DIPHENYL	100	MEOH	NA
26	1723-3	OP-PEST	25	MEOH	11/20/10
27	1668-3	STEROLS	200	MEOH	10/30/10
28#		ADD. PEST	4	ACETONE	NA
29#		DECANES	100	MEOH	NA
30	1620-1	EDB/DBCP	0.2	MEOH	06/22/10

# LCS SOLUTIONS

7/3/2010

31	1707-3	TERPINEOL	100	MEOH	03/19/11
32	1619-3	GUAIACOL	50-200	ACETONE	04/30/10
33	1639-3	RETENE	100	MEOH	09/03/10
34	1633-1	CONGENERS	2.5	ACETONE	08/11/10
35	1674-3	ALKYL PNA A	10	MEOH	10/28/10
36	1601-3	ALKYL PNA B	10	MEOH	05/13/10
50	1617-1	FULL RESIN	250	ACETONE	06/17/10
51	1696-3	DDTS	2.5	ACETONE	06/03/10
52	1613-5	1232 PCB	20	ACETONE	06/16/10
53	1703-3	DALAPON	50	MEOH	09/11/10
54	1701-2	PBDE	0.5	ACETONE	02/10/11
	#=PROJECT SPECIFIC SOLUTION				
	*=REVERIFIED SOLUTION				



**Spike Recovery Control Limits for Analysis of Solid Samples  
Volatile Organic Compounds (VOA) EPA SW-846 Methods 8260C  
5 mL Purge Volume <sup>(7)</sup>  
Effective:5/18/09**

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

	Low Level <sup>(1)</sup>	Low Level ME Limits <sup>(3)</sup>	Medium Level <sup>(2)</sup>	Medium Level ME Limits <sup>(3)</sup>
<b>LCS Spike Recovery <sup>(8)</sup></b>				
Dichlorodifluoromethane	53 - 148	37 - 164	25 - 128	<b>10 - 145</b>
Chloromethane	64 - 125	54 - 135	55 - 121	44 - 132
Vinyl Chloride	63 - 137	51 - 149	66 - 123	57 - 133
Bromomethane	57 - 136	44 - 149	40 - 154	21 - 173
Chloroethane	64 - 131	53 - 142	72 - 128	63 - 137
Trichlorofluoromethane	69 - 132	59 - 143	69 - 135	58 - 146
Acrolein	54 - 137	40 - 151	39 - 135	23 - 151
1,1,2-Trichloro-1,2,2-trifluoroethane	74 - 130	65 - 139	65 - 139	53 - 151
Acetone	60 - 131	48 - 143	55 - 130	43 - 143
1,1-Dichloroethene	75 - 126	67 - 135	73 - 133	63 - 143
Bromoethane	76 - 126	68 - 134	74 - 133	64 - 143
Methyl Iodide	65 - 139	53 - 151	47 - 155	29 - 173
Methylene Chloride	70 - 123	61 - 132	<b>80 - 120</b>	75 - 122
Acrylonitrile	67 - 125	57 - 135	62 - 129	51 - 140
Methyl tert-Butyl Ether	70 - 120	62 - 128	69 - 128	59 - 138
Carbon Disulfide	71 - 129	61 - 139	64 - 135	52 - 147
trans-1,2-Dichloroethene	80 - <b>120</b>	74 - 126	78 - 125	70 - 133
Vinyl Acetate	60 - 136	47 - 149	66 - 132	55 - 143
1,1-Dichloroethane	<b>80 - 120</b>	75 - 124	77 - 124	69 - 132
2-Butanone	70 - <b>120</b>	62 - 127	65 - 126	55 - 136
2,2-Dichloropropane	74 - 123	66 - 131	75 - 127	66 - 136
cis-1,2-Dichloroethene	<b>80 - 120</b>	76 - 123	<b>80 - 125</b>	74 - 132
Chloroform	80 - <b>120</b>	74 - 123	<b>80 - 124</b>	73 - 131
Bromodichloromethane	77 - 121	70 - 128	78 - 130	69 - 139
1,1,1-Trichloroethane	77 - 121	70 - 128	76 - 130	67 - 139
1,1-Dichloropropene	<b>80 - 120</b>	77 - 123	77 - 131	68 - 140
Carbon Tetrachloride	77 - 122	70 - 130	74 - 129	65 - 138
1,2-Dichloroethane	76 - <b>120</b>	69 - 123	73 - 123	65 - 131
Benzene	<b>80 - 120</b>	80 - 126	<b>80 - 120</b>	75 - 130
Trichloroethene	<b>80 - 120</b>	77 - 123	<b>80 - 125</b>	75 - 132
1,2-Dichloropropane	<b>80 - 120</b>	76 - 120	<b>80 - 122</b>	74 - 129
Bromochloromethane	80 - 120	73 - 127	<b>80 - 127</b>	73 - 135
Dibromomethane	80 - <b>120</b>	74 - 121	<b>80 - 121</b>	76 - 128
2-Chloroethylvinylether	<b>10 - 191</b>	<b>10 - 222</b>	61 - 128	50 - 139



**Spike Recovery Control Limits for Analysis of Solid Samples  
Volatile Organic Compounds (VOA) EPA SW-846 Methods 8260C  
5 mL Purge Volume <sup>(7)</sup>**

Effective:5/18/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLS.zip>

	Low Level <sup>(1)</sup>	Low Level ME Limits <sup>(3)</sup>	Medium Level <sup>(2)</sup>	Medium Level ME Limits <sup>(3)</sup>
4-Methyl-2-Pentanone	67 - 120	59 - 125	80 - 123	73 - 130
cis-1,3-Dichloropropene	74 - 120	67 - 125	80 - 122	73 - 129
Toluene	80 - 120	79 - 120	80 - 122	80 - 127
trans-1,3-Dichloropropene	65 - 120	57 - 125	80 - 123	79 - 129
2-Hexanone	65 - 130	54 - 141	58 - 129	46 - 141
1,1,2-Trichloroethane	80 - 120	75 - 122	80 - 120	77 - 126
1,3-Dichloropropane	80 - 120	74 - 122	80 - 120	76 - 126
Tetrachloroethene	80 - 121	79 - 127	80 - 130	73 - 138
Dibromochloromethane	64 - 120	55 - 128	77 - 120	70 - 127
Ethylene Dibromide	75 - 120	68 - 124	80 - 120	80 - 120
Chlorobenzene	80 - 120	82 - 120	80 - 121	80 - 127
Ethylbenzene	80 - 127	80 - 134	80 - 126	80 - 132
1,1,2,2-Tetrachloroethane	74 - 120	66 - 128	79 - 120	73 - 123
m,p-Xylene	80 - 125	80 - 131	80 - 130	80 - 137
o-Xylene	78 - 120	71 - 126	80 - 124	80 - 130
Styrene	80 - 123	78 - 130	80 - 132	77 - 140
Isopropylbenzene	80 - 127	84 - 133	80 - 130	80 - 137
Bromoform	60 - 120	50 - 128	68 - 129	58 - 139
1,1,1,2-Tetrachloroethane	69 - 121	60 - 130	80 - 126	76 - 133
1,2,3-Trichloropropane	72 - 121	64 - 129	77 - 120	71 - 121
trans-1,4-Dichloro-2-butene	65 - 126	55 - 136	66 - 127	56 - 137
n-Propylbenzene	80 - 132	80 - 139	80 - 132	77 - 140
Bromobenzene	80 - 120	78 - 122	80 - 121	80 - 127
1,3,5-Trimethylbenzene	80 - 125	80 - 131	78 - 137	68 - 147
2-Chlorotoluene	80 - 125	77 - 132	80 - 123	80 - 129
4-Chlorotoluene	80 - 127	77 - 134	80 - 130	74 - 138
tert-Butylbenzene	87 - 122	80 - 128	80 - 133	78 - 141
1,2,4-Trimethylbenzene	80 - 126	80 - 132	80 - 131	79 - 139
sec-Butylbenzene	80 - 134	80 - 142	80 - 136	76 - 146
4-Isopropyltoluene	80 - 131	80 - 138	80 - 141	71 - 151
1,3-Dichlorobenzene	80 - 120	80 - 126	80 - 126	77 - 133
1,4-Dichlorobenzene	80 - 120	79 - 126	80 - 121	77 - 127
n-Butylbenzene	80 - 138	80 - 146	80 - 138	77 - 147
1,2-Dichlorobenzene	80 - 120	78 - 122	80 - 120	80 - 121
1,2-Dibromo-3-chloropropane	59 - 120	49 - 130	67 - 121	58 - 130
1,2,4-Trichlorobenzene	78 - 130	69 - 139	80 - 133	72 - 142



**Spike Recovery Control Limits for Analysis of Solid Samples  
Volatile Organic Compounds (VOA) EPA SW-846 Methods 8260C  
5 mL Purge Volume <sup>(7)</sup>  
Effective:5/18/09**

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

	Low Level <sup>(1)</sup>	Low Level ME Limits <sup>(3)</sup>	Medium Level <sup>(2)</sup>	Medium Level ME Limits <sup>(3)</sup>
Hexachloro-1,3-butadiene	76 - 129	67 - 138	62 - 148	48 - 162
Naphthalene	66 - <b>120</b>	58 - 126	74 - 133	64 - 143
1,2,3-Trichlorobenzene	73 - 123	65 - 131	80 - 126	72 - 134
<b>MB/LCS Surrogate Recovery</b>				
Dibromofluoromethane	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)
d4-1,2-Dichloroethane	79 - 121	(4)	<b>76 - 120</b>	(4)
d8-Toluene	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)
4-Bromofluorobenzene	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)
d4-1,2-Dichlorobenzene	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)
<b>Sample Surrogate Recovery</b>				
Dibromofluoromethane	30 - 160 <sup>(6)</sup>	(4)	30 - 160 <sup>(6)</sup>	(4)
d4-1,2-Dichloroethane	75 - 152	(4)	69 - <b>120</b>	(4)
d8-Toluene	82 - 115	(4)	<b>80 - 120</b>	(4)
4-Bromofluorobenzene	64 - <b>120</b>	(4)	76 - 128	(4)
d4-1,2-Dichlorobenzene	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)

(1) Control Limits calculated using all data generated 1/1/08 through 12/31/08.

(2) Control Limits calculated using all data generated 3/1/07 through 11/15/07.

(3) **ME = A marginal exceedance** defined in the NELAC Standard<sup>(5)</sup> as beyond the LCS-CL but still within the ME limits. ME limits are between 3 and 4 standard deviations around the mean. A maximum of four marginal exceedances are acceptable. Five or more marginal exceedances require corrective action.

(4) Marginal Exceedances not allowed for surrogate standards

(5) **2003 NELAC Standard (EPA/600/R-04/003), July 2003**, Chapter 5, pages 251-252.

(6) 30 – 160 are default, advisory control limits used when there is insufficient data to calculate historic control limits. **DO NOT** use these limits as the sole reason to reject the data from a batch of analyses

(7) Highlighted control limits (**bold font**) are adjusted from the calculated values as follows:

a) ARI does not use control limits < 10

b) Control limits for analytes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.

(8) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analytes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.



## Spike Recovery Control Limits for Polycyclic Aromatic Hydrocarbons EPA Method SW-846-8270D <sup>(1,2)</sup>

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

Sample Matrix	Water		Soil	
Sample Volume / Final Volume	500 mL to 0.5 mL		7.5 g / 0.5 mL	
LCS Spike Recovery <sup>(6)</sup>	Control Limits	ME Limits <sup>(3)</sup>	Control Limits	ME Limits <sup>(3)</sup>
Napthalene	30 - <b>100</b>	21 - <b>100</b>	37 - <b>100</b>	31 - <b>100</b>
2-Methylnapthalene	33 - 108	21 - 121	43 - 101	33 - 111
1-Methylnapthalene	34 - <b>100</b>	26 - <b>100</b>	39 - <b>100</b>	32 - <b>100</b>
Acenaphthylene	45 - <b>100</b>	38 - <b>100</b>	44 - <b>100</b>	37 - <b>100</b>
Acenaphthene	40 - <b>100</b>	32 - <b>100</b>	41 - <b>100</b>	35 - <b>100</b>
Dibenzofuran	45 - <b>100</b>	37 - <b>100</b>	44 - <b>100</b>	37 - <b>100</b>
Fluorene	45 - <b>100</b>	37 - 105	49 - <b>100</b>	43 - <b>100</b>
Phenanthrene	47 - 101	38 - 110	48 - <b>100</b>	42 - <b>100</b>
Anthracene	47 - <b>100</b>	38 - 108	50 - <b>100</b>	44 - <b>100</b>
Fluoranthene	48 - 110	38 - 120	54 - <b>100</b>	47 - 107
Pyrene	48 - 109	38 - 119	41 - 105	30 - 116
Benz(a)anthracene	44 - 105	34 - 115	49 - <b>100</b>	42 - 102
Chrysene	50 - 103	41 - 112	50 - <b>100</b>	43 - 101
Benzofluoranthene(s) (Total)	30 - 160 <sup>(7)</sup>	30 - 160 <sup>(7)</sup>	30 - 160 <sup>(7)</sup>	30 - 160 <sup>(7)</sup>
Benzo(a)pyrene	44 - 107	34 - 118	50 - <b>100</b>	42 - 105
Indeno(1,2,3-cd)pyrene	30 - 106	17 - 119	33 - 101	22 - 112
Dibenzo(a,h)anthracene	42 - 103	32 - 113	37 - 104	26 - 115
Benzo(g,h,i)Perylene	42 - 102	32 - 112	33 - 107	21 - 119
<b>MB / LCS Surrogate Recovery</b>		-		
d14-p-Terphenyl	52 - 110	(5)	47 - 112	(5)
2-Fluorobiphenyl	36 - <b>100</b>	(5)	40 - <b>100</b>	(5)
<b>Sample Surrogate Recovery</b>				
d14-p-Terphenyl	23 - 120	(5)	35 - 112	(5)
2-Fluorobiphenyl	38 - <b>100</b>	(5)	34 - <b>100</b>	(5)

(1) Control limits calculated using all available spike recovery data from 7/1/07 through 2/27/09.

(2) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.

(3) **ME** = A marginal exceedance defined in the NELAC Standard (4) as beyond the LCS-CL but still within the ME limits. ME limits are between 3 and 4 standard deviations around the mean. A maximum of one marginal exceedance is acceptable. Two or more marginal exceedances require corrective action.

(4) **2003 NELAC Standard (EPA/600/R-04/003), July 2003**, Chapter 5, pages 251-252.

(5) Marginal Exceedances are not allowed for surrogate standards.

(6) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.

(7) Default limits pending generation of historic limits for total benzofluoranthrenes (7/29/10)



**Spike Recovery Control Limits for Chlorinated Phenols**  
**EPA Method SW-846-8041<sup>(1,2)</sup>**  
Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

	ARI's Calculated Control Limits	
	Water	Soil / Sediment
<b>Sample Matrix:</b>	Water	Soil / Sediment
<b>Sample Amount / Final Volume:</b>	500 / 50 mL	10 g / 25 mL
<b>LCS Spike Recovery<sup>(3)</sup></b>		
Pentachlorophenol	27 - 115	<b>10</b> - 162
<b>Method Blank/LCS Surrogate Recovery</b>		
2,4,6-Tribromophenol	40 - 130	50 - 115
<b>Sample Surrogate Recovery</b>		
2,4,6-Tribromophenol	11 - 156	<b>10</b> - 146

(1) ARI's Control limits calculated using all available spike recovery data from 1/1/08 through 12/1/08.

(2) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10.

(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.



**Spike Recovery Control Limits Hydrocarbon Identification (NWTPH-HCID)  
and Diesel Range Petroleum Hydrocarbons (NWTPH-D & AK-102) <sup>(1)</sup>**  
Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

<b>Method:</b>	<b>NWTPH-HCID <sup>(2)</sup></b>	<b>NWTPH-D</b>		<b>AK102 <sup>(2)</sup></b>
<b>Sample Matrix:</b>	Water & Soil	Water	Soil	Water & Soil
<b>Preparation:</b>	500 to 1 mL	500 to 1 mL	10g to 1 mL	500 to 1 mL or 10g to 1 mL
<b>LCS Spike Recovery <sup>(3)</sup></b>				
Diesel	-- --	56 - 103	55 - 104	75 - 125
Diesel with Acid & Silica Clean-up	-- --	43 - 100	54 - 96	(4)
Diesel with Silica Clean-up	-- --	43 - 100	54 - 96	75 - 125
<b>Method Blank/LCS Surrogate Recovery</b>				
o-Terphenyl	-- --	57 - 120	58 - 121	60 - 120
o-Terphenyl with Acid & Silica Clean-up	-- --	51 - 120	63 - 115	(4)
o-Terphenyl Silica Clean-up		51 - 120	63 - 115	60 - 120
<b>Sample Surrogate Recovery</b>				
o-Terphenyl	50 - 150	35 - 131	53 - 118	50 - 150
o-Terphenyl with Acid & Silica Clean-up	-- --	41 - 121	49 - 120	(4)
o-Terphenyl with Silica Clean-up		41 - 121	49 - 120	50 - 150

1. Control Limits calculated using all data generated 1/1/08 through 12/31/08
2. Method specified, non-prescriptive limits. The NWTPH-HCID Method does not include LCS or MS analyses.
3. Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.
4. Alaska State UST Methods do not allow acid cleanup of sample extracts.





**Spike Recovery Control Limits BTEX – EPA Method 8021 &  
Gasoline – Methods NWTPH-G and AK101<sup>(1,2)</sup>**  
Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

Sample Matrix:	Aqueous Samples		Soil / Sediment Samples	
Analytical Method:	Method 8021B	NWTPH-G AK-101	Method 8021B	NWTPH-G AK-101
<b>LCS Spike Recovery</b> <sup>(3)</sup>				
Benzene	73 - <b>120</b>		72 - <b>120</b>	
Toluene	73 - <b>120</b>		72 - <b>120</b>	
Ethyl benzene	69 - <b>120</b>		71 - <b>120</b>	
<i>m,p</i> -Xylenes	72 - <b>120</b>		72 - <b>120</b>	
<i>o</i> -Xlyene	73 - <b>120</b>		72 - <b>120</b>	
MTBE	30 - 182		40 - 163	
Gasoline		75 - 124		74 - 124
<b>Method Blank/LCS Surrogate Recovery</b>				
Trifluorotoluene (TFT)	79 - <b>120</b>	<b>80 - 120</b>	80 - <b>120</b>	<b>80 - 120</b>
Bromobenzene	79 - <b>120</b>	<b>80 - 120</b>	77 - <b>120</b>	<b>80 - 120</b>
<b>Sample Surrogate Recovery</b>				
Trifluorotoluene (TFT)	<b>80 - 120</b>	<b>80 - 120</b>	68 - 124	66 - 123
Bromobenzene	<b>80 - 120</b>	<b>80 - 120</b>	62 - 134	62 - 130

(1) Control Limits calculated using all data generated 1/1/08 through 12/31/08.

(2) Highlighted control limits (bold font) are adjusted from the calculated values as follows:

- a) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
- b) Control limits for analytes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.

(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.



### Summary of Laboratory Control Limits Metals Analyses (All Methods & Sample Matrices)

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

Element	Matrix Spike Recovery	LCS Recovery	Replicate RPD
Aluminum	75 - 125	80 - 120	≤ 20%
Antimony	75 - 125	80 - 120	≤ 20%
Arsenic	75 - 125	80 - 120	≤ 20%
Barium	75 - 125	80 - 120	≤ 20%
Beryllium	75 - 125	80 - 120	≤ 20%
Boron	75 - 125	80 - 120	≤ 20%
Cadmium	75 - 125	80 - 120	≤ 20%
Calcium	75 - 125	80 - 120	≤ 20%
Chromium	75 - 125	80 - 120	≤ 20%
Cobalt	75 - 125	80 - 120	≤ 20%
Copper	75 - 125	80 - 120	≤ 20%
Iron	75 - 125	80 - 120	≤ 20%
Lead	75 - 125	80 - 120	≤ 20%
Magnesium	75 - 125	80 - 120	≤ 20%
Manganese	75 - 125	80 - 120	≤ 20%
Mercury	75 - 125	80 - 120	≤ 20%
Nickel	75 - 125	80 - 120	≤ 20%
Potassium	75 - 125	80 - 120	≤ 20%
Selenium	75 - 125	80 - 120	≤ 20%
Silica	75 - 125	80 - 120	≤ 20%
Silver	75 - 125	80 - 120	≤ 20%
Sodium	75 - 125	80 - 120	≤ 20%
Strontium	75 - 125	80 - 120	≤ 20%
Thallium	75 - 125	80 - 120	≤ 20%
Vanadium	75 - 125	80 - 120	≤ 20%
Zinc	75 - 125	80 - 120	≤ 20%



<b>Spike Recovery Control Limits for Conventional Wet Chemistry</b>		
Effective 5/1/09		
Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <a href="http://www.arilabs.com/portal/downloads/ARI-CLs.zip">http://www.arilabs.com/portal/downloads/ARI-CLs.zip</a>		
<b>Sample Matrix:</b>	<b>ARI's Control Limits</b>	
	Water	Soil / Sediment
<b>Matrix Spike Recoveries</b>	<b>% Recovery</b>	<b>% Recovery</b>
Ammonia	75 - 125	75 - 125
Bromide	75 - 125	75 - 125
Chloride	75 - 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
<b>Duplicate RPDs</b>		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

**Volatile Analysis  
Report and Summary QC Forms**

**ARI Job ID: RG60**

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: PSB13-0-0.5-072910  
SAMPLE

Lab Sample ID: RG60A  
LIMS ID: 10-18279  
Matrix: Soil  
Data Release Authorized: *MW*  
Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA  
Date Sampled: 07/29/10  
Date Received: 07/29/10

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 08/04/10 18:43

Sample Amount: 7.60 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 6.2%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.7	< 0.7	U
156-59-2	cis-1,2-Dichloroethene	0.7	< 0.7	U
107-06-2	1,2-Dichloroethane	0.7	< 0.7	U
79-01-6	Trichloroethene	0.7	< 0.7	U
127-18-4	Tetrachloroethene	0.7	< 0.7	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	126%
d8-Toluene	102%
Bromofluorobenzene	81.8%
d4-1,2-Dichlorobenzene	97.3%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: PSB13-1.5-2-072910

Page 1 of 1

SAMPLE

Lab Sample ID: RG60B

QC Report No: RG60-Floyd/Snider

LIMS ID: 10-18280

Project: Lora Lake RI

Matrix: Soil

POS-LLA

Data Release Authorized: *WV*

Date Sampled: 07/29/10

Reported: 08/06/10

Date Received: 07/29/10

Instrument/Analyst: FINN5/PAB

Sample Amount: 8.86 g-dry-wt

Date Analyzed: 08/04/10 19:09

Purge Volume: 5.0 mL

Moisture: 7.2%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.6	< 0.6	U
156-59-2	cis-1,2-Dichloroethene	0.6	< 0.6	U
107-06-2	1,2-Dichloroethane	0.6	< 0.6	U
79-01-6	Trichloroethene	0.6	< 0.6	U
127-18-4	Tetrachloroethene	0.6	< 0.6	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	120%
d8-Toluene	101%
Bromofluorobenzene	93.5%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: PSB13-2-4-072910

Page 1 of 1

SAMPLE

Lab Sample ID: RG60C

QC Report No: RG60-Floyd/Snider

LIMS ID: 10-18281

Project: Lora Lake RI

Matrix: Soil

POS-LLA

Data Release Authorized: *WV*

Date Sampled: 07/29/10

Reported: 08/06/10

Date Received: 07/29/10

Instrument/Analyst: FINN5/PAB

Sample Amount: 9.24 g-dry-wt

Date Analyzed: 08/04/10 19:36

Purge Volume: 5.0 mL

Moisture: 7.6%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.5	< 0.5	U
156-59-2	cis-1,2-Dichloroethene	0.5	< 0.5	U
107-06-2	1,2-Dichloroethane	0.5	< 0.5	U
79-01-6	Trichloroethene	0.5	< 0.5	U
127-18-4	Tetrachloroethene	0.5	< 0.5	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	127%
d8-Toluene	103%
Bromofluorobenzene	91.1%
d4-1,2-Dichlorobenzene	104%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: PSB13-4-6-072910

Page 1 of 1

SAMPLE

Lab Sample ID: RG60D

QC Report No: RG60-Floyd/Snider

LIMS ID: 10-18282

Project: Lora Lake RI

Matrix: Soil

POS-LLA

Data Release Authorized: *mw*

Date Sampled: 07/29/10

Reported: 08/06/10

Date Received: 07/29/10

Instrument/Analyst: FINN5/PAB

Sample Amount: 8.55 g-dry-wt

Date Analyzed: 08/04/10 20:02

Purge Volume: 5.0 mL

Moisture: 10.2%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.6	< 0.6	U
156-59-2	cis-1,2-Dichloroethene	0.6	< 0.6	U
107-06-2	1,2-Dichloroethane	0.6	< 0.6	U
79-01-6	Trichloroethene	0.6	< 0.6	U
127-18-4	Tetrachloroethene	0.6	< 0.6	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	126%
d8-Toluene	102%
Bromofluorobenzene	95.7%
d4-1,2-Dichlorobenzene	105%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: PSB13-11-13-072910

Page 1 of 1

SAMPLE

Lab Sample ID: RG60E

QC Report No: RG60-Floyd/Snider

LIMS ID: 10-18283

Project: Lora Lake RI

Matrix: Soil

POS-LLA

Data Release Authorized: *MMW*

Date Sampled: 07/29/10

Reported: 08/06/10

Date Received: 07/29/10

Instrument/Analyst: FINN5/PAB

Sample Amount: 9.67 g-dry-wt

Date Analyzed: 08/04/10 20:29

Purge Volume: 5.0 mL

Moisture: 9.6%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.5	< 0.5	U
156-59-2	cis-1,2-Dichloroethene	0.5	< 0.5	U
107-06-2	1,2-Dichloroethane	0.5	< 0.5	U
79-01-6	Trichloroethene	0.5	< 0.5	U
127-18-4	Tetrachloroethene	0.5	< 0.5	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	122%
d8-Toluene	102%
Bromofluorobenzene	95.8%
d4-1,2-Dichlorobenzene	104%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: PSB13-14.5-16.5-072910

Page 1 of 1

**SAMPLE**

Lab Sample ID: RG60F

QC Report No: RG60-Floyd/Snider

LIMS ID: 10-18284

Project: Lora Lake RI

Matrix: Soil

POS-LLA

Data Release Authorized: *WV*

Date Sampled: 07/29/10

Reported: 08/06/10

Date Received: 07/29/10

Instrument/Analyst: FINN5/PAB

Sample Amount: 9.87 g-dry-wt

Date Analyzed: 08/04/10 20:55

Purge Volume: 5.0 mL

Moisture: 10.3%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.5	< 0.5	U
156-59-2	cis-1,2-Dichloroethene	0.5	< 0.5	U
107-06-2	1,2-Dichloroethane	0.5	< 0.5	U
79-01-6	Trichloroethene	0.5	< 0.5	U
127-18-4	Tetrachloroethene	0.5	< 0.5	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	123%
d8-Toluene	105%
Bromofluorobenzene	95.3%
d4-1,2-Dichlorobenzene	104%

VOA SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT	OUT
MB-080410	Method Blank	Low	117%	105%	94.6%	103%		0
LCS-080410	Lab Control	Low	90.0%	104%	98.7%	99.1%		0
LCSD-080410	Lab Control Dup	Low	105%	103%	99.6%	101%		0
RG60A	PSB13-0-0.5-072910	Low	126%	102%	81.8%	97.3%		0
RG60B	PSB13-1.5-2-072910	Low	120%	101%	93.5%	102%		0
RG60C	PSB13-2-4-072910	Low	127%	103%	91.1%	104%		0
RG60D	PSB13-4-6-072910	Low	126%	102%	95.7%	105%		0
RG60E	PSB13-11-13-072910	Low	122%	102%	95.8%	104%		0
RG60F	PSB13-14.5-16.5-072910	Low	123%	105%	95.3%	104%		0

SW8260C	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	79-121	76-120	75-152	69-120
(TOL) = d8-Toluene	80-120	80-120	82-115	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	64-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 10-18279 to 10-18284

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: PSB13-TB  
SAMPLE

Lab Sample ID: RG60G  
LIMS ID: 10-18285  
Matrix: Water  
Data Release Authorized: *MM*  
Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA  
Date Sampled: 07/29/10  
Date Received: 07/29/10

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 08/04/10 21:21

Sample Amount: 5.00 mL  
Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	104%
Bromofluorobenzene	92.9%
d4-1,2-Dichlorobenzene	103%

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
RG60G	PSB13-TB	5	110%	104%	92.9%	103%	0

	LCS/MB LIMITS	QC LIMITS
SW8260C		
(DCE) = d4-1,2-Dichloroethane	80-122	80-125
(TOL) = d8-Toluene	80-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120

Prep Method: SW5030B  
Log Number Range: 10-18285 to 10-18285

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-080410

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-080410

QC Report No: RG60-Floyd/Snider

LIMS ID: 10-18279

Project: Lora Lake RI

Matrix: Soil

POS-LLA

Data Release Authorized: *TW*

Date Sampled: NA

Reported: 08/06/10

Date Received: NA

Instrument/Analyst LCS: FINN5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCS D: FINN5/PAB

LCS D: 5.00 g-dry-wt

Date Analyzed LCS: 08/04/10 11:07

Purge Volume LCS: 5.0 mL

LCS D: 08/04/10 11:41

LCS D: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
trans-1,2-Dichloroethene	52.7	50.0	105%	50.5	50.0	101%	4.3%
cis-1,2-Dichloroethene	52.0	50.0	104%	50.5	50.0	101%	2.9%
1,2-Dichloroethane	49.4	50.0	98.8%	47.5	50.0	95.0%	3.9%
Trichloroethene	49.7	50.0	99.4%	46.9	50.0	93.8%	5.8%
Tetrachloroethene	48.1	50.0	96.2%	44.4	50.0	88.8%	8.0%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCS D
d4-1,2-Dichloroethane	90.0%	105%
d8-Toluene	104%	103%
Bromofluorobenzene	98.7%	99.6%
d4-1,2-Dichlorobenzene	99.1%	101%

4A  
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0804

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Lab File ID: MB0804

Lab Sample ID: MB0804

Date Analyzed: 08/04/10

Time Analyzed: 1208

Instrument ID: FINN5

Heated Purge: (Y/N) Y

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	LCS0804	LCS0804	LCS0804	1107
02	LCS0804	LCS0804	LCS0804A	1141
03	PSB13-0-0.5-	RG60A	RG60A	1843
04	PSB13-1.5-2-	RG60B	RG60B	1909
05	PSB13-2-4-07	RG60C	RG60C	1936
06	PSB13-4-6-07	RG60D	RG60D	2002
07	PSB13-11-13-	RG60E	RG60E	2029
08	PSB13-14.5-1	RG60F	RG60F	2055
09	PSB13-TB	RG60G	RG60G	2121
10				
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COMMENTS:

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**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-080410

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-080410

QC Report No: RG60-Floyd/Snider

LIMS ID: 10-18279

Project: Lora Lake RI

Matrix: Soil

POS-LLA

Data Release Authorized: *MW*

Date Sampled: NA

Reported: 08/06/10

Date Received: NA

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 08/04/10 12:08

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	117%
d8-Toluene	105%
Bromofluorobenzene	94.6%
d4-1,2-Dichlorobenzene	103%



5A  
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES, INC Contract: FLOYD SNIDER

Lab Code: ARI Case No.: LORA LAKES RI SDG No.: RG60

Lab File ID: BFB07231 BFB Injection Date: 07/23/10

Instrument ID: FINN5 BFB Injection Time: 1648

GC Column: RTX502.2 ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	24.7
75	30.0 - 66.0% of mass 95	49.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.2 ( 0.2)1
174	50.0 - 101.0% of mass 95	77.4
175	4.0 - 9.0% of mass 174	5.7 ( 7.4)1
176	93.0 - 101.0% of mass 174	76.4 ( 98.8)1
177	5.0 - 9.0% of mass 176	5.5 ( 7.2)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	IC0723	2000723	07/23/10	1718
02	VSTD150	IC0723	1500723	07/23/10	1749
03	VSTD100	IC0723	1000723	07/23/10	1816
04	VSTD050	IC0723	0500723	07/23/10	1842
05	VSTD010	IC0723	0100723	07/23/10	1909
06	VSTD005	IC0723	0050723	07/23/10	1935
07	VSTD002	IC0723	0020723	07/23/10	2002
08	VSTD001	IC0723	0010723	07/23/10	2028
09					
10					
11					
12					
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20					
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22					



FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Calibration Date: 07/23/10

LAB FILE ID: RF1: 0010723

RF2: 0020723

RF5: 0050723

RF10: 0100723

RF50: 0500723

COMPOUND	RF1	RF2	RF5	RF10	RF50
Chloromethane	2.155	1.962	1.917	2.009	1.652
Vinyl Chloride	1.519	1.452	1.513	1.597	1.363
Bromomethane	0.934	0.851	0.777	0.625	0.810
Chloroethane	1.071	1.093	0.988	0.871	0.876
Trichlorofluoromethane	1.476	1.559	1.505	1.410	1.426
Acrolein	0.205	0.197	0.177	0.164	0.157
112Trichloro122Trifluoroetha	1.274	1.182	1.204	1.123	1.014
Acetone	0.308	0.320	0.314	0.301	0.268
1,1-Dichloroethene	1.036	1.019	1.041	1.032	0.979
Bromoethane	0.707	0.744	0.729	0.753	0.727
Iodomethane	1.011	1.066	1.142	1.140	1.253
Methylene Chloride		1.396	1.190	1.128	0.935
Acrylonitrile	0.196	0.243	0.283	0.285	0.261
Carbon Disulfide	3.372	3.310	3.395	3.282	3.176
Trans-1,2-Dichloroethene	0.815	0.825	0.806	0.895	0.794
Vinyl Acetate	1.378	1.475	1.529	1.560	1.561
1,1-Dichloroethane	1.593	1.577	1.616	1.674	1.534
2-Butanone	0.326	0.330	0.344	0.353	0.328
2,2-Dichloropropane	0.887	0.897	0.933	0.951	0.913
Cis-1,2-Dichloroethene	0.703	0.702	0.718	0.759	0.692
Chloroform	1.249	1.296	1.316	1.320	1.203
Bromochloromethane	0.301	0.323	0.367	0.357	0.335
1,1,1-Trichloroethane	0.977	0.934	0.973	0.985	0.933
1,1-Dichloropropene	0.670	0.690	0.712	0.765	0.673
Carbon Tetrachloride	0.581	0.624	0.604	0.630	0.570
1,2-Dichloroethane	0.571	0.629	0.633	0.678	0.586
Benzene	1.759	1.768	1.800	1.965	1.656
Trichloroethene	0.436	0.500	0.510	0.540	0.468
1,2-Dichloropropane	0.524	0.521	0.548	0.582	0.501
Bromodichloromethane	0.521	0.592	0.582	0.604	0.542
Dibromomethane	0.253	0.259	0.260	0.288	0.249
2-Chloroethyl Vinyl Ether		0.142	0.173	0.190	0.185
4-Methyl-2-Pentanone	0.141	0.137	0.132	0.143	0.133
Cis 1,3-dichloropropene	0.503	0.566	0.600	0.660	0.638
Toluene	1.257	1.104	1.022	1.052	0.921
Trans 1,3-Dichloropropene	0.446	0.472	0.491	0.540	0.521
2-Hexanone	0.489	0.418	0.404	0.438	0.381

FORM VI VOA

RG60 : 00038

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Calibration Date: 07/23/10

LAB FILE ID: RF1: 0010723

RF2: 0020723

RF5: 0050723

RF10: 0100723

RF50: 0500723

COMPOUND	RF1	RF2	RF5	RF10	RF50
1,1,2-Trichloroethane	0.269	0.295	0.323	0.339	0.296
1,3-Dichloropropane	0.683	0.714	0.715	0.756	0.678
Tetrachloroethene	0.617	0.527	0.565	0.567	0.490
Chlorodibromomethane	0.427	0.440	0.465	0.502	0.453
1,2-Dibromoethane	0.301	0.328	0.338	0.349	0.322
Chlorobenzene	1.449	1.256	1.215	1.285	1.093
Ethyl Benzene	2.203	2.176	2.088	2.268	2.021
1,1,1,2-Tetrachloroethane	0.488	0.463	0.438	0.454	0.389
m,p-xylene	0.686	0.701	0.756	0.820	0.768
o-Xylene	0.597	0.672	0.700	0.773	0.750
Styrene	1.013	1.042	1.151	1.321	1.228
Bromoform	0.588	0.562	0.563	0.584	0.521
1,1,2,2-Tetrachloroethane	1.199	1.124	1.036	1.126	0.917
1,2,3-Trichloropropane		0.226	0.221	0.226	0.186
Trans-1,4-Dichloro 2-Butene		0.322	0.326	0.349	0.301
N-Propyl Benzene	4.356	4.362	4.593	5.132	4.292
Bromobenzene	0.977	0.937	0.972	1.058	0.917
Isopropyl Benzene	3.581	3.464	3.670	4.080	3.636
2-Chloro Toluene	3.123	2.806	3.073	3.372	2.810
4-Chloro Toluene	2.626	2.911	2.880	3.298	2.959
T-Butyl Benzene	2.255	2.386	2.573	2.864	2.638
1,3,5-Trimethyl Benzene	2.663	2.667	2.918	3.226	2.998
1,2,4-Trimethylbenzene	2.438	2.545	2.851	3.260	2.948
S-Butyl Benzene	3.651	3.689	3.984	4.454	4.031
4-Isopropyl Toluene	2.226	2.542	2.823	3.180	2.946
1,3-Dichlorobenzene	1.562	1.533	1.674	1.912	1.646
1,4-Dichlorobenzene	1.655	1.573	1.702	1.839	1.597
N-Butyl Benzene	2.810	2.765	3.045	3.430	3.102
1,2-Dichlorobenzene	1.537	1.602	1.638	1.750	1.517
1,2-Dibromo 3-Chloropropane	0.152	0.209	0.190	0.200	0.171
1,2,4-Trichlorobenzene	0.965	1.017	0.971	1.126	0.860
Hexachloro 1,3-Butadiene	0.585	0.688	0.689	0.751	0.589
Naphthalene	1.716	1.756	1.742	2.094	1.618
1,2,3-Trichlorobenzene	0.961	1.020	0.960	1.136	0.809
Dichlorodifluoromethane	0.618	0.692	0.660	0.633	0.675
Methyl tert-Butyl Ether	1.392	1.482	1.616	1.631	1.525

FORM VI VOA

RG60 : 00039

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Calibration Date: 07/23/10

LAB FILE ID: RF1: 0010723

RF2: 0020723

RF5: 0050723

RF10: 0100723

RF50: 0500723

COMPOUND	RF1	RF2	RF5	RF10	RF50
d4-1,2-Dichloroethane	0.718	0.705	0.687	0.646	0.643
d8-Toluene	1.123	1.149	1.122	1.106	1.114
4-Bromofluorobenzene	0.550	0.557	0.558	0.551	0.566
d4-1,2-Dichlorobenzene	0.929	0.920	0.920	0.926	0.925
Dibromofluoromethane	0.649	0.629	0.614	0.586	0.599

FORM VI VOA

RG60: 00040

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Calibration Date: 07/23/10

LAB FILE ID: RF100: 1000723

RF150: 1500723

RF200: 2000723

COMPOUND	RF100	RF150	RF200
Chloromethane	1.566	1.388	1.306
Vinyl Chloride	1.358	1.171	1.061
Bromomethane	0.769	0.647	0.579
Chloroethane	0.778	0.629	
Trichlorofluoromethane	1.280	1.042	0.967
Acrolein	0.146	0.119	
1,1,2-Trichloro-2,2-Trifluoroethane	0.976	0.818	0.758
Acetone	0.244	0.204	
1,1-Dichloroethene	0.934	0.797	0.739
Bromoethane	0.727	0.633	0.591
Iodomethane	1.256	1.066	1.025
Methylene Chloride	0.929	0.821	
Acrylonitrile	0.258	0.230	0.220
Carbon Disulfide	2.867	2.186	1.913
Trans-1,2-Dichloroethene	0.835	0.766	0.722
Vinyl Acetate	1.554	1.197	1.056
1,1-Dichloroethane	1.561	1.255	1.069
2-Butanone	0.323	0.268	0.247
2,2-Dichloropropane	0.956	0.876	0.855
Cis-1,2-Dichloroethene	0.742	0.687	0.690
Chloroform	1.234	1.073	0.959
Bromochloromethane	0.351	0.332	0.335
1,1,1-Trichloroethane	0.962	0.878	0.863
1,1-Dichloropropene	0.695	0.631	0.596
Carbon Tetrachloride	0.592	0.551	0.570
1,2-Dichloroethane	0.598	0.544	0.529
Benzene	1.455	1.088	
Trichloroethene	0.485	0.448	0.461
1,2-Dichloropropane	0.518	0.470	0.475
Bromodichloromethane	0.555	0.516	0.514
Dibromomethane	0.260	0.237	0.249
2-Chloroethyl Vinyl Ether	0.194	0.187	0.198
4-Methyl-2-Pentanone	0.132	0.122	0.117
Cis 1,3-dichloropropene	0.676	0.620	0.570
Toluene	0.946	0.783	0.707
Trans 1,3-Dichloropropene	0.559	0.524	0.508
2-Hexanone	0.322		

FORM VI VOA

RG60: 00041

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Calibration Date: 07/23/10

LAB FILE ID: RF100: 1000723

RF150: 1500723

RF200: 2000723

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.308	0.291	0.306
1,3-Dichloropropane	0.724	0.676	0.684
Tetrachloroethene	0.546	0.543	0.590
Chlorodibromomethane	0.493	0.479	0.528
1,2-Dibromoethane	0.328	0.309	0.324
Chlorobenzene	1.173	0.982	0.930
Ethyl Benzene	1.784	1.342	
1,1,1,2-Tetrachloroethane	0.428	0.439	0.492
m,p-xylene	0.804	0.647	0.616
o-Xylene	0.840	0.828	0.865
Styrene	1.342	1.127	1.094
Bromoform	0.539	0.500	0.474
1,1,2,2-Tetrachloroethane	0.890	0.780	0.707
1,2,3-Trichloropropane	0.183	0.160	0.146
Trans-1,4-Dichloro 2-Butene	0.299	0.258	0.237
N-Propyl Benzene	3.334		
Bromobenzene	0.956	0.872	0.817
Isopropyl Benzene	3.053	2.076	
2-Chloro Toluene	2.821	1.980	
4-Chloro Toluene	2.626	1.857	
T-Butyl Benzene	2.560	1.958	1.463
1,3,5-Trimethyl Benzene	2.733	1.921	
1,2,4-Trimethylbenzene	2.800	1.985	
S-Butyl Benzene	3.263		
4-Isopropyl Toluene	2.747	2.006	
1,3-Dichlorobenzene	1.804	1.479	1.214
1,4-Dichlorobenzene	1.775	1.484	1.208
N-Butyl Benzene	2.846	1.945	
1,2-Dichlorobenzene	1.586	1.401	1.156
1,2-Dibromo 3-Chloropropane	0.158	0.137	0.128
1,2,4-Trichlorobenzene	0.913	0.825	0.739
Hexachloro 1,3-Butadiene	0.597	0.554	0.542
Naphthalene	1.558	1.287	
1,2,3-Trichlorobenzene	0.822	0.736	0.646
Dichlorodifluoromethane	0.674	0.632	0.601
Methyl tert-Butyl Ether	1.542	1.313	1.151

FORM VI VOA

RG60 : 00042

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Calibration Date: 07/23/10

LAB FILE ID: RF100: 1000723

RF150: 1500723

RF200: 2000723

COMPOUND	RF100	RF150	RF200
d4-1,2-Dichloroethane	0.641	0.617	0.560
d8-Toluene	1.080	1.048	1.047
4-Bromofluorobenzene	0.592	0.613	0.695
d4-1,2-Dichlorobenzene	0.902	0.880	0.873
Dibromofluoromethane	0.586	0.572	0.533

FORM VI VOA

RG60: 00043



FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Calibration Date: 07/23/10

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R <sup>2</sup>
Chloromethane	AVRG	1.744	17.8
Vinyl Chloride	AVRG	1.379	13.3
Bromomethane	AVRG	0.749	16.3
Chloroethane	AVRG	0.901	18.3
Trichlorofluoromethane	AVRG	1.333	16.4
Acrolein	AVRG	0.166	17.8
112Trichloro122Trifluoroetha	AVRG	1.044	17.8
Acetone	AVRG	0.280	15.4
1,1-Dichloroethene	AVRG	0.947	12.4
Bromoethane	AVRG	0.701	8.2
Iodomethane	AVRG	1.120	8.5
Methylene Chloride	AVRG	1.066	19.9
Acrylonitrile	AVRG	0.247	12.5
Carbon Disulfide	AVRG	2.938	19.6
Trans-1,2-Dichloroethene	AVRG	0.807	6.3
Vinyl Acetate	AVRG	1.414	13.5
1,1-Dichloroethane	AVRG	1.485	14.1
2-Butanone	AVRG	0.315	11.8
2,2-Dichloropropane	AVRG	0.909	4.0
Cis-1,2-Dichloroethene	AVRG	0.711	3.7
Chloroform	AVRG	1.206	10.6
Bromochloromethane	AVRG	0.338	6.1
1,1,1-Trichloroethane	AVRG	0.938	4.9
1,1-Dichloropropene	AVRG	0.679	7.5
Carbon Tetrachloride	AVRG	0.590	4.7
1,2-Dichloroethane	AVRG	0.596	8.3
Benzene	AVRG	1.642	17.6
Trichloroethene	AVRG	0.481	7.2
1,2-Dichloropropane	AVRG	0.518	7.1
Bromodichloromethane	AVRG	0.553	6.5
Dibromomethane	AVRG	0.257	5.7
2-Chloroethyl Vinyl Ether	AVRG	0.181	10.5
4-Methyl-2-Pentanone	AVRG	0.132	6.7
Cis 1,3-dichloropropene	AVRG	0.604	9.4
Toluene	AVRG	0.974	18.0
Trans 1,3-Dichloropropene	AVRG	0.508	7.2
2-Hexanone	AVRG	0.409	13.6

<- Indicates value outside QC limits:  
(%RSD < 20% or R<sup>2</sup> > 0.990)

FORM VI VOA

RG60:00044

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Calibration Date: 07/23/10

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R <sup>2</sup>
1,1,2-Trichloroethane	AVRG	0.303	7.0
1,3-Dichloropropane	AVRG	0.704	4.0
Tetrachloroethene	AVRG	0.556	7.0
Chlorodibromomethane	AVRG	0.473	7.2
1,2-Dibromoethane	AVRG	0.325	4.7
Chlorobenzene	AVRG	1.173	14.4
Ethyl Benzene	AVRG	1.983	16.3
1,1,1,2-Tetrachloroethane	AVRG	0.449	7.4
m,p-xylene	AVRG	0.725	10.2
o-Xylene	AVRG	0.753	12.3
Styrene	AVRG	1.165	10.5
Bromoform	AVRG	0.541	7.5
1,1,2,2-Tetrachloroethane	AVRG	0.972	18.2
1,2,3-Trichloropropane	AVRG	0.193	17.0
Trans-1,4-Dichloro 2-Butene	AVRG	0.299	13.1
N-Propyl Benzene	AVRG	4.345	13.4
Bromobenzene	AVRG	0.938	7.7
Isopropyl Benzene	AVRG	3.366	19.2
2-Chloro Toluene	AVRG	2.855	15.4
4-Chloro Toluene	AVRG	2.736	16.4
T-Butyl Benzene	AVRG	2.337	19.1
1,3,5-Trimethyl Benzene	AVRG	2.732	15.0
1,2,4-Trimethylbenzene	AVRG	2.690	15.2
S-Butyl Benzene	AVRG	3.845	10.6
4-Isopropyl Toluene	AVRG	2.638	15.6
1,3-Dichlorobenzene	AVRG	1.603	13.2
1,4-Dichlorobenzene	AVRG	1.604	12.2
N-Butyl Benzene	AVRG	2.849	16.1
1,2-Dichlorobenzene	AVRG	1.523	11.8
1,2-Dibromo 3-Chloropropane	AVRG	0.168	17.6
1,2,4-Trichlorobenzene	AVRG	0.927	13.0
Hexachloro 1,3-Butadiene	AVRG	0.624	12.0
Naphthalene	AVRG	1.682	14.5
1,2,3-Trichlorobenzene	AVRG	0.886	18.2
Dichlorodifluoromethane	AVRG	0.648	4.8
Methyl tert-Butyl Ether	AVRG	1.456	11.2

<- Indicates value outside QC limits:  
(%RSD < 20% or R<sup>2</sup> > 0.990)

FORM VI VOA

RG60:00045

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Calibration Date: 07/23/10

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R <sup>2</sup>
d4-1,2-Dichloroethane	AVRG	0.652	7.8
d8-Toluene	AVRG	1.099	3.4
4-Bromofluorobenzene	AVRG	0.585	8.5
d4-1,2-Dichlorobenzene	AVRG	0.909	2.4
Dibromofluoromethane	AVRG	0.596	6.0

<- Indicates value outside QC limits:  
(%RSD < 20% or R<sup>2</sup> > 0.990)

FORM VI VOA

RG60: 00046

7A  
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Cont. Calib. Date: 08/04/10

Init. Calib. Date: 07/23/10

Cont. Calib. Time: 1024

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Chloromethane	1.744	1.507	0.100	AVRG	-13.6
Vinyl Chloride	1.379	1.432	0.010	AVRG	3.8
Bromomethane	0.749	1.040	0.010	AVRG	38.8 <-
Chloroethane	0.901	0.975	0.010	AVRG	8.2
Trichlorofluoromethane	1.333	1.203	0.010	AVRG	-9.8
Acrolein	0.166	0.165	0.010	AVRG	-0.6
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.044	1.110	0.010	AVRG	6.3
Acetone	0.280	0.268	0.010	AVRG	-4.3
1,1-Dichloroethene	0.947	0.962	0.010	AVRG	1.6
Bromoethane	0.701	0.638	0.010	AVRG	-9.0
Iodomethane	1.120	0.888	0.010	AVRG	-20.7 <-
Methylene Chloride	1.066	1.009	0.010	AVRG	-5.3
Acrylonitrile	0.247	0.279	0.010	AVRG	13.0
Carbon Disulfide	2.938	3.444	0.010	AVRG	17.2
Trans-1,2-Dichloroethene	0.807	0.842	0.010	AVRG	4.3
Vinyl Acetate	1.414	1.578	0.010	AVRG	11.6
1,1-Dichloroethane	1.485	1.563	0.100	AVRG	5.2
2-Butanone	0.315	0.329	0.010	AVRG	4.4
2,2-Dichloropropane	0.908	0.830	0.010	AVRG	-8.6
Cis-1,2-Dichloroethene	0.712	0.745	0.010	AVRG	4.6
Chloroform	1.206	1.217	0.010	AVRG	0.9
Bromochloromethane	0.338	0.313	0.010	AVRG	-7.4
1,1,1-Trichloroethane	0.938	0.874	0.010	AVRG	-6.8
1,1-Dichloropropene	0.679	0.692	0.010	AVRG	1.9
Carbon Tetrachloride	0.590	0.561	0.010	AVRG	-4.9
1,2-Dichloroethane	0.596	0.602	0.010	AVRG	1.0
Benzene	1.642	1.724	0.010	AVRG	5.0
Trichloroethene	0.481	0.479	0.010	AVRG	-0.4
1,2-Dichloropropane	0.517	0.507	0.010	AVRG	-1.9
Bromodichloromethane	0.553	0.551	0.010	AVRG	-0.4
Dibromomethane	0.257	0.257	0.010	AVRG	0.0
2-Chloroethyl Vinyl Ether	0.181	0.199	0.010	AVRG	9.9
4-Methyl-2-Pentanone	0.132	0.128	0.010	AVRG	-3.0
Cis 1,3-dichloropropene	0.604	0.636	0.010	AVRG	5.3
Toluene	0.974	0.965	0.010	AVRG	-0.9
Trans 1,3-Dichloropropene	0.508	0.516	0.010	AVRG	1.6
2-Hexanone	0.409	0.388	0.010	AVRG	-5.1

<- Exceeds QC limit of 20% D

\* RF less than minimum RF

7A  
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Cont. Calib. Date: 08/04/10

Init. Calib. Date: 07/23/10

Cont. Calib. Time: 1024

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
=====	=====	=====	=====	=====	=====
1,1,2-Trichloroethane	0.303	0.311	0.010	AVRG	2.6
1,3-Dichloropropane	0.704	0.739	0.010	AVRG	5.0
Tetrachloroethene	0.556	0.530	0.010	AVRG	-4.7
Chlorodibromomethane	0.473	0.474	0.010	AVRG	0.2
1,2-Dibromoethane	0.325	0.320	0.010	AVRG	-1.5
Chlorobenzene	1.173	1.181	0.300	AVRG	0.7
Ethyl Benzene	1.983	2.191	0.010	AVRG	10.5
1,1,1,2-Tetrachloroethane	0.449	0.399	0.010	AVRG	-11.1
m,p-xylene	0.725	0.864	0.010	AVRG	19.2
o-Xylene	0.753	0.829	0.010	AVRG	10.1
Styrene	1.165	1.378	0.010	AVRG	18.3
Bromoform	0.541	0.499	0.100	AVRG	-7.8
1,1,2,2-Tetrachloroethane	0.972	0.907	0.300	AVRG	-6.7
1,2,3-Trichloropropane	0.192	0.181	0.010	AVRG	-5.7
Trans-1,4-Dichloro 2-Butene	0.299	0.345	0.010	AVRG	15.4
N-Propyl Benzene	4.345	4.589	0.010	AVRG	5.6
Bromobenzene	0.938	0.924	0.010	AVRG	-1.5
Isopropyl Benzene	3.366	3.758	0.010	AVRG	11.6
2-Chloro Toluene	2.855	3.020	0.010	AVRG	5.8
4-Chloro Toluene	2.737	3.165	0.010	AVRG	15.6
T-Butyl Benzene	2.337	2.789	0.010	AVRG	19.3
1,3,5-Trimethyl Benzene	2.732	3.230	0.010	AVRG	18.2
1,2,4-Trimethylbenzene	2.690	3.211	0.010	AVRG	19.4
S-Butyl Benzene	3.845	4.420	0.010	AVRG	15.0
4-Isopropyl Toluene	2.638	3.296	0.010	AVRG	24.9 <-
1,3-Dichlorobenzene	1.603	1.842	0.010	AVRG	14.9
1,4-Dichlorobenzene	1.604	1.780	0.010	AVRG	11.0
N-Butyl Benzene	2.849	3.642	0.010	AVRG	27.8 <-
1,2-Dichlorobenzene	1.523	1.655	0.010	AVRG	8.7
1,2-Dibromo 3-Chloropropane	0.168	0.149	0.010	AVRG	-11.3
1,2,4-Trichlorobenzene	0.927	0.987	0.010	AVRG	6.5
Hexachloro 1,3-Butadiene	0.624	0.655	0.010	AVRG	5.0
Naphthalene	1.682	1.635	0.010	AVRG	-2.8
1,2,3-Trichlorobenzene	0.886	0.878	0.010	AVRG	-0.9
Dichlorodifluoromethane	0.648	0.638	0.010	AVRG	-1.5
Methyl tert-Butyl Ether	1.456	1.314	0.010	AVRG	-9.8
=====	=====	=====	=====	=====	=====

<- Exceeds QC limit of 20% D

\* RF less than minimum RF

7A  
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Instrument ID: FINN5

Cont. Calib. Date: 08/04/10

Init. Calib. Date: 07/23/10

Cont. Calib. Time: 1024

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	0.652	0.601	0.010	AVRG	-7.8
d8-Toluene	1.099	1.130	0.010	AVRG	2.8
4-Bromofluorobenzene	0.585	0.586	0.010	AVRG	0.2
d4-1,2-Dichlorobenzene	0.909	0.895	0.010	AVRG	-1.5
Dibromofluoromethane	0.596	0.581	0.010	AVRG	-2.5

<- Exceeds QC limit of 20% D  
\* RF less than minimum RF

8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Ical Midpoint ID: 0500723

Ical Date: 07/23/10

Instrument ID: FINN5

Project Run Date: 08/04/10

	IS1 (PFB) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CLB) AREA #	RT #
ICAL MIDPT	131115	6.62	191559	7.63	161199	10.78
UPPER LIMIT	262230	7.12	383118	8.13	322398	11.28
LOWER LIMIT	65558	6.12	95780	7.13	80600	10.28
Sample ID						
01 LCS0804	136905	6.61	197026	7.63	159081	10.77
02 LCS0804	138668	6.63	207746	7.64	172992	10.79
03 MB0804	124649	6.62	186870	7.63	160706	10.78
04 PSB13-0-0.5-	126291	6.63	186357	7.65	146593	10.79
05 PSB13-1.5-2-	171148	6.63	253323	7.65	212637	10.79
06 PSB13-2-4-07	152970	6.63	230211	7.64	196779	10.79
07 PSB13-4-6-07	162030	6.63	246819	7.64	207441	10.79
08 PSB13-11-13-	148872	6.63	226474	7.65	192703	10.79
09 PSB13-14.5-1	150285	6.61	227925	7.63	199596	10.77
10 PSB13-TB	146240	6.63	219414	7.65	185559	10.79
11						
12						
13						
14						
15						
16						
17						
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19						
20						
21						
22						

IS1 (PFB) = Pentafluorobenzene  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (CLB) = d5-Chlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
 AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

\* Values outside of QC limits.

8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: RG60

Project: LORA LAKES RI

Ical Midpoint ID: 0500723

Ical Date: 07/23/10

Instrument ID: FINN5

Project Run Date: 08/04/10

	IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	88279	13.47				
UPPER LIMIT	176558	13.97				
LOWER LIMIT	44140	12.97				
=====	=====	=====	=====	=====	=====	=====
Sample ID						
=====	=====	=====	=====	=====	=====	=====
01 LCS0804	90190	13.46				
02 LCS0804	98470	13.47				
03 MB0804	78426	13.46				
04 PSB13-0-0.5-	52760	13.48				
05 PSB13-1.5-2-	101533	13.48				
06 PSB13-2-4-07	87983	13.47				
07 PSB13-4-6-07	102315	13.47				
08 PSB13-11-13-	95934	13.48				
09 PSB13-14.5-1	100629	13.46				
10 PSB13-TB	89236	13.48				
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (DCB) = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
 AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

\* Values outside of QC limits.



**Semivolatile PAH Analysis  
Report and Summary QC Forms**

**ARI Job ID: RG60**

**ORGANICS ANALYSIS DATA SHEET**

**PNA's by SW8270D GC/MS**

Page 1 of 1


**Sample ID: PSB13-0-0.5-072910**

**SAMPLE**

Lab Sample ID: RG60A

LIMS ID: 10-18279

Matrix: Soil

Data Release Authorized: 

Reported: 08/16/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/10/10

Date Analyzed: 08/12/10 22:33

Instrument/Analyst: NT6/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 25.6 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 6.2%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	20	< 20 U
218-01-9	Chrysene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	4.7%
2-Fluorobiphenyl	43.2%

**ORGANICS ANALYSIS DATA SHEET**

**PNAs by SW8270D GC/MS**

Page 1 of 1


**Sample ID: PSB13-1.5-2-072910**

**SAMPLE**

Lab Sample ID: RG60B

LIMS ID: 10-18280

Matrix: Soil

Data Release Authorized: 

Reported: 08/16/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/10/10

Date Analyzed: 08/12/10 23:06

Instrument/Analyst: NT6/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 25.2 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 7.2%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	20	< 20 U
218-01-9	Chrysene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	21.3%
2-Fluorobiphenyl	63.2%

**ORGANICS ANALYSIS DATA SHEET**

**PNAs by SW8270D GC/MS**

Page 1 of 1


**Sample ID: PSB13-2-4-072910**

**SAMPLE**

Lab Sample ID: RG60C

LIMS ID: 10-18281

Matrix: Soil

Data Release Authorized: 

Reported: 08/16/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/10/10

Date Analyzed: 08/13/10 14:42

Instrument/Analyst: NT6/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 26.0 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 7.6%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	19	< 19 U
218-01-9	Chrysene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
TOTBFA	Total Benzofluoranthenes	19	< 19 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	11.5%
2-Fluorobiphenyl	54.4%

**ORGANICS ANALYSIS DATA SHEET**

**PNAs by SW8270D GC/MS**

Page 1 of 1


**Sample ID: PSB13-4-6-072910**

**SAMPLE**

Lab Sample ID: RG60D

LIMS ID: 10-18282

Matrix: Soil

Data Release Authorized: 

Reported: 08/16/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/10/10

Date Analyzed: 08/13/10 11:57

Instrument/Analyst: NT6/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 25.7 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 10.2%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	20	< 20 U
218-01-9	Chrysene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	58.8%
2-Fluorobiphenyl	64.4%

**ORGANICS ANALYSIS DATA SHEET**

PNA's by SW8270D GC/MS

Page 1 of 1


Sample ID: PSB13-11-13-072910

**SAMPLE**

Lab Sample ID: RG60E

LIMS ID: 10-18283

Matrix: Soil

Data Release Authorized: 

Reported: 08/16/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/10/10

Date Analyzed: 08/13/10 12:30

Instrument/Analyst: NT6/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 25.5 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 9.6%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	20	< 20 U
218-01-9	Chrysene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
TOTBEA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	81.2%
2-Fluorobiphenyl	69.2%

**ORGANICS ANALYSIS DATA SHEET**

**PNA's by SW8270D GC/MS**

Page 1 of 1

Sample ID: PSB13-14.5-16.5-072910

**SAMPLE**

Lab Sample ID: RG60F

LIMS ID: 10-18284

Matrix: Soil

Data Release Authorized:

Reported: 08/16/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/10/10

Date Analyzed: 08/13/10 13:03

Instrument/Analyst: NT6/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 25.1 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 10.3%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	20	< 20 U
218-01-9	Chrysene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	76.8%
2-Fluorobiphenyl	68.8%

SW8270 PNA SURROGATE RECOVERY SUMMARY



Matrix: Soil

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 POS-LLA

Client ID	TER	FBP	TOT OUT
MB-081010	74.4%	54.4%	0
LCS-081010	92.8%	64.8%	0
PSB13-0-0.5-072910	4.7%*	43.2%	1
PSB13-1.5-2-072910	21.3%*	63.2%	1
PSB13-2-4-072910	11.5%*	54.4%	1
PSB13-4-6-072910	58.8%	64.4%	0
PSB13-11-13-072910	81.2%	69.2%	0
PSB13-14.5-16.5-072910	76.8%	68.8%	0

	LCS/MB LIMITS	QC LIMITS
(TER) = d14-p-Terphenyl	(47-112)	(35-112)
(FBP) = 2-Fluorobiphenyl	(40-100)	(34-100)

Prep Method: SW3550C  
 Log Number Range: 10-18279 to 10-18284



**ORGANICS ANALYSIS DATA SHEET**

**PNAs by SW8270D GC/MS**

Page 1 of 1


**Sample ID: LCS-081010**

**LAB CONTROL**

Lab Sample ID: LCS-081010

LIMS ID: 10-18279

Matrix: Soil

Data Release Authorized: 

Reported: 08/16/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: NA

Date Received: 07/29/10

Date Extracted: 08/10/10

Date Analyzed: 08/12/10 12:47

Instrument/Analyst: NT6/JZ

GPC Cleanup: No

Silica Gel Cleanup: Yes

Sample Amount: 25.0 g-dry-wt

Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

Alumina Cleanup: No

Analyte	Lab Control	Spike Added	Recovery
Benzo(a)anthracene	390	500	78.0%
Chrysene	383	500	76.6%
Benzo(a)pyrene	337	500	67.4%
Indeno(1,2,3-cd)pyrene	352	500	70.4%
Dibenz(a,h)anthracene	356	500	71.2%
Total Benzofluoranthenes	752	1000	75.2%

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	92.8%
2-Fluorobiphenyl	64.8%

Results reported in µg/kg

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

RG51MBS1
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Lab Name: ANALYTICAL RESOURCES, INC  
 ARI Job No: RG51  
 Lab File ID: 08121002  
 Instrument ID: NT6  
 Matrix: SOLID

Client: FLOYD/SNIDER  
 Project: LORA LAKES RI  
 Date Extracted: 08/10/10  
 Date Analyzed: 08/12/10  
 Time Analyzed: 1214

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	=====	=====	=====	=====
01	RG51LCSS1	RG51LCSS1	08121003	08/12/10
02	PSB12-0-0.5-0728	RG51A	08121005	08/12/10
03	PSB12-1.5-2.0-07	RG51B	08121006	08/12/10
04	PSB12-2-4-072810	RG51C	08121007	08/12/10
05	PSB12-8-10-07281	RG51E	08121008	08/12/10
06	PSB12-14-17-0728	RG51F	08121009	08/12/10
07	PSB12-14-17-072	RG51FMS	08121010	08/12/10
08	PSB12-14-17-072	RG51FMSD	08121011	08/12/10
09	PSB14-0-.5-07281	RG54A	08121012	08/12/10
10	PSB14-1.5-2.0-07	RG54B	08121013	08/12/10
11	PSB14-2-4-072810	RG54C	08121014	08/12/10
12	PSB14-7-9-072810	RG54E	08121015	08/12/10
13	PSB14-12-14-0728	RG54F	08121016	08/12/10
14	PSB17-1.5-2-0728	RG54I	08121018	08/12/10
15	PSB17-2-4-072810	RG54J	08121019	08/12/10
16	PSB17-10-13-0728	RG54L	08121020	08/12/10
17	PSB13-0-0.5-0729	RG60A	08121021	08/12/10
18	PSB13-1.5-2-0729	RG60B	08121022	08/12/10
19	PSB13-4-6-072910	RG60D	08131002	08/13/10
20	PSB13-11-13-0729	RG60E	08131003	08/13/10
21	PSB13-14.5-16.5-	RG60F	08131004	08/13/10
22	PSB17-0-0.5-0728	RG54H	08131006	08/13/10
23	PSB13-2-4-072910	RG60C	08131007	08/13/10
24	_____	_____	_____	_____
25	_____	_____	_____	_____
26	_____	_____	_____	_____
27	_____	_____	_____	_____
28	_____	_____	_____	_____
29	_____	_____	_____	_____
30	_____	_____	_____	_____

**ORGANICS ANALYSIS DATA SHEET**

**PNA's by SW8270D GC/MS**

Page 1 of 1


**Sample ID: MB-081010**

**METHOD BLANK**

Lab Sample ID: MB-081010

LIMS ID: 10-18279

Matrix: Soil

Data Release Authorized: 

Reported: 08/16/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: NA

Date Received: NA

Date Extracted: 08/10/10

Date Analyzed: 08/12/10 12:14

Instrument/Analyst: NT6/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 25.0 g

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: NA

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	20	< 20 U
218-01-9	Chrysene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	74.4%
2-Fluorobiphenyl	54.4%

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

Instrument ID: NT6

Project: LORA LAKES RI

DFTPP Injection Date: 07/23/10

DFTPP Injection Time: 1501

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	32.8
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	39.4
70	Less than 2.0% of mass 69	0.1 ( 0.3)1
127	10.0 - 80.0% of mass 198	50.5
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.4
275	10.0 - 60.0% of mass 198	26.8
365	Greater than 1.0% of mass 198	3.26
441	0.0 - 24.0% of mass 442	10.5 ( 15.1)2
442	50.0 - 200.0% of mass 198	69.5
443	15.0 - 24.0% of mass 442	14.4 ( 20.7)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC250723	IC250723	07231001	07/23/10	1501
02	IC010723	IC010723	07231002	07/23/10	1538
03	IC050723	IC050723	07231003	07/23/10	1616
04	IC100723	IC100723	07231004	07/23/10	1652
05	IC400723	IC400723	07231005	07/23/10	1729
06	IC600723	IC600723	07231006	07/23/10	1801
07	IC800723	IC800723	07231007	07/23/10	1838
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

Instrument ID: NT6

Project: LORA LAKES RI

DFTPP Injection Date: 08/12/10

DFTPP Injection Time: 1142

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	31.6
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	37.3
70	Less than 2.0% of mass 69	0.2 ( 0.6)1
127	10.0 - 80.0% of mass 198	47.8
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 60.0% of mass 198	27.4
365	Greater than 1.0% of mass 198	3.34
441	0.0 - 24.0% of mass 442	11.8 ( 15.2)2
442	50.0 - 200.0% of mass 198	77.6
443	15.0 - 24.0% of mass 442	15.3 ( 19.7)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0812	CC0812	08121001	08/12/10	1142
02	RG51MBS1	RG51MBS1	08121002	08/12/10	1214
03	RG51LCSS1	RG51LCSS1	08121003	08/12/10	1247
04	PSB12-0-0.5-0728	RG51A	08121005	08/12/10	1352
05	PSB12-1.5-2.0-07	RG51B	08121006	08/12/10	1425
06	PSB12-2-4-072810	RG51C	08121007	08/12/10	1457
07	PSB12-8-10-07281	RG51E	08121008	08/12/10	1530
08	PSB12-14-17-0728	RG51F	08121009	08/12/10	1603
09	PSB12-14-17-072	RG51FMS	08121010	08/12/10	1636
10	PSB12-14-17-072	RG51FMSD	08121011	08/12/10	1708
11	PSB14-0-.5-07281	RG54A	08121012	08/12/10	1741
12	PSB14-1.5-2.0-07	RG54B	08121013	08/12/10	1814
13	PSB14-2-4-072810	RG54C	08121014	08/12/10	1846
14	PSB14-7-9-072810	RG54E	08121015	08/12/10	1919
15	PSB14-12-14-0728	RG54F	08121016	08/12/10	1951
16	PSB17-1.5-2-0728	RG54I	08121018	08/12/10	2056
17	PSB17-2-4-072810	RG54J	08121019	08/12/10	2129
18	PSB17-10-13-0728	RG54L	08121020	08/12/10	2201
19	PSB13-0-0.5-0729	RG60A	08121021	08/12/10	2233
20	PSB13-1.5-2-0729	RG60B	08121022	08/12/10	2306
21					
22					

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

Instrument ID: NT6

Project: LORA LAKES RI

DFTPP Injection Date: 08/13/10

DFTPP Injection Time: 1124

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	31.3
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	37.6
70	Less than 2.0% of mass 69	0.3 ( 0.9)1
127	10.0 - 80.0% of mass 198	49.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 60.0% of mass 198	26.9
365	Greater than 1.0% of mass 198	2.89
441	0.0 - 24.0% of mass 442	11.2 ( 14.5)2
442	50.0 - 200.0% of mass 198	77.1
443	15.0 - 24.0% of mass 442	15.6 ( 20.2)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0813	CC0813	08131001	08/13/10	1124
02	PSB13-4-6-072910	RG60D	08131002	08/13/10	1157
03	PSB13-11-13-0729	RG60E	08131003	08/13/10	1230
04	PSB13-14.5-16.5-	RG60F	08131004	08/13/10	1303
05	PSB17-0-0.5-0728	RG54H	08131006	08/13/10	1409
06	PSB13-2-4-072910	RG60C	08131007	08/13/10	1442
07					
08					
09					
10					
11					
12					
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## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No: RG51

Project: LORA LAKES RI

Instrument ID: NT6

Cont. Calib. Date: 08/12/10

Init. Calib. Date: 07/23/10

Cont. Calib. Time: 1142

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	1.130	1.144	0.700	AVRG	1.2
2-Methylnaphthalene	0.620	0.638	0.400	AVRG	2.9
Acenaphthylene	2.058	2.069	0.900	AVRG	0.5
Acenaphthene	1.285	1.266	0.900	AVRG	-1.5
Dibenzofuran	1.707	1.712	0.800	AVRG	0.3
Fluorene	1.455	1.508	0.900	AVRG	3.6
Phenanthrene	1.242	1.275	0.700	AVRG	2.6
Anthracene	1.283	1.321	0.700	AVRG	3.0
Fluoranthene	1.346	1.462	0.600	AVRG	8.6
Pyrene	1.204	1.244	0.600	AVRG	3.3
Benzo(a)anthracene	1.156	1.243	0.800	AVRG	7.5
Chrysene	1.082	1.106	0.700	AVRG	2.2
Benzo(a)pyrene	1.261	1.301	0.700	AVRG	3.2
Indeno(1,2,3-cd)pyrene	1.687	1.630	0.500	AVRG	-3.4
Dibenzo(a,h)anthracene	1.296	1.283	0.400	AVRG	-1.0
Benzo(g,h,i)perylene	1.522	1.456	0.500	AVRG	-4.3
1-methylnaphthalene	0.641	0.662	0.010	AVRG	3.3
Total Benzofluoranthenes	1.288	1.322	0.010	AVRG	2.6
Terphenyl-d14	0.708	0.765	0.010	AVRG	8.0
2-Fluorobiphenyl	1.400	1.344	0.010	AVRG	-4.0

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF



7B  
SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No: RG51

Project: LORA LAKES RI

Instrument ID: NT6

Cont. Calib. Date: 08/13/10

Init. Calib. Date: 07/23/10

Cont. Calib. Time: 1124

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	1.130	1.148	0.700	AVRG	1.6
2-Methylnaphthalene	0.620	0.630	0.400	AVRG	1.6
Acenaphthylene	2.058	2.075	0.900	AVRG	0.8
Acenaphthene	1.285	1.260	0.900	AVRG	-1.9
Dibenzofuran	1.707	1.727	0.800	AVRG	1.2
Fluorene	1.455	1.471	0.900	AVRG	1.1
Phenanthrene	1.242	1.268	0.700	AVRG	2.1
Anthracene	1.283	1.336	0.700	AVRG	4.1
Fluoranthene	1.346	1.474	0.600	AVRG	9.5
Pyrene	1.204	1.232	0.600	AVRG	2.3
Benzo(a)anthracene	1.156	1.243	0.800	AVRG	7.5
Chrysene	1.082	1.132	0.700	AVRG	4.6
Benzo(a)pyrene	1.261	1.264	0.700	AVRG	0.2
Indeno(1,2,3-cd)pyrene	1.687	1.659	0.500	AVRG	-1.6
Dibenzo(a,h)anthracene	1.296	1.311	0.400	AVRG	1.2
Benzo(g,h,i)perylene	1.522	1.479	0.500	AVRG	-2.8
1-methylnaphthalene	0.641	0.656	0.010	AVRG	2.3
Total Benzofluoranthenes	1.288	1.281	0.010	AVRG	-0.5
Terphenyl-d14	0.708	0.758	0.010	AVRG	7.1
2-Fluorobiphenyl	1.400	1.351	0.010	AVRG	-3.5

<- Exceeds QC limit of 20% D  
\* RF less than minimum RF

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG51  
Ical Midpoint ID: 07231001  
Instrument ID: NT6

Client: FLOYD/SNIDER  
Project: LORA LAKES RI  
Ical Date: 07/23/10  
Cont. Cal Date: 08/12/10

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	182786	7.59	584137	9.64	320442	12.50
UPPER LIMIT	365572		1168274		640884	
LOWER LIMIT	91393		292068		160221	
=====	=====	=====	=====	=====	=====	=====
CCAL	170078	7.25	563656	9.33	331873	12.20
UPPER LIMIT		7.75		9.83		12.70
LOWER LIMIT		6.75		8.83		11.70
01 RG51MBS1			654011	9.32	386336	12.19
02 RG51LCSS1			659808	9.32	376047	12.19
03 PSB12-0-0.5-			624298	9.32	363695	12.19
04 PSB12-1.5-2.			644085	9.32	378101	12.20
05 PSB12-2-4-07			675619	9.32	402393	12.20
06 PSB12-8-10-0			690383	9.33	400767	12.20
07 PSB12-14-17-			672234	9.32	389561	12.20
08 PSB12-14-17-			647337	9.32	368766	12.20
09 PSB12-14-17-			684526	9.32	391450	12.20
10 PSB14-0-.5-0			646802	9.32	372263	12.19
11 PSB14-1.5-2.			684688	9.32	394732	12.20
12 PSB14-2-4-07			697008	9.32	405526	12.19
13 PSB14-7-9-07			688034	9.33	406917	12.20
14 PSB14-12-14-			680198	9.32	399910	12.20
15 PSB17-1.5-2-			666015	9.33	391326	12.20
16 PSB17-2-4-07			675475	9.33	399146	12.20
17 PSB17-10-13-			673627	9.32	398471	12.20
18 PSB13-0-0.5-			635836	9.32	370489	12.20
19 PSB13-1.5-2-			672506	9.33	396543	12.20
20						
21						
22						
23						
24						
25						

IS1 = 1,4-Dichlorobenzene-d4  
IS2 = Naphthalene-d8  
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG51  
Ical Midpoint ID: 07231001  
Instrument ID: NT6

Client: FLOYD/SNIDER  
Project: LORA LAKES RI  
Ical Date: 07/23/10  
Cont. Cal Date: 08/12/10

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	503793	14.86	532343	19.16	517269	21.31
UPPER LIMIT	1007586		1064686		1034538	
LOWER LIMIT	251896		266172		258634	
=====	=====	=====	=====	=====	=====	=====
CCAL	526027	14.57	597231	18.89	556523	21.04
UPPER LIMIT		15.07		19.39		21.54
LOWER LIMIT		14.07		18.39		20.54
01 RG51MBS1	624497	14.56	689136	18.88	618317	21.04
02 RG51LCSS1	616996	14.56	660878	18.89	624348	21.04
03 PSB12-0-0.5-	582400	14.57	758225	18.89	752564	21.06
04 PSB12-1.5-2.	606153	14.57	727151	18.89	726625	21.05
05 PSB12-2-4-07	645964	14.57	772569	18.89	779609	21.06
06 PSB12-8-10-0	655503	14.57	758101	18.89	745929	21.05
07 PSB12-14-17-	623192	14.57	771041	18.89	770890	21.05
08 PSB12-14-17-	609818	14.57	724259	18.89	744130	21.05
09 PSB12-14-17-	646825	14.57	805012	18.89	809972	21.05
10 PSB14-0-.5-0	604870	14.57	792141	18.89	779443	21.07
11 PSB14-1.5-2.	650726	14.57	791148	18.89	754770	21.05
12 PSB14-2-4-07	659514	14.57	805472	18.89	768749	21.05
13 PSB14-7-9-07	657807	14.57	815444	18.89	808589	21.06
14 PSB14-12-14-	646609	14.57	802236	18.89	765842	21.05
15 PSB17-1.5-2-	638836	14.57	777046	18.89	722521	21.05
16 PSB17-2-4-07	666150	14.57	834140	18.89	744511	21.05
17 PSB17-10-13-	658509	14.57	817846	18.89	755989	21.05
18 PSB13-0-0.5-	618800	14.57	763836	18.89	732220	21.05
19 PSB13-1.5-2-	662430	14.57	834468	18.89	779307	21.06
20						
21						
22						
23						
24						
25						

IS4 = Phenanthrene-d10  
IS5 = Chrysene-d12  
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG51  
Ical Midpoint ID: 07231001  
Instrument ID: NT6

Client: FLOYD/SNIDER  
Project: LORA LAKES RI  
Ical Date: 07/23/10  
Cont. Cal Date: 08/12/10

	IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	719428	20.35				
UPPER LIMIT	1438856					
LOWER LIMIT	359714					
=====	=====	=====	=====	=====	=====	=====
CCAL	727831	20.13				
UPPER LIMIT		20.63				
LOWER LIMIT		19.63				
01 RG51MBS1						
02 RG51LCSS1						
03 PSB12-0-0.5-						
04 PSB12-1.5-2.						
05 PSB12-2-4-07						
06 PSB12-8-10-0						
07 PSB12-14-17-						
08 PSB12-14-17-						
09 PSB12-14-17-						
10 PSB14-0-.5-0						
11 PSB14-1.5-2.						
12 PSB14-2-4-07						
13 PSB14-7-9-07						
14 PSB14-12-14-						
15 PSB17-1.5-2-						
16 PSB17-2-4-07						
17 PSB17-10-13-						
18 PSB13-0-0.5-						
19 PSB13-1.5-2-						
20						
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25						

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
 AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG51  
Ical Midpoint ID: 07231001  
Instrument ID: NT6

Client: FLOYD/SNIDER  
Project: LORA LAKES RI  
Ical Date: 07/23/10  
Cont. Cal Date: 08/13/10

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	182786	7.59	584137	9.64	320442	12.50
UPPER LIMIT	365572		1168274		640884	
LOWER LIMIT	91393		292068		160221	
=====	=====	=====	=====	=====	=====	=====
CCAL	166565	7.19	550174	9.25	321882	12.09
UPPER LIMIT		7.69		9.75		12.59
LOWER LIMIT		6.69		8.75		11.59
01 PSB13-4-6-07			646607	9.24	380788	12.09
02 PSB13-11-13-			655374	9.24	389020	12.08
03 PSB13-14.5-1			657063	9.24	382063	12.09
04 PSB17-0-0.5-			626035	9.24	374024	12.09
05 PSB13-2-4-07			667186	9.25	410669	12.09
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IS1 = 1,4-Dichlorobenzene-d4  
IS2 = Naphthalene-d8  
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG51  
Ical Midpoint ID: 07231001  
Instrument ID: NT6

Client: FLOYD/SNIDER  
Project: LORA LAKES RI  
Ical Date: 07/23/10  
Cont. Cal Date: 08/13/10

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	503793	14.86	532343	19.16	517269	21.31
UPPER LIMIT	1007586		1064686		1034538	
LOWER LIMIT	251896		266172		258634	
=====	=====	=====	=====	=====	=====	=====
CCAL	505369	14.44	591540	18.72	590209	20.85
UPPER LIMIT		14.94		19.22		21.35
LOWER LIMIT		13.94		18.22		20.35
01	PSB13-4-6-07	616103	683741	18.71	676003	20.85
02	PSB13-11-13-	630919	730490	18.71	755660	20.85
03	PSB13-14.5-1	634253	767749	18.71	788938	20.86
04	PSB17-0-0.5-	619985	848355	18.73	705991	20.89
05	PSB13-2-4-07	703145	724927	18.76	307927	20.94
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23						
24						
25						

IS4 = Phenanthrene-d10  
IS5 = Chrysene-d12  
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG51  
Ical Midpoint ID: 07231001  
Instrument ID: NT6

Client: FLOYD/SNIDER  
Project: LORA LAKES RI  
Ical Date: 07/23/10  
Cont. Cal Date: 08/13/10

	IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	719428	20.35				
UPPER LIMIT	1438856					
LOWER LIMIT	359714					
=====	=====	=====	=====	=====	=====	=====
CCAL	731396	19.94				
UPPER LIMIT		20.44				
LOWER LIMIT		19.44				
01 PSB13-4-6-07						
02 PSB13-11-13-						
03 PSB13-14.5-1						
04 PSB17-0-0.5-						
05 PSB13-2-4-07						
06						
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22						
23						
24						
25						

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
 AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

**ORGANICS ANALYSIS DATA SHEET**

PNAs by SW8270D GC/MS

Page 1 of 1

Sample ID: PSB13-0-0.5-072910

REEXTRACT

Lab Sample ID: RG60A

LIMS ID: 10-18279

Matrix: Soil

Data Release Authorized: *VTS*

Reported: 08/20/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/17/10

Date Analyzed: 08/19/10 17:37

Instrument/Analyst: NT4/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 6.65 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 6.2%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	75	< 75 U
218-01-9	Chrysene	75	< 75 U
50-32-8	Benzo(a)pyrene	75	< 75 U
193-39-5	Indeno(1,2,3-cd)pyrene	75	< 75 U
53-70-3	Dibenz(a,h)anthracene	75	< 75 U
TOTBFA	Total Benzofluoranthenes	75	< 75 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	57.6%
2-Fluorobiphenyl	61.2%



**ORGANICS ANALYSIS DATA SHEET**

PNAs by SW8270D GC/MS

Page 1 of 1

Sample ID: PSB13-1.5-2-072910  
REEXTRACT

Lab Sample ID: RG60B

LIMS ID: 10-18280

Matrix: Soil

Data Release Authorized: **VJB**

Reported: 08/20/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/17/10

Date Analyzed: 08/19/10 18:11

Instrument/Analyst: NT4/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 6.67 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 7.2%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	75	< 75 U
218-01-9	Chrysene	75	< 75 U
50-32-8	Benzo(a)pyrene	75	< 75 U
193-39-5	Indeno(1,2,3-cd)pyrene	75	< 75 U
53-70-3	Dibenz(a,h)anthracene	75	< 75 U
TOTBFA	Total Benzofluoranthenes	75	< 75 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	75.2%
2-Fluorobiphenyl	64.4%

**ORGANICS ANALYSIS DATA SHEET**

PNA's by SW8270D GC/MS

Page 1 of 1

Sample ID: PSB13-2-4-072910

REEXTRACT

Lab Sample ID: RG60C

LIMS ID: 10-18281

Matrix: Soil

Data Release Authorized: *VIS*

Reported: 08/20/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/17/10

Date Analyzed: 08/19/10 22:15

Instrument/Analyst: NT4/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 6.92 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 5.00

Percent Moisture: 7.6%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	360	< 360 U
218-01-9	Chrysene	360	< 360 U
50-32-8	Benzo(a)pyrene	360	< 360 U
193-39-5	Indeno(1,2,3-cd)pyrene	360	< 360 U
53-70-3	Dibenz(a,h)anthracene	360	< 360 U
TOTBFA	Total Benzofluoranthenes	360	< 360 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	73.2%
2-Fluorobiphenyl	73.4%

**SW8270 PNA SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA

<u>Client ID</u>	<u>TER</u>	<u>FBP</u>	<u>TOT OUT</u>
MB-081010	74.4%	54.4%	0
LCS-081010	92.8%	64.8%	0
PSB13-0-0.5-072910	4.7%*	43.2%	1
PSB13-0-0.5-072910 RE	57.6%	61.2%	0
MB-081710	84.4%	67.2%	0
LCS-081710	81.2%	56.0%	0
PSB13-1.5-2-072910	21.3%*	63.2%	1
PSB13-1.5-2-072910 RE	75.2%	64.4%	0
PSB13-2-4-072910	11.5%*	54.4%	1
PSB13-2-4-072910 RE	73.2%	73.4%	0
PSB13-4-6-072910	58.8%	64.4%	0
PSB13-11-13-072910	81.2%	69.2%	0
PSB13-14.5-16.5-072910	76.8%	68.8%	0

**LCS/MB LIMITS      QC LIMITS**

(TER) = dl4-p-Terphenyl                      (47-112)                      (35-112)  
(FBP) = 2-Fluorobiphenyl                      (40-100)                      (34-100)

Prep Method: SW3550C  
Log Number Range: 10-18279 to 10-18284

**ORGANICS ANALYSIS DATA SHEET**

**PNAs by SW8270D GC/MS**

Page 1 of 1

**Sample ID: LCS-081710**

**LAB CONTROL**

Lab Sample ID: LCS-081710

LIMS ID: 10-18280

Matrix: Soil

Data Release Authorized: *AS*

Reported: 08/30/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: NA

Date Received: 07/29/10

Date Extracted: 08/17/10

Date Analyzed: 08/19/10 16:30

Instrument/Analyst: NT4/JZ

GPC Cleanup: No

Silica Gel Cleanup: Yes

Sample Amount: 25.0 g-dry-wt

Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

Alumina Cleanup: No

Analyte	Lab Control	Spike Added	Recovery
Benzo(a)anthracene	368	500	73.6%
Chrysene	361	500	72.2%
Benzo(a)pyrene	337	500	67.4%
Indeno(1,2,3-cd)pyrene	264	500	52.8%
Dibenz(a,h)anthracene	270	500	54.0%
Total Benzofluoranthenes	795	1000	79.5%

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	81.2%
2-Fluorobiphenyl	56.0%

Results reported in µg/kg

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

RG54MBS1

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG54  
Lab File ID: 08191005  
Instrument ID: NT4  
Matrix: SOLID

Client: FLOYD/SNIDER  
Project: LORA LAKE RI  
Date Extracted: 08/17/10  
Date Analyzed: 08/19/10  
Time Analyzed: 1556

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	=====	=====	=====	=====
01	RG54LCSS1	RG54LCSS1	08191006	08/19/10
02	PSB14-0-.5-07281	RG54ARE	08191007	08/19/10
03	PSB13-0-0.5-0729	RG60ARE	08191008	08/19/10
04	PSB13-1.5-2-0729	RG60BRE	08191009	08/19/10
05	PSB13-2-4-072910	RG60CRE	08191016	08/19/10
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**ORGANICS ANALYSIS DATA SHEET**

**PNA's by SW8270D GC/MS**

Page 1 of 1

**Sample ID: MB-081710**

**METHOD BLANK**

Lab Sample ID: MB-081710

LIMS ID: 10-18280

Matrix: Soil

Data Release Authorized: *RS*

Reported: 08/30/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: NA

Date Received: NA

Date Extracted: 08/17/10

Date Analyzed: 08/19/10 15:56

Instrument/Analyst: NT4/JZ

GPC Cleanup: No

Alumina: No

Silica Gel: Yes

Sample Amount: 25.0 g

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: NA

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	20	< 20 U
218-01-9	Chrysene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d14-p-Terphenyl	84.4%
2-Fluorobiphenyl	67.2%

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOTD/SNIDER

Instrument ID: NT4

Project: LORA LAKE RI

DFTPP Injection Date: 07/19/10

DFTPP Injection Time: 1618

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.3
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	34.2
70	Less than 2.0% of mass 69	0.2 ( 0.5)1
127	10.0 - 80.0% of mass 198	55.5
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 60.0% of mass 198	23.4
365	Greater than 1.0% of mass 198	2.50
441	0.0 - 24.0% of mass 442	13.5 ( 15.4)2
442	50.0 - 200.0% of mass 198	87.7
443	15.0 - 24.0% of mass 442	17.3 ( 19.8)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC250719	IC250719	07191001	07/19/10	1618
02	IC010719	IC010719	07191002	07/19/10	1656
03	IC050719	IC050719	07191003	07/19/10	1733
04	IC100719	IC100719	07191004	07/19/10	1807
05	IC400719	IC400719	07191005	07/19/10	1841
06	IC600719	IC600719	07191006	07/19/10	1914
07	IC800719	IC800719	07191007	07/19/10	1948
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5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOTD/SNIDER

Instrument ID: NT4

Project: LORA LAKE RI

DFTPP Injection Date: 08/19/10

DFTPP Injection Time: 1340

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	29.4
68	Less than 2.0% of mass 69	0.1 ( 0.3)1
69	Mass 69 relative abundance	35.8
70	Less than 2.0% of mass 69	0.5 ( 1.5)1
127	10.0 - 80.0% of mass 198	54.0
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	22.8
365	Greater than 1.0% of mass 198	2.32
441	0.0 - 24.0% of mass 442	2.8 ( 2.9)2
442	50.0 - 200.0% of mass 198	96.4
443	15.0 - 24.0% of mass 442	18.2 ( 18.8)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0819	CC0819	08191001	08/19/10	1340
02	RG54MBS2	RG54MBS2	08191005	08/19/10	1556
03	RG54LCSS2	RG54LCSS2	08191006	08/19/10	1630
04	PSB14-0-.5-07281	RG54ARE	08191007	08/19/10	1703
05	PSB13-0-0.5-0729	RG60ARE	08191008	08/19/10	1737
06	PSB13-1.5-2-0729	RG60BRE	08191009	08/19/10	1811
07	PSB13-2-4-072910	RG60CRE	08191016	08/19/10	2215
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22					



SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOTD/SNIDER

ARI Job No: RG54

Project: LORA LAKE RI

Instrument ID: NT4

Calibration Date: 07/19/10

LAB FILE ID:	RRF1 =07191002	RRF5 =07191003	RRF10 =07191004	RRF25 =07191001	RRF40 =07191005	RRF60 =07191006	RRF80 =07191007	RRF	%RSD
COMPOUND	1	5	10	25	40	60	80	RRF	/R <sup>2</sup>
Naphthalene	1.181	1.019	1.014	0.962	0.896	0.777	0.792	0.949	14.9
2-Methylnaphthalene	0.746	0.663	0.663	0.650	0.638	0.574	0.580	0.645	9.0
Acenaphthylene	1.949	1.755	1.753	1.672	1.560	1.388	1.409	1.641	12.3
Acenaphthene	1.245	1.099	1.112	1.066	1.031	0.944	0.980	1.068	9.2
Dibenzofuran	1.646	1.492	1.498	1.424	1.360	1.260	1.288	1.424	9.5
Fluorene	1.445	1.300	1.316	1.260	1.179	1.051	1.074	1.232	11.4
Phenanthrene	1.270	1.078	1.084	1.038	0.986	0.893	0.904	1.036	12.4
Anthracene	1.269	1.107	1.124	1.074	1.022	0.908	0.916	1.060	11.9
Fluoranthene	1.233	1.101	1.145	1.101	1.070	0.936	0.928	1.073	10.2
Pyrene	1.549	1.324	1.302	1.293	1.196	1.087	1.126	1.268	12.1
Benzo(a)anthracene	1.400	1.207	1.241	1.176	1.116	1.016	1.050	1.172	11.0
Chrysene	1.384	1.200	1.214	1.158	1.079	0.977	1.021	1.148	12.0
Benzo(a)pyrene	1.234	1.104	1.132	1.125	1.085	1.008	1.041	1.104	6.6
Indeno(1,2,3-cd)pyrene	1.109	1.079	1.195	1.245	1.261	1.177	1.234	1.186	5.9
Dibenzo(a,h)anthracene	0.819	0.863	0.968	1.027	1.038	0.954	1.003	0.953	8.8
Benzo(g,h,i)perylene	0.944	0.900	1.054	1.046	1.078	1.014	1.058	1.013	6.6
1-methylnaphthalene	0.738	0.636	0.645	0.635	0.631	0.563	0.574	0.632	9.1
Total Benzo(a)fluoranthenes	1.382	1.227	1.244	1.199	1.142	1.024	1.044	1.180	10.5
Terphenyl-d14	0.936	0.818	0.742	0.802	0.727	0.686	0.710	0.774	11.1
2-Fluorobiphenyl	1.464	1.332	1.174	1.258	1.162	1.080	1.106	1.225	11.1

<- Outside QC limits: %RSD <20% or R<sup>2</sup> > 0.990

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOTD/SNIDER

ARI Job No: RG54

Project: LORA LAKE RI

Instrument ID: NT4

Cont. Calib. Date: 08/19/10

Init. Calib. Date: 07/19/10

Cont. Calib. Time: 1340

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	0.949	0.920	0.700	AVRG	-3.0
2-Methylnaphthalene	0.645	0.611	0.400	AVRG	-5.3
Acenaphthylene	1.641	1.645	0.900	AVRG	0.2
Acenaphthene	1.068	1.031	0.900	AVRG	-3.5
Dibenzofuran	1.424	1.383	0.800	AVRG	-2.9
Fluorene	1.232	1.160	0.900	AVRG	-5.8
Phenanthrene	1.036	0.934	0.700	AVRG	-9.8
Anthracene	1.060	0.973	0.700	AVRG	-8.2
Fluoranthene	1.073	1.006	0.600	AVRG	-6.2
Pyrene	1.268	1.231	0.600	AVRG	-2.9
Benzo(a)anthracene	1.172	1.120	0.800	AVRG	-4.4
Chrysene	1.148	1.095	0.700	AVRG	-4.6
Benzo(a)pyrene	1.104	1.035	0.700	AVRG	-6.2
Indeno(1,2,3-cd)pyrene	1.186	1.130	0.500	AVRG	-4.7
Dibenzo(a,h)anthracene	0.953	0.929	0.400	AVRG	-2.5
Benzo(g,h,i)perylene	1.013	0.935	0.500	AVRG	-7.7
1-methylnaphthalene	0.632	0.610	0.010	AVRG	-3.5
Total Benzofluoranthenes	1.180	1.076	0.010	AVRG	-8.8
Terphenyl-d14	0.774	0.728	0.010	AVRG	-5.9
2-Fluorobiphenyl	1.225	1.107	0.010	AVRG	-9.6

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG54  
Ical Midpoint ID: 07191001  
Instrument ID: NT4

Client: FLOTD/SNIDER  
Project: LORA LAKE RI  
Ical Date: 07/19/10  
Cont. Cal Date: 08/19/10

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	356478	8.70	1293412	10.74	785897	13.63
UPPER LIMIT	712956		2586824		1571794	
LOWER LIMIT	178239		646706		392948	
=====	=====	=====	=====	=====	=====	=====
CCAL	386792	7.68	1352410	9.72	840037	12.57
UPPER LIMIT		8.18		10.22		13.07
LOWER LIMIT		7.18		9.22		12.07
01 RG54MBS2			1015849	9.71	622493	12.56
02 RG54LCSS2			1100384	9.72	664342	12.56
03 PSB14-0-.5-0			1332651	9.72	801090	12.56
04 PSB13-0-0.5-			1244824	9.71	755544	12.56
05 PSB13-1.5-2-			1233306	9.71	731833	12.56
06 PSB13-2-4-07			1889642	9.72	1146096	12.56
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IS1 = 1,4-Dichlorobenzene-d4  
IS2 = Naphthalene-d8  
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG54  
Ical Midpoint ID: 07191001  
Instrument ID: NT4

Client: FLOTD/SNIDER  
Project: LORA LAKE RI  
Ical Date: 07/19/10  
Cont. Cal Date: 08/19/10

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	1313990	16.03	1155293	20.38	1146289	22.58
UPPER LIMIT	2627980		2310586		2292578	
LOWER LIMIT	656995		577646		573144	
=====	=====	=====	=====	=====	=====	=====
CCAL	1383202	14.93	1161620	19.22	1257185	21.37
UPPER LIMIT		15.43		19.72		21.87
LOWER LIMIT		14.43		18.72		20.87
01 RG54MBS2	1028403	14.92	991004	19.21	879245	21.36
02 RG54LCSS2	1115640	14.92	1048244	19.22	935470	21.37
03 PSB14-0-.5-0	1338340	14.92	1284700	19.22	959185	21.37
04 PSB13-0-0.5-	1241479	14.92	1145912	19.21	970947	21.36
05 PSB13-1.5-2-	1250218	14.92	1139194	19.21	923017	21.36
06 PSB13-2-4-07	1980045	14.92	1705384	19.22	895198	21.37
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IS4 = Phenanthrene-d10  
IS5 = Chrysene-d12  
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RG54  
Ical Midpoint ID: 07191001  
Instrument ID: NT4

Client: FLOTD/SNIDER  
Project: LORA LAKE RI  
Ical Date: 07/19/10  
Cont. Cal Date: 08/19/10

	IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	1825297	21.45				
UPPER LIMIT	3650594					
LOWER LIMIT	912648					
=====	=====	=====	=====	=====	=====	=====
CCAL	1834295	20.38				
UPPER LIMIT		20.88				
LOWER LIMIT		19.88				
01 RG54MBS2						
02 RG54LCSS2						
03 PSB14-0-.5-0						
04 PSB13-0-0.5-						
05 PSB13-1.5-2-						
06 PSB13-2-4-07						
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IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
 AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal


\* Values outside of QC limits.

**PCP/Chlorophenols Analysis  
Report and Summary QC Forms**

**ARI Job ID: RG60**

ORGANICS ANALYSIS DATA SHEET  
PCP by GC/ECD Method SW8041  
Page 1 of 1

Sample ID: PSB13-0-0.5-072910  
SAMPLE

Lab Sample ID: RG60A  
LIMS ID: 10-18279  
Matrix: Soil  
Data Release Authorized:   
Reported: 08/18/10

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA  
Date Sampled: 07/29/10  
Date Received: 07/29/10

Date Extracted: 08/07/10  
Date Analyzed: 08/13/10 23:04  
Instrument/Analyst: ECD1/YZ

Sample Amount: 9.46 g-dry-wt  
Final Extract Volume: 25 mL  
Dilution Factor: 1.00  
Percent Moisture: 6.2%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	6.6	< 6.6 U
Reported in µg/kg (ppb)			
<b>Chlorophenol Surrogate Recovery</b>			
	2,4,6-Tribromophenol	46.4%	

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: PSB13-1.5-2-072910

**SAMPLE**

Lab Sample ID: RG60B

LIMS ID: 10-18280

Matrix: Soil

Data Release Authorized: 

Reported: 08/18/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/07/10

Date Analyzed: 08/13/10 23:24

Instrument/Analyst: ECD1/YZ

Sample Amount: 9.32 g-dry-wt

Final Extract Volume: 25 mL

Dilution Factor: 1.00

Percent Moisture: 7.2%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	6.7	18

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	52.4%
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**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: PSB13-2-4-072910

**SAMPLE**

Lab Sample ID: RG60C

LIMS ID: 10-18281

Matrix: Soil

Data Release Authorized: 

Reported: 08/18/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/07/10

Date Analyzed: 08/13/10 23:44

Instrument/Analyst: ECD1/YZ

Sample Amount: 9.59 g-dry-wt

Final Extract Volume: 25 mL

Dilution Factor: 1.00

Percent Moisture: 7.6%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	6.5	< 6.5 U


Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	10.4%
----------------------	-------

ORGANICS ANALYSIS DATA SHEET  
PCP by GC/ECD Method SW8041  
Page 1 of 1

Sample ID: PSB13-4-6-072910  
SAMPLE

Lab Sample ID: RG60D  
LIMS ID: 10-18282  
Matrix: Soil  
Data Release Authorized:   
Reported: 08/18/10

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA  
Date Sampled: 07/29/10  
Date Received: 07/29/10

Date Extracted: 08/07/10  
Date Analyzed: 08/14/10 00:04  
Instrument/Analyst: ECD1/YZ

Sample Amount: 9.39 g-dry-wt  
Final Extract Volume: 25 mL  
Dilution Factor: 1.00  
Percent Moisture: 10.2%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	6.7	11

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	52.8%
----------------------	-------

**ORGANICS ANALYSIS DATA SHEET**  
 PCP by GC/ECD Method SW8041  
 Page 1 of 1

Sample ID: PSB13-11-13-072910  
**SAMPLE**

Lab Sample ID: RG60E  
 LIMS ID: 10-18283  
 Matrix: Soil  
 Data Release Authorized: *B*  
 Reported: 08/18/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 POS-LLA  
 Date Sampled: 07/29/10  
 Date Received: 07/29/10

Date Extracted: 08/07/10  
 Date Analyzed: 08/14/10 00:24  
 Instrument/Analyst: ECD1/YZ

Sample Amount: 9.38 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 9.6%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	6.7	< 6.7 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	33.4%
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**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: PSB13-14.5-16.5-072910  
SAMPLE

Lab Sample ID: RG60F

LIMS ID: 10-18284

Matrix: Soil

Data Release Authorized: *BB*

Reported: 08/18/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Extracted: 08/07/10

Date Analyzed: 08/14/10 00:44

Instrument/Analyst: ECD1/YZ

Sample Amount: 9.08 g-dry-wt

Final Extract Volume: 25 mL

Dilution Factor: 1.00

Percent Moisture: 10.3%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	6.9	< 6.9 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	52.0%
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**SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-080710	50.0%	0
LCS-080710	54.8%	0
PSB13-0-0.5-072910	46.4%	0
PSB13-1.5-2-072910	52.4%	0
PSB13-2-4-072910	10.4%	0
PSB13-4-6-072910	52.8%	0
PSB13-11-13-072910	33.4%	0
PSB13-14.5-16.5-072910	52.0%	0


**LCS/MB LIMITS      QC LIMITS**

(TBP) = 2,4,6-Tribromophenol                      (50-115)                      (10-146)

Prep Method: SW3550B  
Log Number Range: 10-18279 to 10-18284

ORGANICS ANALYSIS DATA SHEET  
PCP by GC/ECD Method SW8041  
Page 1 of 1

Sample ID: LCS-080710  
LAB CONTROL

Lab Sample ID: LCS-080710  
LIMS ID: 10-18279  
Matrix: Soil  
Data Release Authorized:   
Reported: 08/18/10

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA  
Date Sampled: 07/29/10  
Date Received: 07/29/10

Date Extracted: 08/07/10  
Date Analyzed: 08/13/10 18:04  
Instrument/Analyst: ECD1/YZ

Sample Amount: 10.0 g  
Final Extract Volume: 25 mL  
Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Pentachlorophenol	44.1	62.5	70.6%

**Chlorophenols Surrogate Recovery**

2,4,6-Tribromophenol 54.8%

Results reported in µg/kg

4  
CHLOROPHENOL METHOD BLANK SUMMARY

SAMPLE NO.

RG54MBS1
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Lab Name: ANALYTICAL RESOURCES, INC  
 ARI Job No.: RG54  
 Lab Sample ID: RG54MBS1  
 Matrix (soil/water) SOLID  
 Sulfur Cleanup (Y/N) Y  
 Date Analyzed (1): 08/13/10  
 Time Analyzed (1): 1744  
 Instrument ID (1): ECD1  
 GC Column (1): ZB5 ID: 0.53 (mm)


Client: FLOYD/SNIDER  
 Project: LORA LAKE  
 Lab File ID: 0813A026  
 Extraction: (SepF/Cont/Sonc) SW3550C  
 Date Extracted: 08/07/10  
 Date Analyzed (2): 08/13/10  
 Time Analyzed (2): 1744  
 Instrument ID (2): ECD1  
 GC Column (2): ZB35 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	RG54LCSS1	RG54LCSS1	08/13/10	08/13/10
02	PSB14-0-.5-0	RG54A	08/13/10	08/13/10
03	PSB14-0-.5-0	RG54AMS	08/13/10	08/13/10
04	PSB14-0-.5-0	RG54AMSD	08/13/10	08/13/10
05	PSB14-1.5-2.	RG54B	08/13/10	08/13/10
06	PSB14-2-4-07	RG54C	08/13/10	08/13/10
07	PSB14-7-9-07	RG54E	08/13/10	08/13/10
08	PSB14-12-14-	RG54F	08/13/10	08/13/10
09	PSB17-0-0.5-	RG54H	08/13/10	08/13/10
10	PSB17-1.5-2-	RG54I	08/13/10	08/13/10
11	PSB17-2-4-07	RG54J	08/13/10	08/13/10
12	PSB17-4-6-07	RG54K	08/13/10	08/13/10
13	PSB17-10-13-	RG54L	08/13/10	08/13/10
14	PSB13-0-0.5-	RG60A	08/13/10	08/13/10
15	PSB13-1.5-2-	RG60B	08/13/10	08/13/10
16	PSB13-2-4-07	RG60C	08/13/10	08/13/10
17	PSB13-4-6-07	RG60D	08/14/10	08/14/10
18	PSB13-11-13-	RG60E	08/14/10	08/14/10
19	PSB13-14.5-1	RG60F	08/14/10	08/14/10

**ORGANICS ANALYSIS DATA SHEET**  
 PCP by GC/ECD Method SW8041  
 Page 1 of 1

Sample ID: MB-080710  
 METHOD BLANK

Lab Sample ID: MB-080710  
 LIMS ID: 10-18279  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 08/18/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 POS-LLA  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 08/07/10  
 Date Analyzed: 08/13/10 17:44  
 Instrument/Analyst: ECD1/YZ

Sample Amount: 10.0 g  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	6.2	< 6.2 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	50.0%
----------------------	-------



6D  
 CHLOROPHENOL INITIAL CALIBRATION  
 RETENTION TIME WINDOWS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RG54

Project: LORA LAKE

GC Column: ZB5 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 08/09/10

COMPOUND	RT OF STANDARDS					MEAN RT	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		FROM	TO
Pentachlorophenol	11.22	11.22	11.22	11.21	11.21	11.21	11.15	11.29
2,4,6-Trichloropheno	7.26	7.26	7.26	7.26	7.26	7.26	7.19	7.33
2,3,6-Trichloropheno	7.62	7.62	7.62	7.61	7.61	7.62	7.55	7.69
2,4,5-Trichloropheno	8.25	8.24	8.23	8.22	8.21	8.23	8.17	8.31
2,3,4-Trichloropheno	8.81	8.79	8.78	8.77	8.76	8.78	8.72	8.86
2,3,5,6-Tetrachlorop	9.01	9.01	9.00	9.00	8.99	9.00	8.94	9.08
2,3,4,5-Tetrachlorop	10.42	10.41	10.41	10.40	10.39	10.40	10.34	10.48
2,4-Dichlorophenol	6.90	6.89	6.89	6.89	6.88	6.89	6.82	6.96
2,4,6-Tribromophenol	10.01	10.00	10.00	9.99	9.98	10.00	9.93	10.07

6D  
 CHLOROPHENOL INITIAL CALIBRATION  
 RETENTION TIME WINDOWS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RG54

Project: LORA LAKE

GC Column: ZB35 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 08/09/10

COMPOUND	RT OF STANDARDS					MEAN RT	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		FROM	TO
Pentachlorophenol	11.66	11.65	11.65	11.65	11.65	11.65	11.59	11.73
2,4,6-Trichloropheno	7.33	7.33	7.33	7.33	7.33	7.33	7.26	7.40
2,3,6-Trichloropheno	7.86	7.86	7.86	7.86	7.85	7.86	7.79	7.93
2,4,5-Trichloropheno	8.62	8.61	8.60	8.59	8.59	8.60	8.54	8.69
2,3,4-Trichloropheno	9.38	9.37	9.36	9.36	9.35	9.36	9.31	9.45
2,3,5,6-Tetrachlorop	9.28	9.27	9.27	9.26	9.26	9.27	9.21	9.35
2,3,4,5-Tetrachlorop	11.13	11.12	11.11	11.11	11.10	11.11	11.06	11.20
2,4-Dichlorophenol	7.17	7.16	7.16	7.16	7.15	7.16	7.10	7.24
2,4,6-Tribromophenol	10.65	10.64	10.64	10.63	10.63	10.64	10.58	10.72

6E  
 CHLOROPHENOL INITIAL CALIBRATION  
 CALIBRATION FACTORS

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER  
 ARI Job No.: RG54      Project: LORA LAKE  
 GC Column: ZB5      ID: 0.53 (mm)      Instrument ID: ECD1  
 Calibration Date: 08/09/10

COMPOUND	CALIBRATION FACTORS						R <sup>2</sup> / %RSD	CT
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		
Pentachlorophenol	24528	19824	17830	15337	13686	11965	0.9996	Q
2,4,6-Trichlorophenol	13540	10473	9560	8413	7539	6660	0.9997	Q
2,3,6-Trichlorophenol	12902	10500	9607	8801	8025	7161	0.9998	Q
2,4,5-Trichlorophenol	6404	5362	5688	4915	4290	3627	19.7	A
2,3,4-Trichlorophenol	8393	7068	7135	7922	5474	5053	19.4	A
2,3,5,6-Tetrachloroph	17905	15060	14996	14233	11882	10558	18.4	A
2,3,4,5-Tetrachloroph	16324	13459	12294	10216	8895	7628	0.9995	Q
2,4-Dichlorophenol	721	627	611	486	409	342	0.9993	Q
2,4,6-Tribromophenol	18561	14998	13969	12135	11200	9940	0.9997	Q
AVE RSD							23.3	

CT stands for Curve Types:  
 A Indicates an Average Response Factor Curve  
 L Indicates a Linear Curve  
 Q Indicates a Quadratic Curve

CALIBRATION FILES  
 -----

LVL 1: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A006.d/0809A006.cdf  
 LVL 2: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A007.d/0809A007.cdf  
 LVL 3: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A008.d  
 LVL 4: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A005.d/0809A005.cdf  
 LVL 5: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A009.d  
 LVL 6: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A010.d

6E  
 CHLOROPHENOL INITIAL CALIBRATION  
 CALIBRATION FACTORS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RG54

Project: LORA LAKE

GC Column: ZB35 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 08/09/10

COMPOUND	CALIBRATION FACTORS						R <sup>2</sup> / %RSD	CT
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		
Pentachlorophenol	28790	24995	23903	21206	20507	18368	16.2	A
2,4,6-Trichlorophenol	14811	12542	14020	12241	11222	10070	14.0	A
2,3,6-Trichlorophenol	15358	13183	12610	12054	11138	10108	14.6	A
2,4,5-Trichlorophenol	9451	7724	7152	6203	5568	4896	0.9997	Q
2,3,4-Trichlorophenol	13138	11714	9430	8408	7532	6669	0.9995	Q
2,3,5,6-Tetrachloroph	22710	20100	18581	17733	16666	15298	14.2	A
2,3,4,5-Tetrachloroph	18414	16106	15136	13550	12798	11541	17.0	A
2,4-Dichlorophenol	859	720	733	619	536	458	0.9997	Q
2,4,6-Tribromophenol	22648	19438	18816	17793	17226	16083	12.2	A
AVE RSD							17.9	

CT stands for Curve Types:

- A Indicates an Average Response Factor Curve
- L Indicates a Linear Curve
- Q Indicates a Quadratic Curve

CALIBRATION FILES  
 -----

- LVL 1: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A006.d/0809A006.cdf
- LVL 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A007.d/0809A007.cdf
- LVL 3: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A008.d
- LVL 4: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A005.d
- LVL 5: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A009.d
- LVL 6: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A010.d

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RG54

Project: LORA LAKE

GC Column: ZB5 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/13/10

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :1724

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	11.21	11.15	11.29	24.7	25.0	-1.2
2,4,6-Trichlorophenol	7.26	7.19	7.33	25.4	25.0	1.6
2,3,6-Trichlorophenol	7.61	7.55	7.69	23.1	25.0	-7.6
2,4,5-Trichlorophenol	8.21	8.17	8.31	24.7	25.0	-1.2
2,3,4-Trichlorophenol	8.76	8.72	8.86	23.5	25.0	-6.0
2,3,5,6-Tetrachlorophenol	8.99	8.94	9.08	24.1	25.0	-3.6
2,3,4,5-Tetrachlorophenol	10.39	10.34	10.48	24.6	25.0	-1.6
2,4-Dichlorophenol	6.88	6.82	6.96	227	250	-9.2
2,4,6-Tribromophenol (surr	9.99	9.93	10.07	24.8	25.0	-0.8

AVERAGE %D = 3.6

FORM VII PCP

RG50:00104

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER  
 ARI Job No.: RG54      Project: LORA LAKE  
 GC Column: ZB35      ID: 0.53 (mm)  
 Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):      Date Analyzed : 08/13/10  
 Lab Sample ID (PCP): PCP CCAL      Time Analyzed : 1724

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	11.64	11.59	11.73	23.9	25.0	-4.4
2,4,6-Trichlorophenol	7.33	7.26	7.40	26.2	25.0	4.8
2,3,6-Trichlorophenol	7.86	7.79	7.93	24.2	25.0	-3.2
2,4,5-Trichlorophenol	8.59	8.54	8.69	25.8	25.0	3.2
2,3,4-Trichlorophenol	9.35	9.31	9.45	24.9	25.0	-0.4
2,3,5,6-Tetrachlorophenol	9.26	9.21	9.35	25.1	25.0	0.4
2,3,4,5-Tetrachlorophenol	11.10	11.06	11.20	23.5	25.0	-6.0
2,4-Dichlorophenol	7.15	7.10	7.24	252	250	0.8
2,4,6-Tribromophenol (surr)	10.63	10.58	10.72	24.7	25.0	-1.2

AVERAGE %D = 2.7

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RG54

Project: LORA LAKE

GC Column: ZB5 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/13/10

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :2124

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
=====	=====	FROM	TO	=====	=====	=====
Pentachlorophenol	11.21	11.15	11.29	22.7	25.0	-9.2
2,4,6-Trichlorophenol	7.26	7.19	7.33	25.0	25.0	0.0
2,3,6-Trichlorophenol	7.61	7.55	7.69	22.7	25.0	-9.2
2,4,5-Trichlorophenol	8.22	8.17	8.31	23.7	25.0	-5.2
2,3,4-Trichlorophenol	8.77	8.72	8.86	22.8	25.0	-8.8
2,3,5,6-Tetrachlorophenol	8.99	8.94	9.08	23.6	25.0	-5.6
2,3,4,5-Tetrachlorophenol	10.39	10.34	10.48	22.9	25.0	-8.4
2,4-Dichlorophenol	6.89	6.82	6.96	226	250	-9.6
2,4,6-Tribromophenol (surr	9.99	9.93	10.07	23.8	25.0	-4.8

AVERAGE %D = 6.8

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RG54

Project: LORA LAKE

GC Column: ZB35 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/13/10

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :2124

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
=====	=====	FROM	TO	=====	=====	=====
Pentachlorophenol	11.65	11.59	11.73	22.3	25.0	-10.8
2,4,6-Trichlorophenol	7.33	7.26	7.40	26.5	25.0	6.0
2,3,6-Trichlorophenol	7.86	7.79	7.93	23.9	25.0	-4.4
2,4,5-Trichlorophenol	8.59	8.54	8.69	24.7	25.0	-1.2
2,3,4-Trichlorophenol	9.35	9.31	9.45	24.0	25.0	-4.0
2,3,5,6-Tetrachlorophenol	9.26	9.21	9.35	24.6	25.0	-1.6
2,3,4,5-Tetrachlorophenol	11.11	11.06	11.20	22.3	25.0	-10.8
2,4-Dichlorophenol	7.16	7.10	7.24	250	250	0.0
2,4,6-Tribromophenol (surr)	10.63	10.58	10.72	23.8	25.0	-4.8

AVERAGE %D = 4.8



7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RG54

Project: LORA LAKE

GC Column: ZB5 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/14/10

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :0124

PCP MIX COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
Pentachlorophenol	11.21	11.15	11.29	23.1	25.0	-7.6
2,4,6-Trichlorophenol	7.26	7.19	7.33	25.5	25.0	2.0
2,3,6-Trichlorophenol	7.62	7.55	7.69	23.0	25.0	-8.0
2,4,5-Trichlorophenol	8.22	8.17	8.31	24.3	25.0	-2.8
2,3,4-Trichlorophenol	8.77	8.72	8.86	23.7	25.0	-5.2
2,3,5,6-Tetrachlorophenol	9.00	8.94	9.08	23.7	25.0	-5.2
2,3,4,5-Tetrachlorophenol	10.39	10.34	10.48	23.6	25.0	-5.6
2,4-Dichlorophenol	6.89	6.82	6.96	231	250	-7.6
2,4,6-Tribromophenol (surr	9.99	9.93	10.07	24.4	25.0	-2.4

AVERAGE %D = 5.2

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RG54

Project: LORA LAKE

GC Column: ZB35 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/14/10

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :0124

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	11.65	11.59	11.73	22.2	25.0	-11.2
2,4,6-Trichlorophenol	7.33	7.26	7.40	26.5	25.0	6.0
2,3,6-Trichlorophenol	7.86	7.79	7.93	24.4	25.0	-2.4
2,4,5-Trichlorophenol	8.59	8.54	8.69	25.6	25.0	2.4
2,3,4-Trichlorophenol	9.35	9.31	9.45	24.1	25.0	-3.6
2,3,5,6-Tetrachlorophenol	9.26	9.21	9.35	24.8	25.0	-0.8
2,3,4,5-Tetrachlorophenol	11.11	11.06	11.20	22.2	25.0	-11.2
2,4-Dichlorophenol	7.16	7.10	7.24	254	250	1.6
2,4,6-Tribromophenol (surr	10.63	10.58	10.72	24.1	25.0	-3.6

AVERAGE %D = 4.8

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER  
 ARI Job No.: RG54      Project: LORA LAKE  
 GC Column: ZB5      ID: 0.53 (mm)      Instrument ID: ECD1  
 Init. Calib. Date(s): 08/09/10 08/09/10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 10.00					
CLIENT	LAB	DATE	TIME	S1	
SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT	#
=====	=====	=====	=====	=====	=====
01	PCPD	08/09/10	1223	9.99	
02	PCPA	08/09/10	1243	10.01	
03	PCPB	08/09/10	1303	10.00	
04	PCPC	08/09/10	1323	10.00	
05	PCPE	08/09/10	1343	9.98	
06	PCPF	08/09/10	1403	9.98	
07	PCP CCAL	08/13/10	1724	9.99	
08	RG54MBS1	08/13/10	1744	9.99	
09	RG54LCSS1	08/13/10	1804	9.99	
10	PSB14-0-.5-0	08/13/10	1824	9.98	
11	PSB14-0-.5-0	08/13/10	1844	9.99	
12	PSB14-0-.5-0	08/13/10	1904	9.99	
13	PSB14-1.5-2.	08/13/10	1924	9.99	
14	PSB14-2-4-07	08/13/10	1944	9.99	
15	PSB14-7-9-07	08/13/10	2004	9.99	
16	PSB14-12-14-	08/13/10	2024	9.99	
17	PSB17-0-0.5-	08/13/10	2044	9.99	
18	PCP CCAL	08/13/10	2124	9.99	
19	PSB17-1.5-2-	08/13/10	2144	9.99	
20	PSB17-2-4-07	08/13/10	2204	9.99	
21	PSB17-4-6-07	08/13/10	2224	9.99	
22	PSB17-10-13-	08/13/10	2244	9.99	
23	PSB13-0-0.5-	08/13/10	2304	9.99	
24	PSB13-1.5-2-	08/13/10	2324	9.99	
25	PSB13-2-4-07	08/13/10	2344	9.99	
26	PSB13-4-6-07	08/14/10	0004	9.99	
27	PSB13-11-13-	08/14/10	0024	9.99	
28	PSB13-14.5-1	08/14/10	0044	9.99	
29	PCP CCAL	08/14/10	0124	9.99	

QC LIMITS  
 S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER  
 ARI Job No.: RG54      Project: LORA LAKE  
 GC Column: ZB35      ID: 0.53 (mm)      Instrument ID: ECD1  
 Init. Calib. Date(s): 08/09/10 08/09/10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 10.65					
CLIENT	LAB	DATE	TIME	S1	
SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT	#
=====	=====	=====	=====	=====	=====
01	PCPD	08/09/10	1223	10.63	
02	PCPA	08/09/10	1243	10.65	
03	PCPB	08/09/10	1303	10.64	
04	PCPC	08/09/10	1323	10.64	
05	PCPE	08/09/10	1343	10.63	
06	PCPF	08/09/10	1403	10.63	
07	PCP CCAL	08/13/10	1724	10.63	
08	RG54MBS1	08/13/10	1744	10.63	
09	RG54LCSS1	08/13/10	1804	10.63	
10	PSB14-0-.5-0	08/13/10	1824	10.63	
11	PSB14-0-.5-0	08/13/10	1844	10.63	
12	PSB14-0-.5-0	08/13/10	1904	10.63	
13	PSB14-1.5-2.	08/13/10	1924	10.63	
14	PSB14-2-4-07	08/13/10	1944	10.63	
15	PSB14-7-9-07	08/13/10	2004	10.63	
16	PSB14-12-14-	08/13/10	2024	10.63	
17	PSB17-0-0.5-	08/13/10	2044	10.63	
18	PCP CCAL	08/13/10	2124	10.63	
19	PSB17-1.5-2-	08/13/10	2144	10.63	
20	PSB17-2-4-07	08/13/10	2204	10.63	
21	PSB17-4-6-07	08/13/10	2224	10.63	
22	PSB17-10-13-	08/13/10	2244	10.63	
23	PSB13-0-0.5-	08/13/10	2304	10.63	
24	PSB13-1.5-2-	08/13/10	2324	10.63	
25	PSB13-2-4-07	08/13/10	2344	10.63	
26	PSB13-4-6-07	08/14/10	0004	10.63	
27	PSB13-11-13-	08/14/10	0024	10.63	
28	PSB13-14.5-1	08/14/10	0044	10.63	
29	PCP CCAL	08/14/10	0124	10.63	

QC LIMITS  
 S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.

**TPHD Analysis  
Report and Summary QC Forms**

**ARI Job ID: RG60**

**ORGANICS ANALYSIS DATA SHEET**

**TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned


Page 1 of 1

Matrix: Soil

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Data Release Authorized: 

Reported: 08/10/10

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
RG60A 10-18279	PSB13-0-0.5-072910 HC ID: <b>MOTOR OIL</b>	08/05/10	08/06/10 FID3B	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	5.3 <b>11</b>	< 5.3 U <b>32</b> 101%
RG60B 10-18280	PSB13-1.5-2-072910 HC ID: <b>DRO/MOTOR OIL</b>	08/05/10	08/06/10 FID3B	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	5.4 <b>11</b>	5.4 <b>53</b> 94.2%
RG60C 10-18281	PSB13-2-4-072910 HC ID: <b>DRO/MOTOR OIL</b>	08/05/10	08/06/10 FID3B	1.00 10	Diesel <b>Motor Oil</b> o-Terphenyl	54 <b>110</b>	54 <b>930</b> 82.9%
RG60D 10-18282	PSB13-4-6-072910 HC ID: <b>MOTOR OIL</b>	08/05/10	08/06/10 FID3B	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	5.6 <b>11</b>	< 5.6 U <b>15</b> 97.8%
RG60E 10-18283	PSB13-11-13-072910 HC ID: <b>MOTOR OIL</b>	08/05/10	08/06/10 FID3B	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	5.5 <b>11</b>	< 5.5 U <b>30</b> 106%
MB-080510 10-18284	Method Blank HC ID: ---	08/05/10	08/06/10 FID3B	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 100%
RG60F 10-18284	PSB13-14.5-16.5-072910 HC ID: <b>MOTOR OIL</b>	08/05/10	08/06/10 FID3B	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	5.6 <b>11</b>	< 5.6 U <b>61</b> 105%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.

DL-Dilution of extract prior to analysis.

RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.

Motor Oil quantitation on total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

**CLEANED TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
PSB13-0-0.5-072910	101%	0
PSB13-1.5-2-072910	94.2%	0
PSB13-2-4-072910	82.9%	0
PSB13-4-6-072910	97.8%	0
PSB13-11-13-072910	106%	0
MB-080510	100%	0
LCS-080510	109%	0
LCS-080510	109%	0
PSB13-14.5-16.5-07	105%	0
PSB13-14.5-16.5-07 MS	108%	0
PSB13-14.5-16.5-07 MSD	106%	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(63-115)

(49-120)

Prep Method: SW3546  
Log Number Range: 10-18279 to 10-18284

**ORGANICS ANALYSIS DATA SHEET**  
**NWTPHD by GC/FID-Silica and Acid Cleaned**  
 Page 1 of 1

**Sample ID: PSB13-14.5-16.5-072910**  
**MS/MSD**

Lab Sample ID: RG60F  
 LIMS ID: 10-18284  
 Matrix: Soil  
 Data Release Authorized: *BB*  
 Reported: 08/10/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 POS-LLA  
 Date Sampled: 07/29/10  
 Date Received: 07/29/10

Date Extracted MS/MSD: 08/05/10  
 Date Analyzed MS: 08/06/10 20:47  
 MSD: 08/06/10 21:06  
 Instrument/Analyst MS: FID/MS  
 MSD: FID/MS

Sample Amount MS: 9.01 g-dry-wt  
 MSD: 9.02 g-dry-wt  
 Final Extract Volume MS: 1.0 mL  
 MSD: 1.0 mL  
 Dilution Factor MS: 1.0  
 MSD: 1.0  
 Percent Moisture: 10.3%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	< 5.6	126	166	75.9%	128	166	77.1%	1.6%

**TPHD Surrogate Recovery**

	MS	MSD
o-Terphenyl	108%	106%

Results reported in mg/kg  
 RPD calculated using sample concentrations per SW846.



**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: LCS-080510

Page 1 of 1

LCS/LCSD

Lab Sample ID: LCS-080510

QC Report No: RG60-Floyd/Snider

LIMS ID: 10-18284

Project: Lora Lake RI

Matrix: Soil

POS-LLA

Data Release Authorized: *AB*

Date Sampled: 07/29/10

Reported: 08/10/10

Date Received: 07/29/10

Date Extracted LCS/LCSD: 08/05/10

Sample Amount LCS: 10.0 g

LCSD: 10.0 g

Date Analyzed LCS: 08/06/10 15:21

Final Extract Volume LCS: 1.0 mL

LCSD: 08/06/10 15:40

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/MS

Dilution Factor LCS: 1.0

LCSD: FID/MS

LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	128	150	85.3%	134	150	89.3%	4.6%

**TPHD Surrogate Recovery**

	LCS	LCSD
o-Terphenyl	109%	109%

Results reported in mg/kg

RPD calculated using sample concentrations per SW846.

**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Soil  
Date Received: 07/29/10

ARI Job: RG60  
Project: Lora Lake RI  
POS-LLA

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
10-18279-RG60A	PSB13-0-0.5-072910	9.44 g	1.00 mL	D	08/05/10
10-18280-RG60B	PSB13-1.5-2-072910	9.32 g	1.00 mL	D	08/05/10
10-18281-RG60C	PSB13-2-4-072910	9.29 g	1.00 mL	D	08/05/10
10-18282-RG60D	PSB13-4-6-072910	8.99 g	1.00 mL	D	08/05/10
10-18283-RG60E	PSB13-11-13-072910	9.09 g	1.00 mL	D	08/05/10
10-18284-080510MB1	Method Blank	10.0 g	1.00 mL	-	08/05/10
10-18284-080510LCS1	Lab Control	10.0 g	1.00 mL	-	08/05/10
10-18284-080510LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	08/05/10
10-18284-RG60F	PSB13-14.5-16.5-0728.99	g	1.00 mL	D	08/05/10
10-18284-RG60FMS	PSB13-14.5-16.5-0729.01	g	1.00 mL	D	08/05/10
10-18284-RG60FMSD	PSB13-14.5-16.5-0729.02	g	1.00 mL	D	08/05/10

Basis: D=Dry Weight W=As Received  
Diesel Extraction Report

RG60 : 00117

4  
TPH METHOD BLANK SUMMARY

BLANK NO.

RG52MBS1
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Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60

Project No.: LORA LAKES RI

Date Extracted: 08/05/10

Matrix: SOLID

Date Analyzed : 08/06/10

Instrument ID : FID3B

Time Analyzed : 1502

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO. =====	LAB SAMPLE ID =====	DATE ANALYZED =====
01	RG52LCSS1	RG52LCSS1	08/06/10
02	RG52LCSDS1	RG52LCSDS1	08/06/10
03	PSB13-2-4-07	RG60C	08/06/10
04	PSB13-0-0.5-	RG60A	08/06/10
05	PSB13-1.5-2-	RG60B	08/06/10
06	PSB13-4-6-07	RG60D	08/06/10
07	PSB13-11-13-	RG60E	08/06/10
08	PSB13-14.5-1	RG60F	08/06/10
08	PSB13-14.5-1	RG60FMS	08/06/10
10	PSB13-14.5-1	RG60FMSD	08/06/10

6a  
NW DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.  
Instrument: FID3B.I  
Calibration Date: 30-JUL-2010

Client: FLOYD/SNIDER  
Project: LORA LAKE APTS.  
SDG No.: RG60

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	22218	21170	21958	21565	21008	20465	21398	3.0
AK Diesel	25279	23959	24625	24161	23624	22975	24104	3.3
OR Diesel	25497	24108	24785	24317	23782	23134	24271	3.4
o-Terph	19592	19395	20002	19771	20130	20713	19934	2.3

<- Indicates %RSD outside limits  
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges :   WA Diesel    C12-C24 (3.468-5.603)  
                  AK Diesel    C10-C25 (2.858-5.764)  
                  OR Diesel    C10-C28 (2.858-6.244)

Calibration Files      Analysis Time

---

0730b018.d	30-JUL-2010 20:23
0730b019.d	30-JUL-2010 20:42
0730b020.d	30-JUL-2010 21:01
0730b021.d	30-JUL-2010 21:20
0730b022.d	30-JUL-2010 21:39
0730b023.d	30-JUL-2010 21:58

6a  
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

Instrument: FID3B.I

Project: LORA LAKE APTS.

Calibration Date: 31-JUL-2010

SDG No.: RG60

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	12620	11767	11795	11887	11681	12739	12081	3.9
Triac Surr	14850	15844	16922	17487	16823	18431	16726	7.5

<- Indicates %RSD outside limits  
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files      Analysis Time

0730b025.d	30-JUL-2010	22:36
0730b026.d	30-JUL-2010	22:55
0730b027.d	30-JUL-2010	23:14
0730b028.d	30-JUL-2010	23:32
0730b030.d	31-JUL-2010	00:10
0730b032.d	31-JUL-2010	00:47

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010

Project: LORA LAKE APTS.

CCal Date: 06-AUG-2010

SDG No.: RG60

Analysis Time: 14:24

Lab ID: DIESEL#1

Instrument: FID3B.I

Lab File Name: 0806b004.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	5367944	250.9	250	0.3
AK102 (C10-C25)	6023835	249.9	250	0.0
Terphenyl	891078	44.7	45	-0.7

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :   WA Diesel   C12-C24  
                   AK Diesel   C10-C25

7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010

Project: LORA LAKE APTS.

CCal Date: 06-AUG-2010

SDG No.: RG60

Analysis Time: 14:43

Lab ID: MOIL#1

Instrument: FID3B.I

Lab File Name: 0806b005.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil (C24-C38)	6180859	511.6	500	2.3
AK103 (C25-C36)	5328451	596.5	500	19.3
n-Triacontane	825264	49.3	45	9.6

\* Surrogate areas are subtracted from range areas  
<- Indicates a %D outside QC limits

Quant Ranges :   WA M.Oil   C24-C38  
                  AK M.Oil   C25-C36

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010

Project: LORA LAKE APTS.

CCal Date: 06-AUG-2010

SDG No.: RG60

Analysis Time: 16:00

Lab ID: DIESEL#2

Instrument: FID3B.I

Lab File Name: 0806b009.d

Diesel Range	Area*	CalcAmt	NomAmt	% D
WADies (C12-C24)	5355345	250.3	250	0.1
AK102 (C10-C25)	6019924	249.7	250	-0.1
Terphenyl	897839	45.0	45	0.1

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :   WA Diesel   C12-C24  
                   AK Diesel   C10-C25



7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.      Client: FLOYD/SNIDER  
 ICal Date: 30-JUL-2010                      Project: LORA LAKE APTS.  
 CCal Date: 06-AUG-2010                      SDG No.: RG60  
 Analysis Time: 16:19                          Lab ID: MOIL#2  
 Instrument: FID3B.I                            Lab File Name: 0806b010.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil (C24-C38)	6170541	510.7	500	2.1
AK103 (C25-C36)	5345019	598.4	500	19.7
n-Triacontane	812314	48.6	45	7.9

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :    WA M.Oil    C24-C38  
                       AK M.Oil    C25-C36

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010

Project: LORA LAKE APTS.

CCal Date: 06-AUG-2010

SDG No.: RG60

Analysis Time: 19:31

Lab ID: DIESEL#3

Instrument: FID3B.I

Lab File Name: 0806b020.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies (C12-C24)	5460372	255.2	250	2.1
AK102 (C10-C25)	6130109	254.3	250	1.7
Terphenyl	898907	45.1	45	0.2

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :   WA Diesel   C12-C24  
                   AK Diesel   C10-C25

7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010

Project: LORA LAKE APTS.

CCal Date: 06-AUG-2010

SDG No.: RG60

Analysis Time: 19:51

Lab ID: MOIL#3

Instrument: FID3B.I

Lab File Name: 0806b021.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil (C24-C38)	6225355	515.3	500	3.1
AK103 (C25-C36)	5393239	603.8	500	20.8
n-Triacontane	827977	49.5	45	10.0

\* Surrogate areas are subtracted from range areas  
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38  
AK M.Oil C25-C36

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010

Project: LORA LAKE APTS.

CCal Date: 06-AUG-2010

SDG No.: RG60

Analysis Time: 22:22

Lab ID: DIESEL#4

Instrument: FID3B.I

Lab File Name: 0806b029.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies (C12-C24)	5444594	254.4	250	1.8
AK102 (C10-C25)	6118348	253.8	250	1.5
Terphenyl	902966	45.3	45	0.7

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :   WA Diesel    C12-C24  
                   AK Diesel    C10-C25

7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010

Project: LORA LAKE APTS.

CCal Date: 06-AUG-2010

SDG No.: RG60

Analysis Time: 22:41

Lab ID: MOIL#4

Instrument: FID3B.I

Lab File Name: 0806b030.d

M.oil Range	Area*	CalcAmt	NomAmt	% D
WAMoil (C24-C38)	6288015	520.5	500	4.1
AK103 (C25-C36)	5485919	614.2	500	22.8
n-Triacontane	831194	49.7	45	10.4

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :   WA M.Oil   C24-C38  
                   AK M.Oil   C25-C36

8  
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60

Project: LORA LAKES RI

Instrument ID: FID3B

GC Column: RTX-1

Run Date: 08/06/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD					
		TERPH: 4.76	TRIAc: 6.56		
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAc RT #
01	RT	08/06/10	1346	4.76	6.56
02	IB	08/06/10	1405	4.76	6.56
03	DIESEL#1	08/06/10	1424	4.76	6.56
04	MOIL#1	08/06/10	1443	4.76	6.56
05	RG52MBS1	08/06/10	1502	4.76	6.56
06	RG52LCSS1	08/06/10	1521	4.76	6.56
07	RG52LCSDS1	08/06/10	1540	4.77	6.56
08	DIESEL#2	08/06/10	1600	4.76	6.56
09	MOIL#2	08/06/10	1619	4.76	6.56
10	PSB13-2-4-07	08/06/10	1638	4.76	6.56
11	ZZZZZ	08/06/10	1657	4.76	6.56
12	ZZZZZ	08/06/10	1717	4.76	6.56
13	ZZZZZ	08/06/10	1736	4.76	6.56
14	ZZZZZ	08/06/10	1755		6.56
15	PSB13-0-0.5-	08/06/10	1815	4.76	6.56
16	ZZZZZ	08/06/10	1834		
17	PSB13-1.5-2-	08/06/10	1853	4.76	6.56
18	PSB13-4-6-07	08/06/10	1912	4.76	6.56
19	DIESEL#3	08/06/10	1931	4.76	6.56
20	MOIL#3	08/06/10	1951	4.76	6.56
21	PSB13-11-13-	08/06/10	2010	4.76	6.56
22	PSB13-14.5-1	08/06/10	2029	4.76	6.56
23	PSB13-14.5-1	08/06/10	2047	4.76	6.56
24	PSB13-14.5-1	08/06/10	2106	4.76	6.56
25	ZZZZZ	08/06/10	2125	4.76	6.56
26	ZZZZZ	08/06/10	2144	4.76	6.56
27	ZZZZZ	08/06/10	2203	4.76	6.56
28	DIESEL#4	08/06/10	2222	4.76	6.56
29	MOIL#4	08/06/10	2241	4.76	6.56

TERPH = o-terph (+/- 0.05 MINUTES)  
 TRIAC = Triacon Surr (+/- 0.05 MINUTES)

\* Values outside of QC limits.

8  
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60

Project: LORA LAKE APTS.

Instrument ID: FID3B

GC Column: RTX-1

Run Date: 07/31/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD					
		TERPH: 4.76		TRIAAC: 6.56	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAAC RT #
01	RT	07/30/10	1944	4.76	6.56
02	IB	07/30/10	2004	4.76	6.56
03	DIESEL 50	07/30/10	2023	4.76	6.56
04	DIESEL 100	07/30/10	2042	4.76	6.56
05	DIESEL 250	07/30/10	2101	4.76	6.55
06	DIESEL 500	07/30/10	2120	4.77	6.56
07	DIESEL 1000	07/30/10	2139	4.77	6.56
08	DIESEL 2500	07/30/10	2158	4.79	6.56
09	DIESEL ICV	07/30/10	2217	4.76	6.56
10	MOIL 100	07/30/10	2236	4.77	6.56
11	MOIL 250	07/30/10	2255	4.76	6.56
12	MOIL 500	07/30/10	2314	4.76	6.56
13	MOIL 1000	07/30/10	2332	4.76	6.57
14	RINSE	07/30/10	2351	4.76	6.56
15	MOIL 2500	07/31/10	0010	4.76	6.58
16	RINSE	07/31/10	0028	4.76	6.56
17	MOIL 5000	07/31/10	0047	4.76	6.60
18	RINSE	07/31/10	0106	4.76	6.56
19	MOIL ICV	07/31/10	0125	4.76	6.56

TERPH = o-terph  
TRIAAC = Triacon Surr

QC LIMITS  
(+/- 0.05 MINUTES)  
(+/- 0.05 MINUTES)

\* Values outside of QC limits.

**TPHG/BETX Analysis  
Report and Summary QC Forms**

**ARI Job ID: RG60**



**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: PSB13-0-0.5-072910

SAMPLE

Lab Sample ID: RG60A

LIMS ID: 10-18279

Matrix: Soil

Data Release Authorized: *WV*

Reported: 08/06/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

Event: POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Date Analyzed: 08/05/10 21:18

Instrument/Analyst: PID2/MH

Purge Volume: 5.0 mL

Sample Amount: 140 mg-dry-wt

Percent Moisture: 6.2%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	9.1	< 9.1 U	
108-88-3	Toluene	9.1	< 9.1 U	
100-41-4	Ethylbenzene	9.1	< 9.1 U	
179601-23-1	m,p-Xylene	18	< 18 U	
95-47-6	o-Xylene	9.1	< 9.1 U	
	Gasoline Range Hydrocarbons	3.7	< 3.7 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	89.8%
Bromobenzene	95.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	89.9%
Bromobenzene	95.4%

BETX values reported in µg/kg (ppb)  
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

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

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: PSB13-1.5-2-072910  
 SAMPLE

Lab Sample ID: RG60B  
 LIMS ID: 10-18280  
 Matrix: Soil  
 Data Release Authorized: *MM*  
 Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 Event: POS-LLA  
 Date Sampled: 07/29/10  
 Date Received: 07/29/10

Date Analyzed: 08/03/10 11:19  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Sample Amount: 160 mg-dry-wt  
 Percent Moisture: 7.2%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	8.1	< 8.1 U	
108-88-3	Toluene	8.1	< 8.1 U	
100-41-4	Ethylbenzene	8.1	< 8.1 U	
179601-23-1	m,p-Xylene	16	< 16 U	
95-47-6	o-Xylene	8.1	< 8.1 U	
	Gasoline Range Hydrocarbons	3.2	< 3.2 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	100%
Bromobenzene	99.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	105%
Bromobenzene	104%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: PSB13-2-4-072910  
 SAMPLE

Lab Sample ID: RG60C  
 LIMS ID: 10-18281  
 Matrix: Soil  
 Data Release Authorized: *mw*  
 Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 Event: POS-LLA  
 Date Sampled: 07/29/10  
 Date Received: 07/29/10

Date Analyzed: 08/03/10 11:43  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Sample Amount: 79 mg-dry-wt  
 Percent Moisture: 7.6%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	16	< 16 U	
108-88-3	Toluene	16	< 16 U	
100-41-4	Ethylbenzene	16	< 16 U	
179601-23-1	m,p-Xylene	32	< 32 U	
95-47-6	o-Xylene	16	< 16 U	
	Gasoline Range Hydrocarbons	6.4	< 6.4 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	97.4%
Bromobenzene	98.8%

**Gasoline Surrogate Recovery**

Trifluorotoluene	103%
Bromobenzene	102%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: PSB13-4-6-072910  
 SAMPLE

Lab Sample ID: RG60D  
 LIMS ID: 10-18282  
 Matrix: Soil  
 Data Release Authorized: *MMW*  
 Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 Event: POS-LLA  
 Date Sampled: 07/29/10  
 Date Received: 07/29/10

Date Analyzed: 08/03/10 12:08  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Sample Amount: 160 mg-dry-wt  
 Percent Moisture: 10.2%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	8.0	< 8.0 U	
108-88-3	Toluene	8.0	< 8.0 U	
100-41-4	Ethylbenzene	8.0	< 8.0 U	
179601-23-1	m,p-Xylene	16	< 16 U	
95-47-6	o-Xylene	8.0	< 8.0 U	
	Gasoline Range Hydrocarbons	3.2	< 3.2 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	98.5%
Bromobenzene	99.9%

**Gasoline Surrogate Recovery**

Trifluorotoluene	103%
Bromobenzene	103%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

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

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: PSB13-11-13-072910  
 SAMPLE

Lab Sample ID: RG60E  
 LIMS ID: 10-18283  
 Matrix: Soil  
 Data Release Authorized: *mmw*  
 Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 Event: POS-LLA  
 Date Sampled: 07/29/10  
 Date Received: 07/29/10

Date Analyzed: 08/03/10 13:45  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Sample Amount: 160 mg-dry-wt  
 Percent Moisture: 9.6%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	7.6	< 7.6 U	
108-88-3	Toluene	7.6	< 7.6 U	
100-41-4	Ethylbenzene	7.6	< 7.6 U	
179601-23-1	m,p-Xylene	15	< 15 U	
95-47-6	o-Xylene	7.6	< 7.6 U	
	Gasoline Range Hydrocarbons	3.0	< 3.0 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	103%
Bromobenzene	104%

**Gasoline Surrogate Recovery**

Trifluorotoluene	107%
Bromobenzene	105%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: PSB13-14.5-16.5-072910  
 SAMPLE

Lab Sample ID: RG60F  
 LIMS ID: 10-18284  
 Matrix: Soil  
 Data Release Authorized: *WW*  
 Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 Event: POS-LLA  
 Date Sampled: 07/29/10  
 Date Received: 07/29/10

Date Analyzed: 08/03/10 14:10  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Sample Amount: 160 mg-dry-wt  
 Percent Moisture: 10.3%

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	7.8	< 7.8 U	
108-88-3	Toluene	7.8	< 7.8 U	
100-41-4	Ethylbenzene	7.8	< 7.8 U	
179601-23-1	m,p-Xylene	16	< 16 U	
95-47-6	o-Xylene	7.8	< 7.8 U	
<b>Gasoline Range Hydrocarbons</b>		<b>3.1</b>	<b>3.8</b>	<b>GAS ID GRO</b>

**BETX Surrogate Recovery**

Trifluorotoluene	103%
Bromobenzene	104%

**Gasoline Surrogate Recovery**

Trifluorotoluene	108%
Bromobenzene	106%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

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

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**TPHG SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: RG60  
Matrix: Soil

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
Event: POS-LLA

Client ID	BFB	TFT	BBZ	TOT OUT
MB-080510	NA	89.0%	89.9%	0
LCS-080510	NA	97.6%	97.1%	0
LCSD-080510	NA	95.9%	94.3%	0
PSB13-0-0.5-072910	NA	89.9%	95.4%	0
MB-080310	NA	100%	99.1%	0
LCS-080310	NA	105%	103%	0
LCSD-080310	NA	102%	102%	0
PSB13-1.5-2-072910	NA	105%	104%	0
PSB13-2-4-072910	NA	103%	102%	0
PSB13-4-6-072910	NA	103%	103%	0
PSB13-11-13-072910	NA	107%	105%	0
PSB13-14.5-16.5-072910	NA	108%	106%	0

	LCS/MB LIMITS	QC LIMITS
(BFB) = Bromofluorobenzene	(70-130)	(70-130)
(TFT) = Trifluorotoluene	(80-120)	(66-123)
(BBZ) = Bromobenzene	(80-120)	(62-130)

Log Number Range: 10-18279 to 10-18284

**BETX SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: RG60  
Matrix: Soil

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
Event: POS-LLA

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-080510	88.4%	89.0%	0
LCS-080510	93.7%	94.2%	0
LCSD-080510	93.0%	92.9%	0
PSB13-0-0.5-072910	89.8%	95.0%	0
MB-080310	94.8%	95.1%	0
LCS-080310	99.2%	97.8%	0
LCSD-080310	97.3%	99.2%	0
PSB13-1.5-2-072910	100%	99.0%	0
PSB13-2-4-072910	97.4%	98.8%	0
PSB13-4-6-072910	98.5%	99.9%	0
PSB13-11-13-072910	103%	104%	0
PSB13-14.5-16.5-072910	103%	104%	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(TFT) = Trifluorotoluene	(80-120)	(68-124)
(BBZ) = Bromobenzene	(77-120)	(62-134)

Log Number Range: 10-18279 to 10-18284



ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: PSB13-TB  
 SAMPLE

Lab Sample ID: RG60G  
 LIMS ID: 10-18285  
 Matrix: Water  
 Data Release Authorized: *MM*  
 Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 Event: POS-LLA  
 Date Sampled: 07/29/10  
 Date Received: 07/29/10

Date Analyzed: 08/03/10 10:30  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
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**BETX Surrogate Recovery**

Trifluorotoluene	95.9%
Bromobenzene	95.8%

**Gasoline Surrogate Recovery**

Trifluorotoluene	101%
Bromobenzene	99.7%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: RG60  
Matrix: Water

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
Event: POS-LLA

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
PSB13-TB	101%	99.7%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 10-18285 to 10-18285

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: RG60  
Matrix: Water

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
Event: POS-LLA

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
PSB13-TB	95.9%	95.8%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(TFT) = Trifluorotoluene	(79-120)	(80-120)
(BBZ) = Bromobenzene	(79-120)	(80-120)

Log Number Range: 10-18285 to 10-18285

ORGANICS ANALYSIS DATA SHEET  
TPHG by Method NWTPHG  
Page 1 of 1

Sample ID: LCS-080310  
LAB CONTROL SAMPLE

Lab Sample ID: LCS-080310  
LIMS ID: 10-18280  
Matrix: Soil  
Data Release Authorized: *WV*  
Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
Event: POS-LLA  
Date Sampled: NA  
Date Received: NA

Date Analyzed LCS: 08/03/10 08:21  
LCSD: 08/03/10 08:46  
Instrument/Analyst LCS: PID3/MH  
LCSD: PID3/MH

Purge Volume: 5.0 mL  
Sample Amount LCS: 100 mg-dry-wt  
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	50.2	50.0	100%	48.4	50.0	96.8%	3.7%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	105%	102%
Bromobenzene	103%	102%

ORGANICS ANALYSIS DATA SHEET  
BETX by Method SW8021BMod  
Page 1 of 1

Sample ID: LCS-080310  
LAB CONTROL SAMPLE

Lab Sample ID: LCS-080310  
LIMS ID: 10-18280  
Matrix: Soil  
Data Release Authorized: *WV*  
Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
Event: POS-LLA  
Date Sampled: NA  
Date Received: NA

Date Analyzed LCS: 08/03/10 08:21  
LCSD: 08/03/10 08:46  
Instrument/Analyst LCS: PID3/MH  
LCSD: PID3/MH

Purge Volume: 5.0 mL  
Sample Amount LCS: 100 mg-dry-wt  
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	112	105	107%	108	105	103%	3.6%
Toluene	1540	1440	107%	1480	1440	103%	4.0%
Ethylbenzene	467	460	102%	453	460	98.5%	3.0%
m,p-Xylene	1680	1690	99.4%	1610	1690	95.3%	4.3%
o-Xylene	720	700	103%	707	700	101%	1.8%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**BETX Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	99.2%	97.3%
Bromobenzene	97.8%	99.2%

ORGANICS ANALYSIS DATA SHEET  
TPHG by Method NWTPHG  
Page 1 of 1

Sample ID: LCS-080510  
LAB CONTROL SAMPLE

Lab Sample ID: LCS-080510  
LIMS ID: 10-18279  
Matrix: Soil  
Data Release Authorized: *MW*  
Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
Event: POS-LLA  
Date Sampled: NA  
Date Received: NA

Date Analyzed LCS: 08/05/10 09:09  
LCSD: 08/05/10 09:35  
Instrument/Analyst LCS: PID2/MH  
LCSD: PID2/MH

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt  
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	50.6	50.0	101%	48.6	50.0	97.2%	4.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	97.6%	95.9%
Bromobenzene	97.1%	94.3%

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-080510

LAB CONTROL SAMPLE

Lab Sample ID: LCS-080510

LIMS ID: 10-18279

Matrix: Soil

Data Release Authorized: *mw*

Reported: 08/06/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

Event: POS-LLA

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 08/05/10 09:09

Purge Volume: 5.0 mL

LCS D: 08/05/10 09:35

Instrument/Analyst LCS: PID2/MH

Sample Amount LCS: 100 mg-dry-wt

LCS D: PID2/MH

LCS D: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
Benzene	95.5	105	91.0%	81.0	105	77.1%	16.4%
Toluene	1320	1440	91.7%	1330	1440	92.4%	0.8%
Ethylbenzene	416	460	90.4%	411	460	89.3%	1.2%
m,p-Xylene	1590	1690	94.1%	1560	1690	92.3%	1.9%
o-Xylene	664	700	94.9%	646	700	92.3%	2.7%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**BETX Surrogate Recovery**

	LCS	LCS D
Trifluorotoluene	93.7%	93.0%
Bromobenzene	94.2%	92.9%

4  
BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0803S1

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project No.: LORA LAKE

Date Analyzed : 08/03/10

Matrix: SOIL<sub>s</sub>

Time Analyzed : 0910

Instrument ID : PID3

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	LCS0803S1	LCS0803	08/03/10
02	LCSD0803S1	LCSD0803	08/03/10
03	PSB14-TB	RG54G	08/03/10
04	PSB13-TB	RG60G	08/03/10
05	PSB13-1.5-2-	RG60B	08/03/10
06	PSB13-2-4-07	RG60C	08/03/10
07	PSB13-4-6-07	RG60D	08/03/10
08	PSB13-11-13-	RG60E	08/03/10
19	PSB13-14.5-1	RG60F	08/03/10
10	PSB14-0-.5-0	RG54A	08/03/10
11	PSB14-1.5-2.	RG54B	08/03/10
12	PSB14-2-4-07	RG54C	08/03/10
13	PSB14-7-9-07	RG54E	08/03/10
14	PSB14-12-14-	RG54F	08/03/10
15	PSB14-12-14-	RG54FMS	08/03/10
16	PSB14-12-14-	RG54FMSD	08/03/10
17	PSB17-0-0.5-	RG54H	08/03/10
18	PSB17-1.5-2-	RG54I	08/03/10
19	PSB17-2-4-07	RG54J	08/03/10
20	PSB17-4-6-07	RG54K	08/03/10
21	PSB17-10-13-	RG54L	08/03/10
22			
23			



ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: MB-080310  
 METHOD BLANK

Lab Sample ID: MB-080310  
 LIMS ID: 10-18280  
 Matrix: Soil  
 Data Release Authorized: *WW*  
 Reported: 08/06/10

QC Report No: RG60-Floyd/Snider  
 Project: Lora Lake RI  
 Event: POS-LLA  
 Date Sampled: NA  
 Date Received: NA

Date Analyzed: 08/03/10 09:10  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	12	< 12 U	
108-88-3	Toluene	12	< 12 U	
100-41-4	Ethylbenzene	12	< 12 U	
179601-23-1	m,p-Xylene	25	< 25 U	
95-47-6	o-Xylene	12	< 12 U	
Gasoline Range Hydrocarbons		5.0	< 5.0 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	94.8%
Bromobenzene	95.1%

**Gasoline Surrogate Recovery**

Trifluorotoluene	100%
Bromobenzene	99.1%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

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

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

4  
BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0805S1

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60

Project No.: LORA LAKE

Date Analyzed : 08/05/10

Matrix: SOIL

Time Analyzed : 1001

Instrument ID : PID2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	LCS0805S1	LCS0805	08/05/10
02	LCSD0805S1	LCSD0805	08/05/10
03	PSB13-0-0.5-	RG60A	08/05/10
04			
05			
06			
07			
08			
09			
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30			

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-080510

METHOD BLANK

Lab Sample ID: MB-080510

LIMS ID: 10-18279

Matrix: Soil

Data Release Authorized: *MMW*

Reported: 08/06/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

Event: POS-LLA

Date Sampled: NA

Date Received: NA

Date Analyzed: 08/05/10 10:01

Instrument/Analyst: PID2/MH

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	12	< 12 U	
108-88-3	Toluene	12	< 12 U	
100-41-4	Ethylbenzene	12	< 12 U	
179601-23-1	m,p-Xylene	25	< 25 U	
95-47-6	o-Xylene	12	< 12 U	
Gasoline Range Hydrocarbons		5.0	< 5.0 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	88.4%
Bromobenzene	89.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	89.0%
Bromobenzene	89.9%

BETX values reported in µg/kg (ppb)  
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

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

6a  
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.  
Instrument/Det: PID2.I/RTX 502-2 FID  
Calibration Date: 28-JUL-2010

Client: FLOYD/SNIDER  
Project: LORA LAKE  
SDG No.: RG60

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 20	Ave RF	%RSD
WA Gas	645285	580360	562860	559889	570101	542758	576875	6.2
AK Gas	1005780	915314	886524	857728	869699	800065	889185	7.7
NW Gas	689685	605684	586542	582439	591310	556137	601966	7.6
8015Gas	1455915	1351382	1309436	1264474	1268273	1179446	1304821	7.2
\$TFT(Surr)	45.63636 39.29000	42.52273	41.85075	40.65000	40.39098	40.27528	41.51659	5.073
\$BB(Surr)	33.22727 28.20000	31.04545	30.40299	29.69000	29.64662	29.08989	30.18603	5.362

<- Indicates %RSD outside limits  
Surrogate areas are not included in RF calculation.

Quant Ranges :   WA Gas   Toluene - nC12  
                  AK Gas   nC6 - nC10  
                  NW Gas   Toluene - Naphthalene  
                  8015 Gas   2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
0728a014.d	28-JUL-2010 13:24
0728a015.d	28-JUL-2010 13:50
0728a016.d	28-JUL-2010 14:16
0728a017.d	28-JUL-2010 14:42
0728a018.d	28-JUL-2010 15:08
0728a019.d	28-JUL-2010 15:34

Surr Calibration Files	Analysis Time
0728a005.d	28-JUL-2010 09:30
0728a006.d	28-JUL-2010 09:56
0728a007.d	28-JUL-2010 10:22
0728a008.d	28-JUL-2010 10:48
0728a009.d	28-JUL-2010 11:14
0728a010.d	28-JUL-2010 11:40
0728a011.d	28-JUL-2010 12:06

6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: 072810-2

Project No.: LORA LAKE

Instrument/Det: PID2 /RTX 502-2 PID

Calibration Date: 07/28/10

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	0.25	0.5	5	25	50		
Benzene	124	116	118	115	116		
Toluene	120	96	102	102	101		
Ethylbenzene	136	128	110	108	107		
M/P-Xylene	84	95	101	99	98		
O-Xylene	80	110	106	105	102		
MTBE	44	44	42	42	41		
TFT (Surr)	15	14	14	14	14		
BB (Surr)	62	58	59	58	57		

Calibration Files

```

/chem3/pid2.i/072810-2.b/0728a005.d
/chem3/pid2.i/072810-2.b/0728a006.d
/chem3/pid2.i/072810-2.b/0728a007.d
/chem3/pid2.i/072810-2.b/0728a008.d
/chem3/pid2.i/072810-2.b/0728a009.d
/chem3/pid2.i/072810-2.b/0728a010.d
/chem3/pid2.i/072810-2.b/0728a011.d

```

6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: 072810-2

Project No.: LORA LAKE

Instrument/Det: PID2 /RTX 502-2 PID

Calibration Date: 07/28/10

COMPOUND	CALIBRATION FACTORS						
	100	200	MEAN	%RSD			
Benzene	111	115	116	3.40			
Toluene	100	106	104	7.49			
Ethylbenzene	105	109	115	10.66			
M/P-Xylene	98	104	97	6.53			
O-Xylene	102	106	102	9.74			
MTBE	40	41	42	3.83			
TFT (Surr)	14	14	14	2.94			
BB (Surr)	57	56	58	3.45			

6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: 072810-2

Project No.: LORA LAKE

Instrument/Det: PID2 /RTX 502-2 PID

Calibration Date: 07/28/10

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	0.25	0.5	5	25	50		
Benzene	124	116	118	115	116		
Toluene	120	96	102	102	101		
Ethylbenzene	136	128	110	108	107		
M/P-Xylene	84	95	101	99	98		
O-Xylene	80	110	106	105	102		
MTBE	44	44	42	42	41		
TFT (Surr)	15	14	14	14	14		
BB (Surr)	62	58	59	58	57		

Calibration Files

```

/chem3/pid2.i/072810-2.b/0728a005.d
/chem3/pid2.i/072810-2.b/0728a006.d
/chem3/pid2.i/072810-2.b/0728a007.d
/chem3/pid2.i/072810-2.b/0728a008.d
/chem3/pid2.i/072810-2.b/0728a009.d
/chem3/pid2.i/072810-2.b/0728a010.d
/chem3/pid2.i/072810-2.b/0728a011.d

```

6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: 072810-2

Project No.: LORA LAKE

Instrument/Det: PID2 /RTX 502-2 PID

Calibration Date: 07/28/10

COMPOUND	CALIBRATION FACTORS						
	100	200	MEAN	%RSD			
Benzene	111	115	116	3.40			
Toluene	100	106	104	7.49			
Ethylbenzene	105	109	115	10.66			
M/P-Xylene	98	104	97	6.53			
O-Xylene	102	106	102	9.74			
MTBE	40	41	42	3.83			
TFT (Surr)	14	14	14	2.94			
BB (Surr)	57	56	58	3.45			



## BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: HART CROWSER

SDG No.: 072810-2

Project No.: POST DREDGE MONITORING

Instrument/Det: PID2/RTX 502-2 PID

Calibration Date: 07/28/10

Init. Calib. Date(s): 07/28/10

Calib. File: 0728A012.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
Benzene	7.48	7.43	7.53	23.80	25.00	-4.8
Toluene	10.09	10.04	10.14	23.79	25.00	-4.8
Ethylbenzene	12.65	12.61	12.71	22.67	25.00	-9.3
M/P-Xylene	12.80	12.75	12.85	49.81	50.00	-0.4
O-Xylene	13.60	13.58	13.64	24.60	25.00	-1.6
MTBE	5.09	5.05	5.15	24.20	25.00	-3.2
TFT (Surr)	8.22	8.18	8.28	95.96	100.0	-4.0
BB (Surr)	14.82	14.77	14.87	97.16	100.0	-2.8

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 28-JUL-2010

SDG No.: RG60

Lab File Name: 0728a021.d

Inst/Det: PID2.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	1722903	2.99	2.50	19.5
AKGas (C6-C10)	2201780	2.48	2.50	-1.0
NWGas (Tol-Nap)	1751023	2.91	2.50	16.4
8015B (2MP-TMB)	2869302	2.20	2.50	-12.0

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 28-JUL-2010

SDG No.: RG60

Lab File Name: 0728a021.d

Inst/Det: PID2.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	68079	98.4	100.0	-1.6
Bromoflrbenz	26233	97.3	100.0	-2.7

7  
BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60

Project No.: LORA LAKE

Instrument/Det: PID2/RTX 502-2 PID

Calibration Date: 08/05/10

Init. Calib. Date(s): 07/28/10

Calib. File: 0805A002.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
Benzene	7.49	7.43	7.53	22.98	25.00	-8.1
Toluene	10.10	10.04	10.14	22.66	25.00	-9.4
Ethylbenzene	12.66	12.61	12.71	21.85	25.00	-12.6
M/P-Xylene	12.81	12.75	12.85	46.63	50.00	-6.7
O-Xylene	13.61	13.58	13.64	23.57	25.00	-5.7
MTBE	5.11	5.05	5.15	22.75	25.00	-9.0
TFT (Surr)	8.24	8.18	8.28	94.77	100.0	-5.2
BB (Surr)	14.83	14.77	14.87	94.58	100.0	-5.4

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 05-AUG-2010

SDG No.: RG60

Lab File Name: 0805a003.d

Inst/Det: PID2.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	1427774	2.48	2.50	-1.0
AKGas (C6-C10)	2253604	2.53	2.50	1.4
NWGas (Tol-Nap)	1482747	2.46	2.50	-1.5
8015B (2MP-TMB)	3268248	2.50	2.50	0.2

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 05-AUG-2010

SDG No.: RG60

Lab File Name: 0805a003.d

Inst/Det: PID2.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	70266	101.9	100.0	1.9
Bromoflrbenz	29802	100.3	100.0	0.3

7  
BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60

Project No.: LORA LAKE

Instrument/Det: PID2/RTX 502-2 PID

Calibration Date: 08/05/10

Init. Calib. Date(s): 07/28/10

Calib. File: 0805A014.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
Benzene	7.49	7.43	7.53	23.84	25.00	-4.6
Toluene	10.09	10.04	10.14	23.08	25.00	-7.7
Ethylbenzene	12.65	12.61	12.71	22.33	25.00	-10.7
M/P-Xylene	12.80	12.75	12.85	47.62	50.00	-4.8
O-Xylene	13.61	13.58	13.64	23.85	25.00	-4.6
MTBE	5.10	5.05	5.15	22.75	25.00	-9.0
TFT (Surr)	8.23	8.18	8.28	92.62	100.0	-7.4
BB (Surr)	14.83	14.77	14.87	92.78	100.0	-7.2

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 05-AUG-2010

SDG No.: RG60

Lab File Name: 0805a015.d

Inst/Det: PID2.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	1397650	2.42	2.50	-3.1
AKGas (C6-C10)	2174980	2.45	2.50	-2.2
NWGas (Tol-Nap)	1450054	2.41	2.50	-3.6
8015B (2MP-TMB)	3191402	2.45	2.50	-2.2

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits



7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 05-AUG-2010

SDG No.: RG60

Lab File Name: 0805a015.d

Inst/Det: PID2.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	67868	97.5	100.0	-2.5
Bromoflrbenz	28997	97.2	100.0	-2.8

7  
 BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60

Project No.: LORA LAKE

Instrument/Det: PID2/RTX 502-2 PID

Calibration Date: 08/05/10

Init. Calib. Date(s): 07/28/10

Calib. File: 0805A033.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
Benzene	7.49	7.43	7.53	23.28	25.00	-6.9
Toluene	10.10	10.04	10.14	22.79	25.00	-8.8
Ethylbenzene	12.66	12.61	12.71	21.77	25.00	-12.9
M/P-Xylene	12.81	12.75	12.85	45.63	50.00	-8.7
O-Xylene	13.61	13.58	13.64	23.14	25.00	-7.4
MTBE	5.11	5.05	5.15	22.27	25.00	-10.9
TFT (Surr)	8.24	8.18	8.28	91.29	100.0	-8.7
BB (Surr)	14.83	14.77	14.87	95.82	100.0	-4.2

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 05-AUG-2010

SDG No.: RG60

Lab File Name: 0805a034.d

Inst/Det: PID2.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	1310244	2.27	2.50	-9.1
AKGas (C6-C10)	1939518	2.18	2.50	-12.8
NWGas (Tol-Nap)	1357790	2.26	2.50	-9.8
8015B (2MP-TMB)	2899900	2.22	2.50	-11.1

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 05-AUG-2010

SDG No.: RG60

Lab File Name: 0805a034.d

Inst/Det: PID2.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	68500	98.7	100.0	-1.3
Bromoflrbenz	29603	101.7	100.0	1.7



## BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60

Project: LORA LAKE

Instrument ID: PID2

GC Detector: RTX 502-2 PID

Run Date: 08/05/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT							
S1 : 8.23		S2 : 14.82					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	S2 RT	#
01	ZZZZZ	ZZZZZ	08/05/10			14.83	
02	RT+BCAL 1	RT+BCAL 1	08/05/10	0817	8.24	14.83	
03	GCAL 1	GCAL 1	08/05/10	0843	8.23	14.83	
04	LCS0805S1	LCS0805	08/05/10	0909	8.23	14.83	
05	LCSD0805S1	LCSD0805	08/05/10	0935	8.23	14.82	
06	MB0805S1	MB0805	08/05/10	1001	8.23	14.82	
07	ZZZZZ	ZZZZZ	08/05/10	1054	8.23	14.83	
08	ZZZZZ	ZZZZZ	08/05/10	1120	8.23	14.83	
09	ZZZZZ	ZZZZZ	08/05/10	1146	8.23	14.83	
10	ZZZZZ	ZZZZZ	08/05/10	1212	8.23	14.83	
11	ZZZZZ	ZZZZZ	08/05/10	1238	8.23	14.83	
12	ZZZZZ	ZZZZZ	08/05/10	1304	8.23	14.83	
13	ZZZZZ	ZZZZZ	08/05/10	1330			
14	BCAL 2	BCAL 2	08/05/10	1356	8.23	14.83	
15	GCAL 2	GCAL 2	08/05/10	1422	8.23	14.83	
16	ZZZZZ	ZZZZZ	08/05/10	1448	8.23	14.83	
17	ZZZZZ	ZZZZZ	08/05/10	1514	8.23	14.83	
18	ZZZZZ	ZZZZZ	08/05/10	1540	8.23	14.83	
19	ZZZZZ	ZZZZZ	08/05/10	1606	8.23	14.83	
20	ZZZZZ	ZZZZZ	08/05/10	1632	8.23	14.83	
21	ZZZZZ	ZZZZZ	08/05/10	1658	8.23	14.83	
22	ZZZZZ	ZZZZZ	08/05/10	1724	8.23	14.83	
23	ZZZZZ	ZZZZZ	08/05/10	1750	8.23	14.83	
24	ZZZZZ	ZZZZZ	08/05/10	1816	8.23	14.83	
25	ZZZZZ	ZZZZZ	08/05/10	1842			
26	ZZZZZ	ZZZZZ	08/05/10	1908	8.23	14.83	
27	ZZZZZ	ZZZZZ	08/05/10	1934	8.24	14.83	
28	ZZZZZ	ZZZZZ	08/05/10	2000	8.24	14.83	
29	ZZZZZ	ZZZZZ	08/05/10	2026	8.24	14.83	
30	ZZZZZ	ZZZZZ	08/05/10	2052	8.23	14.83	
31	PSB13-0-0.5-	RG60A	08/05/10	2118	8.24	14.83	
32	ZZZZZ	ZZZZZ	08/05/10	2144			

QC LIMITS  
S1 = TFT(Surr) (+/- 0.05 MINUTES)  
S2 = BB(Surr) (+/- 0.05 MINUTES)

\* Values outside of QC limits.



6a  
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

Instrument/Det: PID3.I/RTX 502-2 FID

Project: LORA LAKE

Calibration Date: 28-JUL-2010

SDG No.: RG60-RG54

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 20	Ave RF	%RSD
WA Gas	1009250	772696	761867	782843	800745	839442	827807	11.2
AK Gas	1342560	1066876	1050254	1042480	1063396	1225137	1131784	10.9
NW Gas	1102210	829838	811111	828987	844316	875713	882029	12.5
8015Gas	1959390	1600162	1564234	1551602	1571254	1738000	1664107	9.6
\$TFT (Surr)	78.13636 70.30000	73.54545	71.97015	70.35000	70.48120	69.03933	71.97607	4.271
\$BB (Surr)	48.72727 42.23000	43.22727	42.49254	41.18000	42.06767	41.53933	43.06630	5.994

<- Indicates %RSD outside limits  
Surrogate areas are not included in RF calculation.

Quant Ranges :   WA Gas   Toluene - nC12  
                   AK Gas   nC6 - nC10  
                   NW Gas   Toluene - Naphthalene  
                   8015 Gas   2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files      Analysis Time

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0728a012.d	28-JUL-2010 11:42
0728a004.d	28-JUL-2010 08:07
0728a005.d	28-JUL-2010 08:31
0728a006.d	28-JUL-2010 08:56
0728a007.d	28-JUL-2010 09:20
0728a008.d	28-JUL-2010 09:45

Surr Calibration Files      Analysis Time

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0629a005.d	29-JUN-2010 07:59
0629a006.d	29-JUN-2010 08:24
0629a007.d	29-JUN-2010 08:48
0629a008.d	29-JUN-2010 09:12
0629a009.d	29-JUN-2010 09:37
0629a010.d	29-JUN-2010 10:01
0629a011.d	29-JUN-2010 10:26



6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project: LORA LAKE

Instrument/Det: PID3 /RTX 502-2 PID

Calibration Date: 06/29/10

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	0.25	0.5	5	25	50		
Benzene	1564	1462	1257	1240	1256		
Toluene	1608	1252	1288	1275	1275		
Ethylbenzene	1404	1420	1164	1185	1190		
M/P-Xylene	1614	1381	1314	1300	1302		
O-Xylene	1352	1232	1295	1269	1282		
MTBE	464	288	367	346	348		
TFT (Surr)	243	220	213	214	217		
BB (Surr)	496	451	434	440	456		

Calibration Files

/chem3/pid3.i/20100629-1.b/0629a005.d  
 /chem3/pid3.i/20100629-1.b/0629a006.d  
 /chem3/pid3.i/20100629-1.b/0629a007.d  
 /chem3/pid3.i/20100629-1.b/0629a008.d  
 /chem3/pid3.i/20100629-1.b/0629a009.d  
 /chem3/pid3.i/20100629-1.b/0629a010.d  
 /chem3/pid3.i/20100629-1.b/0629a011.d

6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project: LORA LAKE

Instrument/Det: PID3 /RTX 502-2 PID

Calibration Date: 06/29/10

COMPOUND	CALIBRATION FACTORS						
	100	200	MEAN	%RSD			
=====	=====	=====	=====	=====	=====	=====	=====
Benzene	1220	1254	1322	10.16			
Toluene	1247	1294	1320	9.72			
Ethylbenzene	1152	1183	1242	9.38			
M/P-Xylene	1247	1268	1346	9.29			
O-Xylene	1256	1307	1285	3.02			
MTBE	334	343	356	15.04			
=====	=====	=====	=====	=====	=====	=====	=====
TFT (Surr)	212	219	220	4.94			
BB (Surr)	450	463	456	4.41			

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 28-JUL-2010

SDG No.: RG60-RG54

Lab File Name: 0728a010.d

Inst/Det: PID3.I/RTX 502-2 FID

Gas Range	Area*	CalcAmt	NomAmt	%D
WAGas (Tol-C12)	2493506	3.01	2.50	20.5
AKGas (C6-C10)	2858408	2.53	2.50	1.0
NWGas (Tol-Nap)	2556570	2.90	2.50	15.9
8015B (2MP-TMB)	3739886	2.25	2.50	-10.1

<-

\* Surrogate areas are subtracted from Total Area  
 <- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 28-JUL-2010

SDG No.: RG60-RG54

Lab File Name: 0728a010.d

Inst/Det: PID3.I/RTX 502-2 FID

Surrogate	Area	CalcAmt	NomAmt	RPD
Trifluorotol	85915	99.7	100.0	-0.3
Bromoflrbenz	33856	101.1	100.0	1.1

## BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project No.: LORA LAKE

Instrument/Det: PID3/RTX 502-2 PID

Calibration Date: 08/03/10

Init. Calib. Date(s): 06/29/10

Calib. File: 0803A002.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Benzene	7.69	7.65	7.79	25.66	25.00	2.6
Toluene	10.27	10.24	10.38	25.44	25.00	1.8
Ethylbenzene	12.80	12.77	12.91	24.73	25.00	-1.1
M/P-Xylene	12.94	12.91	13.05	49.97	50.00	-0.1
O-Xylene	13.72	13.71	13.81	24.91	25.00	-0.4
MTBE	5.29	5.24	5.38	26.31	25.00	5.2
TFT (Surr)	8.41	8.37	8.51	97.81	100.0	-2.2
BB (Surr)	14.89	14.84	14.98	96.52	100.0	-3.5

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 03-AUG-2010

SDG No.: RG60-RG54

Lab File Name: 0803a003.d

Inst/Det: PID3.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	2059882	2.49	2.50	-0.5
AKGas (C6-C10)	2758865	2.44	2.50	-2.5
NWGas (Tol-Nap)	2190146	2.48	2.50	-0.7
8015B (2MP-TMB)	4090267	2.46	2.50	-1.7

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 03-AUG-2010

SDG No.: RG60-RG54

Lab File Name: 0803a003.d

Inst/Det: PID3.I/RTX 502-2 FID

Surrogate	Area	CalcAmt	NomAmt	RPD
Trifluorotol	93670	109.4	100.0	9.4
Bromoflrbenz	37366	106.5	100.0	6.5

7  
BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project No.: LORA LAKE

Instrument/Det: PID3/RTX 502-2 PID

Calibration Date: 08/03/10

Init. Calib. Date(s): 06/29/10

Calib. File: 0803A014.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Benzene	7.72	7.65	7.79	27.15	25.00	8.6
Toluene	10.31	10.24	10.38	27.51	25.00	10.0
Ethylbenzene	12.84	12.77	12.91	26.67	25.00	6.7
M/P-Xylene	12.98	12.91	13.05	53.70	50.00	7.4
O-Xylene	13.76	13.71	13.81	27.51	25.00	10.0
MTBE	5.31	5.24	5.38	27.09	25.00	8.4
TFT (Surr)	8.44	8.37	8.51	102.5	100.0	2.5
BB (Surr)	14.91	14.84	14.98	104.3	100.0	4.3



7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 03-AUG-2010

SDG No.: RG60-RG54

Lab File Name: 0803a015.d

Inst/Det: PID3.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	2060837	2.49	2.50	-0.4
AKGas (C6-C10)	2737165	2.42	2.50	-3.3
NWGas (Tol-Nap)	2177926	2.47	2.50	-1.2
8015B (2MP-TMB)	4079909	2.45	2.50	-1.9

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 03-AUG-2010

SDG No.: RG60-RG54

Lab File Name: 0803a015.d

Inst/Det: PID3.I/RTX 502-2 FID

Surrogate	Area	CalcAmt	NomAmt	RPD
Trifluorotol	94644	110.1	100.0	10.1
Bromoflrbenz	39566	108.5	100.0	8.5

7  
BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project No.: LORA LAKE

Instrument/Det: PID3/RTX 502-2 PID

Calibration Date: 08/03/10

Init. Calib. Date(s): 06/29/10

Calib. File: 0803A026.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Benzene	7.72	7.65	7.79	26.78	25.00	7.1
Toluene	10.31	10.24	10.38	26.86	25.00	7.4
Ethylbenzene	12.84	12.77	12.91	26.12	25.00	4.5
M/P-Xylene	12.98	12.91	13.05	52.35	50.00	4.7
O-Xylene	13.76	13.71	13.81	26.58	25.00	6.3
MTBE	5.31	5.24	5.38	26.80	25.00	7.2
TFT (Surr)	8.44	8.37	8.51	103.2	100.0	3.2
BB (Surr)	14.91	14.84	14.98	103.1	100.0	3.1

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 03-AUG-2010

SDG No.: RG60-RG54

Lab File Name: 0803a027.d

Inst/Det: PID3.I/RTX 502-2 FID

Gas Range	Area*	CalcAmt	NomAmt	%D
WAGas (Tol-C12)	2033253	2.46	2.50	-1.8
AKGas (C6-C10)	2663212	2.35	2.50	-5.9
NWGas (Tol-Nap)	2147059	2.43	2.50	-2.6
8015B (2MP-TMB)	3991386	2.40	2.50	-4.1

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 03-AUG-2010

SDG No.: RG60-RG54

Lab File Name: 0803a027.d

Inst/Det: PID3.I/RTX 502-2 FID

Surrogate	Area	CalcAmt	NomAmt	RPD
Trifluorotol	93833	108.9	100.0	8.9
Bromoflrbenz	38029	108.1	100.0	8.1

## BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project No.: LORA LAKE

Instrument/Det: PID3/RTX 502-2 PID

Calibration Date: 08/03/10

Init. Calib. Date(s): 06/29/10

Calib. File: 0803A034.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Benzene	7.71	7.65	7.79	27.62	25.00	10.5
Toluene	10.31	10.24	10.38	27.64	25.00	10.6
Ethylbenzene	12.84	12.77	12.91	26.68	25.00	6.7
M/P-Xylene	12.98	12.91	13.05	53.57	50.00	7.1
O-Xylene	13.76	13.71	13.81	27.72	25.00	10.9
MTBE	5.30	5.24	5.38	26.83	25.00	7.3
TFT (Surr)	8.44	8.37	8.51	100.5	100.0	0.5
BB (Surr)	14.91	14.84	14.98	106.8	100.0	6.8

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 03-AUG-2010

SDG No.: RG60-RG54

Lab File Name: 0803a035.d

Inst/Det: PID3.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	1918976	2.32	2.50	-7.3
AKGas (C6-C10)	2475978	2.19	2.50	-12.5
NWGas (Tol-Nap)	2026436	2.30	2.50	-8.1
8015B (2MP-TMB)	3757672	2.26	2.50	-9.7

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 03-AUG-2010

SDG No.: RG60-RG54

Lab File Name: 0803a035.d

Inst/Det: PID3.I/RTX 502-2 FID

Surrogate	Area	CalcAmt	NomAmt	RPD
Trifluorotol	92144	106.6	100.0	6.6
Bromoflrbenz	37796	110.6	100.0	10.6



8  
BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project: LORA LAKE

Instrument ID: PID3

GC Detector: RTX 502-2 PID

Run Date: 06/29/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT					
		S1 : 8.44		S2 : 14.91	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
=====					
01	RINSE	06/29/10	0548		
02	RT+BCAL 1	06/29/10	0613	8.42	14.90
03	GCAL 1	06/29/10	0637	8.43	14.91
04	RINSE	06/29/10	0735		
05	BETX .25	06/29/10	0759	8.42	14.89
06	BETX .5	06/29/10	0824	8.43	14.90
07	BETX 5	06/29/10	0848	8.43	14.91
08	BETX 25	06/29/10	0912	8.44	14.91
09	BETX 50	06/29/10	0937	8.44	14.91
10	BETX 100	06/29/10	1001	8.44	14.91
11	BETX 200	06/29/10	1026	8.44	14.91
12	BETX ICV	06/29/10	1050	8.44	14.91
13	GCAL 2	06/29/10	1145	8.37	14.87
14	LCS0629	06/29/10	1210	8.42	14.89
15	LCSD0629	06/29/10	1234	8.43	14.90
16	MB0629	06/29/10	1259	8.43	14.91
17	ZZZZZ	06/29/10	1344	8.38	14.88
18	ZZZZZ	06/29/10	1408	8.42	14.90
19	ZZZZZ	06/29/10	1433	8.43	14.90
20	ZZZZZ	06/29/10	1458	8.43	14.91
21	ZZZZZ	06/29/10	1522	8.43	14.91
22	ZZZZZ	06/29/10	1547	8.44	14.91
23	ZZZZZ	06/29/10	1611	8.44	14.91
24	RINSE	06/29/10	1636		
25	BCAL 3	06/29/10	1700	8.44	14.91
26	GCAL 2	06/29/10	1725	8.44	14.91

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)  
S2 = BB(Surr) (+/- 0.07 MINUTES)

\* Values outside of QC limits.

## BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project: LORA LAKE

Instrument ID: PID3

GC Detector: RTX 502-2 FID

Run Date: 07/28/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT					
S1 : 8.44		S2 : 14.91			
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	ZZZZZ	07/28/10	0653		14.86
02	RT+BCAL 1	07/28/10	0718	8.41	14.89
03	ZZZZZ	07/28/10	0742	8.43	14.90
04	GAS .25	07/28/10	0807	8.43	14.91
05	GAS 1	07/28/10	0831	8.44	14.91
06	GAS 2.5	07/28/10	0856	8.44	14.91
07	GAS 5	07/28/10	0920	8.44	14.91
08	GAS 20	07/28/10	0945	8.44	14.91
09	ZZZZZ	07/28/10	1009		14.84
10	GAS ICV	07/28/10	1034	8.44	14.91
11	ZZZZZ	07/28/10	1117		14.93
12	GAS .1	07/28/10	1142	8.43	14.90

QC LIMITS  
 S1 = TFT(Surr) (+/- 0.07 MINUTES)  
 S2 = BB(Surr) (+/- 0.07 MINUTES)

\* Values outside of QC limits.

## BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project: LORA LAKE

Instrument ID: PID3

GC Detector: RTX 502-2 PID

Run Date: 08/03/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT				S1	S2
S1 : 8.44		S2 : 14.91			
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	ZZZZZ	08/03/10	0708		
02	RT+BCAL 1	08/03/10	0732	8.41	14.89
03	GCAL 1	08/03/10	0757	8.42	14.90
04	LCS0803S1	08/03/10	0821	8.43	14.91
05	LCSD0803S1	08/03/10	0846	8.44	14.91
06	MB0803S1	08/03/10	0910	8.44	14.91
07	PSB14-TB	08/03/10	1005	8.37	14.87
08	PSB13-TB	08/03/10	1030	8.42	14.89
09	ZZZZZ	08/03/10	1054	8.43	14.90
10	PSB13-1.5-2-	08/03/10	1119	8.44	14.91
11	PSB13-2-4-07	08/03/10	1143	8.44	14.91
12	PSB13-4-6-07	08/03/10	1208	8.44	14.91
13	ZZZZZ	08/03/10	1232		
14	BCAL 2	08/03/10	1256	8.44	14.91
15	GCAL 2	08/03/10	1320	8.44	14.91
16	PSB13-11-13-	08/03/10	1345	8.44	14.91
17	PSB13-14.5-1	08/03/10	1410	8.44	14.91
18	PSB14-0-.5-0	08/03/10	1435	8.44	14.91
19	PSB14-1.5-2.	08/03/10	1459	8.44	14.91
20	PSB14-2-4-07	08/03/10	1524	8.44	14.91
21	PSB14-7-9-07	08/03/10	1548	8.44	14.91
22	PSB14-12-14-	08/03/10	1613	8.44	14.91
23	PSB14-12-14-	08/03/10	1637	8.44	14.91
24	PSB14-12-14-	08/03/10	1702	8.44	14.91
25	ZZZZZ	08/03/10	1727		
26	BCAL3	08/03/10	1751	8.44	14.91
27	GCAL 3	08/03/10	1816	8.44	14.91
28	PSB17-0-0.5-	08/03/10	1840	8.44	14.91
29	PSB17-1.5-2-	08/03/10	1904	8.44	14.91
30	PSB17-2-4-07	08/03/10	1929	8.44	14.91
31	PSB17-4-6-07	08/03/10	1954	8.44	14.91
32	PSB17-10-13-	08/03/10	2018	8.44	14.91

## QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)  
S2 = BB(Surr) (+/- 0.07 MINUTES)

\* Values outside of QC limits.

8  
BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RG60-RG54

Project: LORA LAKE

Instrument ID: PID3

GC Detector: RTX 502-2 PID

Run Date: 08/03/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT					
S1 : 8.44		S2 : 14.91			
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
=====	=====	=====	=====	=====	=====
01 ZZZZZ	ZZZZZ	08/03/10	2043		
02 BCAL 4	BCAL 4	08/03/10	2108	8.44	14.91
03 GCAL 4	GCAL 4	08/03/10	2132	8.44	14.91

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)  
S2 = BB(Surr) (+/- 0.07 MINUTES)

\* Values outside of QC limits.

**Metals Analysis  
Report and Summary QC Forms**

**ARI Job ID: RG60**

# Cover Page

INORGANIC ANALYSIS DATA PACKAGE



CLIENT: Floyd/Snider

PROJECT: Lora Lake RI

SDG: RG60

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
PSB13-0-0.5-072910	RG60A	10-18279	
PSB13-0-0.5-072910D	RG60ADUP	10-18279	
PSB13-0-0.5-072910S	RG60ASPK	10-18279	
PSB13-1.5-2-072910	RG60B	10-18280	
PBS	RG60MB1	10-18280	
LCSS	RG60MB1SPK	10-18280	
LCSS	RG60REF1	10-18280	
PSB13-2-4-072910	RG60C	10-18281	
PSB13-4-6-072910	RG60D	10-18282	
PSB13-11-13-072910	RG60E	10-18283	
PSB13-14.5-16.5-07	RG60F	10-18284	

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: 

Name: Jay Kuhn

Date: 10/11/10

Title: Inorganic Manager

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

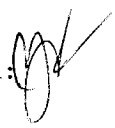
Sample ID: PSB13-0-0.5-072910

**SAMPLE**

Lab Sample ID: RG60A

LIMS ID: 10-18279

Matrix: Soil

Data Release Authorized: 

Reported: 08/11/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Percent Total Solids: 93.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/03/10	6010B	08/09/10	7440-38-2	Arsenic	5	11	
3050B	08/03/10	6010B	08/09/10	7439-92-1	Lead	2	60	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: PSB13-0-0.5-072910

**MATRIX SPIKE**

Lab Sample ID: RG60A


QC Report No: RG60-Floyd/Snider

LIMS ID: 10-18279

Project: Lora Lake RI

Matrix: Soil

POS-LLA

Data Release Authorized: 

Date Sampled: 07/29/10

Reported: 08/11/10

Date Received: 07/29/10

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	11	202	200	95.5%	
Lead	6010B	60	242	200	91.0%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: PSB13-0-0.5-072910

DUPLICATE

Lab Sample ID: RG60A

LIMS ID: 10-18279

Matrix: Soil

Data Release Authorized 

Reported: 08/11/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	11	11	0.0%	+/- 5	L
Lead	6010B	60	63	4.9%	+/- 20%	

Reported in mg/kg-dry

\*-Control Limit Not Met


L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: PSB13-1.5-2-072910  
SAMPLE

Lab Sample ID: RG60B  
LIMS ID: 10-18280  
Matrix: Soil  
Data Release Authorized:   
Reported: 08/11/10

QC Report No: RG60-Floyd/Snider  
Project: Lora Lake RI  
POS-LLA  
Date Sampled: 07/29/10  
Date Received: 07/29/10

Percent Total Solids: 92.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/03/10	6010B	08/10/10	7440-38-2	Arsenic	5	5	U
3050B	08/03/10	6010B	08/10/10	7439-92-1	Lead	2	29	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: PSB13-2-4-072910

**SAMPLE**

Lab Sample ID: RG60C

LIMS ID: 10-18281

Matrix: Soil

Data Release Authorized: 

Reported: 08/11/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Percent Total Solids: 92.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/03/10	6010B	08/09/10	7440-38-2	Arsenic	5	5	U
3050B	08/03/10	6010B	08/09/10	<b>7439-92-1</b>	<b>Lead</b>	2	<b>18</b>	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: PSB13-4-6-072910

SAMPLE

Lab Sample ID: RG60D

LIMS ID: 10-18282

Matrix: Soil

Data Release Authorized: 

Reported: 08/11/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Percent Total Solids: 89.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/03/10	6010B	08/10/10	7440-38-2	Arsenic	10	10	U
3050B	08/03/10	6010B	08/10/10	7439-92-1	Lead	5	23	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

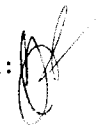
Sample ID: PSB13-11-13-072910

SAMPLE

Lab Sample ID: RG60E

LIMS ID: 10-18283

Matrix: Soil

Data Release Authorized: 

Reported: 08/11/10

QC Report No: RG60-Floyd/Snider

Project: Lora Lake RI

POS-LLA

Date Sampled: 07/29/10

Date Received: 07/29/10

Percent Total Solids: 90.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/03/10	6010B	08/09/10	7440-38-2	Arsenic	5	5	U
3050B	08/03/10	6010B	08/09/10	7439-92-1	Lead	2	3	

U-Analyte undetected at given RL

RL-Reporting Limit