Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 210098
ANALYTICAL REPORT

Baseline Environmental	Project	: Y0239-04.A3
5900 Hollis Street	Location	: Doyle Drive Replacement Project
Emeryville, CA 94608	Level	: III

Sample ID	Lab ID
E051	210098-001
E049	210098-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____ Date: 02/26/2009
Project Manager

Signature: _____ Date: 02/27/2009
Senior Program Manager

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**210098**
Client:	**Baseline Environmental**
Project:	**Y0239-04.A3**
Location:	**Doyle Drive Replacement Project**
Request Date:	**02/18/09**
Samples Received:	**02/18/09**

This data package contains sample and QC results for two water samples, requested for the above referenced project on 02/18/09. See attached cooler receipt form for any sample receipt problems or discrepancies.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):
No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):
High responses were observed for bromoform and vinyl acetate in the CCV analyzed 02/23/09 14:36; these analytes were not detected at or above the RL in the associated samples.

Low recoveries were observed for trichloroethene in the MS/MSD for batch 148175; the parent sample was not a project sample, the BS/BSD were within limits, and the associated RPD was within limits.

No other analytical problems were encountered.

Semivolatile Organics by GC/MS (EPA 8270C):
Low surrogate recoveries were observed for 2-fluorophenol in the MS/MSD for batch 148131; the parent sample was not a project sample.

No other analytical problems were encountered.

PCBs (EPA 8082):
All samples underwent sulfuric acid cleanup using EPA Method 3665A.

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B.

Low surrogate recoveries were observed for decachlorobiphenyl in E051 (lab # 210098-001), E049 (lab # 210098-002), and the method blank/BS/BSD for batch 148160; the corresponding TCMX surrogate recoveries were within limits.

No other analytical problems were encountered.

Metals (EPA 6020 and EPA 7470A):
No analytical problems were encountered.

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**210098**
Client:	**Baseline Environmental**
Project:	**Y0239-04.A3**
Location:	**Doyle Drive Replacement Project**
Request Date:	**02/18/09**
Samples Received:	**02/18/09**

Ion Chromatography (EPA 300.0):
No analytical problems were encountered.

Dissolved Sulfide (SM4500S2-D):
No analytical problems were encountered.

Total Suspended Solids (TSS) (SM2540D):
No analytical problems were encountered.

pH (EPA 9040C):
No analytical problems were encountered.

Chemical Oxygen Demand (SM5220D):
High MS recovery, low MSD recovery, and high RPD were observed for COD in batch 14820. We suspect that the MSD was inadvertently not spiked. The parent sample was not a project sample, and the LCS was within limits.

No other analytical problems were encountered.

Chain of Custody

210098

BASELINE Environmental Consulting

5900 Hollis Street, Suite D
Emeryville, CA 94608
Tel: (510) 420-8686 Fax: (510) 420-1707

CHAIN OF CUSTODY RECORD

Turn-Around-Time Standard
Laboratory Curtis and Tompkins, Ltd.
BASELINE Contact Person Cheri Page

Project Number Y0239-04.A3
Project Name: Doyle Drive Replacement Project
Samplers: (Signature)

[1]As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, and Zn

Sample ID No. Station	Date	Time	Media	Containers No.	Type: L-AG	Type: 40-ml VOA	Type: 500 ml-Poly	Type: 250 ml Poly	Preservative: Ice	Preservative: HCL	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: NaOH	TPH-g (EPA Method 8015M)	TPH-d and mo (EPA Method 8015M with silica gel cleanup)	VOC (EPA Method 8260)	PCB (EPA Method 8082)	SVOC (EPA Method 8270)	Dissolved Sulfides	pH	Total Suspended Solids	Chemical Oxygen Demad	Chlorides	Metals[1] (EPA Method 6010B/7471)	Remarks/ Composite
E051	2-18-09	7:50	water	14		6				X				X		X									
					4										X		X	X			X				
							1						X						X						
								1												X			X		
								1				X										X			
							1				X													X	
E049	2-18-09	10:14	water	14		6				X				X		X									
					4										X		X	X			X				
							1						X						X						
								1												X			X		
								1				X													
							1				X													X	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	
	2-18-09 12:32		2-18-09 1330	Arrival at Laboratory:
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		Remarks:
				Email contact: cheri@baseline-env.com
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		

Received at laboratory with intact: YES NO
Comments:

Y0239-04.A3.DoyleDrive_gw_chain_of_custody(1).xls

Lisa Brooker

From: "Cheri" <cheri@baseline-env.com>
To: "'Lisa Brooker'" <lisa@ctberk.com>
Sent: Friday, February 20, 2009 10:56 AM
Subject: RE: Y0239-04.A3 - C&T Login Summary (210098)

That was an error, Lisa. Please run COD. Thanks for catching that!

Respectfully,
Cheri Page, Senior Geologist
Baseline Environmental Consulting
101 H Street, Suite C
Petaluma, CA 94952
(707) 762-5233

-----Original Message-----
From: Lisa Brooker [mailto:lisa@ctberk.com]
Sent: Thursday, February 19, 2009 3:44 PM
To: cheri@baseline-env.com
Cc: nbosch@lab-data.com
Subject: Y0239-04.A3 - C&T Login Summary (210098)

Hi Cheri,
Do you not want to run COD on E049 or was there an error when marking the COC?
Thanks,
Lisa

C&T Login Summary for 210098

Project: Y0239-04.A3
Site: Doyle Drive Replacement Project
Lab Login #: 210098
Report Due: 02/25/09
PO#:
C&T Proj Mgr: Lisa Brooker

Report To: 5900 Hollis Street
Suite D
Emeryville, CA 94608
ATTN: Cheri Page
(510) 420-8686

Bill To: 901 Market St
Suite 260
San Francisco, CA 94103
ATTN: Bill Sievers
(415) 957-9445

Comments: SuiteA=8150,8081, T26

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 210098 Date Received 2/18/09 Number of coolers 2
Client Baseline Project Dayle Replacement project

Date Opened 2/18/09 By (print) D. Huong (sign) D. Le
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
   Shipping info _____

2A. Were custody seals present? ... ☐ YES (circle) on cooler on samples ☑ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☑ Foam blocks ☑ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☑ Wet ☐ Blue/Gel ☐ None Temp(°C) _____

☑ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
   If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
11. Are sample labels present, in good condition and complete? _____ (YES) NO
12. Do the sample labels agree with custody papers? _____ (YES) NO
13. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
14. Are the samples appropriately preserved? _____ (YES) NO N/A
15. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
16. Was the client contacted concerning this sample delivery? _____ YES NO
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____

Laboratory Job Number 210098

ANALYTICAL REPORT

TPH-Purgeables and/or BTXE by GC

Matrix: Water

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	02/18/09
Units:	ug/L	Received:	02/18/09
Diln Fac:	1.000		

Field ID:	E051	Batch#:	148076
Type:	SAMPLE	Analyzed:	02/19/09
Lab ID:	210098-001		

Analyte	Result	RL
Gasoline C7-C12	2,600	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	115	65-135

Field ID:	E049	Batch#:	148148
Type:	SAMPLE	Analyzed:	02/22/09
Lab ID:	210098-002		

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	65-135

Type:	BLANK	Batch#:	148076
Lab ID:	QC483938	Analyzed:	02/19/09

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	89	65-135

Type:	BLANK	Batch#:	148148
Lab ID:	QC484280	Analyzed:	02/21/09

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	65-135

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC483939	Batch#:	148076
Matrix:	Water	Analyzed:	02/19/09
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	853.1	85	75-125

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	96	65-135

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	148076
MSS Lab ID:	210094-001	Sampled:	02/17/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Analyzed:	02/20/09
Diln Fac:	25.00		

Type: MS Lab ID: QC483940

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	61,570	50,000	110,700	98	75-125

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	65-135

Type: MSD Lab ID: QC484047

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	50,000	110,900	99	75-125	0	35

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	65-135

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8015B
Type:	BS	Diln Fac:	1.000
Lab ID:	QC484281	Batch#:	148148
Matrix:	Water	Analyzed:	02/21/09
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,057	106	75-125

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	65-135

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8015B
Type:	BSD	Diln Fac:	1.000
Lab ID:	QC484450	Batch#:	148148
Matrix:	Water	Analyzed:	02/21/09
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,932	97	75-125	9	35

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	119	65-135

RPD= Relative Percent Difference

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCVOA Water: EPA 8015B / EPA 8021B

Inst : GC04
Calnum : 309007933001
Units : ng

Name : gc04 surr ical 005
Date : 05-JAN-2009 20:46
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	005_012	309007933012	SURROGATE_1	05-JAN-2009 20:46	S10937 (5000X)
L2	005_013	309007933013	SURROGATE_2	05-JAN-2009 21:24	S10937 (5000X)
L3	005_014	309007933014	SURROGATE_3	05-JAN-2009 22:02	S10937 (5000X)
L4	005_015	309007933015	SURROGATE_4	05-JAN-2009 22:39	S10937 (5000X)
L5	005_016	309007933016	SURROGATE_5	05-JAN-2009 23:17	S10937 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Bromofluorobenzene (FID)	A	1079.0	1139.4	1096.2	1111.2	1091.6	AVRG		9.06E-4		1103.5	2	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Bromofluorobenzene (FID)	A	450.0	-2	450.0	3	450.0	-1	450.0	1	450.0	-1

Analyst: PDM Date: 01/06/09 Reviewer: CP Date: 01/06/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCVOA Water: EPA 8015B

Inst : GC04
Calnum : 309007933002
Units : ng

Name : gc04 tvh ical 005
Date : 06-JAN-2009 01:10
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	005_019	309007933019	TVH_14	06-JAN-2009 01:10	S11030 (1000X), S10937 (5000X)
L2	005_020	309007933020	TVH_15	06-JAN-2009 01:47	S11029 (1000X), S10937 (5000X)
L3	005_021	309007933021	TVH_16	06-JAN-2009 02:25	S11028 (1000X), S10937 (5000X)
L4	005_022	309007933022	TVH_17	06-JAN-2009 03:03	S11027 (2000X), S10937 (5000X)
L5	005_023	309007933023	TVH_18	06-JAN-2009 03:40	S11027 (1000X), S10937 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Gasoline C7-C12	A	3845.9	3045.5	3027.0	2525.9	2762.8	AVRG		3.29E-4		3041.4	16	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C7-C12	A	250.0	26	2500	0	10000	0	25000	-17	50000	-9

PDM 01/06/09 : separted from coeluting peak, TFT, run 005_023

Analyst: PDM Date: 01/06/09 Reviewer: CP Date: 01/07/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 GCVOA Water
EPA 8015B

Inst : GC04 Name : gc04 tvh ical 005
Calnum : 309007933002 Cal Date : 06-JAN-2009

ICV 309007933025 (005_025 06-JAN-2009) stds: S10986 (1000X), S10937 (5000X)

Analyte	Ch	Average RF	RF	Spiked	Quant	Units	%D	Flags
Gasoline C7-C12	A	3041.4	2785.6	10000	9159	ng	-8	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCVOA Water: EPA 8015B

Inst : GC05
Calnum : 318458384002
Units : ng

Name : tvh ical 318
Date : 14-NOV-2008 03:44
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	318_029	318458384029	TVH_14	14-NOV-2008 03:44	S10005 (1000X), S10412 (5000X)
L2	318_030	318458384030	TVH_15	14-NOV-2008 04:19	S10004 (1000X), S10412 (5000X)
L3	318_031	318458384031	TVH_16	14-NOV-2008 04:55	S10003 (1000X), S10412 (5000X)
L4	318_032	318458384032	TVH_17	14-NOV-2008 05:30	S10002 (2000X), S10412 (5000X)
L5	318_033	318458384033	TVH_18	14-NOV-2008 06:06	S10002 (1000X), S10412 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Gasoline C7-C12	A	3524.5	2640.1	2518.9	2697.7	2485.5	AVRG		3.61E-4		2773.3	15	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C7-C12	A	250.0	27	2500	-5	10000	-9	25000	-3	50000	-10

PDM 11/14/08 : fronting/tailing integration TFT

Analyst: PDM Date: 11/14/08 Reviewer: CP Date: 11/16/08

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 GCVOA Water
EPA 8015B

Inst : GC05 Name : tvh ical 318
Calnum : 318458384002 Cal Date : 14-NOV-2008

ICV 318458384036 (318_036 14-NOV-2008) stds: S10001 (1000X), S10412 (5000X)

Analyte	Ch	Average RF	RF	Spiked	Quant	Units	%D	Flags
Gasoline C7-C12	A	2773.3	2786.6	10000	10050	ng	0	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCVOA Water: EPA 8015B / EPA 8021B

Inst : GC05
Calnum : 319040770001
Units : ng

Name : gc05 surr ical 028
Date : 28-JAN-2009 11:20
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	028_007	319040770007	SURROGATE_1	28-JAN-2009 11:20	S10937 (5000X)
L2	028_008	319040770008	SURROGATE_2	28-JAN-2009 11:55	S10937 (5000X)
L3	028_009	319040770009	SURROGATE_3	28-JAN-2009 12:31	S10937 (5000X)
L4	028_010	319040770010	SURROGATE_4	28-JAN-2009 13:06	S10937 (5000X)
L5	028_011	319040770011	SURROGATE_5	28-JAN-2009 13:42	S10937 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Bromofluorobenzene (FID)	A	1906.9	2027.0	1987.0	1915.9	1872.3	AVRG		5.15E-4		1941.8	3	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Bromofluorobenzene (FID)	A	450.0	-2	450.0	4	450.0	2	450.0	-1	450.0	-4

Analyst: PDM Date: 01/29/09 Reviewer: ATL Date: 01/29/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS SPIKE USER REPORT FOR 210098 GCVOA Water
EPA 8015B

Inst : GC04 Run Name : QC483939 IDF : 1.0
Seqnum : 309072488003.4 File : 050_003 Time : 19-FEB-2009 09:23
Standards: S10986 (2000X), S10937 (5000X)

Analyte	Ch	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	309007933002	06-JAN-2009	3041.4	2594.7	5000	4266	ng	-15	15	u
Bromofluorobenzene (FID)	A	309007933001	05-JAN-2009	1103.5	1063.6	450.0	433.7	ng	-4	15	u

Analyst: WNH Date: 02/23/09 Reviewer: ATL Date: 02/24/09

u=use

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCVOA Water
EPA 8015B

Inst : GC04 Run Name : STODDARD IDF : 1.0
Seqnum : 309072488013 File : 050_013 Time : 19-FEB-2009 17:05
Cal : 309007933001 Caldate : 05-JAN-2009
Standards: S10978 (1000X), S10937 (5000X)

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Bromofluorobenzene (FID)	A	1103.5	1981.2	450.0	807.9	ng	**80**	15	c+

PDM 02/20/09 : PID surrogates are not applicable.

PDM 02/20/09 [Bromofluorobenzene (FID) A]: Fails high due to coelution with standard.

Analyst: PDM Date: 02/20/09 Reviewer: EAH Date: 02/20/09

+=high bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCVOA Water
EPA 8015B

Inst : GC04 Run Name : TVH IDF : 1.0
Seqnum : 309072488014 File : 050_014 Time : 19-FEB-2009 17:42
Standards: S10986 (1000X), S10937 (5000X)

Analyte	Ch	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	309007933002	06-JAN-2009	3041.4	2576.3	10000	8471	ng	-15	15	
Bromofluorobenzene (FID)	A	309007933001	05-JAN-2009	1103.5	1247.5	450.0	508.7	ng	13	15	

PDM 02/20/09 : Corrected automatically drawn baseline .

PDM 02/20/09 [Trifluorotoluene (FID) A]: Corrected fronting or tailing peak integration .

Analyst: PDM Date: 02/20/09 Reviewer: EAH Date: 02/20/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCVOA Water
EPA 8015B

Inst : GC04 Run Name : TVH IDF : 1.0
Seqnum : 309072488026 File : 050_026 Time : 20-FEB-2009 01:25
Standards: S11421 (666.7X), S10937 (5000X)

Analyte	Ch	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	309007933002	06-JAN-2009	3041.4	2660.3	15000	13120	ng	-13	15	
Bromofluorobenzene (FID)	A	309007933001	05-JAN-2009	1103.5	1388.5	450.0	566.2	ng	**26**	15	c+

PDM 02/20/09 [Trifluorotoluene (FID) A]: Passes control limits.

PDM 02/20/09 [Bromofluorobenzene (FID) A]: Passes control limits.

Analyst: PDM Date: 02/20/09 Reviewer: EAH Date: 02/20/09

+=high bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCVOA Water
EPA 8015B

Inst : GC04 Run Name : TVH IDF : 1.0
Seqnum : 309072488033 File : 050_033 Time : 20-FEB-2009 10:10
Standards: S11421 (666.7X), S10937 (5000X)

Analyte	Ch	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	309007933002	06-JAN-2009	3041.4	2915.9	15000	14380	ng	-4	15	
Bromofluorobenzene (FID)	A	309007933001	05-JAN-2009	1103.5	1350.0	450.0	550.5	ng	**22**	15	c+

PDM 02/20/09 : PID surrogates are not applicable.

PDM 02/20/09 [Trifluorotoluene (FID) A]: Passes control limits.

PDM 02/20/09 [Bromofluorobenzene (FID) A]: Passes control limits.

Analyst: PDM Date: 02/20/09 Reviewer: EAH Date: 02/20/09

+=high bias c=CCV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 210098 GCVOA Water
EPA 8015B

Inst : GC05 Run Name : QC484281 IDF : 1.0
Seqnum : 319075628002.3 File : 052_002 Time : 21-FEB-2009 13:04
Standards: S11421 (2000X), S10937 (5000X)

Analyte	Ch	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	318458384002	14-NOV-2008	2773.3	2932.3	5000	5287	ng	6	15	u
Bromofluorobenzene (FID)	A	319040770001	28-JAN-2009	1941.8	2117.3	450.0	490.7	ng	9	15	u

WNH 02/23/09 [Trifluorotoluene (FID) A]: Passes control limits. [general version]

WNH 02/24/09 : Changed to CCV/BS due to >LR MSS/MS/MSD [general version]

Analyst: WNH Date: 02/23/09 Reviewer: ATL Date: 02/24/09

u=use

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCVOA Water
EPA 8015B

Inst : GC05 Run Name : TVH IDF : 1.0
Seqnum : 319075628018 File : 052_018 Time : 21-FEB-2009 22:46
Standards: S11421 (1000X), S10937 (5000X)

Analyte	Ch	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	318458384002	14-NOV-2008	2773.3	2609.4	10000	9409	ng	-6	15	
Bromofluorobenzene (FID)	A	319040770001	28-JAN-2009	1941.8	2201.9	450.0	510.3	ng	13	15	

WNH 02/23/09 [Trifluorotoluene (FID) A]: Passes control limits.

WNH 02/23/09 : PID surrogates are not applicable.

Analyst: WNH Date: 02/23/09 Reviewer: ATL Date: 02/24/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCVOA Water
EPA 8015B

Inst : GC05 Run Name : STODDARD IDF : 1.0
Seqnum : 319075628021 File : 052_021 Time : 22-FEB-2009 00:33
Cal : 319040770001 Caldate : 28-JAN-2009
Standards: S10978 (1000X), S10937 (5000X)

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Bromofluorobenzene (FID)	A	1941.8	3050.7	450.0	707.0	ng	**57**	15	c+

WNH 02/23/09 : PID surrogates are not applicable.

WNH 02/23/09 [Bromofluorobenzene (FID) A]: Fails high due to coelution with standard.

Analyst: WNH Date: 02/23/09 Reviewer: ATL Date: 02/24/09

+=high bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCVOA Water
EPA 8015B

Inst : GC05 Run Name : TVH IDF : 1.0
Seqnum : 319075628034 File : 052_034 Time : 22-FEB-2009 08:15
Standards: S11421 (666.7X), S10937 (5000X)

Analyte	Ch	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	318458384002	14-NOV-2008	2773.3	2635.1	15000	14250	ng	-5	15	
Bromofluorobenzene (FID)	A	319040770001	28-JAN-2009	1941.8	2364.3	450.0	547.9	ng	**22**	15	c+

WNH 02/23/09 : PID surrogates are not applicable.

WNH 02/23/09 [Trifluorotoluene (FID) A]: Fails high due to coelution with standard.

WNH 02/23/09 [Bromofluorobenzene (FID) A]: Passes control limits.

Analyst: WNH Date: 02/23/09 Reviewer: ATL Date: 02/24/09

+=high bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCVOA Water
EPA 8015B

Inst : GC05 Run Name : TVH IDF : 1.0
Seqnum : 319075628045 File : 052_045 Time : 22-FEB-2009 14:45
Standards: S11421 (666.7X), S10937 (5000X)

Analyte	Ch	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	318458384002	14-NOV-2008	2773.3	2526.5	15000	13660	ng	-9	15	
Bromofluorobenzene (FID)	A	319040770001	28-JAN-2009	1941.8	2349.3	450.0	544.4	ng	**21**	15	c+

WNH 02/23/09 [Trifluorotoluene (FID) A]: Fails high due to coelution with standard.

WNH 02/23/09 [Bromofluorobenzene (FID) A]: Passes control limits.

WNH 02/23/09 : PID surrogates are not applicable.

Analyst: WNH Date: 02/23/09 Reviewer: ATL Date: 02/24/09

+=high bias c=CCV

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 309007933

Instrument : GC04 Begun : 01/05/09 12:13
Method : EPA 8015B, EPA 8021B SOP Version : TVH_BTXE_rv14

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
005	005_005	CCV/LCS	QC478106	Soil	146649	01/05/09 12:13	1.0	1 2	
006	005_006	CCV	TVH			01/05/09 14:08	1.0	1 2	
007	005_007	CCV	TVH			01/05/09 14:46	1.0	1 2	
008	005_008	X	IB			01/05/09 18:16	1.0	2	
009	005_009	X	IB			01/05/09 18:53	1.0	2	
010	005_010	X	IB			01/05/09 19:31	1.0	2	
011	005_011	X	IB			01/05/09 20:09	1.0	2	
012	005_012	ICAL	SURROGATE_1			01/05/09 20:46	1.0	2	
013	005_013	ICAL	SURROGATE_2			01/05/09 21:24	1.0	2	
014	005_014	ICAL	SURROGATE_3			01/05/09 22:02	1.0	2	
015	005_015	ICAL	SURROGATE_4			01/05/09 22:39	1.0	2	
016	005_016	ICAL	SURROGATE_5			01/05/09 23:17	1.0	2	
017	005_017	IB	CALIB			01/05/09 23:54	1.0	2	
018	005_018	X				01/06/09 00:32	1.0	2	
019	005_019	ICAL	TVH_14			01/06/09 01:10	1.0	3 2	
020	005_020	ICAL	TVH_15			01/06/09 01:47	1.0	4 2	
021	005_021	ICAL	TVH_16			01/06/09 02:25	1.0	5 2	
022	005_022	ICAL	TVH_17			01/06/09 03:03	1.0	6 2	
023	005_023	ICAL	TVH_18			01/06/09 03:40	1.0	6 2	
024	005_024	X	IB			01/06/09 04:18	1.0	2	
025	005_025	ICV	TVH			01/06/09 04:55	1.0	1 2	
026	005_026	X	ICV			01/06/09 05:33	1.0	1 2	
027	005_027	X	IB			01/06/09 06:11	1.0	2	
028	005_028	CMARKER				01/06/09 06:48	1.0	7 2	
029	005_029	X	IB			01/06/09 07:50	1.0	2	

PDM 01/06/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 001 through 029.

Analyst: PDM Date: 01/06/09 Reviewer: CP Date: 01/06/09

Standards used: 1=S10986 2=S10937 3=S11030 4=S11029 5=S11028 6=S11027 7=S10536

Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 309072488

Instrument : GC04 Begun : 02/19/09 08:08
Method : EPA 8015B, EPA 8021B SOP Version : TVH_BTXE_rv14

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	050_001	X	CMARK			02/19/09 08:08	1.0	1 2	
002	050_002	X	CCV			02/19/09 08:46	1.0	3 2	
003	050_003	CCV/LCS	QC483939	Water	148076	02/19/09 09:23	1.0	4 2	
004	050_004	X	STODDARD			02/19/09 10:01	1.0	5 2	
005	050_005	CCV	STODDARD			02/19/09 10:39	1.0	5 2	
006	050_006	BLANK	QC483938	Water	148076	02/19/09 11:33	1.0	2	
007	050_007	SAMPLE	209945-010	Water	148076	02/19/09 12:21	200.0	2	
008	050_008	SAMPLE	209945-012	Water	148076	02/19/09 12:59	20.0	2	
009	050_009	SAMPLE	209945-009	Water	148076	02/19/09 13:36	1.0	2	
010	050_010	SAMPLE	209945-011	Water	148076	02/19/09 14:14	1.0	2	
011	050_011	SAMPLE	209945-013	Water	148076	02/19/09 14:52	1.0	2	
012	050_012	X	STODDARD			02/19/09 16:27	1.0	5 2	
013	050_013	CCV	STODDARD			02/19/09 17:05	1.0	5 2	
014	050_014	CCV	TVH		148076	02/19/09 17:42	1.0	4 2	
015	050_015	X	TVH		148076	02/19/09 18:20	1.0	6 2	
016	050_016	X	CMARK			02/19/09 19:09	1.0	1 2	
017	050_017	MSS	210094-001	Water	148076	02/19/09 19:47	1.0	2	7:GAS:7-12=160000
018	050_018	MS	QC483940	Water	148076	02/19/09 20:24	1.0	6 2	7:GAS:7-12=170000
019	050_019	MSD	QC484047	Water	148076	02/19/09 21:02	1.0	6 2	7:GAS:7-12=160000
020	050_020	SAMPLE	210098-001	Water	148076	02/19/09 21:39	1.0	2	
021	050_021	SAMPLE	210098-002	Water	148076	02/19/09 22:17	1.0	2	
022	050_022	SAMPLE	210093-001	Water	148076	02/19/09 22:55	1.0	2	
023	050_023	SAMPLE	210093-002	Water	148076	02/19/09 23:32	1.0	2	
024	050_024	X	IB			02/20/09 00:10	1.0	2	
025	050_025	SAMPLE	210115-006	Water	148076	02/20/09 00:48	1.0	2	
026	050_026	CCV	TVH		148076	02/20/09 01:25	1.0	7 2	
027	050_027	X	TVH		148076	02/20/09 02:03	1.0	4 2	
028	050_028	X	TVH		148076	02/20/09 02:40	1.0	6 2	
029	050_029	X	CMARK			02/20/09 03:18	1.0	1 2	
030	050_030	MSS	210094-001	Water	148076	02/20/09 08:08	20.0	2	2:XYLMP=3600
031	050_031	MS	QC483940	Water	148076	02/20/09 08:45	25.0	7 2	2:XYLMP=3700
032	050_032	MSD	QC484047	Water	148076	02/20/09 09:23	25.0	7 2	2:XYLMP=3800
033	050_033	CCV	TVH		148076	02/20/09 10:10	1.0	7 2	

PDM 02/20/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 001 through 033.

Analyst: PDM Date: 02/20/09 Reviewer: EAH Date: 02/20/09

Standards used: 1=S10996 2=S10937 3=S11372 4=S10986 5=S10978 6=S11427 7=S11421

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 318458384

Instrument : GC05 Begun : 11/13/08 07:44
Method : EPA 8015B, EPA 8021B SOP Version : TVH_BTXE_rv14

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	318_001	X	CMARK			11/13/08 07:44	1.0	1 2	
002	318_002	X	CCV			11/13/08 08:19	1.0	3 2	
003	318_003	CCV	TVH			11/13/08 08:55	1.0	4 2	
004	318_004	X	CCV			11/13/08 09:30	1.0	3 2	
005	318_005	X	CCV			11/13/08 10:26	1.0	5 2	
006	318_006	X	CCV			11/13/08 11:02	1.0	5 2	
007	318_007	X	MB			11/13/08 11:53	1.0	2	
008	318_008	IB	CALIB			11/13/08 15:17	1.0	2	
009	318_009	ICAL	SURROGATE_1			11/13/08 15:52	1.0	2	
010	318_010	ICAL	SURROGATE_2			11/13/08 16:28	1.0	2	
011	318_011	ICAL	SURROGATE_3			11/13/08 17:04	1.0	2	
012	318_012	ICAL	SURROGATE_4			11/13/08 17:39	1.0	2	
013	318_013	ICAL	SURROGATE_5			11/13/08 18:15	1.0	2	
014	318_014	X	IB			11/13/08 18:50	1.0	2	
015	318_015	X	IB			11/13/08 19:26	1.0	2	
016	318_016	ICAL	BTXE_6			11/13/08 20:01	1.0	6 2	
017	318_017	ICAL	MBTXE_7			11/13/08 20:37	1.0	7 2	
018	318_018	ICAL	MBTXE_8			11/13/08 21:12	1.0	7 2	
019	318_019	ICAL	MBTXE_9			11/13/08 21:48	1.0	7 2	
020	318_020	ICAL	MBTXE_10			11/13/08 22:24	1.0	8 2	
021	318_021	ICAL	MBTXE_11			11/13/08 22:59	1.0	8 2	
022	318_022	ICAL	MBTXE_12			11/13/08 23:35	1.0	8 2	
023	318_023	ICAL	MTBE_13			11/14/08 00:10	1.0	9 2	
024	318_024	X	IB			11/14/08 00:46	1.0	2	
025	318_025	X	ICV			11/14/08 01:21	1.0	10 2	
026	318_026	X	MBTXE			11/14/08 01:57	1.0	10 2	
027	318_027	X	IB			11/14/08 02:32	1.0	2	
028	318_028	X	IB			11/14/08 03:08	1.0	2	
029	318_029	ICAL	TVH_14			11/14/08 03:44	1.0	11 2	
030	318_030	ICAL	TVH_15			11/14/08 04:19	1.0	12 2	
031	318_031	ICAL	TVH_16			11/14/08 04:55	1.0	13 2	
032	318_032	ICAL	TVH_17			11/14/08 05:30	1.0	14 2	
033	318_033	ICAL	TVH_18			11/14/08 06:06	1.0	14 2	
034	318_034	X	IB			11/14/08 06:41	1.0	2	
035	318_035	X	ICV			11/14/08 07:17	1.0	15 2	
036	318_036	ICV	TVH			11/14/08 07:52	1.0	15 2	
037	318_037	X	IB			11/14/08 08:28	1.0	2	
038	318_038	CMARKER				11/14/08 09:03	1.0	16 2	
039	318_039	ICV	MBTXE			11/14/08 13:56	1.0	17 2	

PDM 11/14/08 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 001 through 039.

Analyst: PDM Date: 11/14/08 Reviewer: CP Date: 11/16/08

Standards used: 1=S10356 2=S10412 3=S10675 4=S10342 5=S10361 6=S10037 7=S10611 8=S10610 9=S10613 10=S9944 11=S10005 12=S10004 13=S10003 14=S10002 15=S10001 16=S9867 17=S10264

Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 319040770

Instrument : GC05 Begun : 01/28/09 07:30
Method : EPA 8015B, EPA 8021B SOP Version : TVH_BTXE_rv14

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	028_001	X	IB			01/28/09 07:30	1.0	1	
002	028_002	X	CMARK			01/28/09 08:06	1.0	2 1	
003	028_003	CCV	BTXE			01/28/09 08:42	1.0	3 1	
004	028_004	CCV	TVH			01/28/09 09:17	1.0	4 1	
005	028_005	X	IB			01/28/09 10:09	1.0	1	
006	028_006	X	IB			01/28/09 10:44	1.0	1	
007	028_007	ICAL	SURROGATE_1			01/28/09 11:20	1.0	1	
008	028_008	ICAL	SURROGATE_2			01/28/09 11:55	1.0	1	
009	028_009	ICAL	SURROGATE_3			01/28/09 12:31	1.0	1	
010	028_010	ICAL	SURROGATE_4			01/28/09 13:06	1.0	1	
011	028_011	ICAL	SURROGATE_5			01/28/09 13:42	1.0	1	
012	028_012	X	IB			01/28/09 14:18	1.0	1	
013	028_013	IB	CALIB			01/28/09 14:53	1.0	1	
014	028_014	ICAL	BTXE_6			01/28/09 15:29	1.0	5 1	
015	028_015	ICAL	MBTXE_7			01/28/09 16:04	1.0	6 1	
016	028_016	ICAL	MBTXE_8			01/28/09 16:40	1.0	6 1	
017	028_017	ICAL	MBTXE_9			01/28/09 17:15	1.0	6 1	
018	028_018	ICAL	MBTXE_10			01/28/09 17:51	1.0	7 1	
019	028_019	ICAL	MBTXE_11			01/28/09 18:27	1.0	7 1	
020	028_020	ICAL	MBTXE_12			01/28/09 19:02	1.0	7 1	
021	028_021	ICAL	MTBE_13			01/28/09 19:38	1.0	8 1	
022	028_022	X	IB			01/28/09 20:13	1.0	1	
023	028_023	ICV	MBTXE			01/28/09 20:49	1.0	9 1	
024	028_024	X	MBTXE			01/28/09 21:24	1.0	9 1	
025	028_025	X	IB			01/29/09 09:18	1.0	1	
026	028_026	X	MBTXE			01/29/09 10:07	1.0	10 1	

PDM 01/29/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 001 through 026.

Analyst: PDM Date: 01/29/09 Reviewer: ATL Date: 01/29/09

Standards used: 1=S10937 2=S10996 3=S10675 4=S10986 5=S11012 6=S10611 7=S10610 8=S10613 9=S10872 10=S11280

Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 319075628

Instrument : GC05 Begun : 02/21/09 12:28
Method : EPA 8015B, EPA 8021B SOP Version : TVH_BTXE_rv14

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	052_001	X	CMARK			02/21/09 12:28	1.0	1 2	
002	052_002	CCV/BS	QC484281	Water	148148	02/21/09 13:04	1.0	3 2	
003	052_003	X	STODDARD			02/21/09 13:39	1.0	4 2	
004	052_004	CCV	STODDARD			02/21/09 14:15	1.0	4 2	
006	052_006	X	COLEMAN			02/21/09 15:26	1.0	5 2	
007	052_007	CCV	COLEMAN			02/21/09 16:15	1.0	5 2	
008	052_008	X	IB			02/21/09 16:51	1.0	2	
009	052_009	BLANK	QC484280	Water	148148	02/21/09 17:26	1.0	2	
010	052_010	SAMPLE	210050-008	Water	148148	02/21/09 18:02	1.0	2	headspace <= 1 mL
011	052_011	SAMPLE	210050-007	Water	148148	02/21/09 18:37	1.0	2	
012	052_012	SAMPLE	210050-006	Water	148148	02/21/09 19:13	1.0	2	
013	052_013	SAMPLE	210050-005	Water	148148	02/21/09 19:49	1.0	2	
014	052_014	SAMPLE	210050-004	Water	148148	02/21/09 20:24	1.0	2	
015	052_015	SAMPLE	210050-003	Water	148148	02/21/09 21:00	1.0	2	
016	052_016	SAMPLE	210050-002	Water	148148	02/21/09 21:35	1.0	2	
017	052_017	SAMPLE	210050-001	Water	148148	02/21/09 22:11	1.0	2	
018	052_018	CCV	TVH		148148	02/21/09 22:46	1.0	3 2	
019	052_019	BSD	QC484450	Water	148148	02/21/09 23:22	1.0	3 2	
020	052_020	X	STODDARD			02/21/09 23:57	1.0	4 2	
021	052_021	CCV	STODDARD			02/22/09 00:33	1.0	4 2	
022	052_022	CCV	COLEMAN			02/22/09 01:08	1.0	5 2	
023	052_023	X	COLEMAN			02/22/09 01:44	1.0	5 2	
024	052_024	X	CMARK			02/22/09 02:19	1.0	1 2	
025	052_025	SAMPLE	210129-005	Water	148148	02/22/09 02:55	1.0	2	
026	052_026	SAMPLE	210129-006	Water	148148	02/22/09 03:30	1.0	2	
027	052_027	MSS	210207-001	Water	148148	02/22/09 04:06	1.0	2	3:GAS:7-12=100000
028	052_028	MS	QC484282	Water	148148	02/22/09 04:42	1.0	3 2	3:GAS:7-12=95000
029	052_029	MSD	QC484283	Water	148148	02/22/09 05:17	1.0	3 2	3:GAS:7-12=90000
030	052_030	SAMPLE	210207-005	Water	148148	02/22/09 05:53	1.0	2	
031	052_031	SAMPLE	210207-003	Water	148148	02/22/09 06:28	1.0	2	
032	052_032	SAMPLE	210207-002	Water	148148	02/22/09 07:04	1.0	2	
033	052_033	SAMPLE	210207-004	Water	148148	02/22/09 07:39	1.0	2	
034	052_034	CCV	TVH		148148	02/22/09 08:15	1.0	3 2	
035	052_035	X	TVH		148148	02/22/09 08:50	1.0	3 2	
036	052_036	CCV	STODDARD			02/22/09 09:26	1.0	4 2	
037	052_037	X	STODDARD			02/22/09 10:01	1.0	4 2	
038	052_038	X	CMARK			02/22/09 10:37	1.0	1 2	
039	052_039	SAMPLE	210188-004	Water	148148	02/22/09 11:12	1.0	2	
040	052_040	SAMPLE	210188-003	Water	148148	02/22/09 11:48	1.0	2	
041	052_041	SAMPLE	210188-002	Water	148148	02/22/09 12:23	1.0	2	
042	052_042	SAMPLE	210098-002	Water	148148	02/22/09 12:59	1.0	2	
043	052_043	SAMPLE	210136-001	Water	148148	02/22/09 13:34	1.0	2	
044	052_044	X	TVH		148148	02/22/09 14:10	1.0	3 2	
045	052_045	CCV	TVH		148148	02/22/09 14:45	1.0	3 2	
046	052_046	X	CMARK			02/22/09 15:21	1.0	1 2	

WNH 02/23/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 46.

Analyst: WNH Date: 02/23/09 Reviewer: ATL Date: 02/24/09

Standards used: 1=S10996 2=S10937 3=S11421 4=S10978 5=S10297

Page 1 of 1

Laboratory Job Number 210098

ANALYTICAL REPORT

TPH-Extractables by GC

Matrix: Water

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	02/18/09
Units:	ug/L	Received:	02/18/09
Diln Fac:	1.000	Prepared:	02/20/09
Batch#:	148137	Analyzed:	02/24/09

Field ID: E051 Lab ID: 210098-001
Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C12-C24	82 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	87	63-124

Field ID: E049 Lab ID: 210098-002
Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C12-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	77	63-124

Type: BLANK Cleanup Method: EPA 3630C
Lab ID: QC484222

Analyte	Result	RL
Diesel C12-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	92	63-124

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC484223	Batch#:	148137
Matrix:	Water	Prepared:	02/20/09
Units:	ug/L	Analyzed:	02/24/09

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C12-C24	2,500	2,028	81	65-135

Surrogate	%REC	Limits
o-Terphenyl	90	63-124

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	148137
MSS Lab ID:	210146-006	Sampled:	02/17/09
Matrix:	Water	Received:	02/19/09
Units:	ug/L	Prepared:	02/20/09
Diln Fac:	1.000	Analyzed:	02/24/09

Type: MS Lab ID: QC484224

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C12-C24	1,940	2,500	4,747	112	65-135

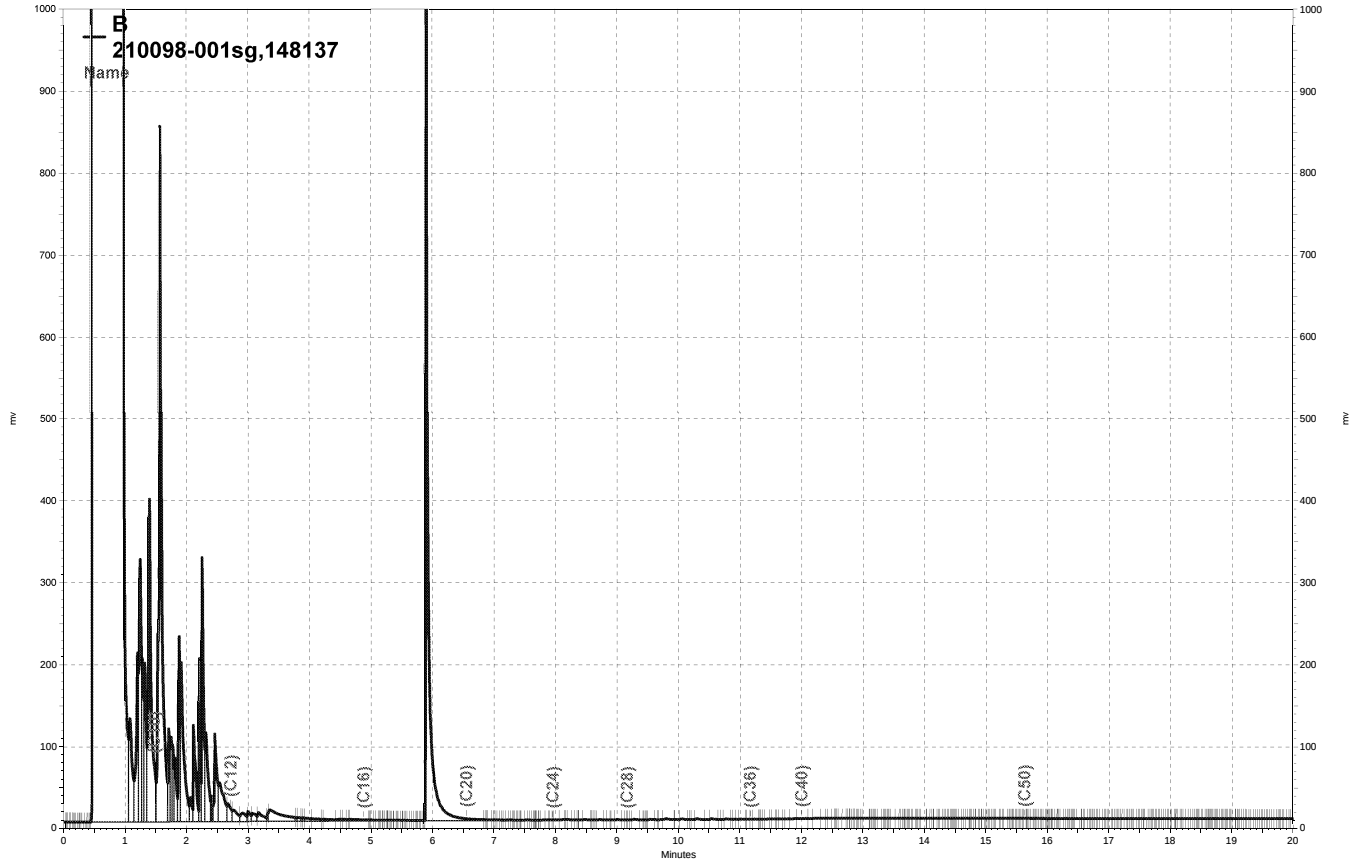
Surrogate	%REC	Limits
o-Terphenyl	85	63-124

Type: MSD Lab ID: QC484225

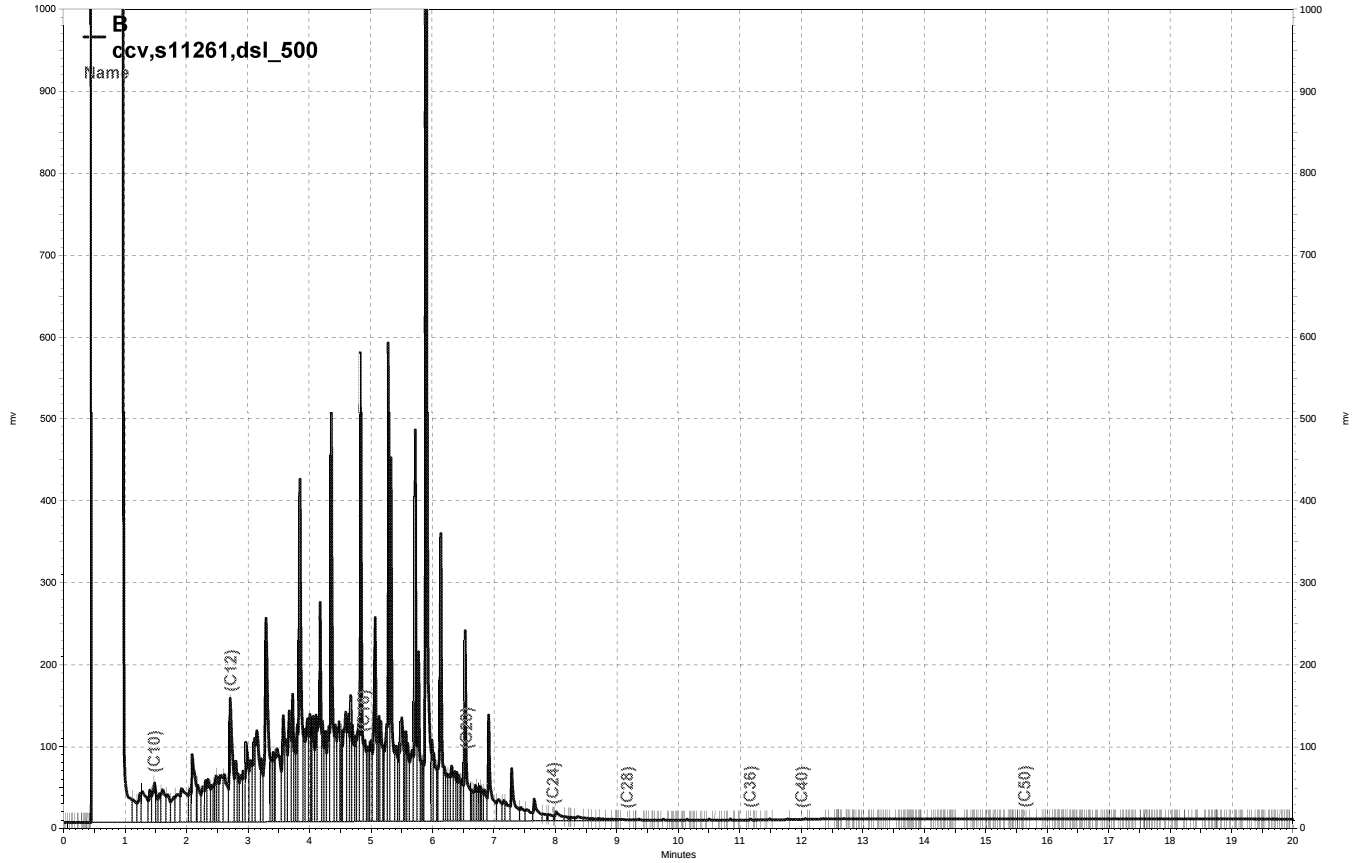
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C12-C24	2,500	4,147	88	65-135	14	35

Surrogate	%REC	Limits
o-Terphenyl	77	63-124

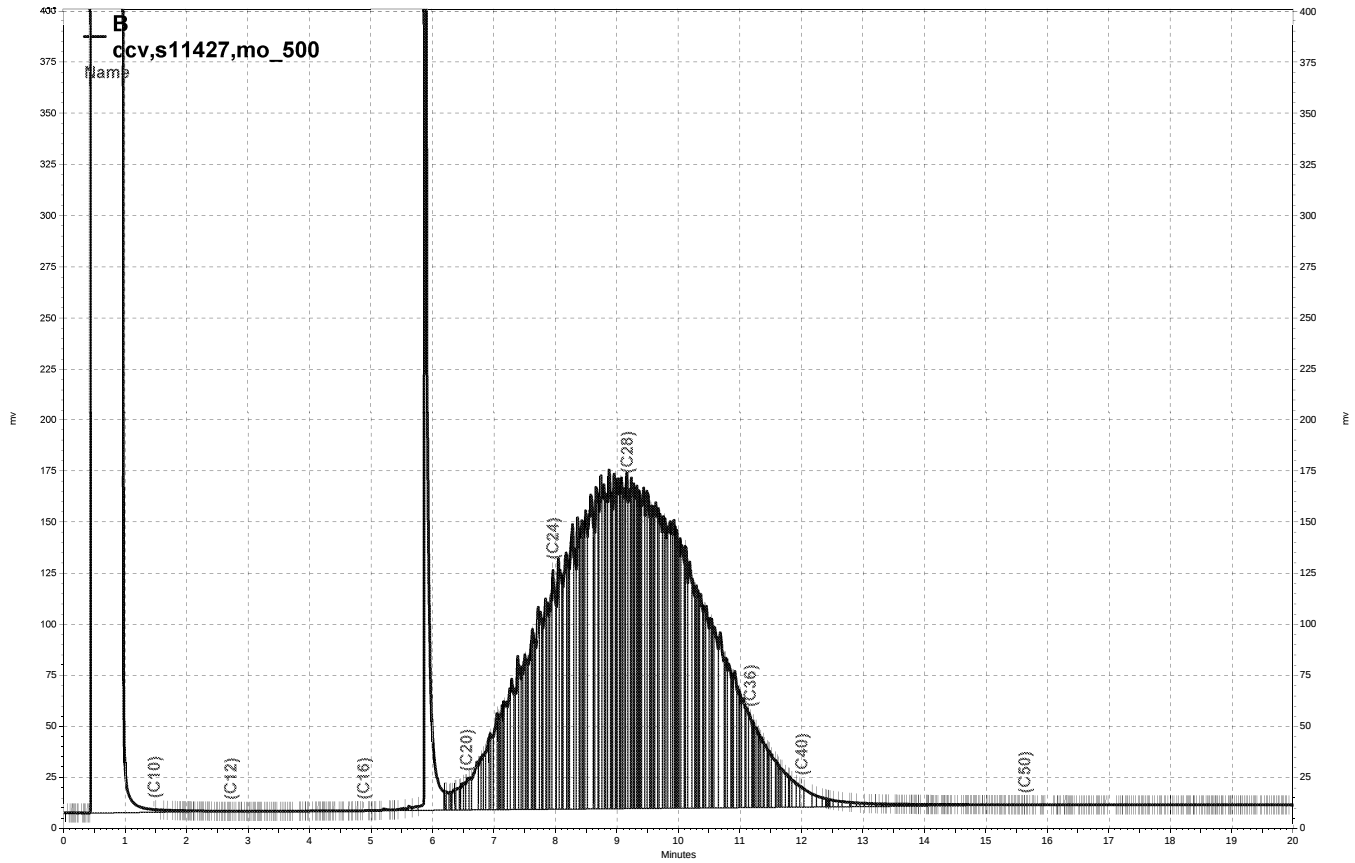
RPD= Relative Percent Difference



\\Lims\gdrive\ezchrom\Projects\GC15B\Data\054b035, B



\\Lims\gdrive\ezchrom\Projects\GC15B\Data\054b021, B



\\Lims\gdrive\ezchrom\Projects\GC15B\Data\054b022, B

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCSV Water: EPA 8015B

Inst : GC15B
Calnum : 169049823005
Units : mg/L

Name : DSL_034
Date : 03-FEB-2009 18:00
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	034b005	169049823005	DSL_100	03-FEB-2009 18:00	S10989
L2	034b006	169049823006	DSL_500	03-FEB-2009 18:28	S10990
L3	034b007	169049823007	DSL_1000	03-FEB-2009 18:56	S10991
L4	034b008	169049823008	DSL_5000	03-FEB-2009 19:24	S10987
L5	034b009	169049823009	DSL_7500	03-FEB-2009 19:52	S10992
L6	034b037	169049823037	DSL_10	04-FEB-2009 09:46	S10988

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C12-C24	52937	56732	51575	50057	49870	45298	AVRG		1.96E-5		51078	7	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Diesel C12-C24	100.0	4	500.0	11	1000	1	5000	-2	7500	-2	10.00	-11

Analyst: JDG Date: 02/05/09 Reviewer: ATL Date: 02/05/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 GCSV Water
EPA 8015B

Inst : GC15B
Calnum : 169049823005

Name : DSL_034
Cal Date : 03-FEB-2009

ICV 169049823011 (034b011 03-FEB-2009) stds: S10993

Analyte	Average RF	RF	Spiked	Quant	Units	%D	Flags
Diesel C12-C24	51078	56171	500.0	549.9	mg/L	10	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCSV Water: EPA 8015B

Inst : GC15B
Calnum : 169049823001
Units : mg/L

Name : bsurotp_034
Date : 04-FEB-2009 01:28
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	034b021	169049823021	OTP_5	04-FEB-2009 01:28	S10979
L2	034b022	169049823022	OTP_10	04-FEB-2009 01:56	S10980
L3	034b023	169049823023	OTP_25	04-FEB-2009 02:24	S10981
L4	034b024	169049823024	OTP_50	04-FEB-2009 02:52	S10982
L5	034b025	169049823025	OTP_100	04-FEB-2009 03:19	S10983
L6	034b026	169049823026	OTP_200	04-FEB-2009 03:47	S10984

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	66052	63928	68379	65729	68143	75273	AVRG		1.47E-5		67917	6	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	5.000	-3	10.00	-6	25.00	1	50.00	-3	100.0	0	200.0	11

JDG 02/04/09 : OTP 5,10,25,200: integrated manual peak.

Analyst: JDG Date: 02/04/09 Reviewer: ATL Date: 02/04/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCSV Water: EPA 8015B

Inst : GC15B
Calnum : 169054028001
Units : mg/L

Name : MO_037
Date : 06-FEB-2009 13:53
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	037b004	169054028004	MO_50	06-FEB-2009 13:53	S10563
L2	037b005	169054028005	MO_250	06-FEB-2009 14:21	S10565
L3	037b006	169054028006	MO_500	06-FEB-2009 14:49	S10564
L4	037b007	169054028007	MO_1000	06-FEB-2009 15:17	S10566
L5	037b008	169054028008	MO_5000	06-FEB-2009 15:45	S10567
L6	037b009	169054028009	MO_7500	06-FEB-2009 16:14	S10568

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Motor Oil C24-C36	48378	49755	50001	47759	39700	37453	AVRG		2.20E-5		45508	12	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Motor Oil C24-C36	50.00	6	250.0	9	500.0	10	1000	5	5000	-13	7500	-18

DNT 02/08/09 : Levels 1-6 were manually integrated for their fuel humps.

Analyst: DNT Date: 02/08/09 Reviewer: EAH Date: 02/09/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCSV Water: EPA 8015B

Inst : GC26A
Calnum : 869048075001
Units : mg/L

Name : asurotp_033
Date : 02-FEB-2009 18:54
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	033a015	869048075015	OTP_5	02-FEB-2009 18:54	S10979
L2	033a016	869048075016	OTP_10	02-FEB-2009 19:23	S10980
L3	033a017	869048075017	OTP_25	02-FEB-2009 19:53	S10981
L4	033a018	869048075018	OTP_50	02-FEB-2009 20:22	S10982
L5	033a019	869048075019	OTP_100	02-FEB-2009 20:51	S10983
L6	033a020	869048075020	OTP_200	02-FEB-2009 21:19	S10984

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	34804	34333	34828	35189	32400	33527	AVRG		2.93E-5		34180	3	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	5.000	2	10.00	0	25.00	2	50.00	3	100.0	-5	200.0	-2

Analyst: JDG Date: 02/03/09 Reviewer: ATL Date: 02/03/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCSV Water: EPA 8015B

Inst : GC26A
Calnum : 869048075002
Units : mg/L

Name : DSL_033
Date : 03-FEB-2009 01:37
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	033a029	869048075029	DSL_10	03-FEB-2009 01:37	S10988
L2	033a030	869048075030	DSL_100	03-FEB-2009 02:05	S10989
L3	033a031	869048075031	DSL_500	03-FEB-2009 02:34	S10990
L4	033a032	869048075032	DSL_1000	03-FEB-2009 03:02	S10991
L5	033a033	869048075033	DSL_5000	03-FEB-2009 03:30	S10987
L6	033a034	869048075034	DSL_7500	03-FEB-2009 03:59	S10992

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C12-C24	27659	28393	29834	28125	26571	27671	AVRG		3.57E-5		28042	4	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Diesel C12-C24	10.00	-1	100.0	1	500.0	6	1000	0	5000	-5	7500	-1

JDG 02/03/09 : DSL_10: corrected automatically drawn baseline.

Analyst: JDG Date: 02/03/09 Reviewer: ATL Date: 02/03/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 GCSV Water
EPA 8015B

Inst : GC26A Name : DSL_033
Calnum : 869048075002 Cal Date : 03-FEB-2009

ICV 869048075036 (033a036 03-FEB-2009) stds: S10993

Analyte	Average RF	RF	Spiked	Quant	Units	%D	Flags
Diesel C12-C24	28042	28399	500.0	506.4	mg/L	1	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 GCSV Water: EPA 8015B

Inst : GC26A
Calnum : 869069879002
Units : mg/L

Name : MO_048
Date : 17-FEB-2009 20:40
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	048a008	869069879008	MO_50	17-FEB-2009 20:40	S10563
L2	048a009	869069879009	MO_250	17-FEB-2009 21:09	S10565
L3	048a010	869069879010	MO_500	17-FEB-2009 21:38	S10564
L4	048a012	869069879012	MO_5000	17-FEB-2009 22:35	S10567
L5	048a023	869069879023	MO_1000	18-FEB-2009 13:49	S10566

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Motor Oil C24-C36	19073	20850	21264	18883	19982	AVRG		5.00E-5		20011	5	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Motor Oil C24-C36	50.00	-5	250.0	4	500.0	6	5000	-6	1000	0

JDG 02/18/09 : MO 5000: corrected automatically drawn baseline.

JDG 02/19/09 : MO_1000: RR due to misinject.

Analyst: JDG Date: 02/18/09 Reviewer: ATL Date: 02/19/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCSV Water
EPA 8015B

Inst : GC15B Run Name : DSL_500 IDF : 1.0
Seqnum : 169078302021 File : 054b021 Time : 23-FEB-2009 19:40
Standards: S11261

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C12-C24	169049823005	03-FEB-2009	51078	52292	500.0	511.9	mg/L	2	15	
o-Terphenyl	169049823001	04-FEB-2009	67917	68055	50.00	50.10	mg/L	0	15	

DNT 02/23/09 : Manually integrated fuel hump.

Analyst: DNT Date: 02/23/09 Reviewer: JDG Date: 02/24/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCSV Water
EPA 8015B

Inst : GC15B Run Name : MO_500 IDF : 1.0
Seqnum : 169078302022 File : 054b022 Time : 23-FEB-2009 20:08
Standards: S11427

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	169054028001	06-FEB-2009	45508	47060	500.0	517.1	mg/L	3	15	
o-Terphenyl	169049823001	04-FEB-2009	67917	68612	50.00	50.51	mg/L	1	15	

DNT 02/23/09 : Manually integrated fuel hump.

Analyst: DNT Date: 02/23/09 Reviewer: JDG Date: 02/24/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCSV Water
EPA 8015B

Inst : GC15B Run Name : DSL_1000 IDF : 1.0
Seqnum : 169078302038 File : 054b038 Time : 24-FEB-2009 03:53
Standards: S11262

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C12-C24	169049823005	03-FEB-2009	51078	53085	1000	1039	mg/L	4	15	
o-Terphenyl	169049823001	04-FEB-2009	67917	73211	50.00	53.90	mg/L	8	15	

Analyst: JDG Date: 02/24/09 Reviewer: DNT Date: 02/24/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCSV Water
EPA 8015B

Inst : GC15B Run Name : MO_500 IDF : 1.0
Seqnum : 169078302039 File : 054b039 Time : 24-FEB-2009 04:21
Standards: S11427

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	169054028001	06-FEB-2009	45508	46861	500.0	514.9	mg/L	3	15	
o-Terphenyl	169049823001	04-FEB-2009	67917	69543	50.00	51.20	mg/L	2	15	

DNT 02/24/09 : Manually integrated fuel hump.

Analyst: JDG Date: 02/24/09 Reviewer: DNT Date: 02/24/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCSV Water
EPA 8015B

Inst : GC26A Run Name : DSL_250 IDF : 1.0
Seqnum : 869078334035 File : 054a035 Time : 24-FEB-2009 01:56
Standards: S11260

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C12-C24	869048075002	03-FEB-2009	28042	28068	250.0	250.2	mg/L	0	15	
o-Terphenyl	869048075001	02-FEB-2009	34180	34887	50.00	51.03	mg/L	2	15	

Analyst: DNT Date: 02/24/09 Reviewer: JDG Date: 02/24/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCSV Water
EPA 8015B

Inst : GC26A Run Name : MO_500 IDF : 1.0
Seqnum : 869078334036 File : 054a036 Time : 24-FEB-2009 02:24
Standards: S11127

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	869069879002	17-FEB-2009	20011	17593	500.0	439.6	mg/L	-12	15	
o-Terphenyl	869048075001	02-FEB-2009	34180	35630	50.00	52.12	mg/L	4	15	

Analyst: DNT Date: 02/24/09 Reviewer: JDG Date: 02/24/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCSV Water
EPA 8015B

Inst : GC26A Run Name : DSL_500 IDF : 1.0
Seqnum : 869078334047 File : 054a047 Time : 24-FEB-2009 07:34
Standards: S11261

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C12-C24	869048075002	03-FEB-2009	28042	29368	500.0	523.7	mg/L	5	15	
o-Terphenyl	869048075001	02-FEB-2009	34180	36620	50.00	53.57	mg/L	7	15	

JDG 02/24/09 : DSL_500:S11261

Analyst: JDG Date: 02/24/09 Reviewer: DNT Date: 02/24/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 GCSV Water
EPA 8015B

Inst : GC26A Run Name : MO_500 IDF : 1.0
Seqnum : 869078334051 File : 054a051 Time : 24-FEB-2009 09:27
Standards: S11127

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	869069879002	17-FEB-2009	20011	17140	500.0	428.3	mg/L	-14	15	
o-Terphenyl	869048075001	02-FEB-2009	34180	34465	50.00	50.42	mg/L	1	15	

Analyst: JDG Date: 02/24/09 Reviewer: ATL Date: 02/24/09

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 169049823

Instrument : GC15B Begun : 02/03/09 14:23
Method : EPA 8015B SOP Version : TEH_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	034b001	X	PRIMER			02/03/09 14:23	1.0		
003	034b003	IB	CALIB			02/03/09 17:04	1.0		
004	034b004	X	DSL_10			02/03/09 17:32	1.0	1	
005	034b005	ICAL	DSL_100			02/03/09 18:00	1.0	2	
006	034b006	ICAL	DSL_500			02/03/09 18:28	1.0	3	
007	034b007	ICAL	DSL_1000			02/03/09 18:56	1.0	4	
008	034b008	ICAL	DSL_5000			02/03/09 19:24	1.0	5	
009	034b009	ICAL	DSL_7500			02/03/09 19:52	1.0	6	
010	034b010	IB	CALIB			02/03/09 20:21	1.0		
011	034b011	ICV	DSL_500			02/03/09 20:49	1.0	7	
012	034b012	X	ICV			02/03/09 21:17	1.0	7	
013	034b013	IB	CALIB			02/03/09 21:45	1.0		
014	034b014	X	MO_50			02/03/09 22:13	1.0	8	
015	034b015	X	MO_250			02/03/09 22:41	1.0	9	
016	034b016	X	MO_500			02/03/09 23:09	1.0	10	
017	034b017	X	MO_1000			02/03/09 23:37	1.0	11	
018	034b018	X	MO_5000			02/04/09 00:05	1.0	12	
019	034b019	X	MO_7500			02/04/09 00:33	1.0	13	
020	034b020	IB	CALIB			02/04/09 01:00	1.0		
021	034b021	ICAL	OTP_5			02/04/09 01:28	1.0	14	
022	034b022	ICAL	OTP_10			02/04/09 01:56	1.0	15	
023	034b023	ICAL	OTP_25			02/04/09 02:24	1.0	16	
024	034b024	ICAL	OTP_50			02/04/09 02:52	1.0	17	
025	034b025	ICAL	OTP_100			02/04/09 03:19	1.0	18	
026	034b026	ICAL	OTP_200			02/04/09 03:47	1.0	19	
027	034b027	IB	CALIB			02/04/09 04:15	1.0		
028	034b028	ICAL	HYFL_50			02/04/09 04:43	1.0	20	
029	034b029	ICAL	HYFL_250			02/04/09 05:11	1.0	21	
030	034b030	ICAL	HYFL_500			02/04/09 05:39	1.0	22	
031	034b031	ICAL	HYFL_1000			02/04/09 06:07	1.0	23	
032	034b032	ICAL	HYFL_5000			02/04/09 06:34	1.0	24	
033	034b033	ICAL	HYFL_7500			02/04/09 07:02	1.0	25	
034	034b034	IB	CALIB			02/04/09 07:30	1.0		
035	034b035	CMARKER	C8-C50			02/04/09 07:58	1.0	26	
036	034b036	X	IB			02/04/09 08:27	1.0		
037	034b037	ICAL	DSL_10			02/04/09 09:46	1.0	1	

JDG 02/04/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 37.

Analyst: JDG Date: 02/04/09 Reviewer: ATL Date: 02/04/09

Standards used: 1=S10988 2=S10989 3=S10990 4=S10991 5=S10987 6=S10992 7=S10993 8=S10563 9=S10565 10=S10564 11=S10566 12=S10567 13=S10568 14=S10979 15=S10980 16=S10981 17=S10982 18=S10983 19=S10984 20=S11069 21=S11070 22=S11071 23=S11072 24=S11073 25=S11074 26=S11248

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 169054028

Instrument : GC15B Begun : 02/06/09 12:28
Method : EPA 8015B SOP Version : TEH_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	037b001	X	IB			02/06/09 12:28	1.0		
002	037b002	X	IB			02/06/09 12:56	1.0		
003	037b003	IB	CALIB			02/06/09 13:24	1.0		
004	037b004	ICAL	MO_50			02/06/09 13:53	1.0	1	
005	037b005	ICAL	MO_250			02/06/09 14:21	1.0	2	
006	037b006	ICAL	MO_500			02/06/09 14:49	1.0	3	
007	037b007	ICAL	MO_1000			02/06/09 15:17	1.0	4	
008	037b008	ICAL	MO_5000			02/06/09 15:45	1.0	5	
009	037b009	ICAL	MO_7500			02/06/09 16:14	1.0	6	
010	037b010	IB	CALIB			02/06/09 16:41	1.0		
011	037b011	CMARKER	C5-C50			02/06/09 17:09	1.0	7	
012	037b012	X	IB			02/06/09 17:38	1.0		
013	037b013	CCV	DSL_500			02/06/09 18:06	1.0	8	
014	037b014	CCV	MO_500			02/06/09 18:34	1.0	9	
015	037b015	X	CCV			02/06/09 19:02	1.0	8	
016	037b016	X	CCV			02/06/09 19:31	1.0	9	

DNT 02/08/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 16.

Analyst: DNT Date: 02/08/09 Reviewer: EAH Date: 02/09/09

Standards used: 1=S10563 2=S10565 3=S10564 4=S10566 5=S10567 6=S10568 7=S11248 8=S11261 9=S11127

Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 169078302

Instrument : GC15B
Method : EPA 8015B

Begun : 02/23/09 09:02
SOP Version : TEH_rv13

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	054b001	X	PRIMER				02/23/09 09:02	1.0		
002	054b002	X	IB				02/23/09 09:30	1.0		
003	054b003	X	CMARKER				02/23/09 09:58	1.0	1	
004	054b004	CCV	DSL_500				02/23/09 10:26	1.0	2	
005	054b005	CCV	MO_500				02/23/09 10:54	1.0	3	
006	054b006	X	CCV				02/23/09 12:37	1.0	4	
007	054b007	CCV	BUNK_500				02/23/09 13:05	1.0	5	
008	054b008	BLANK	QC483417		Water	147942	02/23/09 13:32	1.0		
009	054b009	SAMPLE	209960-010		Water	147942	02/23/09 14:00	1.0		
010	054b010	SAMPLE	209960-011		Water	147942	02/23/09 14:28	1.0		
011	054b011	SAMPLE	209960-004		Water	147942	02/23/09 14:56	1.0		
012	054b012	CCV	DSL_1000				02/23/09 15:30	1.0	6	
013	054b013	CCV	BUNK_500				02/23/09 15:58	1.0	5	
014	054b014	SAMPLE	210021-002		Water	147985	02/23/09 16:26	1.0		
015	054b015	X	IB				02/23/09 16:54	1.0		
016	054b016	SAMPLE	210138-010	S	Soil	148149	02/23/09 17:21	1.0		
017	054b017	SAMPLE	210138-011	S	Soil	148149	02/23/09 17:49	1.0		
018	054b018	SAMPLE	210138-012	S	Soil	148149	02/23/09 18:17	1.0		
019	054b019	SAMPLE	210138-001	S	Soil	148149	02/23/09 18:45	1.0		
020	054b020	SAMPLE	210138-002	S	Soil	148149	02/23/09 19:13	1.0		
021	054b021	CCV	DSL_500				02/23/09 19:40	1.0	2	
022	054b022	CCV	MO_500				02/23/09 20:08	1.0	3	
023	054b023	X	DSL_500				02/23/09 20:36	1.0	2	
024	054b024	X	MO_500				02/23/09 21:04	1.0	3	
025	054b025	CCV	HEX_50				02/23/09 21:53	1.0	7	
026	054b026	MS	QC484171		Soil	148083	02/23/09 22:21	1.0		
027	054b027	MSD	QC484172		Soil	148083	02/23/09 22:49	1.0		
028	054b028	MS	QC484169		Soil	148083	02/23/09 23:16	1.0		
029	054b029	MSD	QC484170		Soil	148083	02/23/09 23:44	1.0		
030	054b030	MS	QC484167		Soil	148083	02/24/09 00:12	1.0		8:BUNKC:12-40=18000
031	054b031	MSD	QC484168		Soil	148083	02/24/09 00:39	1.0		8:BUNKC:12-40=17000
032	054b032	X	IB				02/24/09 01:07	1.0		
033	054b033	SAMPLE	210065-001	S	Water	148137	02/24/09 01:35	1.0		
034	054b034	SAMPLE	210065-002	S	Water	148137	02/24/09 02:02	1.0		
035	054b035	SAMPLE	210098-001	S	Water	148137	02/24/09 02:30	1.0		
036	054b036	SAMPLE	210098-002	S	Water	148137	02/24/09 02:58	1.0		
037	054b037	X	CMARKER				02/24/09 03:25	1.0	1	
038	054b038	CCV	DSL_1000				02/24/09 03:53	1.0	6	
039	054b039	CCV	MO_500				02/24/09 04:21	1.0	3	
040	054b040	CCV	JET_250				02/24/09 04:49	1.0	8	
041	054b041	CCV	KERO_250				02/24/09 05:16	1.0	9	
042	054b042	X	CCV				02/24/09 05:44	1.0	6	
043	054b043	X	CCV				02/24/09 06:11	1.0	3	
044	054b044	X	CCV				02/24/09 06:39	1.0	8	
045	054b045	X	CCV				02/24/09 07:07	1.0	9	
046	054b046	BLANK	QC484222		Water	148137	02/24/09 07:35	1.0		
047	054b047	SAMPLE	209966-003		Water	148137	02/24/09 08:03	1.0		
048	054b048	SAMPLE	210072-001		Water	148137	02/24/09 08:31	1.0		
049	054b049	SAMPLE	210071-001		Water	148137	02/24/09 08:59	1.0		
050	054b050	SAMPLE	210059-001		Water	148137	02/24/09 09:27	1.0		
051	054b051	SAMPLE	210150-001		Water	148137	02/24/09 09:55	1.0		13:BUNKC:12-50=31000
052	054b052	X	IB				02/24/09 10:23	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 169078302

Instrument : GC15B Begun : 02/23/09 09:02
Method : EPA 8015B SOP Version : TEH_rv13

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
053	054b053	SAMPLE	210136-001	S	Water	148137	02/24/09 10:51	1.0		
054	054b054	SAMPLE	210138-035	S	Soil	148203	02/24/09 11:19	1.0		
055	054b055	SAMPLE	210138-036	S	Soil	148203	02/24/09 11:46	1.0		
056	054b056	SAMPLE	210138-037	S	Soil	148203	02/24/09 12:14	1.0		
057	054b057	CCV	DSL_250				02/24/09 12:42	1.0	10	
058	054b058	CCV	MO_500				02/24/09 13:10	1.0	3	
059	054b059	CCV	JET_250				02/24/09 13:38	1.0	8	
060	054b060	CCV	KERO_250				02/24/09 14:06	1.0	9	

DNT 02/23/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 14.

JDG 02/24/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 15 through 46.

DNT 02/24/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 47 through 60.

Standards used: 1=S11248 2=S11261 3=S11427 4=S10451 5=S11172 6=S11262 7=S11445 8=S11462 9=S11463 10=S11260

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 869048075

Instrument : GC26A Begun : 02/02/09 09:15
Method : EPA 8015B SOP Version : TEH_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
004	033a004	X	CMARKER			02/02/09 09:15	1.0	1	
005	033a005	CCV	DSL_250			02/02/09 09:43	1.0	2	
006	033a006	CCV	MO_500			02/02/09 10:12	1.0	3	
014	033a014	IB	CALIB			02/02/09 18:26	1.0		
015	033a015	ICAL	OTP_5			02/02/09 18:54	1.0	4	
016	033a016	ICAL	OTP_10			02/02/09 19:23	1.0	5	
017	033a017	ICAL	OTP_25			02/02/09 19:53	1.0	6	
018	033a018	ICAL	OTP_50			02/02/09 20:22	1.0	7	
019	033a019	ICAL	OTP_100			02/02/09 20:51	1.0	8	
020	033a020	ICAL	OTP_200			02/02/09 21:19	1.0	9	
021	033a021	IB	CALIB			02/02/09 21:48	1.0		
022	033a022	ICAL	MO_50			02/02/09 22:17	1.0	10	
023	033a023	ICAL	MO_250			02/02/09 22:46	1.0	11	
024	033a024	ICAL	MO_500			02/02/09 23:14	1.0	12	
025	033a025	X	MO_1000			02/02/09 23:43	1.0	13	
026	033a026	ICAL	MO_5000			02/03/09 00:11	1.0	14	
027	033a027	ICAL	MO_7500			02/03/09 00:40	1.0	15	
028	033a028	IB	CALIB			02/03/09 01:08	1.0		
029	033a029	ICAL	DSL_10			02/03/09 01:37	1.0	16	
030	033a030	ICAL	DSL_100			02/03/09 02:05	1.0	17	
031	033a031	ICAL	DSL_500			02/03/09 02:34	1.0	18	
032	033a032	ICAL	DSL_1000			02/03/09 03:02	1.0	19	
033	033a033	ICAL	DSL_5000			02/03/09 03:30	1.0	20	
034	033a034	ICAL	DSL_7500			02/03/09 03:59	1.0	21	
035	033a035	IB	CALIB			02/03/09 04:27	1.0		
036	033a036	ICV	DSL_500			02/03/09 04:56	1.0	22	
037	033a037	X	ICV			02/03/09 05:24	1.0	22	
038	033a038	IB	CALIB			02/03/09 05:53	1.0		
039	033a039	CMARKER	C8-C50			02/03/09 06:21	1.0	23	
040	033a040	X	IB			02/03/09 06:50	1.0		
041	033a041	ICAL	MO_1000			02/03/09 11:48	1.0	13	

JDG 02/03/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 39.

Analyst: JDG Date: 02/03/09 Reviewer: ATL Date: 02/03/09

Standards used: 1=S10268 2=S10773 3=S11127 4=S10979 5=S10980 6=S10981 7=S10982 8=S10983 9=S10984 10=S10563 11=S10565 12=S10564 13=S10566 14=S10567 15=S10568 16=S10988 17=S10989 18=S10990 19=S10991 20=S10987 21=S10992 22=S10993 23=S11248

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 869069879

Instrument : GC26A Begun : 02/17/09 12:39
Method : EPA 8015B SOP Version : TEH_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	048a001	X	IB			02/17/09 12:39	1.0		
002	048a002	X	IB			02/17/09 13:07	1.0		
007	048a007	IB	CALIB			02/17/09 20:12	1.0		
008	048a008	ICAL	MO_50			02/17/09 20:40	1.0	1	
009	048a009	ICAL	MO_250			02/17/09 21:09	1.0	2	
010	048a010	ICAL	MO_500			02/17/09 21:38	1.0	3	
011	048a011	X	MO_1000			02/17/09 22:06	1.0	4	
012	048a012	ICAL	MO_5000			02/17/09 22:35	1.0	5	
013	048a013	X	MO_7500			02/17/09 23:04	1.0	6	
014	048a014	IB	CALIB			02/17/09 23:33	1.0		
015	048a015	ICAL	JP5_10			02/18/09 00:01	1.0	7	
016	048a016	ICAL	JP5_100			02/18/09 00:30	1.0	8	
017	048a017	ICAL	JP5_500			02/18/09 00:59	1.0	9	
018	048a018	ICAL	JP5_1500			02/18/09 01:28	1.0	10	
019	048a019	ICAL	JP5_2500			02/18/09 01:57	1.0	11	
020	048a020	ICAL	JP5_5000			02/18/09 02:26	1.0	12	
021	048a021	IB	CALIB			02/18/09 02:55	1.0		
022	048a022	CMARKER	C8-C50			02/18/09 03:24	1.0	13	
023	048a023	ICAL	MO_1000			02/18/09 13:49	1.0	4	

JDG 02/18/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 22.

Analyst: JDG Date: 02/18/09 Reviewer: ATL Date: 02/18/09

Standards used: 1=S10563 2=S10565 3=S10564 4=S10566 5=S10567 6=S10568 7=S10506 8=S10507 9=S10508 10=S10509 11=S10510 12=S10505 13=S11248

Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 869078334

Instrument : GC26A Begun : 02/23/09 09:34
Method : EPA 8015B SOP Version : TEH_rv13

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
004	054a004	X	CMARKER				02/23/09 09:34	1.0	1
005	054a005	CCV	DSL_500				02/23/09 10:02	1.0	2
006	054a006	CCV	MO_500				02/23/09 10:31	1.0	3
007	054a007	CCV	HEX_50				02/23/09 12:29	1.0	4
008	054a008	BLANK	QC483819		Water	148041	02/23/09 13:15	1.0	
009	054a009	LCS	QC483825	S	Water	148041	02/23/09 13:44	1.0	
010	054a010	MSS	210078-001		Water	148041	02/23/09 14:12	1.0	
011	054a011	MS	QC483821		Water	148041	02/23/09 14:40	1.0	
012	054a012	MSD	QC483822		Water	148041	02/23/09 15:09	1.0	
013	054a013	MSS	210094-001		Water	148041	02/23/09 15:37	1.0	
014	054a014	MS	QC483823		Water	148041	02/23/09 16:05	1.0	
015	054a015	MSD	QC483824		Water	148041	02/23/09 16:33	1.0	
016	054a016	LCS	QC483825	S	Water	148041	02/23/09 17:01	1.0	
017	054a017	SAMPLE	210078-003		Water	148041	02/23/09 17:29	1.0	
018	054a018	CCV	DSL_1000				02/23/09 17:58	1.0	5
019	054a019	CCV	MO_500				02/23/09 18:26	1.0	3
020	054a020	CCV	HEX_50				02/23/09 18:54	1.0	4
022	054a022	X	CCV				02/23/09 19:50	1.0	3
024	054a024	BLANK	QC484222		Water	148137	02/23/09 20:47	1.0	
025	054a025	BLANK	QC484298	S	Soil	148152	02/23/09 21:15	1.0	
026	054a026	LCS	QC484299	S	Soil	148152	02/23/09 21:43	1.0	
027	054a027	SAMPLE	210078-004		Water	148041	02/23/09 22:11	1.0	
028	054a028	SAMPLE	210095-001		Soil	148152	02/23/09 22:39	100.0	
029	054a029	SAMPLE	210095-002		Soil	148152	02/23/09 23:07	50.0	
030	054a030	X	IB				02/23/09 23:35	1.0	
031	054a031	SAMPLE	210103-004	S	Soil	148152	02/24/09 00:04	1.0	
032	054a032	SAMPLE	210103-003	S	Soil	148152	02/24/09 00:31	1.0	
033	054a033	SAMPLE	210103-002	S	Soil	148152	02/24/09 01:00	1.0	
035	054a035	CCV	DSL_250				02/24/09 01:56	1.0	6
036	054a036	CCV	MO_500				02/24/09 02:24	1.0	3
037	054a037	CCV	HEX_50				02/24/09 02:52	1.0	4
041	054a041	BLANK	QC484222	S	Water	148137	02/24/09 04:45	1.0	
042	054a042	LCS	QC484223	S	Water	148137	02/24/09 05:13	1.0	
043	054a043	SAMPLE	210113-001		Water	148137	02/24/09 05:42	1.0	
044	054a044	MSS	210146-006		Water	148137	02/24/09 06:10	1.0	
045	054a045	MS	QC484224		Water	148137	02/24/09 06:38	1.0	
046	054a046	MSD	QC484225		Water	148137	02/24/09 07:06	1.0	
047	054a047	CCV	DSL_500				02/24/09 07:34	1.0	2
048	054a048	X	MO_500				02/24/09 08:02	1.0	3
049	054a049	CCV	HEX_50				02/24/09 08:31	1.0	4
051	054a051	CCV	MO_500				02/24/09 09:27	1.0	3

JDG 02/24/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 49.

Standards used: 1=S10268 2=S11261 3=S11127 4=S11445 5=S11262 6=S11260

SAMPLE PREPARATION SUMMARY

Batch # : 148137
Started By : DJT
Method : 3520C
Spike #1 ID : S11431

Prep Date : 20-FEB-2009 16:45
SOP Version : TEH_3520_rv12
Spike #2 ID : S11331

Analysis : TEH
Finished By : NAV
Units : mL
Spike #3 ID : S11320

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
209966-003		Water	500	2.5	1	0.005	7	.5				TEHM	
210059-001		Water	500	2.5	1	0.005	7	.5				TEHM	
210065-001		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	sediment
210065-002		Water	500	2.5	1	0.005	7	.5			3630C	(rebatched)	sediment
210071-001		Water	500	2.5	1	0.005	7	.5				TEH	
210072-001		Water	500	2.5	1	0.005	7	.5				TEH	
210098-001		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
210098-002		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	sediment
210106-001		Water	500	2.5	1	0.005	7	.5				TEH	
210106-002		Water	500	2.5	1	0.005	7	.5				TEH	
210106-003		Water	500	2.5	1	0.005	7	.5				TEH	
210106-004		Water	500	2.5	1	0.005	7	.5				TEH	
210108-001		Water	500	2.5	1	0.005	7	.5				TEH	
210113-001		Water	500	2.5	1	0.005	7	.5		.5		TEH	
210136-001		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
210146-006		Water	500	2.5	1	0.005	7	.5				TEH	See comment 1 below
210150-001		Water	500	2.5	1	0.005	7	.5				(rebatched)	sediment, black sample
210188-002		Water	500	2.5	1	0.005	7	.5				TEH	
210188-003		Water	500	2.5	1	0.005	7	.5				TEH	
210188-004		Water	500	2.5	1	0.005	7	.5				TEH	
QC484222	BLANK	Water	500	2.5	1	0.005		.5		.5	3630C		
QC484223	LCS	Water	500	2.5	1	0.005		.5	.5	.5	3630C		
QC484224	MS	Water	500	2.5	1	0.005	7	.5	.5				
QC484225	MSD	Water	500	2.5	1	0.005	7	.5	.5				

Comment 1: mss (comp-001h,002g,003h,004i, @400mL each)

Analyst: DNT Date: 02/24/09 Reviewer: JDG Date: 02/24/09

TEH (8015) Water Prep Log

Curtis & Tompkins, Ltd.

Page 59 BK 2820

LIMS Batch No: 148137
LIMS Analysis: TEH/M
Date Extracted: 2/20/09

Extraction Method:
☐ mod. EPA 3510c sep. funnel
☒ mod. EPA 3520c cont. L/L

Cleanup Method (if needed):
☒ EPA 3630c Silica Gel

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Cleanup (x if needed)	Comments
209966-003	A	500	7	2.5		RE-X
210059-001	G					
210065-001	L				X	SEDIMENT
↓ 002	↓				↓	↓
210071-001	I					
210072-001	↓					
210098-001	K				X	
↓ 002	↓				↓	SEDIMENT
210106-001	E					
002						
003						
↓ 004	↓					
210108-001	G					
★ 210113-001	A					
210136-001	N				X	
210146-006	COMP					MSS COMP 001H, 002H, 003H, 004H @ 400mL GA
210150-001	E					SEDIMENT, BLACK SAMPLE
210188-002	G					
003						
↓ 004	↓					
MB QC484222	NA		NA		X	
LCS 3	↓		↓		↓	
MS 4	COMP		7			
MSD 5	↓	↓	↓	↓		

TFB 2/24/09

0.5*/0.5 mL of TEH_SURR was added to all samples
0.5 mL of TEH_SP was added to all spikes
pH of all samples adjusted to pH ≤ 2 with H_2SO_4
☒ 3520c: Samples were continually extracted about 450 mL of CH_2Cl_2
Extraction Start Time:
Extraction End Time:
☐ 3510c: Samples were extracted 3 times with 60 mL of CH_2Cl_2
Extracts filtered through baked, CH2Cl2-rinsed granular Na2SO4
Concentrated to final volume at temperature (degrees C)
Relinquished to TEH Department

Mfg & Lot# / LIMS # / Time	Date/ Initials
S11431A/S11320A*	DJT 2/20/09
S11331B	↓
FS085385	↓
EM48352	↓
1645	↓
1145	TFB 2/21/09
N/A	NAV 2/20/09
EM48315847	↓
100°	↓
✓	↓

2/20/09
Extraction Chemist **Date**

Contined from Page ___
Continued on Page ___

TFB 2/24/09
Reviewed by **Date**

Curtis & Tompkins, Ltd. **Silica Gel Cleanup** **EPA 3630c**

Prep Chemist: N/A ✓
Cleanup Date: 2/22/09

Benchbook # **BK 2843**
Page 21

Sample #	Batch#	Initial Volume (mL)	Final Volume (mL)	Comments
210065-001	148137	1.0	1.0	
↓ -002	↓	↓	↓	
210098-001				
↓ -002				
210136-001				
MB QC494222				
LCS ↓ 3	↓	↓	↓	
				TFB 2/24/09

	Mfg & Lot # / Time / Program	Initials / Date
☐ Extracts were cleaned up using C&T assembled ___ g columns	N/A	NAV 2/22/09
☒ Extracts were cleaned up using 1.0 g cartridges	SP10882	↓
Extracts were eluted with 4.0 mL CH_2Cl_2	EM48340	
Concentrated to volumes as noted above	✓	

Extraction Chemist / Date 2/22/09

Continued from page ___
Continued on page ___

TFB 2/24/09
Reviewed by / Date

Laboratory Job Number 210098

ANALYTICAL REPORT

Volatile Organics by GC/MS

Matrix: Water

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8260B
Field ID:	E051	Batch#:	148175
Lab ID:	210098-001	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Analyzed:	02/23/09
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Chloromethane	ND	1.0	0.2
Vinyl Chloride	ND	0.5	
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.2
Acetone	ND	10	
1,1-Dichloroethene	ND	0.5	
Methylene Chloride	ND	10	1.0
Carbon Disulfide	ND	0.5	
MTBE	ND	0.5	
Vinyl Acetate	ND	10	
1,1-Dichloroethane	ND	0.5	
2-Butanone	ND	10	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	89	0.5	
Trichloroethene	ND	0.5	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
4-Methyl-2-Pentanone	ND	10	
cis-1,3-Dichloropropene	ND	0.5	
Toluene	2.5	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
2-Hexanone	ND	10	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	49	0.5	
m,p-Xylenes	130	0.5	
o-Xylene	5.9	0.5	
Styrene	ND	0.5	
Bromoform	ND	1.0	0.2
1,1,2,2-Tetrachloroethane	ND	0.5	
1,2-Dichloroethene (total)	ND	0.5	

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	76-120
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8260B
Field ID:	E049	Batch#:	148175
Lab ID:	210098-002	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Analyzed:	02/23/09
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Chloromethane	ND	1.0	0.2
Vinyl Chloride	ND	0.5	
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.2
Acetone	ND	10	
1,1-Dichloroethene	ND	0.5	
Methylene Chloride	ND	10	1.0
Carbon Disulfide	ND	0.5	
MTBE	ND	0.5	
Vinyl Acetate	ND	10	
1,1-Dichloroethane	ND	0.5	
2-Butanone	ND	10	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	ND	0.5	
Trichloroethene	ND	0.5	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
4-Methyl-2-Pentanone	ND	10	
cis-1,3-Dichloropropene	ND	0.5	
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
2-Hexanone	ND	10	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	1.3	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	1.0	0.2
1,1,2,2-Tetrachloroethane	ND	0.5	
1,2-Dichloroethene (total)	ND	0.5	

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	104	76-120
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

45.0

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	148175
Units:	ug/L	Analyzed:	02/23/09
Diln Fac:	1.000		

Type: BS Lab ID: QC484397

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	20.11	101	65-135
Benzene	20.00	19.90	100	65-135
Trichloroethene	20.00	19.45	97	65-135
Toluene	20.00	19.18	96	65-135
Chlorobenzene	20.00	20.18	101	65-135

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	105	76-120
Toluene-d8	101	80-120
Bromofluorobenzene	97	80-120

Type: BSD Lab ID: QC484398

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	18.74	94	65-135	7	35
Benzene	20.00	18.67	93	65-135	6	35
Trichloroethene	20.00	18.37	92	65-135	6	35
Toluene	20.00	18.06	90	65-135	6	35
Chlorobenzene	20.00	19.26	96	65-135	5	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	76-120
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC484400	Batch#:	148175
Matrix:	Water	Analyzed:	02/23/09
Units:	ug/L		

Analyte	Result	RL	MDL
Chloromethane	ND	1.0	0.2
Vinyl Chloride	ND	0.5	
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.2
Acetone	ND	10	
1,1-Dichloroethene	ND	0.5	
Methylene Chloride	ND	10	1.0
Carbon Disulfide	ND	0.5	
MTBE	ND	0.5	
Vinyl Acetate	ND	10	
1,1-Dichloroethane	ND	0.5	
2-Butanone	ND	10	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	ND	0.5	
Trichloroethene	ND	0.5	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
4-Methyl-2-Pentanone	ND	10	
cis-1,3-Dichloropropene	ND	0.5	
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
2-Hexanone	ND	10	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	1.0	0.2
1,1,2,2-Tetrachloroethane	ND	0.5	
1,2-Dichloroethene (total)	ND	0.5	

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	76-120
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 5030B
Project#:	Y0239-04.A3	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	148175
MSS Lab ID:	210116-003	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Analyzed:	02/24/09
Diln Fac:	1.000		

Type: MS Lab ID: QC484480

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1379	20.00	19.33	97	65-135
Benzene	<0.1000	20.00	19.43	97	65-135
Trichloroethene	49.21	20.00	60.46	56 *	65-135
Toluene	<0.1000	20.00	18.87	94	65-135
Chlorobenzene	<0.1000	20.00	19.07	95	65-135

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	114	76-120
Toluene-d8	101	80-120
Bromofluorobenzene	98	80-120

Type: MSD Lab ID: QC484481

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	20.12	101	65-135	4	35
Benzene	20.00	19.70	98	65-135	1	35
Trichloroethene	20.00	61.25	60 *	65-135	1	35
Toluene	20.00	18.83	94	65-135	0	35
Chlorobenzene	20.00	19.58	98	65-135	3	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	112	76-120
Toluene-d8	101	80-120
Bromofluorobenzene	98	80-120

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

CURTIS & TOMPKINS BFB TUNE FOR 210098 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : BFB IDF : 1.0
Seqnum : 499052398002 File : jb502 Time : 05-FEB-2009 14:52

Standards: S10902

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	70006	24.98	
75	30% - 60% of mass 95	130904	46.70	
95		280284	100.00	
96	5% - 9% of mass 95	18120	6.46	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	185898	66.32	
175	5% - 9% of mass 174	14253	7.67	
176	> 95% and < 101% of mass 174	183061	98.47	
177	5% - 9% of mass 176	12021	6.57	

Analyst: MJM Date: 02/06/09 Reviewer: ACM Date: 02/06/09

CURTIS & TOMPKINS BFB TUNE FOR 210098 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : BFB IDF : 1.0
Seqnum : 499053770002 File : jb602 Time : 06-FEB-2009 10:18

Standards: S10902

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	73084	26.18	
75	30% - 60% of mass 95	131285	47.03	
95		279146	100.00	
96	5% - 9% of mass 95	18410	6.60	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	179264	64.22	
175	5% - 9% of mass 174	13528	7.55	
176	> 95% and < 101% of mass 174	177898	99.24	
177	5% - 9% of mass 176	11711	6.58	

Analyst: MJM Date: 02/06/09 Reviewer: ACM Date: 02/06/09

CURTIS & TOMPKINS BFB TUNE FOR 210098 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : BFB IDF : 1.0
Seqnum : 499078267002 File : jbn02 Time : 23-FEB-2009 08:56

Standards: S10902

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	102474	26.83	
75	30% - 60% of mass 95	186709	48.88	
95		381952	100.00	
96	5% - 9% of mass 95	24949	6.53	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	244480	64.01	
175	5% - 9% of mass 174	18609	7.61	
176	> 95% and < 101% of mass 174	240170	98.24	
177	5% - 9% of mass 176	15566	6.48	

Analyst: MJM Date: 02/24/09 Reviewer: LW Date: 02/24/09

CURTIS & TOMPKINS BFB TUNE FOR 210098 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : BFB IDF : 1.0
Seqnum : 499078267012 File : jbn12 Time : 23-FEB-2009 14:19

Standards: S10902

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	105634	26.21	
75	30% - 60% of mass 95	197034	48.88	
95		403093	100.00	
96	5% - 9% of mass 95	25565	6.34	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	273280	67.80	
175	5% - 9% of mass 174	20064	7.34	
176	> 95% and < 101% of mass 174	268181	98.13	
177	5% - 9% of mass 176	17525	6.53	

Analyst: MJM Date: 02/24/09 Reviewer: LW Date: 02/24/09

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 MSVOA Water: EPA 8260B

Inst : MSVOA10
Calnum : 499052398003
Units : ug/L

Name : 826GOX10
Date : 05-FEB-2009 17:34
X Axis : R

Type : WATER

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	jb507	499052398007		05-FEB-2009 17:34	S11241 (2000000X), S11144 (1000000X), S10687 (2000000X), S11037 (2000000X), S11173 (2500X)
L2	jb508	499052398008		05-FEB-2009 18:08	S11241 (250000X), S11144 (250000X), S10687 (500000X), S11037 (250000X), S11173 (2500X)
L3	jb509	499052398009		05-FEB-2009 18:43	S11241 (100000X), S11144 (100000X), S10687 (200000X), S11037 (100000X), S11173 (2500X)
L4	jb510	499052398010		05-FEB-2009 19:17	S11241 (50000X), S11144 (50000X), S10687 (100000X), S11037 (50000X), S11173 (2500X)
L5	jb511	499052398011		05-FEB-2009 19:52	S11241 (25000X), S11144 (25000X), S10687 (50000X), S11037 (25000X), S11173 (2500X)
L6	jb512	499052398012		05-FEB-2009 20:26	S11241 (10000X), S11144 (10000X), S10687 (20000X), S11037 (10000X), S11173 (2500X)
L7	jb513	499052398013		05-FEB-2009 21:01	S11241 (6667X), S11144 (6667X), S10687 (13330X), S11037 (6667X), S11173 (2500X)
L8	jb514	499052398014		05-FEB-2009 21:35	S11241 (5000X), S11144 (5000X), S10687 (10000X), S11037 (5000X), S11173 (2500X)
L9	jb520	499052398020		06-FEB-2009 01:01	S11241 (1000000X), S11144 (500000X), S10687 (1000000X), S11037 (1000000X), S11173 (2500X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Chloromethane		1.8092	1.6950	1.6962	1.6608	1.6019	1.5766	1.6261	1.7252m	AVRG		0.59741		1.6739	4	15	0.10	0.99	
Vinyl Chloride	1.1008	1.1478	1.1206	1.2990	1.2749	1.2393	1.1944	1.2359	0.9839	AVRG		0.84933		1.1774	8	15	0.05	0.99	
Bromomethane		0.4844m	0.4466	0.5133	0.5493	0.5800	0.5775	0.6006	0.4133m	AVRG		1.92077		0.5206	13	15	0.05	0.99	
Chloroethane		0.7311m	0.6333	0.6653	0.6667	0.6127	0.6001	0.6155	0.6566	AVRG		1.54401		0.6477	7	15	0.05	0.99	
Acetone			0.3400m	0.3155	0.3027	0.2749	0.2906	0.3068		AVRG		3.27797		0.3051	7	15	0.05	0.99	
1,1-Dichloroethene		0.4522	0.4712	0.5725	0.5589	0.5255	0.5278	0.5667	0.5248m	AVRG		1.90494		0.5250	8	15	0.05	0.99	
Methylene Chloride		0.9138	0.8233	0.8335	0.8113	0.7619	0.7706	0.8223		AVRG		1.22023		0.8195	6	15	0.05	0.99	
Carbon Disulfide		2.2785	2.1461	2.4064	2.3962	2.2645	2.2859	2.4822	2.2632	AVRG		0.43189		2.3154	5	15	0.05	0.99	
MTBE		1.9717	1.9471	1.9324	1.9595	1.7486	1.8358	1.8893	1.7544	AVRG		0.53196		1.8798	5	15	0.05	0.99	
trans-1,2-Dichloroethene		0.6486	0.6255	0.6451	0.6385	0.6027	0.6146	0.6568	0.6090	AVRG		1.58712		0.6301	3	15	0.05	0.99	
Vinyl Acetate		1.5397m	1.6638m	1.5343	1.6606	1.3954	1.1870	1.1810		AVRG		0.68885		1.4517	14	15	0.05	0.99	
1,1-Dichloroethane		1.6788	1.5232	1.5353	1.5245	1.4138	1.4206	1.5074	1.4138	AVRG		0.66570		1.5022	6	15	0.10	0.99	
2-Butanone		0.4553	0.4628	0.4459	0.4436	0.3955	0.4083	0.4236		AVRG		2.30638		0.4336	6	15	0.05	0.99	
cis-1,2-Dichloroethene		0.8007	0.7300	0.7316	0.7073	0.6819	0.6826	0.7365	0.6357	AVRG		1.40194		0.7133	7	15	0.05	0.99	
Chloroform		1.2624	1.1801	1.1775	1.1800	1.0981	1.0914	1.1535	1.0895	AVRG		0.86651		1.1541	5	15	0.05	0.99	
1,1,1-Trichloroethane		0.7201	0.7172	0.7886	0.7893	0.7448	0.7538	0.7968	0.7005	AVRG		1.33090		0.7514	5	15	0.05	0.99	
Carbon Tetrachloride		0.2861	0.2893	0.3720	0.3628	0.3416	0.3335	0.3647	0.3197	AVRG		2.99671		0.3337	10	15	0.05	0.99	
1,2-Dichloroethane		0.5551	0.5652	0.5724	0.5570	0.5050	0.5114	0.5379	0.4922	AVRG		1.86208		0.5370	6	15	0.05	0.99	
Benzene		1.7696	1.6697	1.6008	1.5950	1.4827	1.4687	1.5774	1.5216	AVRG		0.63063		1.5857	6	15	0.05	0.99	
Trichloroethene		0.4002	0.3810	0.3995	0.3837	0.3715	0.3725	0.4096	0.3592	AVRG		2.59961		0.3847	4	15	0.05	0.99	
1,2-Dichloropropane		0.5528	0.5208	0.5072	0.5047	0.4795	0.4767	0.4994	0.4536	AVRG		2.00261		0.4993	6	15	0.05	0.99	
Bromodichloromethane		0.5410	0.5288	0.5199	0.5178	0.4874	0.4833	0.5249	0.4647	AVRG		1.96671		0.5085	5	15	0.05	0.99	
4-Methyl-2-Pentanone		0.5326	0.5546	0.5398	0.5588	0.5106	0.5194	0.5425	0.4933	AVRG		1.88162		0.5315	4	15	0.05	0.99	
cis-1,3-Dichloropropene		0.7081	0.6878	0.6679	0.6632	0.6441	0.6370	0.6856	0.6089	AVRG		1.50873		0.6628	5	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Toluene		1.0554	0.9406	0.9418	0.9386	0.8634	0.8559	0.9116	0.9653	AVRG		1.07056		0.9341	7	15	0.05	0.99	
trans-1,3-Dichloropropene		0.5825	0.5769	0.5874	0.6054	0.5617	0.5517	0.5936	0.5437	AVRG		1.73800		0.5754	4	15	0.05	0.99	
1,1,2-Trichloroethane		0.2022	0.1893	0.1902	0.1951	0.1834	0.1791	0.1938	0.1451	AVRG		5.41192		0.1848	9	15	0.05	0.99	
2-Hexanone		0.4687	0.4180	0.4312	0.4388	0.3998	0.4233	0.4325		AVRG		2.32370		0.4303	5	15	0.05	0.99	
Tetrachloroethene		0.3128	0.3126	0.3648	0.3596	0.3478	0.3461	0.3789	0.2881	AVRG		2.95136		0.3388	9	15	0.05	0.99	
Dibromochloromethane		0.3653	0.3428	0.3495	0.3571	0.3464	0.3473	0.3760	0.2892	AVRG		2.88438		0.3467	7	15	0.05	0.99	
Chlorobenzene		1.2371	1.1133	1.0516	1.0651	0.9881	0.9699	1.0504	0.9575	AVRG		0.94864		1.0541	9	15	0.30	0.99	
Ethylbenzene		2.1281	1.8839	1.9303	1.9281	1.8047	1.7397	1.8149	1.8947	AVRG		0.52895		1.8905	6	15	0.05	0.99	
m,p-Xylenes	0.7051	0.7699	0.6857	0.6952	0.6933	0.6411	0.6130	0.6405	0.6419	AVRG		1.47882		0.6762	7	15	0.05	0.99	
o-Xylene		0.7869	0.6957	0.6673	0.6799	0.6297	0.6313	0.6593	0.6765	AVRG		1.47423		0.6783	7	15	0.05	0.99	
Styrene		1.3084	1.2051	1.1705	1.1916	1.1079	1.0925	1.1378	0.9514	AVRG		0.87287		1.1456	9	15	0.05	0.99	
Bromoform		0.1982	0.2030	0.1940	0.2101	0.1982	0.2025	0.2197	0.1434	AVRG		5.09863		0.1961	12	15	0.10	0.99	
1,1,2,2-Tetrachloroethane		1.0574	1.0072	0.9687	1.0206	0.8985	0.9050	0.9527	0.9031	AVRG		1.03717		0.9642	6	15	0.30	0.99	
1,2-Dichloroethane-d4	0.4166	0.4277	0.4272	0.4209	0.4205	0.4067	0.3929	0.3875	0.4366	AVRG		2.40857		0.4152	4	15	0.05	0.99	
Toluene-d8	1.2161	1.2582	1.2454	1.1710	1.2523	1.2464	1.2478	1.2434	1.2545	AVRG		0.80825		1.2372	2	15	0.05	0.99	
Bromofluorobenzene	1.1431	1.1616	1.1495	1.1246	1.1557	1.1328	1.1206	1.1259	1.1817	AVRG		0.87415		1.1440	2	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Chloromethane			2.000	8	5.000	1	10.00	1	20.00	-1	50.00	-4	75.00	-6	100.0	-3	1.000	3
Vinyl Chloride	0.500	-7	2.000	-3	5.000	-5	10.00	10	20.00	8	50.00	5	75.00	1	100.0	5	1.000	-16
Bromomethane			2.000	-7	5.000	-14	10.00	-1	20.00	6	50.00	11	75.00	11	100.0	15	1.000	-21
Chloroethane			2.000	13	5.000	-2	10.00	3	20.00	3	50.00	-5	75.00	-7	100.0	-5	1.000	1
Acetone					5.000	11	10.00	3	20.00	-1	50.00	-10	75.00	-5	100.0	1		
1,1-Dichloroethene			2.000	-14	5.000	-10	10.00	9	20.00	6	50.00	0	75.00	1	100.0	8	0.500	0
Methylene Chloride			2.000	12	5.000	0	10.00	2	20.00	-1	50.00	-7	75.00	-6	100.0	0		
Carbon Disulfide			2.000	-2	5.000	-7	10.00	4	20.00	3	50.00	-2	75.00	-1	100.0	7	0.500	-2
MTBE			2.000	5	5.000	4	10.00	3	20.00	4	50.00	-7	75.00	-2	100.0	1	0.500	-7
trans-1,2-Dichloroethene			2.000	3	5.000	-1	10.00	2	20.00	1	50.00	-4	75.00	-2	100.0	4	0.500	-3
Vinyl Acetate			2.000	6	5.000	15	10.00	6	20.00	14	50.00	-4	75.00	-18	100.0	-19		
1,1-Dichloroethane			2.000	12	5.000	1	10.00	2	20.00	1	50.00	-6	75.00	-5	100.0	0	0.500	-6
2-Butanone			2.000	5	5.000	7	10.00	3	20.00	2	50.00	-9	75.00	-6	100.0	-2		
cis-1,2-Dichloroethene			2.000	12	5.000	2	10.00	3	20.00	-1	50.00	-4	75.00	-4	100.0	3	0.500	-11
Chloroform			2.000	9	5.000	2	10.00	2	20.00	2	50.00	-5	75.00	-5	100.0	0	0.500	-6
1,1,1-Trichloroethane			2.000	-4	5.000	-5	10.00	5	20.00	5	50.00	-1	75.00	0	100.0	6	0.500	-7
Carbon Tetrachloride			2.000	-14	5.000	-13	10.00	11	20.00	9	50.00	2	75.00	0	100.0	9	0.500	-4
1,2-Dichloroethane			2.000	3	5.000	5	10.00	7	20.00	4	50.00	-6	75.00	-5	100.0	0	0.500	-8
Benzene			2.000	12	5.000	5	10.00	1	20.00	1	50.00	-6	75.00	-7	100.0	-1	0.500	-4
Trichloroethene			2.000	4	5.000	-1	10.00	4	20.00	0	50.00	-3	75.00	-3	100.0	6	0.500	-7
1,2-Dichloropropane			2.000	11	5.000	4	10.00	2	20.00	1	50.00	-4	75.00	-5	100.0	0	0.500	-9
Bromodichloromethane			2.000	6	5.000	4	10.00	2	20.00	2	50.00	-4	75.00	-5	100.0	3	0.500	-9
4-Methyl-2-Pentanone			2.000	0	5.000	4	10.00	2	20.00	5	50.00	-4	75.00	-2	100.0	2	0.500	-7
cis-1,3-Dichloropropene			2.000	7	5.000	4	10.00	1	20.00	0	50.00	-3	75.00	-4	100.0	3	0.500	-8
Toluene			2.000	13	5.000	1	10.00	1	20.00	0	50.00	-8	75.00	-8	100.0	-2	0.500	3
trans-1,3-Dichloropropene			2.000	1	5.000	0	10.00	2	20.00	5	50.00	-2	75.00	-4	100.0	3	0.500	-6
1,1,2-Trichloroethane			2.000	9	5.000	2	10.00	3	20.00	6	50.00	-1	75.00	-3	100.0	5	0.500	-21
2-Hexanone			2.000	9	5.000	-3	10.00	0	20.00	2	50.00	-7	75.00	-2	100.0	1		
Tetrachloroethene			2.000	-8	5.000	-8	10.00	8	20.00	6	50.00	3	75.00	2	100.0	12	0.500	-15
Dibromochloromethane			2.000	5	5.000	-1	10.00	1	20.00	3	50.00	0	75.00	0	100.0	8	0.500	-17
Chlorobenzene			2.000	17	5.000	6	10.00	0	20.00	1	50.00	-6	75.00	-8	100.0	0	0.500	-9
Ethylbenzene			2.000	13	5.000	0	10.00	2	20.00	2	50.00	-5	75.00	-8	100.0	-4	0.500	0
m,p-Xylenes	0.500	4	4.000	14	10.00	1	20.00	3	40.00	3	100.0	-5	150.0	-9	200.0	-5	1.000	-5
o-Xylene			2.000	16	5.000	3	10.00	-2	20.00	0	50.00	-7	75.00	-7	100.0	-3	0.500	0
Styrene			2.000	14	5.000	5	10.00	2	20.00	4	50.00	-3	75.00	-5	100.0	-1	0.500	-17
Bromoform			2.000	1	5.000	4	10.00	-1	20.00	7	50.00	1	75.00	3	100.0	12	0.500	-27
1,1,2,2-Tetrachloroethane			2.000	10	5.000	4	10.00	0	20.00	6	50.00	-7	75.00	-6	100.0	-1	0.500	-6
1,2-Dichloroethane-d4	50.00	0	50.00	3	50.00	3	50.00	1	50.00	1	50.00	-2	50.00	-5	50.00	-7	50.00	5
Toluene-d8	50.00	-2	50.00	2	50.00	1	50.00	-5	50.00	1	50.00	1	50.00	1	50.00	0	50.00	1
Bromofluorobenzene	50.00	0	50.00	2	50.00	0	50.00	-2	50.00	1	50.00	-1	50.00	-2	50.00	-2	50.00	3

MJM 02/06/09 [Freon 12]: Combined split peak.

MJM 02/06/09 [Chloromethane]: Combined split peak.

MJM 02/06/09 [Bromomethane]: Drew baseline due to software limitations. Combined split peak.

MJM 02/06/09 [Chloroethane]: Combined split peak.

MJM 02/06/09 [Ethanol]: Drew baseline due to software limitations.

MJM 02/06/09 [Acetone]: Drew baseline due to software limitations.

MJM 02/06/09 [1,1-Dichloroethene]: Combined split peak.

MJM 02/06/09 [Vinyl Acetate]: Drew baseline due to software limitations.

MJM 02/06/09 [tert-Butyl Alcohol (TBA)]: Combined split peak.

MJM 02/06/09 [2-Butanone]: Combined split peak.

MJM 02/06/09 [2,2-Dichloropropane]: Combined split peak.

Analyst: MJM Date: 02/06/09 Reviewer: ACM Date: 02/06/09

m=manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 MSVOA Water
EPA 8260B

Inst : MSVOA10 Name : 826GOX10
Calnum : 499052398003 Cal Date : 05-FEB-2009 Type : WATER

ICV 499053770004 (jb604 06-FEB-2009) stds: S11334 (12500X), S11053 (12500X), S11106 (12500X), S11224 (12500X), S11173 (2500X)

Analyte	Average RF	RF	Spiked	Quant	Units	%D	Max	Flags
Chloromethane	1.6739	1.4456	20.00	17.27	ug/L	-14	30	
Vinyl Chloride	1.1774	1.1522	20.00	19.57	ug/L	-2	20	
Bromomethane	0.5206	0.5027	20.00	19.31	ug/L	-3	30	
Chloroethane	0.6477	0.5991	20.00	18.50	ug/L	-8	30	
Acetone	0.3051	0.3486	20.00	22.85	ug/L	14	40	
1,1-Dichloroethene	0.5250	0.5788	20.00	22.05	ug/L	10	20	
Methylene Chloride	0.8195	0.8912	20.00	21.75	ug/L	9	30	
Carbon Disulfide	2.3154	2.2740	20.00	19.64	ug/L	-2	30	
MTBE	1.8798	1.7354	20.00	18.46	ug/L	-8	30	
trans-1,2-Dichloroethene	0.6301	0.6637	20.00	21.07	ug/L	5	30	
Vinyl Acetate	1.4517	1.8401	20.00	25.35	ug/L	27	40	
1,1-Dichloroethane	1.5022	1.4834	20.00	19.75	ug/L	-1	30	
2-Butanone	0.4336	0.4359	20.00	20.11	ug/L	1	40	
cis-1,2-Dichloroethene	0.7133	0.7311	20.00	20.50	ug/L	2	30	
Chloroform	1.1541	1.1528	20.00	19.98	ug/L	0	20	
1,1,1-Trichloroethane	0.7514	0.7774	20.00	20.69	ug/L	3	30	
Carbon Tetrachloride	0.3337	0.3595	20.00	21.55	ug/L	8	30	
1,2-Dichloroethane	0.5370	0.5366	20.00	19.98	ug/L	0	30	
Benzene	1.5857	1.5666	20.00	19.76	ug/L	-1	30	
Trichloroethene	0.3847	0.3760	20.00	19.55	ug/L	-2	30	
1,2-Dichloropropane	0.4993	0.5092	20.00	20.40	ug/L	2	20	
Bromodichloromethane	0.5085	0.5098	20.00	20.05	ug/L	0	30	
4-Methyl-2-Pentanone	0.5315	0.5168	20.00	19.45	ug/L	-3	40	
cis-1,3-Dichloropropene	0.6628	0.6894	20.00	20.80	ug/L	4	30	
Toluene	0.9341	0.9180	20.00	19.65	ug/L	-2	20	
trans-1,3-Dichloropropene	0.5754	0.5366	20.00	18.65	ug/L	-7	30	
1,1,2-Trichloroethane	0.1848	0.1956	20.00	21.17	ug/L	6	30	
2-Hexanone	0.4303	0.4262	20.00	19.81	ug/L	-1	40	
Tetrachloroethene	0.3388	0.3681	20.00	21.73	ug/L	9	30	
Dibromochloromethane	0.3467	0.3682	20.00	21.24	ug/L	6	30	
Chlorobenzene	1.0541	1.0326	20.00	19.59	ug/L	-2	30	
Ethylbenzene	1.8905	1.9175	20.00	20.28	ug/L	1	20	
m,p-Xylenes	0.6762	0.6924	40.00	40.96	ug/L	2	30	
o-Xylene	0.6783	0.6706	20.00	19.77	ug/L	-1	30	
Styrene	1.1456	1.1597	20.00	20.25	ug/L	1	30	
Bromoform	0.1961	0.2067	20.00	21.07	ug/L	5	30	
1,1,2,2-Tetrachloroethane	0.9642	1.0149	20.00	21.05	ug/L	5	30	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : 20PPB IDF : 1.0
Seqnum : 499078267003 File : jbn03 Time : 23-FEB-2009 09:15
Cal : 499052398003 Caldate : 05-FEB-2009 Caltype : WATER
Standards: S11183 (25000X), S11241 (25000X), S11419 (25000X), S10687 (50000X), S11398 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Chloromethane	1.6739	1.4230	20.00	17.00	ug/L	-15	30	0.1000	
Vinyl Chloride	1.1774	1.0689	20.00	18.16	ug/L	-9	20	0.0500	
Bromomethane	0.5206	0.3175	20.00	12.20	ug/L	**-39**	30	0.0500	c- ***
Chloroethane	0.6477	0.5802	20.00	17.92	ug/L	-10	30	0.0500	
Acetone	0.3051	0.3145	20.00	20.62	ug/L	3	40	0.0500	
1,1-Dichloroethene	0.5250	0.5008	20.00	19.08	ug/L	-5	20	0.0500	
Methylene Chloride	0.8195	0.7897	20.00	19.27	ug/L	-4	30	0.0500	
Carbon Disulfide	2.3154	2.3412	20.00	20.22	ug/L	1	30	0.0500	
MTBE	1.8798	1.9174	20.00	20.40	ug/L	2	30	0.0500	
trans-1,2-Dichloroethene	0.6301	0.6142	20.00	19.50	ug/L	-3	30	0.0500	
Vinyl Acetate	1.4517	2.3842	20.00	32.85	ug/L	**64**	40	0.0500	c+ ***
1,1-Dichloroethane	1.5022	1.4833	20.00	19.75	ug/L	-1	30	0.1000	
2-Butanone	0.4336	0.4221	20.00	19.47	ug/L	-3	40	0.0500	
cis-1,2-Dichloroethene	0.7133	0.7067	20.00	19.82	ug/L	-1	30	0.0500	
Chloroform	1.1541	1.2168	20.00	21.09	ug/L	5	20	0.0500	
1,1,1-Trichloroethane	0.7514	0.7732	20.00	20.58	ug/L	3	30	0.0500	
Carbon Tetrachloride	0.3337	0.3339	20.00	20.01	ug/L	0	30	0.0500	
1,2-Dichloroethane	0.5370	0.6092	20.00	22.69	ug/L	13	30	0.0500	
Benzene	1.5857	1.5583	20.00	19.65	ug/L	-2	30	0.0500	
Trichloroethene	0.3847	0.3492	20.00	18.16	ug/L	-9	30	0.0500	
1,2-Dichloropropane	0.4993	0.4936	20.00	19.77	ug/L	-1	20	0.0500	
Bromodichloromethane	0.5085	0.5514	20.00	21.69	ug/L	8	30	0.0500	
4-Methyl-2-Pentanone	0.5315	0.5050	20.00	19.01	ug/L	-5	40	0.0500	
cis-1,3-Dichloropropene	0.6628	0.7064	20.00	21.32	ug/L	7	30	0.0500	
Toluene	0.9341	0.8772	20.00	18.78	ug/L	-6	20	0.0500	
trans-1,3-Dichloropropene	0.5754	0.6408	20.00	22.27	ug/L	11	30	0.0500	
1,1,2-Trichloroethane	0.1848	0.1880	20.00	20.35	ug/L	2	30	0.0500	
2-Hexanone	0.4303	0.3918	20.00	18.21	ug/L	-9	40	0.0500	
Tetrachloroethene	0.3388	0.2859	20.00	16.88	ug/L	-16	30	0.0500	
Dibromochloromethane	0.3467	0.3834	20.00	22.12	ug/L	11	30	0.0500	
Chlorobenzene	1.0541	1.0109	20.00	19.18	ug/L	-4	30	0.3000	
Ethylbenzene	1.8905	1.6984	20.00	17.97	ug/L	-10	20	0.0500	
m,p-Xylenes	0.6762	0.6124	40.00	36.22	ug/L	-9	30	0.0500	
o-Xylene	0.6783	0.6166	20.00	18.18	ug/L	-9	30	0.0500	
Styrene	1.1456	1.1363	20.00	19.84	ug/L	-1	30	0.0500	
Bromoform	0.1961	0.2318	20.00	23.64	ug/L	18	30	0.1000	
1,1,2,2-Tetrachloroethane	0.9642	0.9293	20.00	19.28	ug/L	-4	30	0.3000	
1,2-Dichloroethane-d4	0.4152	0.4574	50.00	55.09	ug/L	10	30	0.0500	
Toluene-d8	1.2372	1.2729	50.00	51.44	ug/L	3	30	0.0500	
Bromofluorobenzene	1.1440	1.1521	50.00	50.35	ug/L	1	30	0.0500	

ISTD (ICAL jb512)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	958679	949633	-0.94	11.15	11.14	-0.01
1,4-Difluorobenzene	1689299	1665696	-1.40	12.31	12.30	-0.01
Chlorobenzene-d5	1535950	1549933	0.91	16.20	16.19	-0.01
1,4-Dichlorobenzene-d4	744991	768151	3.11	18.91	18.90	-0.01

Analyst: MJM Date: 02/24/09 Reviewer: LW Date: 02/24/09

+=high bias -=low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : 20PPB IDF : 1.0
Seqnum : 499078267013 File : jbn13 Time : 23-FEB-2009 14:36
Cal : 499052398003 Caldate : 05-FEB-2009 Caltype : WATER
Standards: S11183 (25000X), S11241 (25000X), S11419 (25000X), S10687 (50000X), S11398 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Chloromethane	1.6739	1.5257	20.00	18.23	ug/L	-9	30	0.1000	
Vinyl Chloride	1.1774	1.1811	20.00	20.06	ug/L	0	20	0.0500	
Bromomethane	0.5206	0.3808	20.00	14.63	ug/L	**-27**	30	0.0500	!c-
Chloroethane	0.6477	0.6642	20.00	20.51	ug/L	3	30	0.0500	
Acetone	0.3051	0.2671	20.00	17.51	ug/L	-12	40	0.0500	
1,1-Dichloroethene	0.5250	0.5222	20.00	19.89	ug/L	-1	20	0.0500	
Methylene Chloride	0.8195	0.8307	20.00	20.27	ug/L	1	30	0.0500	
Carbon Disulfide	2.3154	2.4582	20.00	21.23	ug/L	6	30	0.0500	
MTBE	1.8798	2.0977	20.00	22.32	ug/L	12	30	0.0500	
trans-1,2-Dichloroethene	0.6301	0.6360	20.00	20.19	ug/L	1	30	0.0500	
Vinyl Acetate	1.4517	2.1477	20.00	29.59	ug/L	**48**	40	0.0500	c+ ***
1,1-Dichloroethane	1.5022	1.5728	20.00	20.94	ug/L	5	30	0.1000	
2-Butanone	0.4336	0.4368	20.00	20.15	ug/L	1	40	0.0500	
cis-1,2-Dichloroethene	0.7133	0.7374	20.00	20.68	ug/L	3	30	0.0500	
Chloroform	1.1541	1.2574	20.00	21.79	ug/L	9	20	0.0500	
1,1,1-Trichloroethane	0.7514	0.7836	20.00	20.86	ug/L	4	30	0.0500	
Carbon Tetrachloride	0.3337	0.3307	20.00	19.82	ug/L	-1	30	0.0500	
1,2-Dichloroethane	0.5370	0.6351	20.00	23.65	ug/L	18	30	0.0500	
Benzene	1.5857	1.5603	20.00	19.68	ug/L	-2	30	0.0500	
Trichloroethene	0.3847	0.3661	20.00	19.04	ug/L	-5	30	0.0500	
1,2-Dichloropropane	0.4993	0.5058	20.00	20.26	ug/L	1	20	0.0500	
Bromodichloromethane	0.5085	0.5635	20.00	22.17	ug/L	11	30	0.0500	
4-Methyl-2-Pentanone	0.5315	0.5596	20.00	21.06	ug/L	5	40	0.0500	
cis-1,3-Dichloropropene	0.6628	0.7231	20.00	21.82	ug/L	9	30	0.0500	
Toluene	0.9341	0.8703	20.00	18.63	ug/L	-7	20	0.0500	
trans-1,3-Dichloropropene	0.5754	0.6624	20.00	23.03	ug/L	15	30	0.0500	
1,1,2-Trichloroethane	0.1848	0.1931	20.00	20.90	ug/L	4	30	0.0500	
2-Hexanone	0.4303	0.4288	20.00	19.93	ug/L	0	40	0.0500	
Tetrachloroethene	0.3388	0.3109	20.00	18.35	ug/L	-8	30	0.0500	
Dibromochloromethane	0.3467	0.4182	20.00	24.13	ug/L	**21**	30	0.0500	!c+
Chlorobenzene	1.0541	1.0472	20.00	19.87	ug/L	-1	30	0.3000	
Ethylbenzene	1.8905	1.7712	20.00	18.74	ug/L	-6	20	0.0500	
m,p-Xylenes	0.6762	0.6361	40.00	37.63	ug/L	-6	30	0.0500	
o-Xylene	0.6783	0.6547	20.00	19.30	ug/L	-3	30	0.0500	
Styrene	1.1456	1.1975	20.00	20.91	ug/L	5	30	0.0500	
Bromoform	0.1961	0.2633	20.00	26.85	ug/L	**34**	30	0.1000	c+ ***
1,1,2,2-Tetrachloroethane	0.9642	1.0082	20.00	20.91	ug/L	5	30	0.3000	
1,2-Dichloroethane-d4	0.4152	0.4527	50.00	54.52	ug/L	9	30	0.0500	
Toluene-d8	1.2372	1.2496	50.00	50.50	ug/L	1	30	0.0500	
Bromofluorobenzene	1.1440	1.1399	50.00	49.82	ug/L	0	30	0.0500	

ISTD (ICAL jb512)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	958679	963989	0.55	11.15	11.13	-0.02
1,4-Difluorobenzene	1689299	1707541	1.08	12.31	12.30	-0.01
Chlorobenzene-d5	1535950	1522205	-0.89	16.20	16.19	-0.01
1,4-Dichlorobenzene-d4	744991	777189	4.32	18.91	18.90	-0.01

Analyst: MJM Date: 02/24/09 Reviewer: LW Date: 02/24/09

!=warning +=high bias -=low bias c=CCV

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 499078267

Date : 02/23/09 Reference : jb512
Sequence : MSVOA10 jbn Analyzed : 02/05/09 20:26

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	958679	11.15	1689299	12.31	1535950	16.20	744991	18.91
		LOWER LIMIT	479340	10.65	844650	11.81	767975	15.70	372496	18.41
		UPPER LIMIT	1917358	11.65	3378598	12.81	3071900	16.70	1489982	19.41
003	CCV	20PPB	949633	11.14	1665696	12.30	1549933	16.19	768151	18.90
004	BS	QC484397	1080491	11.14	1850190	12.29	1668551	16.19	823868	18.90
005	BSD	QC484398	1166528	11.13	1964271	12.30	1740557	16.19	855691	18.90
007	BLANK	QC484399	1109864	11.14	1876768	12.29	1691860	16.19	802915	18.90
008	SAMPLE	210049-017	1060042	11.14	1795324	12.29	1645737	16.19	788782	18.90
009	SAMPLE	210049-018	1017685	11.14	1769465	12.29	1587331	16.19	737324	18.90
010	SAMPLE	210157-001	1012040	11.13	1759885	12.29	1598702	16.19	746444	18.90
011	SAMPLE	210189-001	1035450	11.13	1758053	12.29	1586007	16.19	747249	18.90
013	CCV	20PPB	963989	11.13	1707541	12.30	1522205	16.19	777189	18.90
015	BLANK	QC484400	1001622	11.14	1754583	12.30	1577677	16.18	727093	18.90
016	SAMPLE	210189-002	993910	11.14	1721016	12.30	1554052	16.19	724401	18.90
017	SAMPLE	210157-002	1050772	11.14	1785854	12.30	1639504	16.19	772961	18.90
018	SAMPLE	210157-004	1034020	11.14	1759209	12.30	1600329	16.19	763788	18.90
019	SAMPLE	210157-006	1015882	11.14	1753943	12.30	1561068	16.18	748652	18.90
020	SAMPLE	210157-007	969504	11.13	1695726	12.29	1554481	16.19	744983	18.90
021	SAMPLE	210097-001	1011877	11.14	1747883	12.29	1561893	16.19	741887	18.89
022	SAMPLE	210098-001	995739	11.13	1770333	12.29	1612738	16.19	791127	18.89
023	SAMPLE	210098-002	1108713	11.13	1897828	12.29	1686036	16.19	799486	18.89
024	SAMPLE	210117-010	976672	11.14	1792661	12.30	1555495	16.18	736875	18.90
025	SAMPLE	210116-001	1027762	11.14	1790293	12.30	1609417	16.18	765479	18.90
026	SAMPLE	210116-002	1007788	11.13	1757754	12.29	1589506	16.19	747498	18.89
027	MSS	210116-003	1023379	11.14	1739875	12.30	1576704	16.18	731031	18.90
028	SAMPLE	210116-004	1027464	11.13	1773342	12.29	1578882	16.18	742383	18.89
029	SAMPLE	209986-004	990337	11.14	1732085	12.29	1542253	16.18	736081	18.89
030	SAMPLE	209986-002	926409	11.13	1620769	12.29	1481301	16.18	710531	18.89
031	SAMPLE	210117-009	986297	11.13	1702056	12.29	1532350	16.18	710675	18.89
032	MS	QC484480	971270	11.13	1683389	12.29	1523071	16.18	779176	18.89
033	MSD	QC484481	1002270	11.13	1716363	12.29	1558906	16.17	790213	18.89

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 499052398

Instrument : MSVOA10 Begun : 02/05/09 09:18
Method : EPA 8260B SOP Version : TVH_8260B_rv0

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	jb501	X	IB			02/05/09 09:18	1.0	1	
002	jb502	TUN	BFB			02/05/09 14:52	1.0	2	
003	jb503	X	IB			02/05/09 15:09	1.0	1	
004	jb504	X	IB			02/05/09 15:44	1.0	1	
005	jb505	IB	CALIB			02/05/09 16:25	1.0	1	
006	jb506	X	ICAL			02/05/09 17:00	1.0	3 4 5 6 1	
007	jb507	ICAL				02/05/09 17:34	1.0	3 4 5 6 1	
008	jb508	ICAL				02/05/09 18:08	1.0	3 4 5 6 1	
009	jb509	ICAL				02/05/09 18:43	1.0	3 4 5 6 1	
010	jb510	ICAL				02/05/09 19:17	1.0	3 4 5 6 1	
011	jb511	ICAL				02/05/09 19:52	1.0	3 4 5 6 1	
012	jb512	ICAL				02/05/09 20:26	1.0	3 4 5 6 1	
013	jb513	ICAL				02/05/09 21:01	1.0	3 4 5 6 1	
014	jb514	ICAL				02/05/09 21:35	1.0	3 4 5 6 1	
015	jb515	X	GAS			02/05/09 22:09	1.0	7 1	
016	jb516	X				02/05/09 22:44	1.0	8 9 10 1	
017	jb517	X	IB			02/05/09 23:18	1.0	1	
018	jb518	X	IB			02/05/09 23:53	1.0	1	
019	jb519	X	IB			02/06/09 00:27	1.0	1	
020	jb520	ICAL				02/06/09 01:01	1.0	3 4 5 6 1	

MJM 02/06/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 001 through 020.

Analyst: MJM Date: 02/06/09 Reviewer: ACM Date: 02/06/09

Standards used: 1=S11173 2=S10902 3=S11241 4=S11144 5=S10687 6=S11037 7=S11334 8=S11053 9=S11106 10=S11224

Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 499053770

Instrument : MSVOA10 Begun : 02/06/09 08:10
Method : EPA 8260B SOP Version : TVH_8260B_rv0

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	jb601	X	IB			02/06/09 08:10	1.0	1	
002	jb602	TUN	BFB			02/06/09 10:18	1.0	2	
003	jb603	CCV	20PPB			02/06/09 10:41	1.0	3 4 5 6 1	
004	jb604	ICV/BS	QC482378	Water	147681	02/06/09 11:33	1.0	7 8 9 10 1	
005	jb605	BSD	QC482379	Water	147681	02/06/09 12:07	1.0	7 8 9 10 1	
006	jb606	X	IB			02/06/09 12:42	1.0	1	
007	jb607	BLANK	QC482380	Water	147681	02/06/09 13:16	1.0	1	
008	jb608	SAMPLE	209689-001	Water	147681	02/06/09 13:51	1.0	1	
009	jb609	SAMPLE	209689-004	Water	147681	02/06/09 14:25	1.0	1	
010	jb610	SAMPLE	209689-003	Water	147681	02/06/09 14:59	1.0	1	
011	jb611	SAMPLE	209689-005	Water	147681	02/06/09 15:34	1.0	1	
012	jb612	SAMPLE	209687-001	Water	147681	02/06/09 16:09	1.0	1	
013	jb613	SAMPLE	209687-002	Water	147681	02/06/09 16:43	1.0	1	
014	jb614	SAMPLE	209687-003	Water	147681	02/06/09 17:18	1.0	1	
015	jb615	SAMPLE	209687-004	Water	147681	02/06/09 17:52	1.0	1	
016	jb616	SAMPLE	209687-005	Water	147681	02/06/09 18:27	1.0	1	
017	jb617	SAMPLE	209687-006	Water	147681	02/06/09 19:01	1.0	1	
018	jb618	SAMPLE	209687-007	Water	147681	02/06/09 19:36	1.0	1	
019	jb619	SAMPLE	209716-001	Water	147681	02/06/09 20:10	1.0	1	
020	jb620	SAMPLE	209725-001	Water	147681	02/06/09 20:45	1.0	1	pH > 2, 1:HXO2=100
021	jb621	SAMPLE	209725-002	Water	147681	02/06/09 21:19	1.0	1	1:HXO2=190
022	jb622	SAMPLE	209725-003	Water	147681	02/06/09 21:54	1.0	1	
023	jb623	SAMPLE	209725-004	Water	147681	02/06/09 22:28	1.0	1	
024	jb624	SAMPLE	209725-005	Water	147681	02/06/09 23:03	1.0	1	
025	jb625	X	IB			02/06/09 23:37	1.0	1	
026	jb626	X	IB			02/07/09 00:12	1.0	1	
027	jb627	X	IB			02/07/09 00:46	1.0	1	
028	jb628	X	IB			02/07/09 01:21	1.0	1	
029	jb629	X	IB			02/07/09 01:55	1.0	1	

MJM 02/09/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 001 through 029.

Analyst: MJM Date: 02/09/09 Reviewer: LW Date: 02/09/09

Standards used: 1=S11173 2=S10902 3=S11144 4=S11241 5=S11037 6=S10687 7=S11334 8=S11053 9=S11106 10=S11224

Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 499078267

Instrument : MSVOA10 Begun : 02/23/09 08:27
Method : EPA 8260B SOP Version : TVH_8260B_rv0

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	jbn01	X	IB			02/23/09 08:27	1.0	1	
002	jbn02	TUN	BFB			02/23/09 08:56	1.0	2	
003	jbn03	CCV	20PPB			02/23/09 09:15	1.0	3 4 5 6 1	
004	jbn04	BS	QC484397	Water	148175	02/23/09 09:50	1.0	7 8 9 10 1	
005	jbn05	BSD	QC484398	Water	148175	02/23/09 10:24	1.0	7 8 9 10 1	
006	jbn06	X	IB			02/23/09 10:58	1.0	1	
007	jbn07	BLANK	QC484399	Water	148175	02/23/09 11:33	1.0	1	
008	jbn08	SAMPLE	210049-017	Water	148175	02/23/09 12:07	1.0	1	
009	jbn09	SAMPLE	210049-018	Water	148175	02/23/09 12:41	1.0	1	
010	jbn10	SAMPLE	210157-001	Water	148175	02/23/09 13:15	1.0	1	
011	jbn11	SAMPLE	210189-001	Water	148175	02/23/09 13:49	1.0	1	
012	jbn12	TUN	BFB			02/23/09 14:19	1.0	2	
013	jbn13	CCV	20PPB			02/23/09 14:36	1.0	3 4 5 6 1	
014	jbn14	X	IB			02/23/09 15:10	1.0	1	
015	jbn15	BLANK	QC484400	Water	148175	02/23/09 15:44	1.0	1	
016	jbn16	SAMPLE	210189-002	Water	148175	02/23/09 16:19	1.0	1	
017	jbn17	SAMPLE	210157-002	Water	148175	02/23/09 16:53	1.0	1	pH > 2, 1:ACE=170
018	jbn18	SAMPLE	210157-004	Water	148175	02/23/09 17:27	1.0	1	pH > 2, 1:ACE=110
019	jbn19	SAMPLE	210157-006	Water	148175	02/23/09 18:01	1.0	1	pH > 2
020	jbn20	SAMPLE	210157-007	Water	148175	02/23/09 18:36	1.0	1	pH > 2
021	jbn21	SAMPLE	210097-001	Water	148175	02/23/09 19:10	1.0	1	
022	jbn22	SAMPLE	210098-001	Water	148175	02/23/09 19:44	1.0	1	headspace <= 1 mL
023	jbn23	SAMPLE	210098-002	Water	148175	02/23/09 20:18	1.0	1	
024	jbn24	SAMPLE	210117-010	Water	148175	02/23/09 20:53	1.0	1	3:VC=2200
025	jbn25	SAMPLE	210116-001	Water	148175	02/23/09 21:27	1.0	1	
026	jbn26	SAMPLE	210116-002	Water	148175	02/23/09 22:01	1.0	1	
027	jbn27	MSS	210116-003	Water	148175	02/23/09 22:35	1.0	1	
028	jbn28	SAMPLE	210116-004	Water	148175	02/23/09 23:10	2.500	1	
029	jbn29	SAMPLE	209986-004	Water	148175	02/23/09 23:44	3.333	1	
030	jbn30	SAMPLE	209986-002	Water	148175	02/24/09 00:18	8.333	1	
031	jbn31	SAMPLE	210117-009	Water	148175	02/24/09 00:52	2000	1	
032	jbn32	MS	QC484480	Water	148175	02/24/09 01:27	1.0	7 8 9 11 1	
033	jbn33	MSD	QC484481	Water	148175	02/24/09 02:01	1.0	7 8 9 11 1	
034	jbn34	X	IB			02/24/09 02:35	1.0	1	
035	jbn35	X	IB			02/24/09 03:09	1.0	1	
036	jbn36	X	IB			02/24/09 03:44	1.0	1	

MJM 02/24/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 001 through 036.

Analyst: MJM Date: 02/24/09 Reviewer: LW Date: 02/24/09

Standards used: 1=S11398 2=S10902 3=S11183 4=S11241 5=S11419 6=S10687 7=S11334 8=S11411 9=S11443 10=S11444 11=S11224

Page 1 of 1

GC/MS VOLATILE ORGANICS

Batch #: 148175

Water Sample Prep Sheet

	Sample Number	Sample Vial	pH	Head space?	Shelf	Dil'n Flask	MS#	Comments	Initials & Date
1	210118 - 2	C	—	—	—		10	RR 5X PCE > LK Put off - on ms6	AB 2/23/09
2	210068 - 8	B	—	—	—			RR 50X PCE > LK	
3	210127 - 1		—	—	—			RR 1X OD (RE ~ 80)	
4	210189 - 1	A	<2					1X	
5	2								
6	210133 - 1		—	—	—			1X Put off - on ms6	
7	210049 - 17		<2					1X	
8	18							FB	
9	210157 - 1	B						TB	
10	2		7					1X	
11	4								
12	6								
13	7								
14	210097 - 1	A	<2					1X	
15	210098 - 1			Bubble					
16	2	C							
17	210117 - 9	D	<2			1		2000X (cis)	
18	10	A						1X	
19	209986 - 2	A	<2			2		8.3X	
20	4					3		3.3X	
21	210116 - 1	A	<2					EB	
22	2							TB	
23	3							1X MSS	
24	4		<2			4		2.5X	
25	3	BCD	<2					1X MS/MSD	
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									

Laboratory Job Number 210098

ANALYTICAL REPORT

Semivolatile Organics by GC/MS

Matrix: Water

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8270C
Field ID:	E051	Batch#:	148131
Lab ID:	210098-001	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Prepared:	02/20/09
Diln Fac:	1.000	Analyzed:	02/22/09

Analyte	Result	RL	MDL
Phenol	19	9.4	
bis(2-Chloroethyl)ether	ND	9.4	
2-Chlorophenol	ND	9.4	
1,3-Dichlorobenzene	ND	9.4	
1,4-Dichlorobenzene	ND	9.4	
Benzyl alcohol	ND	9.4	
1,2-Dichlorobenzene	ND	9.4	
2-Methylphenol	ND	9.4	
bis(2-Chloroisopropyl) ether	ND	9.4	
4-Methylphenol	ND	9.4	
N-Nitroso-di-n-propylamine	ND	9.4	
Hexachloroethane	ND	9.4	
Nitrobenzene	ND	9.4	
Isophorone	ND	9.4	
2-Nitrophenol	ND	19	5.7
2,4-Dimethylphenol	12	9.4	
Benzoic acid	ND	47	
bis(2-Chloroethoxy)methane	ND	9.4	
2,4-Dichlorophenol	ND	9.4	
1,2,4-Trichlorobenzene	ND	9.4	
Naphthalene	42	9.4	
4-Chloroaniline	ND	9.4	
Hexachlorobutadiene	ND	9.4	
4-Chloro-3-methylphenol	ND	9.4	
2-Methylnaphthalene	14	9.4	
Hexachlorocyclopentadiene	ND	19	
2,4,6-Trichlorophenol	ND	9.4	
2,4,5-Trichlorophenol	ND	9.4	
2-Chloronaphthalene	ND	9.4	
2-Nitroaniline	ND	19	
Dimethylphthalate	ND	9.4	
Acenaphthylene	ND	9.4	
2,6-Dinitrotoluene	ND	9.4	
3-Nitroaniline	ND	19	
Acenaphthene	ND	9.4	
2,4-Dinitrophenol	ND	19	
4-Nitrophenol	ND	19	
Dibenzofuran	ND	9.4	
2,4-Dinitrotoluene	ND	9.4	
Diethylphthalate	ND	9.4	
Fluorene	ND	9.4	
4-Chlorophenyl-phenylether	ND	9.4	
4-Nitroaniline	ND	19	
4,6-Dinitro-2-methylphenol	ND	19	
N-Nitrosodiphenylamine	ND	9.4	
4-Bromophenyl-phenylether	ND	9.4	
Hexachlorobenzene	ND	9.4	
Pentachlorophenol	ND	19	
Phenanthrene	ND	9.4	
Anthracene	ND	9.4	
Di-n-butylphthalate	ND	9.4	
Fluoranthene	ND	9.4	
Pyrene	ND	9.4	

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8270C
Field ID:	E051	Batch#:	148131
Lab ID:	210098-001	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Prepared:	02/20/09
Diln Fac:	1.000	Analyzed:	02/22/09

Analyte	Result	RL	MDL
Butylbenzylphthalate	ND	9.4	
3,3'-Dichlorobenzidine	ND	19	
Benzo(a)anthracene	ND	9.4	
Chrysene	ND	9.4	
bis(2-Ethylhexyl)phthalate	ND	9.4	
Di-n-octylphthalate	ND	9.4	
Benzo(b)fluoranthene	ND	9.4	
Benzo(k)fluoranthene	ND	9.4	
Benzo(a)pyrene	ND	9.4	
Indeno(1,2,3-cd)pyrene	ND	9.4	
Dibenz(a,h)anthracene	ND	9.4	
Benzo(g,h,i)perylene	ND	9.4	

Surrogate	%REC	Limits
2-Fluorophenol	44	21-120
Phenol-d5	66	10-120
2,4,6-Tribromophenol	93	10-123
Nitrobenzene-d5	65	36-120
2-Fluorobiphenyl	81	43-120
Terphenyl-d14	57	33-141

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8270C
Field ID:	E049	Batch#:	148131
Lab ID:	210098-002	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Prepared:	02/20/09
Diln Fac:	1.000	Analyzed:	02/22/09

Analyte	Result	RL	MDL
Phenol	ND	9.4	
bis(2-Chloroethyl)ether	ND	9.4	
2-Chlorophenol	ND	9.4	
1,3-Dichlorobenzene	ND	9.4	
1,4-Dichlorobenzene	ND	9.4	
Benzyl alcohol	ND	9.4	
1,2-Dichlorobenzene	ND	9.4	
2-Methylphenol	ND	9.4	
bis(2-Chloroisopropyl) ether	ND	9.4	
4-Methylphenol	ND	9.4	
N-Nitroso-di-n-propylamine	ND	9.4	
Hexachloroethane	ND	9.4	
Nitrobenzene	ND	9.4	
Isophorone	ND	9.4	
2-Nitrophenol	ND	19	5.7
2,4-Dimethylphenol	ND	9.4	
Benzoic acid	ND	47	
bis(2-Chloroethoxy)methane	ND	9.4	
2,4-Dichlorophenol	ND	9.4	
1,2,4-Trichlorobenzene	ND	9.4	
Naphthalene	ND	9.4	
4-Chloroaniline	ND	9.4	
Hexachlorobutadiene	ND	9.4	
4-Chloro-3-methylphenol	ND	9.4	
2-Methylnaphthalene	ND	9.4	
Hexachlorocyclopentadiene	ND	19	
2,4,6-Trichlorophenol	ND	9.4	
2,4,5-Trichlorophenol	ND	9.4	
2-Chloronaphthalene	ND	9.4	
2-Nitroaniline	ND	19	
Dimethylphthalate	ND	9.4	
Acenaphthylene	ND	9.4	
2,6-Dinitrotoluene	ND	9.4	
3-Nitroaniline	ND	19	
Acenaphthene	ND	9.4	
2,4-Dinitrophenol	ND	19	
4-Nitrophenol	ND	19	
Dibenzofuran	ND	9.4	
2,4-Dinitrotoluene	ND	9.4	
Diethylphthalate	ND	9.4	
Fluorene	ND	9.4	
4-Chlorophenyl-phenylether	ND	9.4	
4-Nitroaniline	ND	19	
4,6-Dinitro-2-methylphenol	ND	19	
N-Nitrosodiphenylamine	ND	9.4	
4-Bromophenyl-phenylether	ND	9.4	
Hexachlorobenzene	ND	9.4	
Pentachlorophenol	ND	19	
Phenanthrene	ND	9.4	
Anthracene	ND	9.4	
Di-n-butylphthalate	ND	9.4	
Fluoranthene	ND	9.4	
Pyrene	ND	9.4	

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8270C
Field ID:	E049	Batch#:	148131
Lab ID:	210098-002	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Prepared:	02/20/09
Diln Fac:	1.000	Analyzed:	02/22/09

Analyte	Result	RL	MDL
Butylbenzylphthalate	ND	9.4	
3,3'-Dichlorobenzidine	ND	19	
Benzo(a)anthracene	ND	9.4	
Chrysene	ND	9.4	
bis(2-Ethylhexyl)phthalate	ND	9.4	
Di-n-octylphthalate	ND	9.4	
Benzo(b)fluoranthene	ND	9.4	
Benzo(k)fluoranthene	ND	9.4	
Benzo(a)pyrene	ND	9.4	
Indeno(1,2,3-cd)pyrene	ND	9.4	
Dibenz(a,h)anthracene	ND	9.4	
Benzo(g,h,i)perylene	ND	9.4	

Surrogate	%REC	Limits
2-Fluorophenol	70	21-120
Phenol-d5	66	10-120
2,4,6-Tribromophenol	76	10-123
Nitrobenzene-d5	68	36-120
2-Fluorobiphenyl	79	43-120
Terphenyl-d14	39	33-141

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC484198	Batch#:	148131
Matrix:	Water	Prepared:	02/20/09
Units:	ug/L	Analyzed:	02/22/09

Analyte	Result	RL	MDL
Phenol	ND	10	
bis(2-Chloroethyl)ether	ND	10	
2-Chlorophenol	ND	10	
1,3-Dichlorobenzene	ND	10	
1,4-Dichlorobenzene	ND	10	
Benzyl alcohol	ND	10	
1,2-Dichlorobenzene	ND	10	
2-Methylphenol	ND	10	
bis(2-Chloroisopropyl) ether	ND	10	
4-Methylphenol	ND	10	
N-Nitroso-di-n-propylamine	ND	10	
Hexachloroethane	ND	10	
Nitrobenzene	ND	10	
Isophorone	ND	10	
2-Nitrophenol	ND	20	6.0
2,4-Dimethylphenol	ND	10	
Benzoic acid	ND	50	
bis(2-Chloroethoxy)methane	ND	10	
2,4-Dichlorophenol	ND	10	
1,2,4-Trichlorobenzene	ND	10	
Naphthalene	ND	10	
4-Chloroaniline	ND	10	
Hexachlorobutadiene	ND	10	
4-Chloro-3-methylphenol	ND	10	
2-Methylnaphthalene	ND	10	
Hexachlorocyclopentadiene	ND	20	
2,4,6-Trichlorophenol	ND	10	
2,4,5-Trichlorophenol	ND	10	
2-Chloronaphthalene	ND	10	
2-Nitroaniline	ND	20	
Dimethylphthalate	ND	10	
Acenaphthylene	ND	10	
2,6-Dinitrotoluene	ND	10	
3-Nitroaniline	ND	20	
Acenaphthene	ND	10	
2,4-Dinitrophenol	ND	20	
4-Nitrophenol	ND	20	
Dibenzofuran	ND	10	
2,4-Dinitrotoluene	ND	10	
Diethylphthalate	ND	10	
Fluorene	ND	10	
4-Chlorophenyl-phenylether	ND	10	
4-Nitroaniline	ND	20	
4,6-Dinitro-2-methylphenol	ND	20	
N-Nitrosodiphenylamine	ND	10	
4-Bromophenyl-phenylether	ND	10	
Hexachlorobenzene	ND	10	
Pentachlorophenol	ND	20	
Phenanthrene	ND	10	
Anthracene	ND	10	
Di-n-butylphthalate	ND	10	
Fluoranthene	ND	10	
Pyrene	ND	10	

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC484198	Batch#:	148131
Matrix:	Water	Prepared:	02/20/09
Units:	ug/L	Analyzed:	02/22/09

Analyte	Result	RL	MDL
Butylbenzylphthalate	ND	10	
3,3'-Dichlorobenzidine	ND	20	
Benzo(a)anthracene	ND	10	
Chrysene	ND	10	
bis(2-Ethylhexyl)phthalate	ND	10	
Di-n-octylphthalate	ND	10	
Benzo(b)fluoranthene	ND	10	
Benzo(k)fluoranthene	ND	10	
Benzo(a)pyrene	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	
Dibenz(a,h)anthracene	ND	10	
Benzo(g,h,i)perylene	ND	10	

Surrogate	%REC	Limits
2-Fluorophenol	62	21-120
Phenol-d5	61	10-120
2,4,6-Tribromophenol	58	10-123
Nitrobenzene-d5	63	36-120
2-Fluorobiphenyl	77	43-120
Terphenyl-d14	82	33-141

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC484199	Batch#:	148131
Matrix:	Water	Prepared:	02/20/09
Units:	ug/L	Analyzed:	02/22/09

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	52.65	66	17-120
2-Chlorophenol	80.00	58.71	73	46-120
1,4-Dichlorobenzene	80.00	49.59	62	38-120
N-Nitroso-di-n-propylamine	80.00	54.69	68	42-120
1,2,4-Trichlorobenzene	80.00	53.29	67	39-120
4-Chloro-3-methylphenol	80.00	53.14	66	54-120
Acenaphthene	30.00	23.43	78	49-120
4-Nitrophenol	80.00	52.05	65	10-120
2,4-Dinitrotoluene	80.00	63.74	80	48-120
Pentachlorophenol	80.00	49.94	62	13-153
Pyrene	30.00	27.03	90	57-150

Surrogate	%REC	Limits
2-Fluorophenol	72	21-120
Phenol-d5	70	10-120
2,4,6-Tribromophenol	88	10-123
Nitrobenzene-d5	71	36-120
2-Fluorobiphenyl	88	43-120
Terphenyl-d14	91	33-141

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8270C
Field ID:	ZZZZZZZZZZ	Batch#:	148131
MSS Lab ID:	210094-001	Sampled:	02/17/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Prepared:	02/20/09
Diln Fac:	1.000	Analyzed:	02/22/09

Type: MS Lab ID: QC484200

Analyte	MSS Result	Spiked	Result	%REC	Limits
Phenol	<2.554	75.47	56.25	75	12-120
2-Chlorophenol	<1.657	75.47	61.25	81	27-123
1,4-Dichlorobenzene	<0.6646	75.47	51.89	69	36-120
N-Nitroso-di-n-propylamine	<1.607	75.47	57.28	76	41-120
1,2,4-Trichlorobenzene	<0.7138	75.47	55.74	74	39-120
4-Chloro-3-methylphenol	<2.511	75.47	51.90	69	23-120
Acenaphthene	<0.6304	28.30	21.94	78	46-120
4-Nitrophenol	<1.659	75.47	53.72	71	10-120
2,4-Dinitrotoluene	<0.5844	75.47	59.07	78	24-120
Pentachlorophenol	<3.875	75.47	60.59	80	9-120
Pyrene	<0.5950	28.30	25.71	91	26-127

Surrogate	%REC	Limits
2-Fluorophenol	0 *	21-120
Phenol-d5	76	10-120
2,4,6-Tribromophenol	99	10-123
Nitrobenzene-d5	71	36-120
2-Fluorobiphenyl	89	43-120
Terphenyl-d14	85	33-141

Type: MSD Lab ID: QC484201

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	76.19	56.05	74	12-120	1	42
2-Chlorophenol	76.19	61.57	81	27-123	0	40
1,4-Dichlorobenzene	76.19	56.50	74	36-120	8	28
N-Nitroso-di-n-propylamine	76.19	57.40	75	41-120	1	38
1,2,4-Trichlorobenzene	76.19	59.27	78	39-120	5	28
4-Chloro-3-methylphenol	76.19	53.04	70	23-120	1	42
Acenaphthene	28.57	23.16	81	46-120	4	31
4-Nitrophenol	76.19	56.32	74	10-120	4	50
2,4-Dinitrotoluene	76.19	61.54	81	24-120	3	38
Pentachlorophenol	76.19	64.49	85	9-120	5	50
Pyrene	28.57	32.89	115	26-127	24	31

Surrogate	%REC	Limits
2-Fluorophenol	0 *	21-120
Phenol-d5	75	10-120
2,4,6-Tribromophenol	104	10-123
Nitrobenzene-d5	73	36-120
2-Fluorobiphenyl	93	43-120
Terphenyl-d14	114	33-141

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8270C
Field ID:	ZZZZZZZZZZ	Batch#:	148131
MSS Lab ID:	210146-006	Sampled:	02/17/09
Matrix:	Water	Received:	02/19/09
Units:	ug/L	Prepared:	02/20/09
Diln Fac:	1.000	Analyzed:	02/23/09

Type: MS Lab ID: QC484202

Analyte	MSS Result	Spiked	Result	%REC	Limits
Phenol	<2.681	80.00	63.01	79	12-120
2-Chlorophenol	<1.740	80.00	61.85	77	27-123
1,4-Dichlorobenzene	<0.6979	80.00	61.09	76	36-120
N-Nitroso-di-n-propylamine	<1.687	80.00	57.21	72	41-120
1,2,4-Trichlorobenzene	<0.7495	80.00	63.39	79	39-120
4-Chloro-3-methylphenol	<2.637	80.00	57.96	72	23-120
Acenaphthene	<0.6619	30.00	24.08	80	46-120
4-Nitrophenol	<1.742	80.00	58.24	73	10-120
2,4-Dinitrotoluene	<0.6136	80.00	63.09	79	24-120
Pentachlorophenol	<4.068	80.00	55.98	70	9-120
Pyrene	<0.6247	30.00	26.86	90	26-127

Surrogate	%REC	Limits
2-Fluorophenol	76	21-120
Phenol-d5	74	10-120
2,4,6-Tribromophenol	94	10-123
Nitrobenzene-d5	74	36-120
2-Fluorobiphenyl	81	43-120
Terphenyl-d14	48	33-141

Type: MSD Lab ID: QC484203

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	52.93	66	12-120	17	42
2-Chlorophenol	80.00	51.17	64	27-123	19	40
1,4-Dichlorobenzene	80.00	50.44	63	36-120	19	28
N-Nitroso-di-n-propylamine	80.00	46.77	58	41-120	20	38
1,2,4-Trichlorobenzene	80.00	52.24	65	39-120	19	28
4-Chloro-3-methylphenol	80.00	47.60	59	23-120	20	42
Acenaphthene	30.00	19.45	65	46-120	21	31
4-Nitrophenol	80.00	46.82	59	10-120	22	50
2,4-Dinitrotoluene	80.00	52.28	65	24-120	19	38
Pentachlorophenol	80.00	47.07	59	9-120	17	50
Pyrene	30.00	22.08	74	26-127	20	31

Surrogate	%REC	Limits
2-Fluorophenol	63	21-120
Phenol-d5	62	10-120
2,4,6-Tribromophenol	77	10-123
Nitrobenzene-d5	62	36-120
2-Fluorobiphenyl	67	43-120
Terphenyl-d14	44	33-141

RPD= Relative Percent Difference

CURTIS & TOMPKINS DFTPP TUNE FOR 210098 MSBNA Water
EPA 8270C

Inst : MSBNA07 Run Name : DFTPP/PEM IDF : 1.0
Seqnum : 568517596003 File : zlo03 Time : 24-DEC-2008 11:34

Standards: S11025

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	274076	49.78	
68	< 2% of mass 69	4531	1.95	
69		232341	100.00	
70	< 2% of mass 69	1172	0.50	
127	40% - 60% of mass 198	282005	51.22	
197	< 1% of mass 198	0	0.00	
198		550592	100.00	
199	5% - 9% of mass 198	37264	6.77	
275	10% - 30% of mass 198	146154	26.54	
365	> 1% of mass 198	16486	2.99	
441	Present, < mass 443	82954	83.26	
442	> 40% and < 100% of mass 198	516437	93.80	
443	17% - 23% of mass 442	99634	19.29	

Analyst: SHD Date: 12/24/08 Reviewer: LW Date: 12/31/08

PEM REPORT

Calibration Title	MSBNA07 BNA DFTPP/PEM
Data File Name	ZLO03.D
Data File Path	G:\msbna07\122408\
Date Acquired	12/24/200811:34
Acq. Method File	DFTPP07.M
Instrument Name	MSBNA07

Name	Ret Time	Amount	Units	Target Response	Scan#
Pentachlorophenol	5.55	56.14	ug/mL	541326	594
DFTPP	6.06	50.00	ug/mL	725404	704
Benzidine	7.40	55.30	ug/mL	3756227	991
4,4'-DDT	8.42	50.00	ug/mL	1961802	1211
4,4'-DDE	7.63	0.00	ug/mL	5171	1041
4,4'-DDD	8.04	0.00	ug/mL	86877	1130

	% Breakdown
4,4'-DDE + 4,4'-DDD	4.481729435

CURTIS & TOMPKINS DFTPP TUNE FOR 210098 MSBNA Water
EPA 8270C

Inst : MSBNA07 Run Name : DFTPP/PEM 50 UG/ML IDF : 1.0
Seqnum : 569077215001 File : zbm01 Time : 22-FEB-2009 14:55

Standards: S11025

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	322496	56.08	
68	< 2% of mass 69	0	0.00	
69		273984	100.00	
70	< 2% of mass 69	1622	0.59	
127	40% - 60% of mass 198	321536	55.91	
197	< 1% of mass 198	0	0.00	
198		575104	100.00	
199	5% - 9% of mass 198	39232	6.82	
275	10% - 30% of mass 198	152320	26.49	
365	> 1% of mass 198	16688	2.90	
441	Present, < mass 443	86336	77.18	
442	> 40% and < 100% of mass 198	533760	92.81	
443	17% - 23% of mass 442	111856	20.96	

SHD 02/22/09 : Picked or reassigned peak .

Analyst: SHD Date: 02/22/09 Reviewer: LW Date: 02/25/09

PEM REPORT

Calibration Title	MSBNA07 BNA DFTPP/PEM
Data File Name	ZBM01.D
Data File Path	G:\msbna07\022209\
Date Acquired	2/22/200914:55
Acq. Method File	DFTPP07.M
Instrument Name	MSBNA07

Name	Ret Time	Amount	Units	Target Response	Scan#
Pentachlorophenol	5.02	46.63	ug/mL	582287	481
DFTPP	5.56	50.00	ug/mL	809893	597
Benzidine	6.87	50.98	ug/mL	4283795	878
4,4'-DDT	7.89	50.00	ug/mL	2053982	1097
4,4'-DDE	7.10	0.00	ug/mL	5481	928
4,4'-DDD	7.55	0.00	ug/mL	48163	1025

	% Breakdown
4,4'-DDE + 4,4'-DDD	2.545233357

CURTIS & TOMPKINS DFTPP TUNE FOR 210098 MSBNA Water
EPA 8270C

Inst : MSBNA07 Run Name : DFTPP/PEM 50 UG/ML IDF : 1.0
Seqnum : 569078366001 File : zbn01 Time : 23-FEB-2009 10:06

Standards: S11025

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	338645	48.62	
68	< 2% of mass 69	0	0.00	
69		291553	100.00	
70	< 2% of mass 69	1186	0.41	
127	40% - 60% of mass 198	360099	51.70	
197	< 1% of mass 198	0	0.00	
198		696576	100.00	
199	5% - 9% of mass 198	47472	6.82	
275	10% - 30% of mass 198	192554	27.64	
365	> 1% of mass 198	19639	2.82	
441	Present, < mass 443	106242	82.97	
442	> 40% and < 100% of mass 198	633813	90.99	
443	17% - 23% of mass 442	128050	20.20	

Analyst: HDD Date: 02/24/09 Reviewer: LW Date: 02/24/09

PEM REPORT

Calibration Title	MSBNA07 BNA DFTPP/PEM
Data File Name	ZBN01.D
Data File Path	G:\csinput.net\DATA\022309\
Date Acquired	2/23/200910:06
Acq. Method File	DFTPP07.M
Instrument Name	MSBNA07

Name	Ret Time	Amount	Units	Target Response	Scan#
Pentachlorophenol	5.03	54.08	ug/mL	629817	482
DFTPP	5.56	50.00	ug/mL	971290	596
Benzidine	6.87	49.44	ug/mL	5080315	878
4,4'-DDT	7.88	50.00	ug/mL	2498366	1096
4,4'-DDE	7.10	0.00	ug/mL	6343	927
4,4'-DDD	7.51	0.00	ug/mL	166369	1016

	% Breakdown
4,4'-DDE + 4,4'-DDD	6.466003614

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 MSBNA Water: EPA 8270C

Inst : MSBNA07
Calnum : 568517596002
Units : ug/mL

Name : 6PTBNA07
Date : 24-DEC-2008 11:52
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	zlo04	568517596004	#1	24-DEC-2008 11:52	S10916
L2	zlo05	568517596005	#2	24-DEC-2008 12:26	S10917
L3	zlo06	568517596006	#3	24-DEC-2008 13:01	S10918
L4	zlo07	568517596007	#4	24-DEC-2008 13:35	S10919
L5	zlo08	568517596008	#5	24-DEC-2008 14:10	S10920
L6	zlo09	568517596009	#6	24-DEC-2008 14:45	S10921
L7	zlo10	568517596010	#7	24-DEC-2008 15:19	S10922
L8	zlo11	568517596011	#8	24-DEC-2008 15:54	S10923

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Phenol		2.1161	2.0991	2.0435	1.9752	1.9530	1.9319	1.9441	AVRG		0.49776		2.0090	4	15	0.05	0.99	
bis(2-Chloroethyl)ether		1.6292	1.6050	1.5675m	1.5082	1.4449	1.3789m	1.3213m	AVRG		0.66954		1.4936	8	15	0.05	0.99	
2-Chlorophenol		1.6748	1.6777	1.6435	1.6015	1.5648	1.5414	1.5261	AVRG		0.62334		1.6043	4	15	0.05	0.99	
1,3-Dichlorobenzene		1.8587	1.8173	1.7748	1.7122	1.6320	1.5470	1.4361	AVRG		0.59433		1.6826	9	15	0.05	0.99	
1,4-Dichlorobenzene		1.8868	1.8363	1.8003	1.7322	1.6336	1.5173	1.4138	AVRG		0.59220		1.6886	10	15	0.05	0.99	
Benzyl alcohol		1.1399	1.1484	1.1140	1.1155	1.1297	1.1381	1.1545	AVRG		0.88160		1.1343	1	15	0.05	0.99	
1,2-Dichlorobenzene		1.7526	1.7298	1.6857	1.6267	1.5628	1.4793	1.3816	AVRG		0.62397		1.6026	9	15	0.05	0.99	
2-Methylphenol		1.3558	1.3436	1.2860	1.2526	1.2439	1.2316	1.1902m	AVRG		0.78620		1.2719	5	15	0.05	0.99	
bis(2-Chloroisopropyl) ether		3.1203	3.0265	2.8839	2.7331m	2.4791	2.3347	2.1711	AVRG		0.37336		2.6784	13	15	0.05	0.99	
4-Methylphenol		1.9700	1.9344	1.8888	1.8811	1.9111	1.9262m	1.9390m	AVRG		0.52042		1.9215	2	15	0.05	0.99	
N-Nitroso-di-n-propylamine		0.9622	0.9596	0.9549	0.9657	0.9410	0.9144	0.9077	AVRG		1.05973		0.9436	3	15	0.050	0.99	
Hexachloroethane		0.7118	0.7046	0.6918	0.6713	0.6463	0.6082	0.5601	AVRG		1.52374		0.6563	8	15	0.05	0.99	
Nitrobenzene		0.4690	0.4654m	0.4547m	0.4450	0.4362	0.4232	0.4103	AVRG		2.25528		0.4434	5	15	0.05	0.99	
Isophorone		0.8263	0.8319	0.8408	0.8512	0.8289	0.8081	0.7969m	AVRG		1.21022		0.8263	2	15	0.05	0.99	
2-Nitrophenol			0.2239	0.2217	0.2266	0.2287	0.2291m	0.2291	AVRG		4.41477		0.2265	1	15	0.05	0.99	
2,4-Dimethylphenol		0.4126	0.3934	0.3912	0.3952	0.3865	0.3767	0.3650	AVRG		2.57289		0.3887	4	15	0.05	0.99	
bis(2-Chloroethoxy)methane			0.4442	0.4443	0.4609	0.4576	0.4531	0.4437	AVRG		2.21909		0.4506	2	15	0.05	0.99	
Benzoic acid		0.1884m	0.2129m	0.2433m	0.2774m	0.2974m	0.3086m	0.3136m	LINR	26.1309	2.65574		0.2631	0.999	15	0.05	0.99	
2,4-Dichlorophenol		0.3548	0.3508	0.3528	0.3556	0.3460	0.3369	0.3188	AVRG		2.89774		0.3451	4	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.3806	0.3771	0.3711	0.3682	0.3506	0.3343	0.3135	AVRG		2.80518		0.3565	7	15	0.05	0.99	
Naphthalene	1.1685	1.1805	1.1539	1.1273	1.1062	1.0787	1.0498	1.0068	AVRG		0.90175		1.1090	5	15	0.05	0.99	
4-Chloroaniline		0.4357	0.5033	0.5187	0.5148	0.5073	0.4979m	0.4837m	AVRG		2.02226		0.4945	6	15	0.05	0.99	
Hexachlorobutadiene		0.2245	0.2201	0.2200	0.2178	0.2032	0.1884	0.1743	AVRG		4.83337		0.2069	9	15	0.05	0.99	
4-Chloro-3-methylphenol		0.3804	0.3762	0.3804	0.3808	0.3657	0.3538	0.3392	AVRG		2.71689		0.3681	4	15	0.05	0.99	
2-Methylnaphthalene	0.7709	0.7841	0.7695	0.7773	0.7923	0.7717	0.7502	0.7257	AVRG		1.30259		0.7677	3	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Hexachlorocyclopentadiene			0.3624	0.3487	0.3633	0.3722	0.3649	0.3357	AVRG		2.79427		0.3579	4	15	0.050	0.99	
2,4,6-Trichlorophenol		0.4481	0.4502	0.4437	0.4517	0.4434	0.4344	0.4184	AVRG		2.26546		0.4414	3	15	0.05	0.99	
2,4,5-Trichlorophenol		0.4904	0.4933	0.4888	0.4948m	0.4746	0.4610	0.4344m	AVRG		2.09748		0.4768	5	15	0.05	0.99	
2-Chloronaphthalene			1.2519	1.2198	1.2163	1.1998	1.1740	1.1362	AVRG		0.83356		1.1997	3	15	0.05	0.99	
2-Nitroaniline			0.4571	0.4504	0.4566	0.4442	0.4346	0.4141	AVRG		2.25822		0.4428	4	15	0.05	0.99	
Dimethylphthalate		1.6033	1.5872	1.5643	1.5511	1.4987	1.4258	1.3520	AVRG		0.66148		1.5118	6	15	0.05	0.99	
2,6-Dinitrotoluene		0.3715	0.3806	0.3804	0.3809	0.3801	0.3764	0.3684	AVRG		2.65329		0.3769	1	15	0.05	0.99	
Acenaphthylene	1.9690	1.9792	1.9708	1.9109	1.8913	1.8399	1.8025	1.7407	AVRG		0.52965		1.8880	5	15	0.05	0.99	
3-Nitroaniline			0.3873m	0.3925	0.3943	0.3973	0.3954	0.3925	AVRG		2.54314		0.3932	1	15	0.05	0.99	
Acenaphthene	1.2360	1.2610	1.2875	1.2970	1.3149	1.2040	1.1458	1.0917	AVRG		0.81318		1.2297	6	15	0.05	0.99	
2,4-Dinitrophenol			0.1397m	0.1701m	0.1992m	0.2200m	0.2312m	0.2399m	LINR	10.3408	3.92400		0.2000	1.000	15	0.050	0.99	
4-Nitrophenol			0.1972	0.2048	0.2040	0.2039m	0.1993m	0.1926m	AVRG		4.99273		0.2003	2	15	0.050	0.99	
Dibenzofuran			1.7793	1.7285	1.7200	1.6862	1.6525	1.4550	AVRG		0.59871		1.6703	7	15	0.05	0.99	
2,4-Dinitrotoluene		0.5078	0.5147	0.5118	0.5103	0.5061	0.4928	0.4532	AVRG		2.00186		0.4995	4	15	0.05	0.99	
Diethylphthalate			1.4568	1.4387	1.4282	1.3826	1.3385	1.2830	AVRG		0.72049		1.3880	5	15	0.05	0.99	
Fluorene	1.5239	1.4980	1.4841	1.4503	1.4471	1.4403	1.4234	1.3708	AVRG		0.68741		1.4547	3	15	0.05	0.99	
4-Chlorophenyl-phenylether			0.7237	0.7139	0.7232	0.7270	0.7197	0.6813	AVRG		1.39901		0.7148	2	15	0.05	0.99	
4-Nitroaniline			0.4228m	0.4253m	0.4044	0.4021	0.4039	0.3961	AVRG		2.44438		0.4091	3	15	0.05	0.99	
4,6-Dinitro-2-methylphenol			0.1606	0.1711	0.1771	0.1883	0.1914	0.1975m	AVRG		5.52461		0.1810	8	15	0.05	0.99	
N-Nitrosodiphenylamine			0.6279	0.6196	0.6146	0.6228	0.6155	0.6184	AVRG		1.61348		0.6198	1	15	0.05	0.99	
4-Bromophenyl-phenylether			0.2521	0.2535	0.2582	0.2692	0.2719	0.2754	AVRG		3.79679		0.2634	4	15	0.05	0.99	
Hexachlorobenzene		0.3111	0.3175	0.3225	0.3292	0.3308	0.3152	0.3015	AVRG		3.14215		0.3183	3	15	0.05	0.99	
Pentachlorophenol			0.2061	0.2137	0.2249	0.2321	0.2258	0.2194	AVRG		4.53855		0.2203	4	15	0.05	0.99	
Phenanthrene	1.3070	1.3033	1.2663	1.2316	1.2176	1.2190	1.1778	1.1489	AVRG		0.81042		1.2339	5	15	0.05	0.99	
Anthracene	1.3115	1.2893	1.2419	1.2144	1.1915	1.1874	1.1608	1.1274	AVRG		0.82269		1.2155	5	15	0.05	0.99	
Di-n-butylphthalate			1.5352	1.5029	1.4577	1.4155	1.3451	1.2864	AVRG		0.70234		1.4238	7	15	0.05	0.99	
Fluoranthene	1.4981	1.5002	1.4586	1.4428	1.4126	1.3957	1.3495	1.3102	AVRG		0.70374		1.4210	5	15	0.05	0.99	
Pyrene	1.1841	1.2168	1.2076	1.1882	1.1590	1.1437	1.0972	1.0455	AVRG		0.86560		1.1553	5	15	0.05	0.99	
Butylbenzylphthalate			0.5621	0.5537	0.5420	0.5294	0.5091	0.4876	AVRG		1.88449		0.5306	5	15	0.05	0.99	
3,3'-Dichlorobenzidine			0.4357	0.4633	0.4938	0.4858	0.4356	0.3936	AVRG		2.21578		0.4513	8	15	0.05	0.99	
Benzo(a)anthracene	1.1961	1.1900	1.1791	1.1652	1.1583	1.1694	1.1555	1.1278	AVRG		0.85640		1.1677	2	15	0.05	0.99	
bis(2-Ethylhexyl)phthalate			0.7912	0.7790	0.7617	0.7038	0.5806		AVRG		1.38266		0.7232	12	15	0.05	0.99	
Chrysene	1.0905	1.0771	1.0603	1.0478	1.0519	1.0584	1.0432	1.0229m	AVRG		0.94652		1.0565	2	15	0.05	0.99	
Di-n-octylphthalate			1.3997	1.4231	1.4362	1.4560	1.4565	1.5023	AVRG		0.69174		1.4456	2	15	0.05	0.99	
Benzo(b)fluoranthene	1.0914	1.1425	1.1749	1.2042	1.2287	1.2922	1.3827	1.5821	AVRG		0.79218		1.2623	12	15	0.05	0.99	
Benzo(k)fluoranthene	1.0709	1.1350	1.1773	1.1912	1.2043	1.2564m	1.2047m	1.1170m	AVRG		0.85499		1.1696	5	15	0.05	0.99	
Benzo(a)pyrene	0.9904	1.0564	1.1122	1.1350	1.1594	1.2020	1.2255	1.2579	AVRG		0.87539		1.1424	8	15	0.05	0.99	
Indeno(1,2,3-cd)pyrene	1.0039m	1.0865m	1.1627m	1.2060m	1.2250m	1.2611m	1.2481m	1.1860m	AVRG		0.85293		1.1724	7	15	0.05	0.99	
Dibenz(a,h)anthracene	0.8347m	0.9095m	0.9764m	1.0008	1.0330	1.0714	1.0755	1.0416	AVRG		1.00718		0.9929	8	15	0.05	0.99	
Benzo(g,h,i)perylene	0.8275	0.8458	0.8754	0.9317	0.9658	0.9843	0.9524	0.8660	AVRG		1.10360		0.9061	7	15	0.05	0.99	
2-Fluorophenol		1.3949	1.4220	1.4142	1.3936	1.3852	1.3729	1.3483	AVRG		0.71934		1.3902	2	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Phenol-d5		1.8648	1.8739	1.8233	1.7767	1.7704	1.7753	1.7876	AVRG		0.55240		1.8103	2	15	0.05	0.99	
Nitrobenzene-d5		0.4254	0.4136	0.4142	0.4141	0.4045	0.4029	0.3938	AVRG		2.44023		0.4098	2	15	0.05	0.99	
2-Fluorobiphenyl		1.4090	1.3961	1.3678	1.3642	1.3225	1.2902	1.2351	AVRG		0.74587		1.3407	5	15	0.05	0.99	
2,4,6-Tribromophenol		0.2007	0.2163	0.2236	0.2404	0.2552	0.2666	0.2736	AVRG		4.17554		0.2395	11	15	0.05	0.99	
Terphenyl-d14		0.8040	0.8120	0.8103	0.8110	0.8049	0.7816	0.7385	AVRG		1.25843		0.7946	3	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D
Phenol			10.00	5	20.00	4	32.00	2	50.00	-2	80.00	-3	120.0	-4	160.0	-3
bis(2-Chloroethyl)ether			10.00	9	20.00	7	32.00	5	50.00	1	80.00	-3	120.0	-8	160.0	-12
2-Chlorophenol			10.00	4	20.00	5	32.00	2	50.00	0	80.00	-2	120.0	-4	160.0	-5
1,3-Dichlorobenzene			10.00	10	20.00	8	32.00	5	50.00	2	80.00	-3	120.0	-8	160.0	-15
1,4-Dichlorobenzene			10.00	12	20.00	9	32.00	7	50.00	3	80.00	-3	120.0	-10	160.0	-16
Benzyl alcohol			10.00	0	20.00	1	32.00	-2	50.00	-2	80.00	0	120.0	0	160.0	2
1,2-Dichlorobenzene			10.00	9	20.00	8	32.00	5	50.00	2	80.00	-2	120.0	-8	160.0	-14
2-Methylphenol			10.00	7	20.00	6	32.00	1	50.00	-2	80.00	-2	120.0	-3	160.0	-6
bis(2-Chloroisopropyl) ether			10.00	16	20.00	13	32.00	8	50.00	2	80.00	-7	120.0	-13	160.0	-19
4-Methylphenol			10.00	3	20.00	1	32.00	-2	50.00	-2	80.00	-1	120.0	0	160.0	1
N-Nitroso-di-n-propylamine			10.00	2	20.00	2	32.00	1	50.00	2	80.00	0	120.0	-3	160.0	-4
Hexachloroethane			10.00	8	20.00	7	32.00	5	50.00	2	80.00	-2	120.0	-7	160.0	-15
Nitrobenzene			10.00	6	20.00	5	32.00	3	50.00	0	80.00	-2	120.0	-5	160.0	-7
Isophorone			10.00	0	20.00	1	32.00	2	50.00	3	80.00	0	120.0	-2	160.0	-4
2-Nitrophenol					20.00	-1	32.00	-2	50.00	0	80.00	1	120.0	1	160.0	1
2,4-Dimethylphenol			10.00	6	20.00	1	32.00	1	50.00	2	80.00	-1	120.0	-3	160.0	-6
bis(2-Chloroethoxy)methane					10.00	-1	16.00	-1	25.00	2	40.00	2	60.00	1	80.00	-2
Benzoic acid			50.00	2	60.00	0	80.00	-3	100.0	0	120.0	1	140.0	1	160.0	0
2,4-Dichlorophenol			10.00	3	20.00	2	32.00	2	50.00	3	80.00	0	120.0	-2	160.0	-8
1,2,4-Trichlorobenzene			10.00	7	20.00	6	32.00	4	50.00	3	80.00	-2	120.0	-6	160.0	-12
Naphthalene	2.000	5	5.000	6	10.00	4	16.00	2	25.00	0	40.00	-3	60.00	-5	80.00	-9
4-Chloroaniline			10.00	-12	20.00	2	32.00	5	50.00	4	80.00	3	120.0	1	160.0	-2
Hexachlorobutadiene			10.00	9	20.00	6	32.00	6	50.00	5	80.00	-2	120.0	-9	160.0	-16
4-Chloro-3-methylphenol			10.00	3	20.00	2	32.00	3	50.00	3	80.00	-1	120.0	-4	160.0	-8
2-Methylnaphthalene	2.000	0	5.000	2	10.00	0	16.00	1	25.00	3	40.00	1	60.00	-2	80.00	-5
Hexachlorocyclopentadiene					20.00	1	32.00	-3	50.00	2	80.00	4	120.0	2	160.0	-6
2,4,6-Trichlorophenol			10.00	2	20.00	2	32.00	1	50.00	2	80.00	0	120.0	-2	160.0	-5
2,4,5-Trichlorophenol			10.00	3	20.00	3	32.00	3	50.00	4	80.00	0	120.0	-3	160.0	-9
2-Chloronaphthalene					10.00	4	16.00	2	25.00	1	40.00	0	60.00	-2	80.00	-5
2-Nitroaniline					20.00	3	32.00	2	50.00	3	80.00	0	120.0	-2	160.0	-6
Dimethylphthalate			10.00	6	20.00	5	32.00	3	50.00	3	80.00	-1	120.0	-6	160.0	-11
2,6-Dinitrotoluene			10.00	-1	20.00	1	32.00	1	50.00	1	80.00	1	120.0	0	160.0	-2
Acenaphthylene	2.000	4	5.000	5	10.00	4	16.00	1	25.00	0	40.00	-3	60.00	-5	80.00	-8
3-Nitroaniline					20.00	-2	32.00	0	50.00	0	80.00	1	120.0	1	160.0	0
Acenaphthene	2.000	1	5.000	3	10.00	5	16.00	5	25.00	7	40.00	-2	60.00	-7	80.00	-11
2,4-Dinitrophenol					20.00	7	32.00	-1	50.00	-1	80.00	-1	120.0	-1	160.0	1
4-Nitrophenol					20.00	-2	32.00	2	50.00	2	80.00	2	120.0	0	160.0	-4
Dibenzofuran					10.00	7	16.00	3	25.00	3	40.00	1	60.00	-1	80.00	-13
2,4-Dinitrotoluene			10.00	2	20.00	3	32.00	2	50.00	2	80.00	1	120.0	-1	160.0	-9
Diethylphthalate					10.00	5	16.00	4	25.00	3	40.00	0	60.00	-4	80.00	-8
Fluorene	2.000	5	5.000	3	10.00	2	16.00	0	25.00	-1	40.00	-1	60.00	-2	80.00	-6
4-Chlorophenyl-phenylether					10.00	1	16.00	0	25.00	1	40.00	2	60.00	1	80.00	-5

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D
4-Nitroaniline					20.00	3	32.00	4	50.00	-1	80.00	-2	120.0	-1	160.0	-3
4,6-Dinitro-2-methylphenol					20.00	-11	32.00	-5	50.00	-2	80.00	4	120.0	6	160.0	9
N-Nitrosodiphenylamine					10.00	1	16.00	0	25.00	-1	40.00	0	60.00	-1	80.00	0
4-Bromophenyl-phenylether					10.00	-4	16.00	-4	25.00	-2	40.00	2	60.00	3	80.00	5
Hexachlorobenzene			10.00	-2	20.00	0	32.00	1	50.00	3	80.00	4	120.0	-1	160.0	-5
Pentachlorophenol					20.00	-6	32.00	-3	50.00	2	80.00	5	120.0	2	160.0	0
Phenanthrene	2.000	6	5.000	6	10.00	3	16.00	0	25.00	-1	40.00	-1	60.00	-5	80.00	-7
Anthracene	2.000	8	5.000	6	10.00	2	16.00	0	25.00	-2	40.00	-2	60.00	-4	80.00	-7
Di-n-butylphthalate					10.00	8	16.00	6	25.00	2	40.00	-1	60.00	-6	80.00	-10
Fluoranthene	2.000	5	5.000	6	10.00	3	16.00	2	25.00	-1	40.00	-2	60.00	-5	80.00	-8
Pyrene	2.000	2	5.000	5	10.00	5	16.00	3	25.00	0	40.00	-1	60.00	-5	80.00	-10
Butylbenzylphthalate					10.00	6	16.00	4	25.00	2	40.00	0	60.00	-4	80.00	-8
3,3'-Dichlorobenzidine					20.00	-3	32.00	3	50.00	9	80.00	8	120.0	-3	160.0	-13
Benzo(a)anthracene	2.000	2	5.000	2	10.00	1	16.00	0	25.00	-1	40.00	0	60.00	-1	80.00	-3
bis(2-Ethylhexyl)phthalate					10.00	9	16.00	8	25.00	5	40.00	-3	60.00	-20		
Chrysene	2.000	3	5.000	2	10.00	0	16.00	-1	25.00	0	40.00	0	60.00	-1	80.00	-3
Di-n-octylphthalate					10.00	-3	16.00	-2	25.00	-1	40.00	1	60.00	1	80.00	4
Benzo(b)fluoranthene	2.000	-14	5.000	-9	10.00	-7	16.00	-5	25.00	-3	40.00	2	60.00	10	80.00	25
Benzo(k)fluoranthene	2.000	-8	5.000	-3	10.00	1	16.00	2	25.00	3	40.00	7	60.00	3	80.00	-5
Benzo(a)pyrene	2.000	-13	5.000	-8	10.00	-3	16.00	-1	25.00	1	40.00	5	60.00	7	80.00	10
Indeno(1,2,3-cd)pyrene	2.000	-14	5.000	-7	10.00	-1	16.00	3	25.00	4	40.00	8	60.00	6	80.00	1
Dibenz(a,h)anthracene	2.000	-16	5.000	-8	10.00	-2	16.00	1	25.00	4	40.00	8	60.00	8	80.00	5
Benzo(g,h,i)perylene	2.000	-9	5.000	-7	10.00	-3	16.00	3	25.00	7	40.00	9	60.00	5	80.00	-4
2-Fluorophenol			5.000	0	10.00	2	16.00	2	25.00	0	40.00	0	60.00	-1	80.00	-3
Phenol-d5			5.000	3	10.00	4	16.00	1	25.00	-2	40.00	-2	60.00	-2	80.00	-1
Nitrobenzene-d5			5.000	4	10.00	1	16.00	1	25.00	1	40.00	-1	60.00	-2	80.00	-4
2-Fluorobiphenyl			5.000	5	10.00	4	16.00	2	25.00	2	40.00	-1	60.00	-4	80.00	-8
2,4,6-Tribromophenol			5.000	-16	10.00	-10	16.00	-7	25.00	0	40.00	7	60.00	11	80.00	14
Terphenyl-d14			5.000	1	10.00	2	16.00	2	25.00	2	40.00	1	60.00	-2	80.00	-7

SHD 12/24/08 : All manual integrations due to tailing/splitting peaks or mischosen peaks.

Analyst: SHD Date: 12/24/08 Reviewer: LW Date: 12/31/08

m=manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor; LINR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 MSBNA Water
EPA 8270C

Inst : MSBNA07 Name : 6PTBNA07
Calnum : 568517596002 Cal Date : 24-DEC-2008

ICV 568517596012 (zlo12 24-DEC-2008) stds: S10319

Analyte	Average RF	RF	Spiked	Quant	Units	%D	Max	Flags
Phenol	2.0090	1.7324	50.00	43.12	ug/mL	-14	20	
bis(2-Chloroethyl)ether	1.4936	1.3702	50.00	45.87	ug/mL	-8	30	
2-Chlorophenol	1.6043	1.4162	50.00	44.14	ug/mL	-12	30	
1,3-Dichlorobenzene	1.6826	1.5394	50.00	45.75	ug/mL	-9	30	
1,4-Dichlorobenzene	1.6886	1.5430	50.00	45.69	ug/mL	-9	20	
Benzyl alcohol	1.1343	0.9459	50.00	41.69	ug/mL	-17	30	
1,2-Dichlorobenzene	1.6026	1.4628	50.00	45.64	ug/mL	-9	30	
2-Methylphenol	1.2719	1.0981	50.00	43.17	ug/mL	-14	30	
bis(2-Chloroisopropyl) ether	2.6784	2.4638	50.00	45.99	ug/mL	-8	30	
4-Methylphenol	1.9215	1.6257	50.00	42.30	ug/mL	-15	30	
N-Nitroso-di-n-propylamine	0.9436	0.8725	50.00	46.23	ug/mL	-8	30	
Hexachloroethane	0.6563	0.5865	50.00	44.69	ug/mL	-11	30	
Nitrobenzene	0.4434	0.3949	50.00	44.53	ug/mL	-11	30	
Isophorone	0.8263	0.7766	50.00	46.99	ug/mL	-6	30	
2-Nitrophenol	0.2265	0.2050	50.00	45.26	ug/mL	-9	20	
2,4-Dimethylphenol	0.3887	0.3221	50.00	41.43	ug/mL	-17	30	
bis(2-Chloroethoxy)methane	0.4506	0.4299	25.00	23.85	ug/mL	-5	30	
Benzoic acid	0.2631	0.3100	100.0	108.5	ug/mL	8	40	m
2,4-Dichlorophenol	0.3451	0.3161	50.00	45.80	ug/mL	-8	20	
1,2,4-Trichlorobenzene	0.3565	0.3299	50.00	46.28	ug/mL	-7	30	
Naphthalene	1.1090	1.0464	25.00	23.59	ug/mL	-6	30	
4-Chloroaniline	0.4945	0.4511	50.00	45.62	ug/mL	-9	30	
Hexachlorobutadiene	0.2069	0.2006	50.00	48.47	ug/mL	-3	20	
4-Chloro-3-methylphenol	0.3681	0.3304	50.00	44.88	ug/mL	-10	20	
2-Methylnaphthalene	0.7677	0.7114	25.00	23.17	ug/mL	-7	30	
Hexachlorocyclopentadiene	0.3579	0.3274	50.00	45.74	ug/mL	-9	40	
2,4,6-Trichlorophenol	0.4414	0.3912	50.00	44.32	ug/mL	-11	20	
2,4,5-Trichlorophenol	0.4768	0.4233	50.00	44.39	ug/mL	-11	30	m
2-Chloronaphthalene	1.1997	1.1068	25.00	23.07	ug/mL	-8	30	
2-Nitroaniline	0.4428	0.3906	50.00	44.10	ug/mL	-12	30	
Dimethylphthalate	1.5118	1.3516	50.00	44.70	ug/mL	-11	30	
2,6-Dinitrotoluene	0.3769	0.3236	50.00	42.93	ug/mL	-14	30	
Acenaphthylene	1.8880	1.7558	25.00	23.25	ug/mL	-7	30	
3-Nitroaniline	0.3932	0.3454	50.00	43.93	ug/mL	-12	30	
Acenaphthene	1.2297	1.1923	25.00	24.24	ug/mL	-3	20	
2,4-Dinitrophenol	0.2000	0.1738	50.00	44.44	ug/mL	-11	40	m
4-Nitrophenol	0.2003	0.1786	50.00	44.59	ug/mL	-11	40	
Dibenzofuran	1.6703	1.5822	25.00	23.68	ug/mL	-5	30	
2,4-Dinitrotoluene	0.4995	0.4404	50.00	44.08	ug/mL	-12	30	
Diethylphthalate	1.3880	1.3369	25.00	24.08	ug/mL	-4	30	
Fluorene	1.4547	1.3623	25.00	23.41	ug/mL	-6	30	
4-Chlorophenyl-phenylether	0.7148	0.6647	25.00	23.25	ug/mL	-7	40	
4-Nitroaniline	0.4091	0.3460	50.00	42.29	ug/mL	-15	30	
4,6-Dinitro-2-methylphenol	0.1810	0.1517	50.00	41.91	ug/mL	-16	30	
N-Nitrosodiphenylamine	0.6198	0.5689	25.00	22.95	ug/mL	-8	20	
4-Bromophenyl-phenylether	0.2634	0.2402	25.00	22.80	ug/mL	-9	30	
Hexachlorobenzene	0.3183	0.2883	50.00	45.29	ug/mL	-9	30	
Pentachlorophenol	0.2203	0.2007	50.00	45.54	ug/mL	-9	20	
Phenanthrene	1.2339	1.1416	25.00	23.13	ug/mL	-7	30	

Analyte	Average RF	RF	Spiked	Quant	Units	%D	Max	Flags
Anthracene	1.2155	1.1636	25.00	23.93	ug/mL	-4	30	
Di-n-butylphthalate	1.4238	1.3830	25.00	24.28	ug/mL	-3	30	
Fluoranthene	1.4210	1.3351	25.00	23.49	ug/mL	-6	20	
Pyrene	1.1553	1.1069	25.00	23.95	ug/mL	-4	30	
Butylbenzylphthalate	0.5306	0.5059	25.00	23.83	ug/mL	-5	30	
3,3'-Dichlorobenzidine	0.4513	0.4361	50.00	48.32	ug/mL	-3	40	
Benzo(a)anthracene	1.1677	1.0807	25.00	23.14	ug/mL	-7	30	
bis(2-Ethylhexyl)phthalate	0.7232	0.7188	25.00	24.85	ug/mL	-1	30	
Chrysene	1.0565	1.0085	25.00	23.86	ug/mL	-5	30	
Di-n-octylphthalate	1.4456	1.3637	25.00	23.58	ug/mL	-6	20	
Benzo(b)fluoranthene	1.2623	1.1930	25.00	23.63	ug/mL	-5	30	
Benzo(k)fluoranthene	1.1696	1.2042	25.00	25.74	ug/mL	3	30	
Benzo(a)pyrene	1.1424	1.0386	25.00	22.73	ug/mL	-9	20	
Indeno(1,2,3-cd)pyrene	1.1724	1.1253	25.00	23.99	ug/mL	-4	30	m
Dibenz(a,h)anthracene	0.9929	0.9719	25.00	24.47	ug/mL	-2	30	
Benzo(g,h,i)perylene	0.9061	0.8887	25.00	24.52	ug/mL	-2	30	m

m=manual integration

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 MSBNA Water
EPA 8270C

Inst : MSBNA07 Run Name : CCV #5 IDF : 1.0
Seqnum : 569077215002 File : zbm02 Time : 22-FEB-2009 16:00
Cal : 568517596002 Caldate : 24-DEC-2008
Standards: S10920

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Phenol	2.0090	1.7252	50.00	42.94	ug/mL	-14	20	0.0500	
bis(2-Chloroethyl)ether	1.4936	1.4769	50.00	49.44	ug/mL	-1	30	0.0500	
2-Chlorophenol	1.6043	1.5371	50.00	47.91	ug/mL	-4	30	0.0500	
1,3-Dichlorobenzene	1.6826	1.6716	50.00	49.67	ug/mL	-1	30	0.0500	
1,4-Dichlorobenzene	1.6886	1.7273	50.00	51.15	ug/mL	2	20	0.0500	
Benzyl alcohol	1.1343	0.9975	50.00	43.97	ug/mL	-12	30	0.0500	
1,2-Dichlorobenzene	1.6026	1.6624	50.00	51.86	ug/mL	4	30	0.0500	
2-Methylphenol	1.2719	1.1616	50.00	45.66	ug/mL	-9	30	0.0500	
bis(2-Chloroisopropyl) ether	2.6784	2.1874	50.00	40.83	ug/mL	-18	30	0.0500	
4-Methylphenol	1.9215	1.6843	50.00	43.83	ug/mL	-12	30	0.0500	
N-Nitroso-di-n-propylamine	0.9436	0.8500	50.00	45.04	ug/mL	-10	30	0.0500	
Hexachloroethane	0.6563	0.7021	50.00	53.49	ug/mL	7	30	0.0500	
Nitrobenzene	0.4434	0.3879	50.00	43.74	ug/mL	-13	30	0.0500	
Isophorone	0.8263	0.6818	50.00	41.26	ug/mL	-17	30	0.0500	
2-Nitrophenol	0.2265	0.2170	50.00	47.91	ug/mL	-4	20	0.0500	
2,4-Dimethylphenol	0.3887	0.3265	50.00	42.00	ug/mL	-16	30	0.0500	
bis(2-Chloroethoxy)methane	0.4506	0.3822	25.00	21.20	ug/mL	-15	30	0.0500	
Benzoic acid	0.2631	0.1998	100.0	79.18	ug/mL	-21	40	0.0500	m
2,4-Dichlorophenol	0.3451	0.3128	50.00	45.32	ug/mL	-9	20	0.0500	
1,2,4-Trichlorobenzene	0.3565	0.3474	50.00	48.72	ug/mL	-3	30	0.0500	
Naphthalene	1.1090	1.0686	25.00	24.09	ug/mL	-4	30	0.0500	
4-Chloroaniline	0.4945	0.4729	50.00	47.81	ug/mL	-4	30	0.0500	
Hexachlorobutadiene	0.2069	0.1966	50.00	47.52	ug/mL	-5	20	0.0500	
4-Chloro-3-methylphenol	0.3681	0.3421	50.00	46.48	ug/mL	-7	20	0.0500	
2-Methylnaphthalene	0.7677	0.7403	25.00	24.11	ug/mL	-4	30	0.0500	
Hexachlorocyclopentadiene	0.3579	0.2789	50.00	38.97	ug/mL	-22	40	0.0500	
2,4,6-Trichlorophenol	0.4414	0.4173	50.00	47.27	ug/mL	-5	20	0.0500	
2,4,5-Trichlorophenol	0.4768	0.4754	50.00	49.86	ug/mL	0	30	0.0500	
2-Chloronaphthalene	1.1997	1.2380	25.00	25.80	ug/mL	3	30	0.0500	
2-Nitroaniline	0.4428	0.3901	50.00	44.05	ug/mL	-12	30	0.0500	
Dimethylphthalate	1.5118	1.4619	50.00	48.35	ug/mL	-3	30	0.0500	
2,6-Dinitrotoluene	0.3769	0.3781	50.00	50.16	ug/mL	0	30	0.0500	
Acenaphthylene	1.8880	1.9244	25.00	25.48	ug/mL	2	30	0.0500	
3-Nitroaniline	0.3932	0.3838	50.00	48.81	ug/mL	-2	30	0.0500	
Acenaphthene	1.2297	1.1422	25.00	23.22	ug/mL	-7	20	0.0500	
2,4-Dinitrophenol	0.2000	0.1865	50.00	46.94	ug/mL	-6	40	0.0500	m
4-Nitrophenol	0.2003	0.1657	50.00	41.37	ug/mL	-17	40	0.0500	
Dibenzofuran	1.6703	1.7227	25.00	25.79	ug/mL	3	30	0.0500	
2,4-Dinitrotoluene	0.4995	0.5090	50.00	50.95	ug/mL	2	30	0.0500	
Diethylphthalate	1.3880	1.4053	25.00	25.31	ug/mL	1	30	0.0500	
Fluorene	1.4547	1.4328	25.00	24.62	ug/mL	-2	30	0.0500	
4-Chlorophenyl-phenylether	0.7148	0.7130	25.00	24.94	ug/mL	0	40	0.0500	
4-Nitroaniline	0.4091	0.3871	50.00	47.31	ug/mL	-5	30	0.0500	
4,6-Dinitro-2-methylphenol	0.1810	0.1822	50.00	50.34	ug/mL	1	30	0.0500	
N-Nitrosodiphenylamine	0.6198	0.6443	25.00	25.99	ug/mL	4	20	0.0500	
4-Bromophenyl-phenylether	0.2634	0.2552	25.00	24.22	ug/mL	-3	30	0.0500	
Hexachlorobenzene	0.3183	0.3075	50.00	48.31	ug/mL	-3	30	0.0500	
Pentachlorophenol	0.2203	0.1768	50.00	40.12	ug/mL	-20	20	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Phenanthrene	1.2339	1.2343	25.00	25.01	ug/mL	0	30	0.0500	
Anthracene	1.2155	1.2504	25.00	25.72	ug/mL	3	30	0.0500	
Di-n-butylphthalate	1.4238	1.4390	25.00	25.27	ug/mL	1	30	0.0500	
Fluoranthene	1.4210	1.3988	25.00	24.61	ug/mL	-2	20	0.0500	
Pyrene	1.1553	1.1874	25.00	25.69	ug/mL	3	30	0.0500	
Butylbenzylphthalate	0.5306	0.5432	25.00	25.59	ug/mL	2	30	0.0500	
3,3'-Dichlorobenzidine	0.4513	0.4904	50.00	54.33	ug/mL	9	40	0.0500	
Benzo(a)anthracene	1.1677	1.1451	25.00	24.52	ug/mL	-2	30	0.0500	
bis(2-Ethylhexyl)phthalate	0.7232	0.7283	25.00	25.17	ug/mL	1	30	0.0500	
Chrysene	1.0565	1.1218	25.00	26.55	ug/mL	6	30	0.0500	
Di-n-octylphthalate	1.4456	1.2878	25.00	22.27	ug/mL	-11	20	0.0500	
Benzo(b)fluoranthene	1.2623	1.1412	25.00	22.60	ug/mL	-10	30	0.0500	
Benzo(k)fluoranthene	1.1696	1.1668	25.00	24.94	ug/mL	0	30	0.0500	
Benzo(a)pyrene	1.1424	1.1072	25.00	24.23	ug/mL	-3	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.1724	1.1903	25.00	25.38	ug/mL	2	30	0.0500	
Dibenz(a,h)anthracene	0.9929	0.9920	25.00	24.98	ug/mL	0	30	0.0500	
Benzo(g,h,i)perylene	0.9061	0.9450	25.00	26.07	ug/mL	4	30	0.0500	
2-Fluorophenol	1.3902	1.2216	25.00	21.97	ug/mL	-12	30	0.0500	
Phenol-d5	1.8103	1.5774	25.00	21.78	ug/mL	-13	30	0.0500	
Nitrobenzene-d5	0.4098	0.3512	25.00	21.43	ug/mL	-14	30	0.0500	
2-Fluorobiphenyl	1.3407	1.3494	25.00	25.16	ug/mL	1	30	0.0500	
2,4,6-Tribromophenol	0.2395	0.2312	25.00	24.13	ug/mL	-3	30	0.0500	
Terphenyl-d14	0.7946	0.7888	25.00	24.82	ug/mL	-1	30	0.0500	

SHD 02/22/09 : Picked or reassigned peak .

SHD 02/22/09 : Corrected fronting or tailing peak integration .

Analyst: SHD Date: 02/22/09 Reviewer: LW Date: 02/25/09

m=manual integration

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 MSBNA Water
EPA 8270C

Inst : MSBNA07 Run Name : CCV #5 IDF : 1.0
Seqnum : 569078366003 File : zbn03 Time : 23-FEB-2009 11:54
Cal : 568517596002 Caldate : 24-DEC-2008
Standards: S10920

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Phenol	2.0090	1.7302	50.00	43.06	ug/mL	-14	20	0.0500	
bis(2-Chloroethyl)ether	1.4936	1.4382	50.00	48.15	ug/mL	-4	30	0.0500	
2-Chlorophenol	1.6043	1.5527	50.00	48.39	ug/mL	-3	30	0.0500	
1,3-Dichlorobenzene	1.6826	1.6862	50.00	50.11	ug/mL	0	30	0.0500	
1,4-Dichlorobenzene	1.6886	1.7674	50.00	52.33	ug/mL	5	20	0.0500	
Benzyl alcohol	1.1343	0.9715	50.00	42.82	ug/mL	-14	30	0.0500	
1,2-Dichlorobenzene	1.6026	1.6432	50.00	51.27	ug/mL	3	30	0.0500	
2-Methylphenol	1.2719	1.1600	50.00	45.60	ug/mL	-9	30	0.0500	
bis(2-Chloroisopropyl) ether	2.6784	2.1648	50.00	40.41	ug/mL	-19	30	0.0500	
4-Methylphenol	1.9215	1.6472	50.00	42.86	ug/mL	-14	30	0.0500	
N-Nitroso-di-n-propylamine	0.9436	0.7964	50.00	42.20	ug/mL	-16	30	0.0500	
Hexachloroethane	0.6563	0.6652	50.00	50.68	ug/mL	1	30	0.0500	
Nitrobenzene	0.4434	0.3743	50.00	42.21	ug/mL	-16	30	0.0500	
Isophorone	0.8263	0.6710	50.00	40.61	ug/mL	-19	30	0.0500	
2-Nitrophenol	0.2265	0.2225	50.00	49.12	ug/mL	-2	20	0.0500	
2,4-Dimethylphenol	0.3887	0.3125	50.00	40.21	ug/mL	-20	30	0.0500	
bis(2-Chloroethoxy)methane	0.4506	0.3780	25.00	20.97	ug/mL	-16	30	0.0500	
Benzoic acid	0.2631	0.1962	100.0	78.22	ug/mL	-22	40	0.0500	m
2,4-Dichlorophenol	0.3451	0.3215	50.00	46.58	ug/mL	-7	20	0.0500	
1,2,4-Trichlorobenzene	0.3565	0.3573	50.00	50.12	ug/mL	0	30	0.0500	
Naphthalene	1.1090	1.0516	25.00	23.71	ug/mL	-5	30	0.0500	
4-Chloroaniline	0.4945	0.4625	50.00	46.77	ug/mL	-6	30	0.0500	
Hexachlorobutadiene	0.2069	0.2006	50.00	48.48	ug/mL	-3	20	0.0500	
4-Chloro-3-methylphenol	0.3681	0.3268	50.00	44.39	ug/mL	-11	20	0.0500	
2-Methylnaphthalene	0.7677	0.7291	25.00	23.74	ug/mL	-5	30	0.0500	
Hexachlorocyclopentadiene	0.3579	0.2785	50.00	38.90	ug/mL	-22	40	0.0500	
2,4,6-Trichlorophenol	0.4414	0.4296	50.00	48.66	ug/mL	-3	20	0.0500	
2,4,5-Trichlorophenol	0.4768	0.4769	50.00	50.01	ug/mL	0	30	0.0500	
2-Chloronaphthalene	1.1997	1.2271	25.00	25.57	ug/mL	2	30	0.0500	
2-Nitroaniline	0.4428	0.3770	50.00	42.57	ug/mL	-15	30	0.0500	
Dimethylphthalate	1.5118	1.4428	50.00	47.72	ug/mL	-5	30	0.0500	
2,6-Dinitrotoluene	0.3769	0.3758	50.00	49.85	ug/mL	0	30	0.0500	
Acenaphthylene	1.8880	1.8986	25.00	25.14	ug/mL	1	30	0.0500	
3-Nitroaniline	0.3932	0.3747	50.00	47.65	ug/mL	-5	30	0.0500	
Acenaphthene	1.2297	1.1282	25.00	22.94	ug/mL	-8	20	0.0500	
2,4-Dinitrophenol	0.2000	0.1887	50.00	47.36	ug/mL	-5	40	0.0500	m
4-Nitrophenol	0.2003	0.1523	50.00	38.03	ug/mL	-24	40	0.0500	
Dibenzofuran	1.6703	1.7021	25.00	25.48	ug/mL	2	30	0.0500	
2,4-Dinitrotoluene	0.4995	0.4931	50.00	49.35	ug/mL	-1	30	0.0500	
Diethylphthalate	1.3880	1.3322	25.00	24.00	ug/mL	-4	30	0.0500	
Fluorene	1.4547	1.4091	25.00	24.22	ug/mL	-3	30	0.0500	
4-Chlorophenyl-phenylether	0.7148	0.7090	25.00	24.80	ug/mL	-1	40	0.0500	
4-Nitroaniline	0.4091	0.3676	50.00	44.93	ug/mL	-10	30	0.0500	
4,6-Dinitro-2-methylphenol	0.1810	0.1884	50.00	52.05	ug/mL	4	30	0.0500	
N-Nitrosodiphenylamine	0.6198	0.6430	25.00	25.94	ug/mL	4	20	0.0500	
4-Bromophenyl-phenylether	0.2634	0.2639	25.00	25.05	ug/mL	0	30	0.0500	
Hexachlorobenzene	0.3183	0.3233	50.00	50.79	ug/mL	2	30	0.0500	
Pentachlorophenol	0.2203	0.1763	50.00	40.01	ug/mL	-20	20	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Phenanthrene	1.2339	1.2461	25.00	25.25	ug/mL	1	30	0.0500	
Anthracene	1.2155	1.2405	25.00	25.51	ug/mL	2	30	0.0500	
Di-n-butylphthalate	1.4238	1.4065	25.00	24.70	ug/mL	-1	30	0.0500	
Fluoranthene	1.4210	1.4030	25.00	24.68	ug/mL	-1	20	0.0500	
Pyrene	1.1553	1.1919	25.00	25.79	ug/mL	3	30	0.0500	
Butylbenzylphthalate	0.5306	0.5383	25.00	25.36	ug/mL	1	30	0.0500	
3,3'-Dichlorobenzidine	0.4513	0.4938	50.00	54.71	ug/mL	9	40	0.0500	
Benzo(a)anthracene	1.1677	1.1491	25.00	24.60	ug/mL	-2	30	0.0500	
bis(2-Ethylhexyl)phthalate	0.7232	0.7137	25.00	24.67	ug/mL	-1	30	0.0500	
Chrysene	1.0565	1.1118	25.00	26.31	ug/mL	5	30	0.0500	
Di-n-octylphthalate	1.4456	1.2910	25.00	22.33	ug/mL	-11	20	0.0500	
Benzo(b)fluoranthene	1.2623	1.1905	25.00	23.58	ug/mL	-6	30	0.0500	
Benzo(k)fluoranthene	1.1696	1.1574	25.00	24.74	ug/mL	-1	30	0.0500	
Benzo(a)pyrene	1.1424	1.1351	25.00	24.84	ug/mL	-1	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.1724	1.2411	25.00	26.46	ug/mL	6	30	0.0500	
Dibenz(a,h)anthracene	0.9929	1.0503	25.00	26.45	ug/mL	6	30	0.0500	
Benzo(g,h,i)perylene	0.9061	0.9781	25.00	26.99	ug/mL	8	30	0.0500	
2-Fluorophenol	1.3902	1.2133	25.00	21.82	ug/mL	-13	30	0.0500	
Phenol-d5	1.8103	1.5703	25.00	21.69	ug/mL	-13	30	0.0500	
Nitrobenzene-d5	0.4098	0.3392	25.00	20.70	ug/mL	-17	30	0.0500	
2-Fluorobiphenyl	1.3407	1.3466	25.00	25.11	ug/mL	0	30	0.0500	
2,4,6-Tribromophenol	0.2395	0.2366	25.00	24.69	ug/mL	-1	30	0.0500	
Terphenyl-d14	0.7946	0.8015	25.00	25.22	ug/mL	1	30	0.0500	

Analyst: HDD Date: 02/24/09 Reviewer: LW Date: 02/24/09

m=manual integration

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 569077215

Date : 02/22/09 Reference : zbm02
Sequence : MSBNA07 zbm Analyzed : 02/22/09 16:00

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+ICV+ICV/CCV STD	449749	5.69	1905569	7.16	1133632	9.30	1915031	11.13	2302540	14.42	2344589	16.93
		LOWER LIMIT	224875	5.19	952785	6.66	566816	8.80	957516	10.63	1151270	13.92	1172295	16.43
		UPPER LIMIT	899498	6.19	3811138	7.66	2267264	9.80	3830062	11.63	4605080	14.92	4689178	17.43
002	CCV	CCV #5	449749	5.69	1905569	7.16	1133632	9.30	1915031	11.13	2302540	14.42	2344589	16.93
003	BLANK	QC484198	531313	5.68	2089491	7.16	1136518	9.29	1879578	11.12	2282818	14.41	2308978	16.92
004	LCS	QC484199	540712	5.69	2188498	7.16	1270481	9.30	2279332	11.13	2566424	14.42	2625864	16.93
005	SAMPLE	210093-001	551397	5.68	2158753	7.16	1191737	9.30	2130656	11.12	2450247	14.41	2399682	16.92
006	SAMPLE	210093-002	542805	5.68	2112842	7.16	1170876	9.29	2091556	11.12	2418517	14.41	2424411	16.92
007	MSS	210094-001	299425	5.70	2266493	7.16	1322932	9.29	2266792	11.12	2558210	14.41	2619592	16.92
008	SAMPLE	210098-001	584832	5.69	2243573	7.16	1304026	9.29	2303036	11.13	2631788	14.41	2607908	16.93
009	SAMPLE	210098-002	574278	5.68	2252614	7.16	1252683	9.30	2181601	11.12	2495947	14.41	2597134	16.92
010	SAMPLE	210102-001	570604	5.69	2229233	7.16	1220864	9.29	2069282	11.12	2453217	14.41	2409745	16.92
011	SAMPLE	210136-001	582824	5.69	2293703	7.16	1309919	9.30	2282151	11.12	2647881	14.41	2710377	16.93
012	MSS	210144-006	562018	5.68	2232240	7.16	1208797	9.30	2017776	11.12	2401181	14.41	2476845	16.92
013	MS	QC484200	520338	5.70	2270522	7.17	1325076	9.30	2331708	11.13	2630771	14.42	2653493	16.93
014	MSD	QC484201	554912	5.70	2345624	7.17	1366561	9.30	2401282	11.13	2199203	14.42	2726604	16.94
015	MSS	210146-006	624772	5.69	2467615	7.16	1370876	9.30	2391141	11.12	2953908	14.42	2876607	16.93
016	MS	QC484202	571000	5.69	2261245	7.16	1330577	9.30	2342236	11.13	2639811	14.43	2517474	16.94
017	MSD	QC484203	660766	5.69	2595630	7.16	1531421	9.30	2656994	11.13	3045176	14.43	2904841	16.94
018	SAMPLE	210162-001	643291	5.69	2514285	7.16	1403930	9.29	2457357	11.13	2833088	14.41	2798084	16.93
019	SAMPLE	210162-002	610093	5.69	2393229	7.16	1322326	9.29	2278506	11.12	2650761	14.41	2646924	16.93
020	SAMPLE	210162-003	593777	5.69	2340537	7.16	1301501	9.30	2224937	11.12	2587325	14.41	2623086	16.93
021	SAMPLE	210150-001	555718	5.69	2135950	7.16	1377670	9.30	2320278	11.13	2202078	14.43	1586897	16.95
022	SAMPLE	210158-001	566221	5.69	2311849	7.16	1306106	9.30	1120425	11.21	2704300	14.47	2228262	16.97

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 569078366

Date : 02/23/09 Reference : zbn03
Sequence : MSBNA07 zbn Analyzed : 02/23/09 11:54

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+ICV+ICV/CCV STD	569437	5.69	2319376	7.17	1353688	9.30	2201685	11.13	2658875	14.43	2645044	16.95
		LOWER LIMIT	284719	5.19	1159688	6.67	676844	8.80	1100843	10.63	1329438	13.93	1322522	16.45
		UPPER LIMIT	1138874	6.19	4638752	7.67	2707376	9.80	4403370	11.63	5317750	14.93	5290088	17.45
003	CCV	CCV #5	569437	5.69	2319376	7.17	1353688	9.30	2201685	11.13	2658875	14.43	2645044	16.95
004	MSS	210146-006	609524	5.69	2461657	7.16	1385546	9.30	2369487	11.13	2884929	14.42	2857287	16.95
005	SAMPLE	210162-003	582998	5.69	2309141	7.16	1295390	9.30	2223280	11.13	2541914	14.42	2634076	16.94
006	SAMPLE	210150-001	581475	5.69	2270505	7.17	1399895	9.30	2383776	11.13	2445060	14.43	1919735	16.95
007	SAMPLE	210158-001	594173	5.69	2336508	7.16	1336719	9.30	2348172	11.13	2804829	14.42	2820057	16.94
008	MS	QC484202	625732	5.69	2452624	7.17	1456370	9.30	2540030	11.14	2840964	14.43	2657245	16.95
009	MSD	QC484203	665593	5.69	2640285	7.17	1563978	9.30	2677351	11.13	2996604	14.43	2773137	16.95
010	BLANK	QC484455	630583	5.70	2295352	7.16	1440624	9.30	2389726	11.13	2975679	14.42	2940897	16.94
011	LCS	QC484456	635558	5.70	2390530	7.17	1510850	9.30	2633599	11.13	3189941	14.42	3206482	16.95
012	SAMPLE	210219-001	616385	5.70	2298604	7.16	1388150	9.30	2354897	11.13	2905280	14.42	3023030	16.95
013	SAMPLE	210219-002	578572	5.70	2128757	7.16	1285215	9.30	2147562	11.13	2663065	14.42	2658267	16.94
014	SAMPLE	210219-003	584310	5.70	2159745	7.16	1341082	9.30	2281541	11.13	2972469	14.42	3025293	16.95
015	SAMPLE	210131-005	664438	5.69	2551716	7.16	1493025	9.30	2576215	11.13	3261384	14.42	2590870	16.95
016	SAMPLE	210145-001	613142	5.70	2256511	7.16	1405369	9.30	2297903	11.13	2870616	14.42	2620596	16.94
017	SAMPLE	210145-003	625470	5.70	2290876	7.16	1436228	9.30	2346827	11.13	2981106	14.42	2743451	16.94
018	MSS	210145-020	618422	5.70	2279481	7.16	1418397	9.30	2426849	11.13	2979249	14.42	2673598	16.94
019	MS	QC484459	646180	5.70	2424880	7.17	1540078	9.30	2662355	11.13	3220777	14.42	2811889	16.94
020	MSD	QC484460	648410	5.70	2424939	7.17	1540793	9.30	2645583	11.13	3176080	14.42	2716129	16.94

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 568517596

Instrument : MSBNA07 Begun : 12/24/08 10:36
Method : EPA 8270C SOP Version : bna_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	zlo01	TUN	DFTPP/PEM			12/24/08 10:36	1.0	1	
002	zlo02	CCV	#3			12/24/08 10:57	1.0	2	
003	zlo03	TUN	DFTPP/PEM			12/24/08 11:34	1.0	1	
004	zlo04	ICAL	#1			12/24/08 11:52	1.0	3	
005	zlo05	ICAL	#2			12/24/08 12:26	1.0	4	
006	zlo06	ICAL	#3			12/24/08 13:01	1.0	2	
007	zlo07	ICAL	#4			12/24/08 13:35	1.0	5	
008	zlo08	ICAL	#5			12/24/08 14:10	1.0	6	
009	zlo09	ICAL	#6			12/24/08 14:45	1.0	7	
010	zlo10	ICAL	#7			12/24/08 15:19	1.0	8	
011	zlo11	ICAL	#8			12/24/08 15:54	1.0	9	
012	zlo12	ICV	ICV			12/24/08 16:28	1.0	10	
013	zlo13	TUN	DFTPP/PEM			12/24/08 16:59	1.0	1	
014	zlo14	CCV	#5			12/24/08 17:18	1.0	6	
015	zlo15	BLANK	QC476831	Soil	146334	12/24/08 17:54	1.0	11	2:PHENOLD5=160
016	zlo16	LCS	QC476832	Soil	146334	12/24/08 18:28	1.0	11	
017	zlo17	SAMPLE	208611-001	Soil	146334	12/24/08 19:02	3.0	11	
018	zlo18	SAMPLE	208611-002	Soil	146334	12/24/08 19:37	1.0	11	
019	zlo19	SAMPLE	208611-003	Soil	146334	12/24/08 20:12	1.0	11	2:PHENOLD5=220
020	zlo20	SAMPLE	208611-004	Soil	146334	12/24/08 20:47	1.0	11	2:PHENOLD5=170
021	zlo21	SAMPLE	208612-001	Soil	146334	12/24/08 21:21	1.0	11	2:PHENOLD5=240
022	zlo22	SAMPLE	208612-002	Soil	146334	12/24/08 21:56	1.0	11	
023	zlo23	SAMPLE	208562-001	Soil	146334	12/24/08 22:30	1.0	11	2:PHENOLD5=200
024	zlo24	SAMPLE	208562-002	Soil	146334	12/24/08 23:05	1.0	11	2:PHENOLD5=160
025	zlo25	SAMPLE	208562-003	Soil	146334	12/24/08 23:39	1.0	11	2:PHENOLD5=230
026	zlo26	SAMPLE	208562-004	Soil	146334	12/25/08 00:14	1.0	11	2:PHENOLD5=110
027	zlo27	SAMPLE	208562-005	Soil	146334	12/25/08 00:48	1.0	11	2:PHENOLD5=230
028	zlo28	SAMPLE	208562-016	Soil	146334	12/25/08 01:23	1.0	11	2:PHENOLD5=260
029	zlo29	SAMPLE	208562-017	Soil	146334	12/25/08 01:58	1.0	11	2:PHENOLD5=230
030	zlo30	SAMPLE	208562-006	Soil	146334	12/25/08 02:33	1.0	11	2:PHENOLD5=200
031	zlo31	SAMPLE	208562-007	Soil	146334	12/25/08 03:08	5.0	11	
032	zlo32	MS	QC476833	Soil	146334	12/25/08 03:44	5.0	11	
033	zlo33	MSD	QC476834	Soil	146334	12/25/08 04:19	5.0	11	

SHD 12/29/08 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 33.

Standards used: 1=S11025 2=S10918 3=S10916 4=S10917 5=S10919 6=S10920 7=S10921 8=S10922 9=S10923 10=S10319 11=S10551

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 569077215

Instrument : MSBNA07 Begun : 02/22/09 14:55
Method : EPA 8270C SOP Version : bna_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	zbm01	TUN	DFTPP/PEM 50 UG/ML			02/22/09 14:55	1.0	1	
002	zbm02	CCV	CCV #5			02/22/09 16:00	1.0	2	
003	zbm03	BLANK	QC484198	Water	148131	02/22/09 16:35	1.0	3	
004	zbm04	LCS	QC484199	Water	148131	02/22/09 17:10	1.0	3	
005	zbm05	SAMPLE	210093-001	Water	148131	02/22/09 17:47	1.0	3	
006	zbm06	SAMPLE	210093-002	Water	148131	02/22/09 18:22	1.0	3	
007	zbm07	MSS	210094-001	Water	148131	02/22/09 18:58	1.0	3	
008	zbm08	SAMPLE	210098-001	Water	148131	02/22/09 19:35	1.0	3	
009	zbm09	SAMPLE	210098-002	Water	148131	02/22/09 20:12	1.0	3	
010	zbm10	SAMPLE	210102-001	Water	148131	02/22/09 20:48	1.0	3	
011	zbm11	SAMPLE	210136-001	Water	148131	02/22/09 21:24	1.0	3	
012	zbm12	MSS	210144-006	Water	148131	02/22/09 22:02	1.0	3	
013	zbm13	MS	QC484200	Water	148131	02/22/09 22:38	1.0	3	
014	zbm14	MSD	QC484201	Water	148131	02/22/09 23:15	1.0	3	1:BIS2EHP=140
015	zbm15	MSS	210146-006	Water	148131	02/22/09 23:52	1.0	3	
016	zbm16	MS	QC484202	Water	148131	02/23/09 00:29	1.0	3	
017	zbm17	MSD	QC484203	Water	148131	02/23/09 01:06	1.0	3	
018	zbm18	SAMPLE	210162-001	Water	148131	02/23/09 01:42	1.0	3	
019	zbm19	SAMPLE	210162-002	Water	148131	02/23/09 02:19	1.0	3	
020	zbm20	SAMPLE	210162-003	Water	148131	02/23/09 02:56	1.0	3	
021	zbm21	SAMPLE	210150-001	Water	148131	02/23/09 03:33	3.0	3	1:BIS2EHP=100
022	zbm22	SAMPLE	210158-001	Water	148131	02/23/09 04:09	5.0	3	

HDD 02/23/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 22.

Standards used: 1=S11025 2=S10920 3=S10551

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 569078366

Instrument : MSBNA07 Begun : 02/23/09 10:06
Method : EPA 8270C SOP Version : bna_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	zbn01	TUN	DFTPP/PEM 50 UG/ML			02/23/09 10:06	1.0	1	
002	zbn02	CCV	CCV #5			02/23/09 10:44	1.0	2	
003	zbn03	CCV	CCV #5			02/23/09 11:54	1.0	2	
004	zbn04	MSS	210146-006	Water	148131	02/23/09 12:30	1.0	3	
005	zbn05	SAMPLE	210162-003	Water	148131	02/23/09 13:05	1.0	3	
006	zbn06	SAMPLE	210150-001	Water	148131	02/23/09 13:40	5.0	3	1:BIS2EHP=66
007	zbn07	SAMPLE	210158-001	Water	148131	02/23/09 14:15	100.0	3	
008	zbn08	MS	QC484202	Water	148131	02/23/09 14:52	1.0	3	
009	zbn09	MSD	QC484203	Water	148131	02/23/09 15:27	1.0	3	
010	zbn10	BLANK	QC484455	Soil	148187	02/23/09 16:02	1.0	3	
011	zbn11	LCS	QC484456	Soil	148187	02/23/09 16:38	1.0	3	
012	zbn12	SAMPLE	210219-001	Soil	148187	02/23/09 17:22	1.0	3	
013	zbn13	SAMPLE	210219-002	Soil	148187	02/23/09 17:58	1.0	3	
014	zbn14	SAMPLE	210219-003	Soil	148187	02/23/09 18:34	1.0	3	
015	zbn15	SAMPLE	210131-005	Soil	148187	02/23/09 19:08	2.0	3	
016	zbn16	SAMPLE	210145-001	Soil	148187	02/23/09 19:44	1.0	3	
017	zbn17	SAMPLE	210145-003	Soil	148187	02/23/09 20:18	1.0	3	
018	zbn18	MSS	210145-020	Soil	148187	02/23/09 20:54	1.0	3	
019	zbn19	MS	QC484459	Soil	148187	02/23/09 21:29	1.0	3	
020	zbn20	MSD	QC484460	Soil	148187	02/23/09 22:04	1.0	3	

HDD 02/24/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 20.

Standards used: 1=S11025 2=S10920 3=S10551

SAMPLE PREPARATION SUMMARY

Batch # : 148131
Started By : DJT
Method : 3520C
Spike #1 ID : S10894

Prep Date : 20-FEB-2009 14:45
SOP Version : 8270_3520_rv16
Spike #2 ID : S11358

Analysis : 625
Finished By : SFL
Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
210093-001		Water	1060	1	1	0.0009434	7	.4				625	
210093-002		Water	1050	1	1	0.0009524	7	.4				625	
210094-001		Water	1050	1	1	0.0009524	7	.4				625	mss
210098-001		Water	1060	1	1	0.0009434	7	.4				8270-1	
210098-002		Water	1060	1	1	0.0009434	7	.4				8270-1	
210102-001		Water	1020	1	1	0.0009804	7	.4				625	
210136-001		Water	1060	1	1	0.0009434	7	.4				8270-1	
210144-006		Water	1060	1	1	0.0009434	7	.4				625	
210146-006		Water	1000	1	1	0.001	7	.4				625	See comment 1 below
210150-001		Water	1010	1	1	0.0009901	7	.4				8270-1	sediment, black sample
210158-001		Water	700	20	1	0.02857	7	.4				8270-1	limited volume
210162-001		Water	1040	1	1	0.0009615	7	.4				8270-1	
210162-002		Water	1060	1	1	0.0009434	7	.4				8270-1	
210162-003		Water	1060	1	1	0.0009434	7	.4				8270-1	
QC484198	BLANK	Water	1000	1	1	0.001		.4				8270-1	
QC484199	LCS	Water	1000	1	1	0.001		.4	1			8270-1	
QC484200	MS	Water	1060	1	1	0.0009434	7	.4	1			8270-1	
QC484201	MSD	Water	1050	1	1	0.0009524	7	.4	1			8270-1	
QC484202	MS	Water	1000	1	1	0.001	7	.4	1			8270-1	
QC484203	MSD	Water	1000	1	1	0.001	7	.4	1			8270-1	

Comment 1: mss (comp-001g,002h.003g,004h @750mL each)

HDD: 02/24/09 SHD: 02/24/09 LW: 02/25/09

BNA (8270 & 625) Water Prep Log

Curtis & Tompkins, Ltd.

Page 17 **BK 2835**

LIMS Analysis: 8270-1/625
LIMS Batch No: 148131
Date Extracted: 2/20/09

Extraction Method:
☒ mod.EPA 3520c cont.L/L
☐ _____

Cleanup Method (if needed):
☐ EPA 3640a GPC
☐ _____

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Cleanup (x if needed)	Comments
210093-001	G	1060	7	1.0		
↓ 002	↓	1050				
210094-001	Q	↓				MSS
210098-001	M	1060				
↓ 002	↓	↓				
210102-001	G	1020				
210136-001	L	1060				
210144-006	A ~~COMP~~ 2/20/09	↓				
210146-006	COMP	1000				MSS COMP 001+004 @ 750mL EA 002+003
210150-001	F	1010				SEDIMENT/BLACK SAMPLE
210158-001	E	700		20.C		LIMITED VOLUME; NOT ABLE TO CONC. FURTHER
210162-001	D	1040		1.0		
002		1060				
↓ 003	↓	↓	↓			
MB QC484198	NA	1000	NA			
LCS 199	↓	↓	↓			
MS 200	M	1060	7			210094-001
MSD 201	N	1050				↓
MS 202	COMP	1000				210146-006
MSD ↓ 203	↓	↓	↓	↓		↓

	Lot# / LIMS # / Time	Date/ Initials
0.4 mL of surrogate solution was added to all samples	S10894A	DJT 2/20/09
1.0 mL of matrix spiking solution was added to all spikes	S11358A	
pH of all samples adjusted to pH ≤ 2 with H_2SO_4	FS085385	
Cont. L/L extracted with 450mL of CH_2Cl_2	EM48352	
Extraction Start Time:	1445	
Extraction End Time:	0850	TEB 2/21/09
pH of all samples adjusted to pH ≥ 11 with 10 N NaOH	NA	
Extraction Start Time:		
Extraction End Time:		
Extracts filtered through baked, CH2Cl2-rinsed granular Na2SO4	EM48315847	
Concentrated to final volume at temperature (degrees C)	70°	
Relinquished to BNA department		

2/20/09
Extraction Chemist **Date**

Contined from Page ___
Continued on Page 1

2/22/09
Reviewed by **Date**

Laboratory Job Number 210098

ANALYTICAL REPORT

PCBs

Matrix: Water

Curtis & Tompkins, Ltd.

Polychlorinated Biphenyls (PCBs)

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8082
Matrix:	Water	Sampled:	02/18/09
Units:	ug/L	Received:	02/18/09
Diln Fac:	1.000	Prepared:	02/22/09
Batch#:	148160	Analyzed:	02/24/09

Field ID: E051 Lab ID: 210098-001
Type: SAMPLE Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	0.50
Aroclor-1221	ND	1.0
Aroclor-1232	ND	0.50
Aroclor-1242	ND	0.50
Aroclor-1248	ND	0.50
Aroclor-1254	ND	0.50
Aroclor-1260	ND	0.50

Surrogate	%REC	Limits
TCMX	102	65-135
Decachlorobiphenyl	22 *	65-135

Field ID: E049 Lab ID: 210098-002
Type: SAMPLE Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	0.50
Aroclor-1221	ND	1.0
Aroclor-1232	ND	0.50
Aroclor-1242	ND	0.50
Aroclor-1248	ND	0.50
Aroclor-1254	ND	0.50
Aroclor-1260	ND	0.50

Surrogate	%REC	Limits
TCMX	100	65-135
Decachlorobiphenyl	16 *	65-135

Type: BLANK Cleanup Method: EPA 3665A
Lab ID: QC484336

Analyte	Result	RL
Aroclor-1016	ND	0.50
Aroclor-1221	ND	1.0
Aroclor-1232	ND	0.50
Aroclor-1242	ND	0.50
Aroclor-1248	ND	0.50
Aroclor-1254	ND	0.50
Aroclor-1260	ND	0.50

Surrogate	%REC	Limits
TCMX	95	65-135
Decachlorobiphenyl	41 *	65-135

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Polychlorinated Biphenyls (PCBs)

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 3520C
Project#:	Y0239-04.A3	Analysis:	EPA 8082
Matrix:	Water	Batch#:	148160
Units:	ug/L	Prepared:	02/22/09
Diln Fac:	1.000	Analyzed:	02/24/09

Type: BS Cleanup Method: EPA 3665A
Lab ID: QC484337

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	5.000	5.958	119	71-139
Aroclor-1260	5.000	5.873	117	75-141

Surrogate	%REC	Limits
TCMX	111	65-135
Decachlorobiphenyl	43 *	65-135

Type: BSD Cleanup Method: EPA 3665A
Lab ID: QC484338

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	5.000	6.195	124	71-139	4	24
Aroclor-1260	5.000	6.113	122	75-141	4	27

Surrogate	%REC	Limits
TCMX	110	65-135
Decachlorobiphenyl	37 *	65-135

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 PCBS Water: EPA 8082

Inst : GC06
Calnum : 209073118001
Units : pg/uL

Name : 1660_051
Date : 19-FEB-2009 22:08
X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	050_007	209073118007	PCB25_5	19-FEB-2009 22:08	S10124
L2	050_008	209073118008	PCB100_20	19-FEB-2009 22:42	S10125
L3	050_009	209073118009	PCB250_50	19-FEB-2009 23:17	S10126
L4	050_010	209073118010	PCB500_100	19-FEB-2009 23:52	S10127
L5	050_011	209073118011	PCB750_150	20-FEB-2009 00:26	S10128
L6	050_012	209073118012	PCB1000_200	20-FEB-2009 01:01	S10129
L7	050_018	209073118018	PCB10_2	20-FEB-2009 10:52	S11430

Analyte	Ch	L1	L2	L3	L4	L5	L6	L7	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Aroclor-1016 Peak # 1	A	121.64	115.64	108.19	98.362	93.183	85.457	147.60	AVRG		0.00909		110.01	19	.99	20	
Aroclor-1016 Peak # 2	A	337.44	295.17	280.20	252.29	239.94	232.29	368.00	AVRG		0.00349		286.48	18	.99	20	
Aroclor-1016 Peak # 3	A	209.72	190.24	180.62	154.63	151.13	147.97	244.60	AVRG		0.00547		182.70	19	.99	20	
Aroclor-1016 Peak # 4	A	112.36	105.13	98.668	75.794	75.601	74.811	118.00	AVRG		0.01060		94.338	20	.99	20	
Aroclor-1016 Peak # 5	A	190.24	160.39	156.72	129.14	125.08	122.70	182.10	AVRG		0.00656		152.34	18	.99	20	
Aroclor-1260 Peak # 1	A	507.04	465.76	451.70	367.56	359.48	353.33	551.80	AVRG		0.00229		436.67	18	.99	20	
Aroclor-1260 Peak # 2	A	388.20	357.39	342.37	275.14	265.71	260.81	419.90	AVRG		0.00303		329.93	19	.99	20	
Aroclor-1260 Peak # 3	A	343.84	313.25	303.61	242.57	240.96	236.21	365.00	AVRG		0.00342		292.21	18	.99	20	
Aroclor-1260 Peak # 4	A	837.40	761.70	749.24	597.13	593.89	580.35	913.60	AVRG		0.00139		719.05	18	.99	20	
Aroclor-1260 Peak # 5	A	376.60	347.81	346.53	281.44	281.99	279.62	398.30	AVRG		0.00303		330.33	15	.99	20	
TCMX	A	5511.0	5091.9	5083.5	4504.1	4516.7	4433.1	5965.0	AVRG		1.99E-4		5015.0	12	.99	20	
Decachlorobiphenyl	A	6656.4	6135.2	5912.6	4561.5	4419.2		7507.5	AVRG		1.70E-4		5865.4	20	.99	20	
Aroclor-1016 Peak # 1	B	103.84	96.080	94.440	81.702	81.001	80.030	108.90	AVRG		0.01084		92.285	13	.99	20	
Aroclor-1016 Peak # 2	B	248.88	235.12	239.94	213.07	218.70	222.54	268.70	AVRG		0.00425		235.28	8	.99	20	
Aroclor-1016 Peak # 3	B	124.20	115.45	114.30	98.636	98.636	98.537	133.40	AVRG		0.00894		111.88	12	.99	20	
Aroclor-1016 Peak # 4	B	77.040	71.280	69.848	59.086	58.032	57.046	80.600	AVRG		0.01480		67.562	14	.99	20	
Aroclor-1016 Peak # 5	B	82.760	78.380	79.188	67.706	67.824	68.221	85.500	AVRG		0.01322		75.654	10	.99	20	
Aroclor-1260 Peak # 1	B	218.64	212.06	223.32	196.84	202.42	202.50	235.50	AVRG		0.00469		213.04	6	.99	20	
Aroclor-1260 Peak # 2	B	176.84	165.88	166.22	136.32	135.55	133.43	189.30	AVRG		0.00634		157.65	14	.99	20	
Aroclor-1260 Peak # 3	B	159.12	151.22	155.20	128.57	131.16	130.64	158.90	AVRG		0.00690		144.97	10	.99	20	
Aroclor-1260 Peak # 4	B	346.64	330.70	344.98	290.90	299.85	302.20	358.50	AVRG		0.00308		324.82	8	.99	20	
Aroclor-1260 Peak # 5	B	154.16	148.20	155.46	132.74	140.74	144.47	160.10	AVRG		0.00676		147.98	6	.99	20	
TCMX	B	2620.2	2638.4	2917.2	2712.3	2868.6	2903.4	2814.5	AVRG		3.59E-4		2782.1	4	.99	20	
Decachlorobiphenyl	B	3521.0	3436.8	3557.7	2820.5	2798.7	2729.5	3673.0	AVRG		3.11E-4		3219.6	13	.99	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
Aroclor-1016 Peak # 1	A	25.00	11	100.0	5	250.0	-2	500.0	-11	750.0	-15	1000	-22	10.00	34
Aroclor-1016 Peak # 2	A	25.00	18	100.0	3	250.0	-2	500.0	-12	750.0	-16	1000	-19	10.00	28
Aroclor-1016 Peak # 3	A	25.00	15	100.0	4	250.0	-1	500.0	-15	750.0	-17	1000	-19	10.00	34
Aroclor-1016 Peak # 4	A	25.00	19	100.0	11	250.0	5	500.0	-20	750.0	-20	1000	-21	10.00	25
Aroclor-1016 Peak # 5	A	25.00	25	100.0	5	250.0	3	500.0	-15	750.0	-18	1000	-19	10.00	20
Aroclor-1260 Peak # 1	A	25.00	16	100.0	7	250.0	3	500.0	-16	750.0	-18	1000	-19	10.00	26
Aroclor-1260 Peak # 2	A	25.00	18	100.0	8	250.0	4	500.0	-17	750.0	-19	1000	-21	10.00	27
Aroclor-1260 Peak # 3	A	25.00	18	100.0	7	250.0	4	500.0	-17	750.0	-18	1000	-19	10.00	25
Aroclor-1260 Peak # 4	A	25.00	16	100.0	6	250.0	4	500.0	-17	750.0	-17	1000	-19	10.00	27
Aroclor-1260 Peak # 5	A	25.00	14	100.0	5	250.0	5	500.0	-15	750.0	-15	1000	-15	10.00	21
TCMX	A	5.000	10	20.00	2	50.00	1	100.0	-10	150.0	-10	200.0	-12	2.000	19
Decachlorobiphenyl	A	5.000	13	20.00	5	50.00	1	100.0	-22	150.0	-25			2.000	28
Aroclor-1016 Peak # 1	B	25.00	13	100.0	4	250.0	2	500.0	-11	750.0	-12	1000	-13	10.00	18
Aroclor-1016 Peak # 2	B	25.00	6	100.0	0	250.0	2	500.0	-9	750.0	-7	1000	-5	10.00	14
Aroclor-1016 Peak # 3	B	25.00	11	100.0	3	250.0	2	500.0	-12	750.0	-12	1000	-12	10.00	19
Aroclor-1016 Peak # 4	B	25.00	14	100.0	6	250.0	3	500.0	-13	750.0	-14	1000	-16	10.00	19
Aroclor-1016 Peak # 5	B	25.00	9	100.0	4	250.0	5	500.0	-11	750.0	-10	1000	-10	10.00	13
Aroclor-1260 Peak # 1	B	25.00	3	100.0	0	250.0	5	500.0	-8	750.0	-5	1000	-5	10.00	11
Aroclor-1260 Peak # 2	B	25.00	12	100.0	5	250.0	5	500.0	-14	750.0	-14	1000	-15	10.00	20
Aroclor-1260 Peak # 3	B	25.00	10	100.0	4	250.0	7	500.0	-11	750.0	-10	1000	-10	10.00	10
Aroclor-1260 Peak # 4	B	25.00	7	100.0	2	250.0	6	500.0	-10	750.0	-8	1000	-7	10.00	10
Aroclor-1260 Peak # 5	B	25.00	4	100.0	0	250.0	5	500.0	-10	750.0	-5	1000	-2	10.00	8
TCMX	B	5.000	-6	20.00	-5	50.00	5	100.0	-3	150.0	3	200.0	4	2.000	1
Decachlorobiphenyl	B	5.000	9	20.00	7	50.00	11	100.0	-12	150.0	-13	200.0	-15	2.000	14

KMH 02/20/09 : dropped high point of DCB on channel A, level 1 was high

KMH 02/20/09 : re-ran level 1, original run failed high

KMH 02/20/09 : corrected automatically drawn baslines

KMH 02/20/09 : see runs 044-014 - 044-019 for single point ical traces

Analyst: KMH Date: 02/20/09 Reviewer: EAH Date: 02/20/09

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 PCBS Water
EPA 8082

Inst : GC06 Name : 1660_051
Calnum : 209073118001 Cal Date : 19-FEB-2009

ICV 209073118014 (050_014 20-FEB-2009) stds: S10363

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aroclor-1016	A	250.0	243.7	pg/uL	-3	15	
Aroclor-1260	A	250.0	237.6	pg/uL	-5	15	
Aroclor-1016	B	250.0	245.5	pg/uL	-2	15	
Aroclor-1260	B	250.0	239.2	pg/uL	-4	15	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 PCBS Water
EPA 8082

Inst : GC06 Run Name : PCB250_50 IDF : 1.0
Seqnum : 209079599003 File : 055_003 Time : 24-FEB-2009 07:44
Cal : 209073118001 Caldate : 19-FEB-2009
Standards: S11439

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	266.8	pg/uL	7	15	
Aroclor-1260	A			250.0	261.9	pg/uL	5	15	
TCMX	A	5015.0	5310.7	50.00	52.95	pg/uL	6	15	
Decachlorobiphenyl	A	5865.4	5479.3	50.00	46.71	pg/uL	-7	15	
Aroclor-1016	B			250.0	251.6	pg/uL	1	15	
Aroclor-1260	B			250.0	250.5	pg/uL	0	15	
TCMX	B	2782.1	2873.3	50.00	51.64	pg/uL	3	15	
Decachlorobiphenyl	B	3219.6	2995.8	50.00	46.52	pg/uL	-7	15	

KMH 02/24/09 : Corrected automatically drawn baseline .

Analyst: KMH Date: 02/24/09 Reviewer: EAH Date: 02/24/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 PCBS Water
EPA 8082

Inst : GC06 Run Name : PCB500_100 IDF : 1.0
Seqnum : 209079599012 File : 055_012 Time : 24-FEB-2009 14:21
Cal : 209073118001 Caldate : 19-FEB-2009
Standards: S11440

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			500.0	497.4	pg/uL	-1	15	
Aroclor-1260	A			500.0	477.1	pg/uL	-5	15	
TCMX	A	5015.0	5280.4	100.0	105.3	pg/uL	5	15	
Decachlorobiphenyl	A	5865.4	4742.2	100.0	80.85	pg/uL	**-19**	15	c-
Aroclor-1016	B			500.0	495.7	pg/uL	-1	15	
Aroclor-1260	B			500.0	479.6	pg/uL	-4	15	
TCMX	B	2782.1	3043.5	100.0	109.4	pg/uL	9	15	
Decachlorobiphenyl	B	3219.6	2740.6	100.0	85.12	pg/uL	-15	15	

KMH 02/24/09 : Corrected automatically drawn baseline .

Analyst: KMH Date: 02/24/09 Reviewer: EAH Date: 02/24/09

-=low bias c=CCV

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 209073118

Instrument : GC06 Begun : 02/19/09 18:38
Method : EPA 8082 SOP Version : pcb_rv.7

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	050_001	X	HEX			02/19/09 18:38	1.0		
002	050_002	X	HEX			02/19/09 19:13	1.0		
003	050_003	X	HEX			02/19/09 19:48	1.0		
004	050_004	X	HEX			02/19/09 20:23	1.0		
005	050_005	IB	CAL			02/19/09 20:59	1.0		
006	050_006	ICAL	PCB10_2			02/19/09 21:33	1.0	1	
007	050_007	ICAL	PCB25_5			02/19/09 22:08	1.0	2	
008	050_008	ICAL	PCB100_20			02/19/09 22:42	1.0	3	
009	050_009	ICAL	PCB250_50			02/19/09 23:17	1.0	4	
010	050_010	ICAL	PCB500_100			02/19/09 23:52	1.0	5	
011	050_011	ICAL	PCB750_150			02/20/09 00:26	1.0	6	
012	050_012	ICAL	PCB1000_200			02/20/09 01:01	1.0	7	
013	050_013	X	HEX			02/20/09 01:35	1.0		
014	050_014	ICV	ULTRA_1660			02/20/09 02:09	1.0	8	
015	050_015	X	ICV			02/20/09 02:43	1.0	8	
016	050_016	X	HEX			02/20/09 03:17	1.0		
017	050_017	X	HEX			02/20/09 10:15	1.0		
018	050_018	ICAL	PCB10_2			02/20/09 10:52	1.0	1	

KMH 02/20/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 18.

Analyst: KMH Date: 02/20/09 Reviewer: EAH Date: 02/20/09

Standards used: 1=S11430 2=S10124 3=S10125 4=S10126 5=S10127 6=S10128 7=S10129 8=S10363

Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 209079599

Instrument : GC06 Begun : 02/24/09 06:39
Method : EPA 8082 SOP Version : pcb_rv.7

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	055_001	X	HEX			02/24/09 06:39	1.0		
002	055_002	X	PCB250_50			02/24/09 07:11	1.0	1	
003	055_003	CCV	PCB250_50			02/24/09 07:44	1.0	1	
004	055_004	BLANK	QC484336	Water	148160	02/24/09 09:59	1.0		
005	055_005	BS	QC484337	Water	148160	02/24/09 10:33	1.0		
006	055_006	BSD	QC484338	Water	148160	02/24/09 11:06	1.0		
007	055_007	SAMPLE	210065-001	Water	148160	02/24/09 11:40	1.0		
008	055_008	SAMPLE	210065-002	Water	148160	02/24/09 12:12	1.0		
009	055_009	SAMPLE	210098-001	Water	148160	02/24/09 12:44	1.0		
010	055_010	SAMPLE	210098-002	Water	148160	02/24/09 13:17	1.0		
011	055_011	SAMPLE	210136-001	Water	148160	02/24/09 13:49	1.0		
012	055_012	CCV	PCB500_100			02/24/09 14:21	1.0	2	
013	055_013	CCV	AR2154			02/24/09 17:50	1.0	3	
014	055_014	X	CCV			02/24/09 18:23	1.0	3	
015	055_015	BLANK	QC483626	Soil	147996	02/24/09 18:56	1.0		
016	055_016	LCS	QC483627	Soil	147996	02/24/09 19:30	1.0		
017	055_017	SAMPLE	210053-001	Soil	147996	02/24/09 20:04	1.0		
018	055_018	SAMPLE	210053-002	Soil	147996	02/24/09 20:37	1.0		
019	055_019	MSS	210053-003	Soil	147996	02/24/09 21:11	1.0		
020	055_020	SAMPLE	210053-004	Soil	147996	02/24/09 21:44	1.0		
021	055_021	MS	QC483628	Soil	147996	02/24/09 22:17	1.0		
022	055_022	MSD	QC483629	Soil	147996	02/24/09 22:50	1.0		
023	055_023	CCV	PCB250_50			02/24/09 23:23	1.0	1	
024	055_024	X	CCV			02/24/09 23:55	1.0	1	
025	055_025	CCV	AR2154			02/25/09 00:28	1.0	3	
026	055_026	X	CCV			02/25/09 01:01	1.0	3	
027	055_027	X	HEX			02/25/09 01:34	1.0		

KMH 02/25/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

Standards used: 1=S11439 2=S11440 3=S11075

SAMPLE PREPARATION SUMMARY

Batch # : 148160
Started By : SFL
Method : 3520C
Spike #1 ID : S11189

Prep Date : 22-FEB-2009 12:20
SOP Version : PCB_3520_rv9
Spike #2 ID : S11288

Analysis : PCB
Finished By : SFL
Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
210065-001		Water	1060	25	1	0.02358	7	.05			3665A	(rebatched)	See comment 1 below
210065-002		Water	1060	25	1	0.02358	7	.05			3665A	(rebatched)	See comment 1 below
210098-001		Water	1040	25	1	0.02404	7	.05			3665A	PCB	
210098-002		Water	1030	25	1	0.02427	7	.05			3665A	PCB	
210102-001		Water	1030	25	1	0.02427	7	.05			3665A	608-PCB	
210136-001		Water	1050	25	1	0.02381	7	.05			3665A	PCB	lost~5mL during pouring
QC484336	BLANK	Water	1000	25	1	0.025		.05			3665A	PCB	
QC484337	BS	Water	1000	25	1	0.025		.05	.05		3665A	PCB	
QC484338	BSD	Water	1000	25	1	0.025		.05	.05		3665A	PCB	

Comment 1: Prepped 23-FEB-2009 12:15; re-x(sediment)

KMH 02/24/09 : all samples copper cleaned (3660B)

KMH 02/24/09 : GC16 runs are for 608

EAH 02/24/09 : This batch has been reviewed for the runs on GC16.

Analyst: KMH Date: 02/24/09 Reviewer: EAH Date: 02/24/09

PCB Water Prep Log Curtis & Tompkins, Ltd.

LIMS Batch No: 148160
LIMS Analysis: PCB
Date Extracted: 2/22/09

Extraction Method:
☑ EPA 3520c Continuous L/L
☐ Other _____

BK 2836
Page 1

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Comments
210098-001	N	1040	7	25.0	
↓ 02	↓	1030	↓	↓	
210102-001	H	↓	↓	↓	
210136-001	K	1050	↓	↓	LOST ~5ML during pouring
MB QC484336	NA	1000	NA	↓	
DS ↓ 7	↓	↓	↓	↓	
DSD ↓ 8	↓	↓	↓	↓	
210065-001	N	1060	↓	25.0	RE-X (SEDIMENT) ADDED DJT 2/27/09 1215*
↓ 002	↓	↓	↓	↓	↓ ↓

DJT 2/24/09

	Lot# / LIMS # / Time	Date/ Initials
0.05 mL of surrogate solution was added to all samples	S11189A	SR 2/22/09
0.05 mL of spike solution AT16160 was added to all spikes	S11288A	↓
☑ 3520c: Samples were continuously extracted with about 450 mL CH_2Cl_2	EM48552	↓
Extraction Start Time:	1220/1215*	↓
Extraction End Time:	830 /1655*	DDC 2/23/09
☐ 3510c: Samples were extracted 3 times with 60 mL of CH_2Cl_2	N/A	SR 2/23/09
Extracts filtered through baked, CH2Cl2-rinsed granular Na2SO4	EM483/5847	↓
Solvent exchanged 2x w/ Hexane lot#	STB64E01	↓
Concentrated to final volume at temperature (degrees C)	100°	↓
EPA 3665A Clean-up: Vortexed w/ H_2SO_4 lot #	FS085385	↓
Centrifuged for 1min; 10mL transferred to labelled vial	✓	↓
Relinquished to PCB group		↓

2/22/09
Extraction Chemist **Date**

Contined from Page ____
Continued on Page ____

2/24/09
Reviewed by **Date**

REPORTING SUMMARY FOR 210098 PCBS Water

Sample ID	Analyte	Inst ID	Ch	Date & Time
210098-001	Aroclor-1016	GC06	A	02/24/09 12:44
210098-001	Aroclor-1221	GC06	A	02/24/09 12:44
210098-001	Aroclor-1232	GC06	A	02/24/09 12:44
210098-001	Aroclor-1242	GC06	A	02/24/09 12:44
210098-001	Aroclor-1248	GC06	A	02/24/09 12:44
210098-001	Aroclor-1254	GC06	A	02/24/09 12:44
210098-001	Aroclor-1260	GC06	A	02/24/09 12:44
210098-001	TCMX	GC06	B	02/24/09 12:44
210098-001	Decachlorobiphenyl	GC06	B	02/24/09 12:44
210098-002	Aroclor-1016	GC06	A	02/24/09 13:17
210098-002	Aroclor-1221	GC06	A	02/24/09 13:17
210098-002	Aroclor-1232	GC06	A	02/24/09 13:17
210098-002	Aroclor-1242	GC06	A	02/24/09 13:17
210098-002	Aroclor-1248	GC06	A	02/24/09 13:17
210098-002	Aroclor-1254	GC06	A	02/24/09 13:17
210098-002	Aroclor-1260	GC06	A	02/24/09 13:17
210098-002	TCMX	GC06	B	02/24/09 13:17
210098-002	Decachlorobiphenyl	GC06	B	02/24/09 13:17
QC484336	Aroclor-1016	GC06	A	02/24/09 09:59
QC484336	Aroclor-1221	GC06	A	02/24/09 09:59
QC484336	Aroclor-1232	GC06	A	02/24/09 09:59
QC484336	Aroclor-1242	GC06	A	02/24/09 09:59
QC484336	Aroclor-1248	GC06	A	02/24/09 09:59
QC484336	Aroclor-1254	GC06	A	02/24/09 09:59
QC484336	Aroclor-1260	GC06	A	02/24/09 09:59
QC484336	TCMX	GC06	B	02/24/09 09:59
QC484336	Decachlorobiphenyl	GC06	B	02/24/09 09:59
QC484337	Aroclor-1016	GC06	A	02/24/09 10:33
QC484337	Aroclor-1260	GC06	A	02/24/09 10:33
QC484337	TCMX	GC06	B	02/24/09 10:33
QC484337	Decachlorobiphenyl	GC06	B	02/24/09 10:33
QC484338	Aroclor-1016	GC06	A	02/24/09 11:06
QC484338	Aroclor-1260	GC06	A	02/24/09 11:06
QC484338	TCMX	GC06	B	02/24/09 11:06
QC484338	Decachlorobiphenyl	GC06	B	02/24/09 11:06

Laboratory Job Number 210098

ANALYTICAL REPORT

Metals

Matrix: Water

Curtis & Tompkins, Ltd.

Metals Analytical Report

Lab #:	210098	Project#:	Y0239-04.A3
Client:	Baseline Environmental	Location:	Doyle Drive Replacement Project
Field ID:	E051	Sampled:	02/18/09
Lab ID:	210098-001	Received:	02/18/09
Matrix:	Water	Prepared:	02/19/09
Units:	ug/L		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Prep	Analysis
Arsenic	19	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Cadmium	ND	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Chromium	82	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Copper	18	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Lead	7.3	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Mercury	ND	0.20	1.000	148064	02/19/09	METHOD	EPA 7470A
Nickel	58	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Silver	ND	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Zinc	38	5.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Metals Analytical Report

Lab #:	210098	Project#:	Y0239-04.A3
Client:	Baseline Environmental	Location:	Doyle Drive Replacement Project
Field ID:	E049	Sampled:	02/18/09
Lab ID:	210098-002	Received:	02/18/09
Matrix:	Water	Prepared:	02/19/09
Units:	ug/L		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Prep	Analysis
Arsenic	8.3	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Cadmium	ND	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Chromium	210	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Copper	54	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Lead	19	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Mercury	ND	0.20	1.000	148064	02/19/09	METHOD	EPA 7470A
Nickel	160	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Silver	ND	1.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020
Zinc	110	5.0	5.000	148080	02/20/09	EPA 200.8	EPA 6020

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	148064
Lab ID:	QC483894	Prepared:	02/19/09
Matrix:	Water	Analyzed:	02/19/09
Units:	ug/L		

Result	RL
ND	0.20

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	148064
Matrix:	Water	Prepared:	02/19/09
Units:	ug/L	Analyzed:	02/19/09
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC483895	5.000	5.140	103	80-120		
BSD	QC483896	5.000	5.140	103	80-120	0	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	148064
Field ID:	ZZZZZZZZZZ	Sampled:	02/09/09
MSS Lab ID:	209893-001	Received:	02/10/09
Matrix:	Water	Prepared:	02/19/09
Units:	ug/L	Analyzed:	02/19/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC483897	<0.03335	5.000	5.580	112	75-125		
MSD	QC483898		5.000	5.600	112	75-125	0	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	EPA 7470A
Analyte:	Mercury	Units:	ug/L
Field ID:	ZZZZZZZZZZ	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	148064
MSS Lab ID:	209893-001	Sampled:	02/09/09
Lab ID:	QC483899	Received:	02/10/09
Matrix:	Water	Analyzed:	02/19/09

MSS Result	MSS RL	Result	RL	% Diff	Lim
ND	0.2000	ND	1.000	NC	10

NC= Not Calculated
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 200.8
Project#:	Y0239-04.A3	Analysis:	EPA 6020
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC483952	Batch#:	148080
Matrix:	Water	Prepared:	02/19/09
Units:	ug/L	Analyzed:	02/19/09

Analyte	Result	RL
Arsenic	ND	1.0
Cadmium	ND	1.0
Chromium	ND	1.0
Copper	ND	1.0
Lead	ND	1.0
Nickel	ND	1.0
Silver	ND	1.0
Zinc	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 200.8
Project#:	Y0239-04.A3	Analysis:	EPA 6020
Matrix:	Water	Batch#:	148080
Units:	ug/L	Prepared:	02/19/09
Diln Fac:	1.000	Analyzed:	02/19/09

Type: BS Lab ID: QC483953

Analyte	Spiked	Result	%REC	Limits
Arsenic	100.0	98.86	99	80-120
Cadmium	100.0	99.40	99	80-120
Chromium	100.0	96.13	96	80-120
Copper	100.0	94.06	94	80-120
Lead	100.0	92.83	93	80-120
Nickel	100.0	96.13	96	80-120
Silver	100.0	89.70	90	80-120
Zinc	100.0	98.84	99	80-120

Type: BSD Lab ID: QC483954

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Arsenic	100.0	105.2	105	80-120	6	20
Cadmium	100.0	98.43	98	80-120	1	20
Chromium	100.0	101.8	102	80-120	6	20
Copper	100.0	98.22	98	80-120	4	20
Lead	100.0	92.87	93	80-120	0	20
Nickel	100.0	101.1	101	80-120	5	20
Silver	100.0	88.47	88	80-120	1	20
Zinc	100.0	103.6	104	80-120	5	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 200.8
Project#:	Y0239-04.A3	Analysis:	EPA 6020
Field ID:	ZZZZZZZZZZ	Units:	ug/L
Type:	Serial Dilution	Diln Fac:	50.00
MSS Lab ID:	210116-003	Batch#:	148080
Lab ID:	QC483955	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim	Analyzed
Arsenic	5.521	1.000	5.665	5.000	NC	10	02/19/09
Cadmium	0.6950	1.000	ND	5.000	NC	10	02/19/09
Chromium	3.482	1.000	2.415 J	5.000	NC	10	02/19/09
Copper	5.535	1.091	4.545 J	5.456	NC	10	02/19/09
Lead	1.284	1.000	1.425 J	5.000	NC	10	02/19/09
Nickel	5.676	1.230	5.415 J	6.150	NC	10	02/20/09
Silver	0.7980	1.000	ND	5.000	NC	10	02/19/09
Zinc	10.43	5.321	14.74 J	26.60	NC	10	02/19/09

J= Estimated value
NC= Not Calculated
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 200.8
Project#:	Y0239-04.A3	Analysis:	EPA 6020
Field ID:	ZZZZZZZZZZ	Batch#:	148080
MSS Lab ID:	210116-003	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09
Units:	ug/L	Prepared:	02/19/09
Diln Fac:	10.00	Analyzed:	02/19/09

Type: MS Lab ID: QC483956

Analyte	MSS Result	Spiked	Result	%REC	Limits
Arsenic	5.521	100.0	106.9	101	75-125
Cadmium	0.6950	100.0	96.42	96	75-125
Chromium	3.482	100.0	102.2	99	75-125
Copper	5.535	100.0	97.95	92	75-125
Lead	1.284	100.0	94.77	93	75-125
Nickel	6.449	100.0	102.9	96	75-125
Silver	0.7980	100.0	88.43	88	75-125
Zinc	10.43	100.0	108.1	98	75-125

Type: MSD Lab ID: QC483957

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Arsenic	100.0	105.3	100	75-125	2	20
Cadmium	100.0	97.10	96	75-125	1	20
Chromium	100.0	100.4	97	75-125	2	20
Copper	100.0	99.07	94	75-125	1	20
Lead	100.0	93.71	92	75-125	1	20
Nickel	100.0	101.2	95	75-125	2	20
Silver	100.0	87.22	86	75-125	1	20
Zinc	100.0	112.3	102	75-125	4	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	EPA 200.8
Project#:	Y0239-04.A3	Analysis:	EPA 6020
Field ID:	ZZZZZZZZZZ	Diln Fac:	10.00
Type:	Post Digest Spike	Batch#:	148080
MSS Lab ID:	210116-003	Sampled:	02/18/09
Lab ID:	QC483958	Received:	02/18/09
Matrix:	Water	Analyzed:	02/19/09
Units:	ug/L		

Analyte	MSS Result	Spiked	Result	%REC	Limits
Arsenic	5.521	1,000	956.1	95	75-125
Cadmium	0.6950	1,000	929.9	93	75-125
Chromium	3.482	1,000	909.0	91	75-125
Copper	5.535	1,000	876.4	87	75-125
Lead	1.284	1,000	862.7	86	75-125
Nickel	6.449	1,000	909.9	90	75-125
Silver	0.7980	1,000	984.7	98	75-125
Zinc	10.43	1,000	904.3	89	75-125

REPORTING SUMMARY FOR 210098 METALS Water
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	AS	CD	CR	CU	PB	HG	NI	AG	ZN
210098-001	MET14	02/19/09 14:59	1.0						+			
210098-001	MET16	02/20/09 01:55	5.0	+	+	+	+	+		+	+	+
210098-002	MET14	02/19/09 15:01	1.0						+			
210098-002	MET16	02/20/09 02:06	5.0	+	+	+	+	+		+	+	+
QC483894	MET14	02/19/09 14:00	1.0						+			
QC483895	MET14	02/19/09 14:02	1.0						+			
QC483896	MET14	02/19/09 14:04	1.0						+			
QC483897	MET14	02/19/09 14:12	1.0						+			
QC483898	MET14	02/19/09 14:14	1.0						+			
QC483899	MET14	02/19/09 15:06	5.0						+			
QC483952	MET06	02/19/09 16:53	1.0	+	+	+	+	+		+	+	+
QC483952	MET06	02/20/09 15:56	1.0									
QC483953	MET06	02/19/09 17:03	1.0	+	+	+	+	+		+	+	+
QC483953	MET06	02/20/09 16:06	1.0									
QC483954	MET06	02/19/09 17:13	1.0	+	+	+	+	+		+	+	+
QC483954	MET06	02/20/09 16:15	1.0									
QC483955	MET06	02/19/09 17:33	50.0	+	+	+	+	+			+	+
QC483955	MET06	02/20/09 16:35	50.0							+		
QC483956	MET06	02/19/09 17:43	10.0	+	+	+	+	+		+	+	+
QC483956	MET06	02/20/09 16:45	10.0									
QC483957	MET06	02/19/09 17:53	10.0	+	+	+	+	+		+	+	+
QC483957	MET06	02/20/09 16:54	10.0									
QC483958	MET06	02/19/09 18:03	10.0	+	+	+	+	+		+	+	+
QC483958	MET06	02/20/09 17:04	10.0									

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 69072623

Instrument : MET06 Begun : 02/19/09 10:23
Method : EPA 6020 SOP Version : icpms_rv5

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	09b19k00001	TUN				02/19/09 10:23	1.0	1	
002	09b19k00002	X	RINSE			02/19/09 10:29	1.0	2	
003	09b19k00003	ICALBLK	CALBLANK			02/19/09 10:39	1.0	2	
004	09b19k00004	ICAL				02/19/09 10:49	1.0	3 2	
005	09b19k00005	ICAL				02/19/09 10:59	1.0	4 2	
006	09b19k00006	ICAL				02/19/09 11:09	1.0	5 2	
007	09b19k00007	ICAL				02/19/09 11:18	1.0	6 2	
008	09b19k00008	ICAL				02/19/09 11:28	1.0	7 2	
009	09b19k00009	ICAL				02/19/09 11:38	1.0	8 2	
010	09b19k00010	ICV				02/19/09 11:47	1.0	9 2	
011	09b19k00011	X				02/19/09 11:58	1.0	2	
012	09b19k00012	ICB				02/19/09 12:08	1.0	2	
013	09b19k00013	ICSA				02/19/09 12:15	1.0	10 2	7:CA=350000
014	09b19k00014	ICSAB				02/19/09 12:25	1.0	11 2	10:CA=320000
015	09b19k00015	X	RINSE			02/19/09 12:35	1.0	2	
016	09b19k00016	X	RINSE			02/19/09 12:44	1.0	2	
017	09b19k00017	MSS	210067-001	Filtrate	148016	02/19/09 12:54	50.0	2	
018	09b19k00018	MS	QC483719	Filtrate	148016	02/19/09 13:04	50.0	2	
019	09b19k00019	MSD	QC483720	Filtrate	148016	02/19/09 13:14	50.0	2	
020	09b19k00020	SAMPLE	210067-002	Filtrate	148016	02/19/09 13:24	25.0	2	
021	09b19k00021	SAMPLE	210067-003	Filtrate	148016	02/19/09 13:34	100.0	2	
022	09b19k00022	SAMPLE	210067-004	Filtrate	148016	02/19/09 13:43	50.0	2	
023	09b19k00023	SAMPLE	210067-005	Filtrate	148016	02/19/09 13:53	50.0	2	
024	09b19k00024	SAMPLE	210067-006	Filtrate	148016	02/19/09 14:03	50.0	2	
025	09b19k00025	CCV				02/19/09 14:13	1.0	12 2	
026	09b19k00026	CCB				02/19/09 14:23	1.0	2	
027	09b19k00027	X				02/19/09 14:32	1.0	2	
028	09b19k00028	SAMPLE	210067-007	Filtrate	148016	02/19/09 14:42	50.0	2	
029	09b19k00029	CCV				02/19/09 14:52	1.0	12 2	
030	09b19k00030	CCB				02/19/09 15:01	1.0	2	
031	09b19k00031	X				02/19/09 15:08	1.0	2	
032	09b19k00032	ICSA				02/19/09 15:15	1.0	10 2	7:CA=360000
033	09b19k00033	ICSAB				02/19/09 15:25	1.0	11 2	10:CA=320000
034	09b19k00034	X	RINSE			02/19/09 15:35	1.0	2	
035	09b19k00035	X	RINSE			02/19/09 15:45	1.0	2	
036	09b19k00036	MSS	209893-001	Water	147893	02/19/09 15:55	10.0	2	
037	09b19k00037	SER	QC483231	Water	147893	02/19/09 16:05	50.0	2	
038	09b19k00038	PDS	QC483232	Water	147893	02/19/09 16:14	10.0	13 14 2	
039	09b19k00039	CCV				02/19/09 16:24	1.0	12 2	
040	09b19k00040	CCB				02/19/09 16:34	1.0	2	
041	09b19k00041	X				02/19/09 16:44	1.0	2	
042	09b19k00042	BLANK	QC483952	Water	148080	02/19/09 16:53	1.0	2	
043	09b19k00043	BS	QC483953	Water	148080	02/19/09 17:03	1.0	2	
044	09b19k00044	BSD	QC483954	Water	148080	02/19/09 17:13	1.0	2	
045	09b19k00045	MSS	210116-003	Water	148080	02/19/09 17:23	10.0	2	
046	09b19k00046	SER	QC483955	Water	148080	02/19/09 17:33	50.0	2	
047	09b19k00047	MS	QC483956	Water	148080	02/19/09 17:43	10.0	2	
048	09b19k00048	MSD	QC483957	Water	148080	02/19/09 17:53	10.0	2	
049	09b19k00049	PDS	QC483958	Water	148080	02/19/09 18:03	10.0	13 14 2	1:CA=23000
050	09b19k00050	SAMPLE	210116-001	Water	148080	02/19/09 18:12	1.0	2	
051	09b19k00051	SAMPLE	210116-004	Water	148080	02/19/09 18:22	10.0	2	
052	09b19k00052	CCV				02/19/09 18:32	1.0	12 2	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 69072623

Instrument : MET06 Begun : 02/19/09 10:23
Method : EPA 6020 SOP Version : icpms_rv5

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	09b19k00053	CCB				02/19/09 18:42	1.0	2	
054	09b19k00054	X				02/19/09 18:52	1.0	2	
055	09b19k00055	SAMPLE	210116-006	Water	148080	02/19/09 19:01	10.0	2	
056	09b19k00056	SAMPLE	210116-007	Water	148080	02/19/09 19:11	10.0	2	
057	09b19k00057	SAMPLE	210068-001	Water	148080	02/19/09 19:21	1.0	2	
058	09b19k00058	SAMPLE	210068-005	Water	148080	02/19/09 19:31	10.0	2	
059	09b19k00059	SAMPLE	210068-006	Water	148080	02/19/09 19:41	10.0	2	
060	09b19k00060	SAMPLE	210068-007	Water	148080	02/19/09 19:50	10.0	2	3:NA=98000
061	09b19k00061	SAMPLE	210068-008	Water	148080	02/19/09 20:00	10.0	2	
062	09b19k00062	SAMPLE	210068-009	Water	148080	02/19/09 20:10	10.0	2	1:NA=66000
063	09b19k00063	CCV				02/19/09 20:20	1.0	12 2	
064	09b19k00064	CCB				02/19/09 20:29	1.0	2	
065	09b19k00065	X				02/19/09 20:39	1.0	2	
066	09b19k00066	ICSA				02/19/09 20:49	1.0	10 2	7:CA=340000
067	09b19k00067	ICSAB				02/19/09 20:59	1.0	11 2	10:CA=320000
068	09b19k00068	X	RINSE			02/19/09 21:09	1.0	2	
069	09b19k00069	X	RINSE			02/19/09 21:18	1.0	2	
070	09b19k00070	X	RINSE			02/19/09 21:28	1.0	2	
071	09b19k00071	X	RINSE			02/19/09 21:38	1.0	2	
072	09b19k00072	X	RINSE			02/19/09 21:48	1.0	2	

JYF 02/20/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 67.

Standards used: 1=S11295 2=S10858 3=S11298 4=S11299 5=S11300 6=S11301 7=S11296 8=S11297 9=S11303 10=S11305 11=S11306 12=S11304 13=S10997 14=S10998

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 69072623

Date : 02/19/09 Reference : 09b19k00003
Sequence : MET06 09b19k00 Analyzed : 02/19/09 10:39

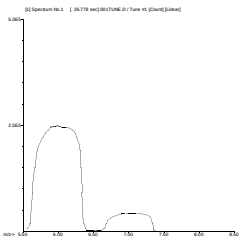
#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	2476730	1996114	20186	469041	119503	16180	3185801	3322955	2960958	4699715
		LOWER LIMIT	743019	598834	6056	140712	35851	4854	955740	996887	888287	1409915
		UPPER LIMIT	2972076	2395337	24223	562849	143404	19416	3822961	3987546	3553150	5639658
012	ICB		2465027	1960775	20987	415201	108980	16943	3068979	3137981	2869395	4485054
013	ICSA		2026796	1690772	19501	383697	90789	14578	2320762	2153046	2357083	3614906
014	ICSAB		1969001	1671520	18631	369278	88542	14015	2333624	2121579	2342138	3612446
017	MSS	210067-001	2058300	1677394	18572	369683	99467	15333	2777930	2865522	2545914	4130315
018	MS	QC483719	2011722	1630755	17912	354876	95575	14955	2685472	2800054	2459531	4019210
019	MSD	QC483720	2051164	1675914	18620	365296	98209	15185	2765671	2861221	2530693	4128451
020	SAMPLE	210067-002	2041521	1670314	18294	358984	97061	15101	2756114	2887664	2537701	4143194
021	SAMPLE	210067-003	2001487	1634128	18443	362984	97388	15197	2688701	2803663	2492756	4046778
022	SAMPLE	210067-004	2015462	1657956	18273	363359	97308	15269	2727663	2837008	2538046	4123098
023	SAMPLE	210067-005	1989892	1636339	18586	322280	88734	15149	2699670	2815323	2481072	4023930
024	SAMPLE	210067-006	1928066	1564009	18316	349871	94598	15116	2565207	2692131	2361275	3836251
025	CCV		1995960	1656719	18610	349483	92112	14882	2629961	2668949	2489748	4035438
026	CCB		1959806	1613871	18442	348945	93786	15134	2639254	2734379	2432978	3966126
028	SAMPLE	210067-007	2015754	1676948	18833	345147	93803	15407	2750385	2848457	2539699	4115404
029	CCV		1989784	1647148	18248	350377	93232	14713	2592542	2637010	2468054	3983057
030	CCB		2035815	1681518	19186	345364	93300	15612	2751440	2828298	2537752	4103975
032	ICSA		1750718	1497309	18216	333329	81000	14108	2134498	1942817	2165021	3316980
033	ICSAB		1741523	1515873	17613	310033	76770	13293	2175404	2001080	2199276	3404718
036	MSS	209893-001	1744054	1496393	16680	278585	77817	13909	2552507	2643615	2337977	3869740
037	SER	QC483231	1761457	1471879	16533	285856	80236	13992	2538050	2672412	2304486	3830581
038	PDS	QC483232	1758186	1512992	16987	288375	79359	13920	2467141	2524024	2325899	3840135
039	CCV		1810629	1543106	17274	288839	79671	14209	2526957	2574772	2376540	3880883
040	CCB		1778630	1493519	15386	274120	76622	12949	2562952	2672866	2347614	3845323
042	BLANK	QC483952	1822661	1534292	17122	271199	75876	14167	2603853	2715607	2377089	3900502
043	BS	QC483953	1817496	1505612	17300	268905	74140	14108	2453709	2504929	2308615	3804124
044	BSD	QC483954	1820528	1526541	16664	276319	76357	13681	2500344	2549317	2347500	3848358
045	MSS	210116-003	1782997	1510589	17131	271698	76474	14421	2538396	2612947	2345186	3866218
046	SER	QC483955	1787393	1520984	16972	264737	74995	14243	2562418	2668013	2356697	3881445
047	MS	QC483956	1766234	1509990	16915	267490	75172	14046	2530451	2621083	2341104	3833485
048	MSD	QC483957	1797345	1532498	17412	266629	74891	14430	2567585	2648483	2378294	3901310
049	PDS	QC483958	1772854	1534055	17194	259828	72017	14052	2478096	2525654	2351666	3827867
050	SAMPLE	210116-001	1798684	1521527	17245	262234	73818	14409	2568826	2662238	2360800	3820941
051	SAMPLE	210116-004	1741196	1490126	16854	252949	71417	14235	2483673	2539496	2309701	3758449
052	CCV		1793095	1514524	17238	227848	63975	14165	2467850	2490858	2329056	3753887
053	CCB		1767079	1490109	16973	248247	70024	14228	2501025	2561087	2303485	3717264
055	SAMPLE	210116-006	1813954	1567724	17817	241974	68400	14956	2586768	2589887	2396309	3863983
056	SAMPLE	210116-007	1836746	1569746	17462	232613	65741	14557	2590048	2629839	2403168	3898376
057	SAMPLE	210068-001	1860413	1566259	17490	228744	65281	14719	2625562	2705378	2425805	3887402
058	SAMPLE	210068-005	1850962	1578859	17341	222434	62610	14414	2573394	2589009	2411911	3901528
059	SAMPLE	210068-006	1859913	1599393	17766	227263	64289	14878	2621402	2604816	2442437	3915958
060	SAMPLE	210068-007	1907400	1620835	18172	228294	62482	14881	2536775	2473931	2421164	3833452
061	SAMPLE	210068-008	1865396	1593800	18031	221982	63215	14959	2618904	2652110	2436464	3919129
062	SAMPLE	210068-009	1890194	1594892	17995	217389	60365	14708	2540328	2495135	2414837	3812824
063	CCV		1926515	1621391	18319	215635	60233	14948	2571962	2572413	2445551	3914251
064	CCB		1912136	1605131	18111	209343	59452	15064	2660141	2699670	2440521	3965444
066	ICSA		1729606	1492606	17953	193539	49984	14110	2129116	1942485	2168888	3331275
067	ICSAB		1636860	1424049	17079	199129	51388	13231	2068163	1893681	2084413	3225071

MET06 QC Tune Report

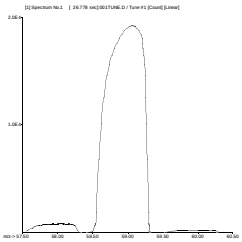
Data File: C:\ICPCHEM\1\DATA\09B19k00.B\001TUNE.D
Date Acquired: Feb 19 2009 10:23 am
Acq. Method: TN6020.M
Operator:
Sample Name: tun,s11295
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\TN6020.M

RSD (%)

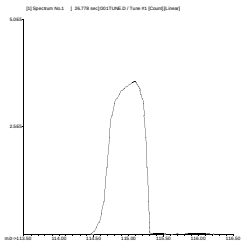
Element	Actual	Required	Flag
7 Li	0.38	5.00	
59 Co	0.37	5.00	
115 In	3.21	5.00	
205 Tl	0.19	5.00	



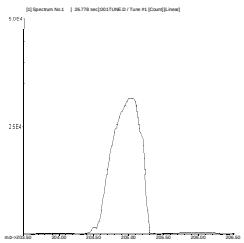
7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.05
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



115 In
Mass Calib.
Actual: 115.05
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



205 Tl
Mass Calib.
Actual: 205.00
Required: 204.90 - 205.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 METALS Water: EPA 6020

Inst : MET06 Reviewer : ---
Calnum : 69072623001 Date : 19-FEB-2009 10:39
Units : ug/L X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	09b19k00004	69072623004		19-FEB-2009 10:49	S11298, S10858
L2	09b19k00005	69072623005		19-FEB-2009 10:59	S11299, S10858
L3	09b19k00006	69072623006		19-FEB-2009 11:09	S11300, S10858
L4	09b19k00007	69072623007		19-FEB-2009 11:18	S11301, S10858
L5	09b19k00008	69072623008		19-FEB-2009 11:28	S11296, S10858
L6	09b19k00009	69072623009		19-FEB-2009 11:38	S11297, S10858

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	Flg
Cadmium	A	0.0378	0.0305	0.0335	0.0323	0.0327	0.0326	BLNK	-0.0144	30.6642		0.0332	1.000	0.995	
Lead	A	0.3349	0.3131	0.3106	0.2994	0.3050	0.3092	BLNK	-0.0173	3.24360		0.3120	1.000	0.995	
Silver	A	0.1797	0.1387	0.1392	0.1325	0.1328	0.1405	BLNK	-0.0162	7.19572		0.1439	0.999	0.995	
Arsenic	E	0.2997	0.2567	0.2464	0.2500	0.2500	0.2456	BLNK	-0.0641	4.05862		0.2581	1.000	0.995	
Chromium	E	6.9102	3.1133	2.7610	2.1909	2.1351	2.0653	BLNK	-0.2036	0.48150		3.1960	1.000	0.995	
Copper	E	15.013	6.4508	6.7809	4.2398	3.9730	3.8469	BLNK	-0.1694	0.25847		6.7174	1.000	0.995	
Nickel	E	2.2758	1.3489	1.4776	1.1858	1.1245	1.0759	BLNK	-0.0608	0.92129		1.4148	1.000	0.995	
Zinc	E	7.6313	1.1775	0.9675	0.5446	0.4991	0.4632	BLNK	-0.3876	2.13038		1.8805	0.999	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Cadmium	A	0.100	2	0.500	-9	1.000	1	10.00	-1	100.0	0	200.0	0
Lead	A	0.100	-9	0.500	-2	1.000	-1	10.00	-3	100.0	-1	200.0	0
Silver	A	0.100	13	0.500	-3	1.000	-1	10.00	-5	100.0	-4	200.0	1
Arsenic	E	0.100	-42	0.500	-9	1.000	-6	10.00	1	100.0	1	200.0	0
Chromium	E	0.100	29	0.500	9	1.000	13	10.00	3	100.0	3	200.0	-1
Copper	E	0.100	119	0.500	33	1.000	58	10.00	8	100.0	3	200.0	-1
Nickel	E	0.100	49	0.500	12	1.000	30	10.00	9	100.0	4	200.0	-1
Zinc	E	0.100	1138	0.500	73	1.000	67	10.00	12	100.0	6	200.0	-2

Instrument amount = a0 + response * a1 + response^2 * a2; BLNK=Y=aX+[blank]

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 METALS Water
EPA 6020

Inst : MET06
Calnum : 69072623001 Cal Date : 19-FEB-2009

ICV 69072623010 (09b19k00010 19-FEB-2009) stds: S11303, S10858

Analyte	Ch	Average RF	RF	Spiked	Quant	Units	%D	Max	Flags
Cadmium	A	0.0332	0.0329	100.0	100.9	ug/L	1	10	
Lead	A	0.3120	0.3097	100.0	100.4	ug/L	0	10	
Silver	A	0.1439	0.1351	100.0	97.22	ug/L	-3	10	
Arsenic	E	0.2581	0.2508	100.0	101.7	ug/L	2	10	
Chromium	E	3.1960	2.0958	100.0	100.7	ug/L	1	10	
Copper	E	6.7174	3.9211	100.0	101.2	ug/L	1	10	
Nickel	E	1.4148	1.1116	100.0	102.4	ug/L	2	10	
Zinc	E	1.8805	0.4776	100.0	101.4	ug/L	1	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69072623012 File : 09b19k00012 Time : 19-FEB-2009 12:08
Cal : 69072623001 Caldate : 19-FEB-2009

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Cadmium	A	ND	0.1000	0.06044	ug/L	
Lead	A	ND	0.1000	0.05505	ug/L	
Silver	A	ND	0.1000	0.06124	ug/L	
Arsenic	E	ND	0.1000	0.06416	ug/L	
Chromium	E	ND	0.1000	0.03166	ug/L	
Copper	E	ND	0.1000	0.07274	ug/L	
Nickel	E	ND	0.1000	0.08200	ug/L	
Zinc	E	ND	0.1000	0.3547	ug/L	

ISTD (ICALBLK 09b19k00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2476730	2465027	-0.47
Scandium	A	1996114	1960775	-1.77
Scandium	E	20186	20987	3.97
Scandium	H	469041	415201	-11.48
Germanium	H	119503	108980	-8.81
Germanium	E	16180	16943	4.72
Indium	A	3185801	3068979	-3.67
Bismuth	A	3322955	3137981	-5.57
Yttrium	A	2960958	2869395	-3.09
Terbium	A	4699715	4485054	-4.57

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69072623032 File : 09b19k00032 Time : 19-FEB-2009 15:15
Cal : 69072623001 Caldate : 19-FEB-2009
Standards: S11305, S10858

Analyte	Ch	Quant	IQL	Units	Flags
Cadmium	A	2.413	0.1000	ug/L	!a+
Lead	A	0.5524	0.1000	ug/L	!a+
Silver	A	0.2459	0.1000	ug/L	!a+
Arsenic	E	0.2301	0.1000	ug/L	!a+
Chromium	E	2.168	0.1000	ug/L	!a+
Copper	E	2.493	0.1000	ug/L	!a+
Nickel	E	1.344	0.1000	ug/L	!a+
Zinc	E	2.308	0.1000	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	117300	ug/L	117
Calcium	A	300000	356000	ug/L	119
Magnesium	A	100000	114400	ug/L	114
Molybdenum	A	2000	2435	ug/L	122
Potassium	A	100000	120000	ug/L	120
Sodium	E	250000	272700	ug/L	109
Iron	H	250000	272900	ug/L	109

ISTD (ICALBLK 09b19k00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2476730	1750718	-29.31
Scandium	A	1996114	1497309	-24.99
Scandium	E	20186	18216	-9.76
Scandium	H	469041	333329	-28.93
Germanium	H	119503	81000	-32.22
Germanium	E	16180	14108	-12.81
Indium	A	3185801	2134498	-33.00
Bismuth	A	3322955	1942817	-41.53
Yttrium	A	2960958	2165021	-26.88
Terbium	A	4699715	3316980	-29.42

!=warning +=high bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69072623033 File : 09b19k00033 Time : 19-FEB-2009 15:25
Cal : 69072623001 Caldate : 19-FEB-2009
Standards: S11306, S10858

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	100.0	103.2	ug/L	3	20	
Silver	A	50.00	51.31	ug/L	3	20	
Arsenic	E	100.0	110.2	ug/L	10	20	
Chromium	E	200.0	204.9	ug/L	2	20	
Copper	E	200.0	186.3	ug/L	-7	20	
Nickel	E	200.0	185.3	ug/L	-7	20	
Zinc	E	100.0	92.32	ug/L	-8	20	

ISTD (ICALBLK 09b19k00003)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	469041	310033	-33.90
Scandium	A	1996114	1515873	-24.06
Scandium	E	20186	17613	-12.75
Germanium	H	119503	76770	-35.76
Germanium	E	16180	13293	-17.84
Indium	A	3185801	2175404	-31.72
Yttrium	A	2960958	2199276	-25.72

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69072623039 File : 09b19k00039 Time : 19-FEB-2009 16:24
Cal : 69072623001 Caldate : 19-FEB-2009
Standards: S11304, S10858

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	0.0332	0.0331	100.0	101.4	ug/L	1	10	
Lead	A	0.3120	0.3009	100.0	97.58	ug/L	-2	10	
Silver	A	0.1439	0.1351	100.0	97.22	ug/L	-3	10	
Arsenic	E	0.2581	0.2534	100.0	102.8	ug/L	3	10	
Chromium	E	3.1960	2.0230	100.0	97.20	ug/L	-3	10	
Copper	E	6.7174	3.6630	100.0	94.51	ug/L	-5	10	
Nickel	E	1.4148	1.0739	100.0	98.88	ug/L	-1	10	
Zinc	E	1.8805	0.4653	100.0	98.73	ug/L	-1	10	

ISTD (ICALBLK 09b19k00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2476730	1810629	-26.89
Scandium	A	1996114	1543106	-22.69
Scandium	E	20186	17274	-14.43
Scandium	H	469041	288839	-38.42
Germanium	H	119503	79671	-33.33
Germanium	E	16180	14209	-12.18
Indium	A	3185801	2526957	-20.68
Bismuth	A	3322955	2574772	-22.52
Yttrium	A	2960958	2376540	-19.74
Terbium	A	4699715	3880883	-17.42

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69072623040 File : 09b19k00040 Time : 19-FEB-2009 16:34
Cal : 69072623001 Caldate : 19-FEB-2009

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Cadmium	A	ND	0.1000	0.06044	ug/L	
Lead	A	ND	0.1000	0.05505	ug/L	
Silver	A	ND	0.1000	0.06124	ug/L	
Arsenic	E	ND	0.1000	0.06416	ug/L	
Chromium	E	ND	0.1000	0.03166	ug/L	
Copper	E	ND	0.1000	0.07274	ug/L	
Nickel	E	ND	0.1000	0.08200	ug/L	
Zinc	E	ND	0.1000	0.3547	ug/L	

ISTD (ICALBLK 09b19k00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2476730	1778630	-28.19
Scandium	A	1996114	1493519	-25.18
Scandium	E	20186	15386	-23.78
Scandium	H	469041	274120	-41.56
Germanium	H	119503	76622	-35.88
Germanium	E	16180	12949	-19.97
Indium	A	3185801	2562952	-19.55
Bismuth	A	3322955	2672866	-19.56
Yttrium	A	2960958	2347614	-20.71
Terbium	A	4699715	3845323	-18.18

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69072623052 File : 09b19k00052 Time : 19-FEB-2009 18:32
Cal : 69072623001 Caldate : 19-FEB-2009
Standards: S11304, S10858

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	0.0332	0.0328	100.0	100.7	ug/L	1	10	
Lead	A	0.3120	0.2923	100.0	94.79	ug/L	-5	10	
Silver	A	0.1439	0.1351	100.0	97.19	ug/L	-3	10	
Arsenic	E	0.2581	0.2518	100.0	102.1	ug/L	2	10	
Chromium	E	3.1960	2.0319	100.0	97.63	ug/L	-2	10	
Copper	E	6.7174	3.6885	100.0	95.17	ug/L	-5	10	
Nickel	E	1.4148	1.0675	100.0	98.28	ug/L	-2	10	
Zinc	E	1.8805	0.4630	100.0	98.25	ug/L	-2	10	

ISTD (ICALBLK 09b19k00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2476730	1793095	-27.60
Scandium	A	1996114	1514524	-24.13
Scandium	E	20186	17238	-14.60
Scandium	H	469041	227848	-51.42
Germanium	H	119503	63975	-46.47
Germanium	E	16180	14165	-12.45
Indium	A	3185801	2467850	-22.54
Bismuth	A	3322955	2490858	-25.04
Yttrium	A	2960958	2329056	-21.34
Terbium	A	4699715	3753887	-20.13

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69072623053 File : 09b19k00053 Time : 19-FEB-2009 18:42
Cal : 69072623001 Caldate : 19-FEB-2009

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Cadmium	A	ND	0.1000	0.06044	ug/L	
Lead	A	ND	0.1000	0.05505	ug/L	
Silver	A	ND	0.1000	0.06124	ug/L	
Arsenic	E	ND	0.1000	0.06416	ug/L	
Chromium	E	ND	0.1000	0.03166	ug/L	
Copper	E	ND	0.1000	0.07274	ug/L	
Nickel	E	ND	0.1000	0.08200	ug/L	
Zinc	E	ND	0.1000	0.3547	ug/L	

ISTD (ICALBLK 09b19k00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2476730	1767079	-28.65
Scandium	A	1996114	1490109	-25.35
Scandium	E	20186	16973	-15.92
Scandium	H	469041	248247	-47.07
Germanium	H	119503	70024	-41.40
Germanium	E	16180	14228	-12.06
Indium	A	3185801	2501025	-21.49
Bismuth	A	3322955	2561087	-22.93
Yttrium	A	2960958	2303485	-22.20
Terbium	A	4699715	3717264	-20.90

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69072623066 File : 09b19k00066 Time : 19-FEB-2009 20:49
Cal : 69072623001 Caldate : 19-FEB-2009
Standards: S11305, S10858

Analyte	Ch	Quant	IQL	Units	Flags
Cadmium	A	2.244	0.1000	ug/L	!a+
Lead	A	0.5143	0.1000	ug/L	!a+
Silver	A	0.2279	0.1000	ug/L	!a+
Arsenic	E	0.2199	0.1000	ug/L	!a+
Chromium	E	2.167	0.1000	ug/L	!a+
Copper	E	2.051	0.1000	ug/L	!a+
Nickel	E	1.312	0.1000	ug/L	!a+
Zinc	E	2.353	0.1000	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	113000	ug/L	113
Calcium	A	300000	344200	ug/L	115
Magnesium	A	100000	109700	ug/L	110
Molybdenum	A	2000	2359	ug/L	118
Potassium	A	100000	116200	ug/L	116
Sodium	E	250000	263300	ug/L	105
Iron	H	250000	326000	ug/L	130

ISTD (ICALBLK 09b19k00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2476730	1729606	-30.17
Scandium	A	1996114	1492606	-25.22
Scandium	E	20186	17953	-11.06
Scandium	H	469041	193539	-58.74
Germanium	H	119503	49984	-58.17
Germanium	E	16180	14110	-12.79
Indium	A	3185801	2129116	-33.17
Bismuth	A	3322955	1942485	-41.54
Yttrium	A	2960958	2168888	-26.75
Terbium	A	4699715	3331275	-29.12

!=warning +=high bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69072623067 File : 09b19k00067 Time : 19-FEB-2009 20:59
Cal : 69072623001 Caldate : 19-FEB-2009
Standards: S11306, S10858

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	100.0	102.6	ug/L	3	20	
Silver	A	50.00	50.85	ug/L	2	20	
Arsenic	E	100.0	107.9	ug/L	8	20	
Chromium	E	200.0	200.4	ug/L	0	20	
Copper	E	200.0	178.9	ug/L	-11	20	
Nickel	E	200.0	181.3	ug/L	-9	20	
Zinc	E	100.0	90.35	ug/L	-10	20	

ISTD (ICALBLK 09b19k00003)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	469041	199129	-57.55
Scandium	A	1996114	1424049	-28.66
Scandium	E	20186	17079	-15.39
Germanium	H	119503	51388	-57.00
Germanium	E	16180	13231	-18.23
Indium	A	3185801	2068163	-35.08
Yttrium	A	2960958	2084413	-29.60

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 899072873

Instrument : MET16 Begun : 02/19/09 14:33
Method : EPA 6020 SOP Version : icpms_rv5

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	09b19o00001	TUN				02/19/09 14:33	1.0	1	
002	09b19o00002	X	RINSE			02/19/09 14:39	1.0	2	
003	09b19o00003	ICALBLK	CALBLANK			02/19/09 14:50	1.0	2	
004	09b19o00004	ICAL				02/19/09 15:01	1.0	3 2	
005	09b19o00005	ICAL				02/19/09 15:13	1.0	4 2	
006	09b19o00006	ICAL				02/19/09 15:24	1.0	5 2	
007	09b19o00007	ICAL				02/19/09 15:36	1.0	6 2	
008	09b19o00008	ICAL				02/19/09 15:47	1.0	7 2	
009	09b19o00009	ICAL				02/19/09 15:58	1.0	8 2	
010	09b19o00010	ICV				02/19/09 16:09	1.0	9 2	
011	09b19o00011	ICB				02/19/09 16:20	1.0	2	
012	09b19o00012	ICSA				02/19/09 16:33	1.0	10 2	7:CA=330000
013	09b19o00013	ICSAB				02/19/09 16:44	1.0	11 2	9:CA=320000
014	09b19o00014	X	RINSE			02/19/09 16:56	1.0	2	
015	09b19o00015	X	RINSE			02/19/09 17:07	1.0	2	
016	09b19o00016	BLANK	QC483959	Water	148081	02/19/09 17:18	1.0	2	
017	09b19o00017	BS	QC483960	Water	148081	02/19/09 17:30	1.0	2	
018	09b19o00018	BSD	QC483961	Water	148081	02/19/09 17:41	1.0	2	
019	09b19o00019	MSS	209986-013	Water	148081	02/19/09 17:52	5.0	2	
020	09b19o00020	SER	QC483962	Water	148081	02/19/09 18:04	25.0	2	
021	09b19o00021	MS	QC483963	Water	148081	02/19/09 18:15	5.0	2	
022	09b19o00022	MSD	QC483964	Water	148081	02/19/09 18:26	5.0	2	
023	09b19o00023	PDS	QC483965	Water	148081	02/19/09 18:37	5.0	12 13 2	1:NA=24000
024	09b19o00024	CCV				02/19/09 18:49	1.0	14 2	
025	09b19o00025	CCB				02/19/09 19:00	1.0	2	
026	09b19o00026	X				02/19/09 19:11	1.0	2	
027	09b19o00027	SAMPLE	209986-002	Water	148081	02/19/09 19:23	5.0	2	1:NA=23000
028	09b19o00028	SAMPLE	209986-003	Water	148081	02/19/09 19:34	5.0	2	1:NA=36000
029	09b19o00029	SAMPLE	209986-004	Water	148081	02/19/09 19:45	5.0	2	1:NA=22000
030	09b19o00030	SAMPLE	209986-005	Water	148081	02/19/09 19:57	5.0	2	1:NA=20000
031	09b19o00031	SAMPLE	209986-006	Water	148081	02/19/09 20:08	5.0	2	
032	09b19o00032	SAMPLE	209986-007	Water	148081	02/19/09 20:19	5.0	2	
033	09b19o00033	SAMPLE	209986-008	Water	148081	02/19/09 20:31	5.0	2	1:NA=20000
034	09b19o00034	SAMPLE	209986-009	Water	148081	02/19/09 20:42	5.0	2	1:NA=26000
035	09b19o00035	SAMPLE	209986-010	Water	148081	02/19/09 20:53	5.0	2	1:NA=59000
036	09b19o00036	SAMPLE	209986-012	Water	148081	02/19/09 21:05	5.0	2	
037	09b19o00037	CCV				02/19/09 21:16	1.0	14 2	
038	09b19o00038	CCB				02/19/09 21:27	1.0	2	
039	09b19o00039	X				02/19/09 21:38	1.0	2	
040	09b19o00040	SAMPLE	210022-001	Water	148081	02/19/09 21:50	5.0	2	1:NA=23000
041	09b19o00041	SAMPLE	210022-002	Water	148081	02/19/09 22:01	5.0	2	1:MN=430
042	09b19o00042	SAMPLE	210022-003	Water	148081	02/19/09 22:13	5.0	2	1:MN=440
043	09b19o00043	SAMPLE	210022-004	Water	148081	02/19/09 22:24	5.0	2	
044	09b19o00044	SAMPLE	210022-005	Water	148081	02/19/09 22:35	5.0	2	1:NA=28000
045	09b19o00045	SAMPLE	210022-006	Water	148081	02/19/09 22:47	5.0	2	2:NA=110000
046	09b19o00046	SAMPLE	210022-007	Water	148081	02/19/09 22:58	5.0	2	1:NA=33000
047	09b19o00047	SAMPLE	210022-009	Water	148081	02/19/09 23:09	5.0	2	
048	09b19o00048	CCV				02/19/09 23:21	1.0	14 2	
049	09b19o00049	CCB				02/19/09 23:32	1.0	2	
050	09b19o00050	X				02/19/09 23:43	1.0	2	
051	09b19o00051	ICSA				02/19/09 23:55	1.0	10 2	7:CA=330000
052	09b19o00052	ICSAB				02/20/09 00:06	1.0	11 2	8:CA=320000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 899072873

Instrument : MET16 Begun : 02/19/09 14:33
Method : EPA 6020 SOP Version : icpms_rv5

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	09b19o00053	X	RINSE			02/20/09 00:18	1.0	2	
054	09b19o00054	X	RINSE			02/20/09 00:29	1.0	2	
055	09b19o00055	SAMPLE	209986-001	Water	148081	02/20/09 00:40	50.0	2	1:NA=610000
056	09b19o00056	SAMPLE	209986-001	Water	148081	02/20/09 00:52	100.0	2	1:NA=300000
057	09b19o00057	TUN				02/20/09 01:04	1.0	1	
058	09b19o00058	X	RINSE			02/20/09 01:10	1.0	2	
059	09b19o00059	CCV				02/20/09 01:21	1.0	14 2	
060	09b19o00060	CCB				02/20/09 01:32	1.0	2	
061	09b19o00061	X				02/20/09 01:44	1.0	2	
062	09b19o00062	SAMPLE	210098-001	Water	148080	02/20/09 01:55	5.0	2	1:NA=23000
063	09b19o00063	SAMPLE	210098-002	Water	148080	02/20/09 02:06	5.0	2	2:CA=21000
064	09b19o00064	SAMPLE	210065-001	Water	148080	02/20/09 02:18	5.0	2	3:CA=29000
065	09b19o00065	SAMPLE	210065-002	Water	148080	02/20/09 02:29	5.0	2	5:FE=51000
066	09b19o00066	SAMPLE	209998-002	Water	148080	02/20/09 02:40	5.0	2	
067	09b19o00067	SAMPLE	209988-001	Water	148080	02/20/09 02:51	5.0	2	2:NA=61000
068	09b19o00068	SAMPLE	209988-003	Water	148080	02/20/09 03:03	5.0	2	1:NA=37000
069	09b19o00069	CCV				02/20/09 03:14	1.0	14 2	
070	09b19o00070	X				02/20/09 03:25	1.0	2	
071	09b19o00071	CCB				02/20/09 03:37	1.0	2	
072	09b19o00072	ICSA				02/20/09 03:48	1.0	10 2	7:CA=320000
073	09b19o00073	ICSAB				02/20/09 04:00	1.0	11 2	9:CA=310000
074	09b19o00074	X	RINSE			02/20/09 04:11	1.0	2	
075	09b19o00075	X	RINSE			02/20/09 04:22	1.0	2	
076	09b19o00076	X	RINSE			02/20/09 04:34	1.0	2	

JYF 02/23/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 73.

Standards used: 1=S11295 2=S10858 3=S11298 4=S11299 5=S11300 6=S11301 7=S11296 8=S11297 9=S11303 10=S11305 11=S11306 12=S10997 13=S10998 14=S11304

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 899072873

Date : 02/19/09 Reference : 09b19o00003
Sequence : MET16 09b19o00 Analyzed : 02/19/09 14:50

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	2077389	2349509	35989	752604	147803	22595	2739451	2453181	2867997	3862719
		LOWER LIMIT	623217	704853	10797	225781	44341	6779	821835	735954	860399	1158816
		UPPER LIMIT	2492867	2819411	43187	903125	177364	27114	3287341	2943817	3441596	4635263
011	ICB		2153409	2433043	39697	703003	136579	24738	2760489	2468606	2914374	3847630
012	ICSA		1780464	2207623	43093	750938	134073	23915	2408510	1953946	2725041	3587177
013	ICSAB		1795307	2252203	42641	748369	132794	23930	2447176	1966136	2801963	3608850
016	BLANK	QC483959	2135468	2497776	41366	723134	143322	26016	2851914	2521938	3012308	3907815
017	BS	QC483960	2083695	2442572	39970	736192	142260	24591	2725950	2389350	2942080	3822112
018	BSD	QC483961	2068178	2461488	40750	733121	145274	25519	2726770	2403742	2967907	3866084
019	MSS	209986-013	2093202	2499033	40645	712363	140368	25607	2788137	2471780	2959348	3878128
020	SER	QC483962	2098353	2445360	39972	686808	136969	25580	2795285	2504354	2933204	3890701
021	MS	QC483963	2085710	2461118	42059	679266	132884	26011	2726757	2425121	2886021	3824273
022	MSD	QC483964	2068624	2468905	39596	703362	138400	25169	2753996	2424174	2912204	3893708
023	PDS	QC483965	2068908	2471518	40823	691757	133929	25323	2698322	2367874	2893559	3841893
024	CCV		2148506	2488038	39938	675554	131836	24996	2776574	2413068	2963095	3856657
025	CCB		2113705	2387069	39352	640557	126414	24495	2705840	2432585	2830403	3757086
027	SAMPLE	209986-002	2108862	2447853	40996	660395	129860	25907	2724880	2418056	2884608	3858348
028	SAMPLE	209986-003	2123863	2439580	39569	628562	123514	24721	2732923	2431917	2856978	3835694
029	SAMPLE	209986-004	2058769	2361873	39018	623027	121935	24522	2660222	2385223	2805415	3783854
030	SAMPLE	209986-005	2061021	2369545	39093	629394	123283	24716	2660879	2401924	2823772	3832513
031	SAMPLE	209986-006	2024426	2374573	38434	611546	119479	24265	2666141	2395405	2814044	3806215
032	SAMPLE	209986-007	2035279	2392915	38867	593724	115663	24804	2684676	2457908	2830434	3843389
033	SAMPLE	209986-008	2036910	2389409	38827	590533	114260	24614	2680231	2421231	2863262	3815119
034	SAMPLE	209986-009	2031679	2359440	39036	600040	117244	24842	2694638	2396279	2832163	3790638
035	SAMPLE	209986-010	2030686	2324223	38787	591510	115487	24511	2626128	2335136	2796711	3724920
036	SAMPLE	209986-012	2076319	2348915	39303	555453	110125	24841	2723754	2483629	2826364	3829527
037	CCV		2146755	2431328	39334	583036	112903	24692	2731206	2449739	2914049	3904779
038	CCB		2067191	2306153	38016	548308	108543	24333	2705550	2466036	2819710	3771474
040	SAMPLE	210022-001	2092828	2412448	40312	553183	108457	25687	2682765	2425988	2847629	3842994
041	SAMPLE	210022-002	2005790	2325704	38136	554043	108126	24073	2609044	2355351	2765591	3736952
042	SAMPLE	210022-003	1981967	2324916	38313	539592	105672	24267	2619446	2359443	2755023	3741467
043	SAMPLE	210022-004	2008505	2321198	37855	512416	99550	24151	2639545	2401269	2761997	3754435
044	SAMPLE	210022-005	2066598	2349540	38093	517313	100564	24375	2650141	2359483	2778815	3789571
045	SAMPLE	210022-006	2063013	2361406	40210	523943	100588	24686	2620821	2262638	2802578	3719132
046	SAMPLE	210022-007	2096722	2382867	38546	501018	97710	24376	2667079	2368425	2829877	3777754
047	SAMPLE	210022-009	2079591	2334773	38019	501064	97785	24122	2607338	2353089	2769525	3753219
048	CCV		2231035	2512883	41140	501242	97482	25713	2829165	2495901	3035685	4064755
049	CCB		2234501	2453263	40151	510271	101408	25320	2856575	2568520	2994736	3962014
051	ICSA		1886808	2236333	42851	506122	90348	24294	2412230	1972943	2774558	3620690
052	ICSAB		1875923	2278890	42347	528388	95178	24184	2472740	1977697	2829793	3644238
055	SAMPLE	209986-001	2045095	2472778	44582 *	587337	107653	25435	2660463	2078616	3016905	3721345
056	SAMPLE	209986-001	2102222	2517167	43761 *	564912	107375	25794	2784982	2225074	3092579	3847780
059	CCV		2116643	2428868	40108	520806	102826	24994	2742625	2395824	2939082	3879092
060	CCB		2183808	2505312	39053	501985	100279	24812	2888189	2539419	3039098	4015220
062	SAMPLE	210098-001	2167501	2578790	40806	509028	98391	25253	2772824	2401877	3015023	3950835
063	SAMPLE	210098-002	2102979	2626047	42166	518320	96967	25294	2765767	2423258	3108760	3946228
064	SAMPLE	210065-001	2054778	2461264	38763	498346	97681	24307	2728118	2410582	3121308	3902811
065	SAMPLE	210065-002	2037180	2616881	41628	507614	94842	25368	2743491	2346514	3203467	3849571
067	SAMPLE	209988-001	2052299	2376772	37503	481090	94931	23915	2662541	2344537	2807178	3778161
068	SAMPLE	209988-003	1989148	2310729	37385	473996	93872	24021	2641732	2371456	2782642	3771869
069	CCV		2065070	2328229	37775	473902	94323	23879	2668589	2336168	2814882	3801136

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 899072873

Date : 02/19/09 Reference : 09b19o00003
Sequence : MET16 09b19o00 Analyzed : 02/19/09 14:50

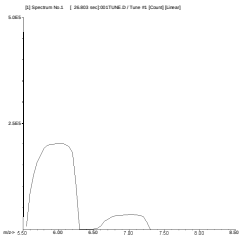
#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
071	CCB		2102049	2336374	37766	456411	90979	24378	2740505	2490335	2865005	3854130
072	ICSA		1790955	2212482	40824	470481	84086	23689	2407444	1988376	2785377	3625523
073	ICSAB		1851486	2295203	39996	546591	96392	23297	2491210	2018930	2876488	3716398

MET16 QC Tune Report

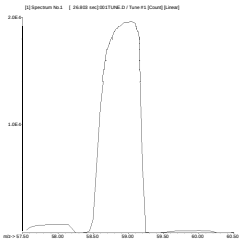
Data File: C:\ICPCHEM\1\DATA\09B19o00.B\001TUNE.D
Date Acquired: Feb 19 2009 02:33 pm
Acq. Method: TN6020.M
Operator:
Sample Name: tun,s11295
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\TN6020.M

RSD (%)

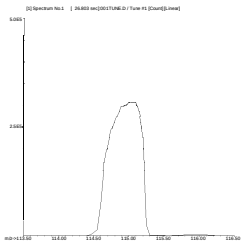
Element	Actual	Required	Flag
7 Li	0.67	5.00	
59 Co	1.69	5.00	
115 In	0.80	5.00	
205 Tl	1.11	5.00	



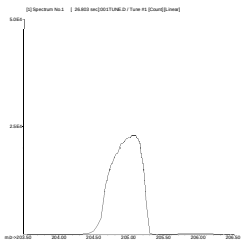
7 Li
Mass Calib.
Actual: 7.00
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



115 In
Mass Calib.
Actual: 115.00
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



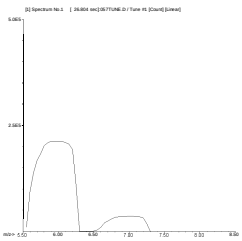
205 Tl
Mass Calib.
Actual: 205.05
Required: 204.90 - 205.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:

MET16 QC Tune Report

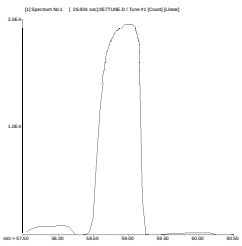
Data File: C:\ICPCHEM\1\DATA\09B19o00.B\057TUNE.D
Date Acquired: Feb 20 2009 01:04 am
Acq. Method: TN6020.M
Operator:
Sample Name: tun,s11295
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\TN6020.M

RSD (%)

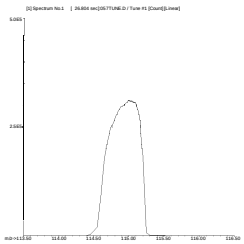
Element	Actual	Required	Flag
7 Li	3.42	5.00	
59 Co	2.96	5.00	
115 In	1.73	5.00	
205 Tl	0.61	5.00	



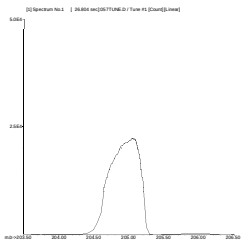
7 Li
Mass Calib.
Actual: 7.00
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



115 In
Mass Calib.
Actual: 115.00
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



205 Tl
Mass Calib.
Actual: 205.00
Required: 204.90 - 205.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 METALS Water: EPA 6020

Inst : MET16 Reviewer : ---
Calnum : 899072873001 Date : 19-FEB-2009 14:50
Units : ug/L X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	09b19o00004	899072873004		19-FEB-2009 15:01	S11298, S10858
L2	09b19o00005	899072873005		19-FEB-2009 15:13	S11299, S10858
L3	09b19o00006	899072873006		19-FEB-2009 15:24	S11300, S10858
L4	09b19o00007	899072873007		19-FEB-2009 15:36	S11301, S10858
L5	09b19o00008	899072873008		19-FEB-2009 15:47	S11296, S10858
L6	09b19o00009	899072873009		19-FEB-2009 15:58	S11297, S10858

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	Flg
Cadmium	A	0.0359	0.0322	0.0352	0.0348	0.0346	0.0343	BLNK	-0.0053	29.0677		0.0345	1.000	0.995	
Lead	A	0.4480	0.3317	0.3189	0.3023	0.3044	0.2984	BLNK	-0.0465	3.33868		0.3340	1.000	0.995	
Silver	A	0.1610	0.1526	0.1514	0.1527	0.1491	0.1544	BLNK	-0.0131	6.52245		0.1535	1.000	0.995	
Arsenic	E	0.4354	0.2888	0.3128	0.2762	0.2739	0.2705	BLNK	-0.0290	3.68826		0.3096	1.000	0.995	
Chromium	E	5.5029	2.9923	2.5530	2.2567	2.1748	2.1192	BLNK	-0.1891	0.46990		2.9332	1.000	0.995	
Copper	E	24.770	11.845	6.8414	5.1232	4.7527	4.5313	BLNK	-0.4254	0.21907		9.6440	0.999	0.995	
Nickel	E	1.9296	1.5675	1.2192	1.1025	1.0430	1.0000	BLNK	-0.0617	0.99166		1.3103	1.000	0.995	
Zinc	E	13.734	2.0280	0.8229	0.5777	0.5148	0.4948	BLNK	-0.2682	2.00745		3.0287	0.999	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Cadmium	A	0.100	-1	0.500	-7	1.000	2	10.00	1	100.0	1	200.0	0
Lead	A	0.100	3	0.500	1	1.000	2	10.00	0	100.0	2	200.0	0
Silver	A	0.100	-8	0.500	-3	1.000	-3	10.00	-1	100.0	-3	200.0	1
Arsenic	E	0.100	32	0.500	1	1.000	12	10.00	2	100.0	1	200.0	0
Chromium	E	0.100	-30	0.500	3	1.000	1	10.00	4	100.0	2	200.0	-1
Copper	E	0.100	17	0.500	74	1.000	7	10.00	8	100.0	4	200.0	-1
Nickel	E	0.100	30	0.500	43	1.000	15	10.00	9	100.0	3	200.0	-1
Zinc	E	0.100	2389	0.500	253	1.000	38	10.00	13	100.0	3	200.0	-1

Instrument amount = a0 + response * a1 + response^2 * a2; BLNK=Y=aX+[blank]

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 METALS Water
EPA 6020

Inst : MET16
Calnum : 899072873001 Cal Date : 19-FEB-2009

ICV 899072873010 (09b19o00010 19-FEB-2009) stds: S11303, S10858

Analyte	Ch	Average RF	RF	Spiked	Quant	Units	%D	Max	Flags
Cadmium	A	0.0345	0.0364	100.0	105.7	ug/L	6	10	
Lead	A	0.3340	0.3169	100.0	105.8	ug/L	6	10	
Silver	A	0.1535	0.1554	100.0	101.3	ug/L	1	10	
Arsenic	E	0.3096	0.2887	100.0	106.4	ug/L	6	10	
Chromium	E	2.9332	2.2219	100.0	104.2	ug/L	4	10	
Copper	E	9.6440	4.8511	100.0	105.8	ug/L	6	10	
Nickel	E	1.3103	1.0729	100.0	106.3	ug/L	6	10	
Zinc	E	3.0287	0.5300	100.0	106.1	ug/L	6	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 899072873011 File : 09b19o00011 Time : 19-FEB-2009 16:20
Cal : 899072873001 Caldate : 19-FEB-2009

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Cadmium	A	ND	0.1000	0.02757	ug/L	
Lead	A	ND	0.1000	0.04402	ug/L	
Silver	A	ND	0.1000	0.02926	ug/L	
Arsenic	E	ND	0.1000	0.03563	ug/L	
Chromium	E	ND	0.1000	0.08000	ug/L	
Copper	E	ND	0.1000	0.08496	ug/L	
Nickel	E	ND	0.1000	0.07446	ug/L	
Zinc	E	ND	0.1000	0.2752	ug/L	

ISTD (ICALBLK 09b19o00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2077389	2153409	3.66
Scandium	A	2349509	2433043	3.56
Scandium	E	35989	39697	10.30
Scandium	H	752604	703003	-6.59
Germanium	H	147803	136579	-7.59
Germanium	E	22595	24738	9.48
Indium	A	2739451	2760489	0.77
Bismuth	A	2453181	2468606	0.63
Yttrium	A	2867997	2914374	1.62
Terbium	A	3862719	3847630	-0.39

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 210098 METALS Water
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 899072873051 File : 09b19o00051 Time : 19-FEB-2009 23:55
Cal : 899072873001 Caldate : 19-FEB-2009
Standards: S11305, S10858

Analyte	Ch	Quant	IQL	Units	Flags
Cadmium	A	1.783	0.1000	ug/L	!a+
Lead	A	0.5145	0.1000	ug/L	!a+
Silver	A	0.2507	0.1000	ug/L	!a+
Arsenic	E	0.2422	0.1000	ug/L	!a+
Chromium	E	1.514	0.1000	ug/L	!a+
Copper	E	1.964	0.1000	ug/L	!a+
Nickel	E	1.252	0.1000	ug/L	!a+
Zinc	E	2.436	0.1000	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	105500	ug/L	106
Calcium	A	300000	325200	ug/L	108
Magnesium	A	100000	101700	ug/L	102
Molybdenum	A	2000	2113	ug/L	106
Potassium	A	100000	108500	ug/L	109
Sodium	E	250000	261400	ug/L	105
Iron	H	250000	275200	ug/L	110

ISTD (ICALBLK 09b19o00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2077389	1886808	-9.17
Scandium	A	2349509	2236333	-4.82
Scandium	E	35989	42851	19.07
Scandium	H	752604	506122	-32.75
Germanium	H	147803	90348	-38.87
Germanium	E	22595	24294	7.52
Indium	A	2739451	2412230	-11.94
Bismuth	A	2453181	1972943	-19.58
Yttrium	A	2867997	2774558	-3.26
Terbium	A	3862719	3620690	-6.27

!=warning +=high bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 210098 METALS Water
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 899072873052 File : 09b19o00052 Time : 20-FEB-2009 00:06
Cal : 899072873001 Caldate : 19-FEB-2009
Standards: S11306, S10858

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	100.0	102.7	ug/L	3	20	
Silver	A	50.00	51.05	ug/L	2	20	
Arsenic	E	100.0	108.3	ug/L	8	20	
Chromium	E	200.0	194.0	ug/L	-3	20	
Copper	E	200.0	178.0	ug/L	-11	20	
Nickel	E	200.0	173.8	ug/L	-13	20	
Zinc	E	100.0	90.13	ug/L	-10	20	

ISTD (ICALBLK 09b19o00003)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	752604	528388	-29.79
Scandium	A	2349509	2278890	-3.01
Scandium	E	35989	42347	17.67
Germanium	H	147803	95178	-35.60
Germanium	E	22595	24184	7.03
Indium	A	2739451	2472740	-9.74
Yttrium	A	2867997	2829793	-1.33

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 METALS Water
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 899072873059 File : 09b19o00059 Time : 20-FEB-2009 01:21
Cal : 899072873001 Caldate : 19-FEB-2009
Standards: S11304, S10858

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	0.0345	0.0357	100.0	103.6	ug/L	4	10	
Lead	A	0.3340	0.3121	100.0	104.1	ug/L	4	10	
Silver	A	0.1535	0.1551	100.0	101.2	ug/L	1	10	
Arsenic	E	0.3096	0.2832	100.0	104.4	ug/L	4	10	
Chromium	E	2.9332	2.1532	100.0	101.0	ug/L	1	10	
Copper	E	9.6440	4.6214	100.0	100.8	ug/L	1	10	
Nickel	E	1.3103	1.0382	100.0	102.9	ug/L	3	10	
Zinc	E	3.0287	0.5126	100.0	102.6	ug/L	3	10	

ISTD (ICALBLK 09b19o00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2077389	2116643	1.89
Scandium	A	2349509	2428868	3.38
Scandium	E	35989	40108	11.45
Scandium	H	752604	520806	-30.80
Germanium	H	147803	102826	-30.43
Germanium	E	22595	24994	10.62
Indium	A	2739451	2742625	0.12
Bismuth	A	2453181	2395824	-2.34
Yttrium	A	2867997	2939082	2.48
Terbium	A	3862719	3879092	0.42

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 899072873060 File : 09b19o00060 Time : 20-FEB-2009 01:32
Cal : 899072873001 Caldate : 19-FEB-2009

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Cadmium	A	ND	0.1000	0.02757	ug/L	
Lead	A	ND	0.1000	0.04402	ug/L	
Silver	A	ND	0.1000	0.02926	ug/L	
Arsenic	E	ND	0.1000	0.03563	ug/L	
Chromium	E	ND	0.1000	0.08000	ug/L	
Copper	E	ND	0.1000	0.08496	ug/L	
Nickel	E	ND	0.1000	0.07446	ug/L	
Zinc	E	ND	0.1000	0.2752	ug/L	

ISTD (ICALBLK 09b19o00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2077389	2183808	5.12
Scandium	A	2349509	2505312	6.63
Scandium	E	35989	39053	8.51
Scandium	H	752604	501985	-33.30
Germanium	H	147803	100279	-32.15
Germanium	E	22595	24812	9.81
Indium	A	2739451	2888189	5.43
Bismuth	A	2453181	2539419	3.52
Yttrium	A	2867997	3039098	5.97
Terbium	A	3862719	4015220	3.95

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 METALS Water
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 899072873069 File : 09b19o00069 Time : 20-FEB-2009 03:14
Cal : 899072873001 Caldate : 19-FEB-2009
Standards: S11304, S10858

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	0.0345	0.0355	100.0	103.0	ug/L	3	10	
Lead	A	0.3340	0.3123	100.0	104.2	ug/L	4	10	
Silver	A	0.1535	0.1528	100.0	99.63	ug/L	0	10	
Arsenic	E	0.3096	0.2828	100.0	104.3	ug/L	4	10	
Chromium	E	2.9332	2.1716	100.0	101.9	ug/L	2	10	
Copper	E	9.6440	4.6087	100.0	100.5	ug/L	1	10	
Nickel	E	1.3103	1.0420	100.0	103.3	ug/L	3	10	
Zinc	E	3.0287	0.5063	100.0	101.4	ug/L	1	10	

ISTD (ICALBLK 09b19o00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2077389	2065070	-0.59
Scandium	A	2349509	2328229	-0.91
Scandium	E	35989	37775	4.96
Scandium	H	752604	473902	-37.03
Germanium	H	147803	94323	-36.18
Germanium	E	22595	23879	5.68
Indium	A	2739451	2668589	-2.59
Bismuth	A	2453181	2336168	-4.77
Yttrium	A	2867997	2814882	-1.85
Terbium	A	3862719	3801136	-1.59

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 899072873071 File : 09b19o00071 Time : 20-FEB-2009 03:37
Cal : 899072873001 Caldate : 19-FEB-2009

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Cadmium	A	ND	0.1000	0.02757	ug/L	
Lead	A	ND	0.1000	0.04402	ug/L	
Silver	A	ND	0.1000	0.02926	ug/L	
Arsenic	E	ND	0.1000	0.03563	ug/L	
Chromium	E	ND	0.1000	0.08000	ug/L	
Copper	E	ND	0.1000	0.08496	ug/L	
Nickel	E	ND	0.1000	0.07446	ug/L	
Zinc	E	ND	0.1000	0.2752	ug/L	

ISTD (ICALBLK 09b19o00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2077389	2102049	1.19
Scandium	A	2349509	2336374	-0.56
Scandium	E	35989	37766	4.94
Scandium	H	752604	456411	-39.36
Germanium	H	147803	90979	-38.45
Germanium	E	22595	24378	7.89
Indium	A	2739451	2740505	0.04
Bismuth	A	2453181	2490335	1.51
Yttrium	A	2867997	2865005	-0.10
Terbium	A	3862719	3854130	-0.22

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 210098 METALS Water
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 899072873072 File : 09b19o00072 Time : 20-FEB-2009 03:48
Cal : 899072873001 Caldate : 19-FEB-2009
Standards: S11305, S10858

Analyte	Ch	Quant	IQL	Units	Flags
Cadmium	A	1.846	0.1000	ug/L	!a+
Lead	A	0.5329	0.1000	ug/L	!a+
Silver	A	0.2375	0.1000	ug/L	!a+
Arsenic	E	0.2063	0.1000	ug/L	!a+
Chromium	E	1.601	0.1000	ug/L	!a+
Copper	E	2.015	0.1000	ug/L	!a+
Nickel	E	1.295	0.1000	ug/L	!a+
Zinc	E	2.324	0.1000	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	102900	ug/L	103
Calcium	A	300000	323100	ug/L	108
Magnesium	A	100000	99150	ug/L	99
Molybdenum	A	2000	2119	ug/L	106
Potassium	A	100000	107200	ug/L	107
Sodium	E	250000	257100	ug/L	103
Iron	H	250000	276100	ug/L	110

ISTD (ICALBLK 09b19o00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	2077389	1790955	-13.79
Scandium	A	2349509	2212482	-5.83
Scandium	E	35989	40824	13.43
Scandium	H	752604	470481	-37.49
Germanium	H	147803	84086	-43.11
Germanium	E	22595	23689	4.84
Indium	A	2739451	2407444	-12.12
Bismuth	A	2453181	1988376	-18.95
Yttrium	A	2867997	2785377	-2.88
Terbium	A	3862719	3625523	-6.14

!=warning +=high bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 210098 METALS Water
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 899072873073 File : 09b19o00073 Time : 20-FEB-2009 04:00
Cal : 899072873001 Caldate : 19-FEB-2009
Standards: S11306, S10858

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	100.0	102.6	ug/L	3	20	
Silver	A	50.00	51.05	ug/L	2	20	
Arsenic	E	100.0	108.8	ug/L	9	20	
Chromium	E	200.0	195.8	ug/L	-2	20	
Copper	E	200.0	179.5	ug/L	-10	20	
Nickel	E	200.0	177.6	ug/L	-11	20	
Zinc	E	100.0	89.57	ug/L	-10	20	

ISTD (ICALBLK 09b19o00003)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	752604	546591	-27.37
Scandium	A	2349509	2295203	-2.31
Scandium	E	35989	39996	11.13
Germanium	H	147803	96392	-34.78
Germanium	E	22595	23297	3.11
Indium	A	2739451	2491210	-9.06
Yttrium	A	2867997	2876488	0.30

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 69074242

Instrument : MET06 Begun : 02/20/09 13:22
Method : EPA 6020 SOP Version : icpms_rv5

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	09b20n00001	TUN				02/20/09 13:22	1.0	1	
002	09b20n00002	X	RINSE			02/20/09 13:29	1.0	2	
003	09b20n00003	ICALBLK	CALBLANK			02/20/09 13:39	1.0	2	
004	09b20n00004	ICAL				02/20/09 13:49	1.0	3 2	
005	09b20n00005	ICAL				02/20/09 13:58	1.0	4 2	
006	09b20n00006	ICAL				02/20/09 14:08	1.0	5 2	
007	09b20n00007	ICAL				02/20/09 14:18	1.0	6 2	
008	09b20n00008	ICAL				02/20/09 14:28	1.0	7 2	
009	09b20n00009	ICAL				02/20/09 14:37	1.0	8 2	
010	09b20n00010	ICV				02/20/09 14:47	1.0	9 2	
011	09b20n00011	X				02/20/09 14:57	1.0	2	
012	09b20n00012	ICB				02/20/09 15:06	1.0	2	
013	09b20n00013	ICSA				02/20/09 15:15	1.0	10 2	7:CA=340000
014	09b20n00014	ICSAB				02/20/09 15:26	1.0	11 2	7:CA=330000
015	09b20n00015	X	RINSE			02/20/09 15:36	1.0	2	
016	09b20n00016	X	RINSE			02/20/09 15:46	1.0	2	
017	09b20n00017	BLANK	QC483952	Water	148080	02/20/09 15:56	1.0	2	
018	09b20n00018	BS	QC483953	Water	148080	02/20/09 16:06	1.0	2	
019	09b20n00019	BSD	QC483954	Water	148080	02/20/09 16:15	1.0	2	
020	09b20n00020	MSS	210116-003	Water	148080	02/20/09 16:25	10.0	2	
021	09b20n00021	SER	QC483955	Water	148080	02/20/09 16:35	50.0	2	
022	09b20n00022	MS	QC483956	Water	148080	02/20/09 16:45	10.0	2	
023	09b20n00023	MSD	QC483957	Water	148080	02/20/09 16:54	10.0	2	
024	09b20n00024	PDS	QC483958	Water	148080	02/20/09 17:04	10.0	12 13 2	1:CA=23000
025	09b20n00025	CCV				02/20/09 17:14	1.0	14 2	
026	09b20n00026	X				02/20/09 17:23	1.0	2	
027	09b20n00027	CCB				02/20/09 17:33	1.0	2	
028	09b20n00028	SAMPLE	209986-012	Water	148081	02/20/09 17:41	1.0	2	
029	09b20n00029	SAMPLE	210068-007	Water	148080	02/20/09 17:51	100.0	2	
030	09b20n00030	SAMPLE	210068-009	Water	148080	02/20/09 18:01	100.0	2	
031	09b20n00031	SAMPLE	209998-002	Water	148080	02/20/09 18:11	5.0	2	
032	09b20n00032	SAMPLE	209988-003	Water	148080	02/20/09 18:21	5.0	2	1:NA=34000
033	09b20n00033	SAMPLE	209986-010	Water	148081	02/20/09 18:30	50.0	2	
034	09b20n00034	CCV				02/20/09 18:40	1.0	14 2	
035	09b20n00035	CCB				02/20/09 18:50	1.0	2	
036	09b20n00036	X				02/20/09 19:00	1.0	2	
037	09b20n00037	ICSA				02/20/09 19:10	1.0	10 2	7:CA=350000
038	09b20n00038	ICSAB				02/20/09 19:19	1.0	11 2	7:CA=330000
039	09b20n00039	X	RINSE			02/20/09 19:29	1.0	2	
040	09b20n00040	X	RINSE			02/20/09 19:39	1.0	2	
041	09b20n00041	MSS	209986-013	Water	148081	02/20/09 19:49	10.0	2	
042	09b20n00042	SER	QC483962	Water	148081	02/20/09 19:59	50.0	2	
043	09b20n00043	PDS	QC483965	Water	148081	02/20/09 20:09	10.0	12 13 2	
044	09b20n00044	SAMPLE	209986-002	Water	148081	02/20/09 20:18	10.0	2	
045	09b20n00045	SAMPLE	209986-004	Water	148081	02/20/09 20:28	10.0	2	
046	09b20n00046	SAMPLE	209986-005	Water	148081	02/20/09 20:38	10.0	2	
047	09b20n00047	SAMPLE	209986-008	Water	148081	02/20/09 20:48	10.0	2	
048	09b20n00048	SAMPLE	209986-009	Water	148081	02/20/09 20:57	10.0	2	
049	09b20n00049	CCV				02/20/09 21:07	1.0	14 2	
050	09b20n00050	CCB				02/20/09 21:17	1.0	2	
051	09b20n00051	X				02/20/09 21:27	1.0	2	
052	09b20n00052	MSS	210110-002	Filtrate	148127	02/20/09 21:36	50.0	2	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 69074242

Instrument : MET06 Begun : 02/20/09 13:22
Method : EPA 6020 SOP Version : icpms_rv5

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	09b20n00053	SER	QC484183	Filtrate	148127	02/20/09 21:46	250.0	2	
054	09b20n00054	PDS	QC484184	Filtrate	148127	02/20/09 21:56	50.0	12 13 2	
055	09b20n00055	SAMPLE	210110-001	Filtrate	148127	02/20/09 22:06	50.0	2	
056	09b20n00056	SAMPLE	210110-003	Filtrate	148127	02/20/09 22:16	50.0	2	
057	09b20n00057	SAMPLE	210110-005	Filtrate	148127	02/20/09 22:26	50.0	2	
058	09b20n00058	SAMPLE	210110-006	Filtrate	148127	02/20/09 22:35	50.0	2	
059	09b20n00059	SAMPLE	210115-002	Filtrate	148127	02/20/09 22:45	500.0	2	
060	09b20n00060	SAMPLE	210115-003	Filtrate	148127	02/20/09 22:55	500.0	2	
061	09b20n00061	SAMPLE	210115-005	Filtrate	148127	02/20/09 23:05	500.0	2	
062	09b20n00062	CCV				02/20/09 23:15	1.0	14 2	
063	09b20n00063	CCB				02/20/09 23:24	1.0	2	
064	09b20n00064	X				02/20/09 23:34	1.0	2	
065	09b20n00065	SAMPLE	210115-006	Filtrate	148127	02/20/09 23:44	500.0	2	
066	09b20n00066	SAMPLE	210115-007	Filtrate	148127	02/20/09 23:54	500.0	2	1:NA=23000
067	09b20n00067	TUN				02/21/09 00:05	1.0	1	
068	09b20n00068	X	RINSE			02/21/09 00:11	1.0	2	
069	09b20n00069	SAMPLE	210115-008	Filtrate	148127	02/21/09 00:21	500.0	2	1:NA=23000
070	09b20n00070	SAMPLE	210115-009	Filtrate	148127	02/21/09 00:31	500.0	2	1:NA=28000
071	09b20n00071	SAMPLE	210115-011	Filtrate	148127	02/21/09 00:41	500.0	2	
072	09b20n00072	SAMPLE	210115-012	Filtrate	148127	02/21/09 00:51	500.0	2	
073	09b20n00073	CCV				02/21/09 01:01	1.0	14 2	
074	09b20n00074	X				02/21/09 01:10	1.0	2	
075	09b20n00075	CCB				02/21/09 01:20	1.0	2	
076	09b20n00076	ICSA				02/21/09 01:30	1.0	10 2	7:CA=350000
077	09b20n00077	ICSAB				02/21/09 01:40	1.0	11 2	7:CA=320000
078	09b20n00078	X	RINSE			02/21/09 01:49	1.0	2	
079	09b20n00079	X	RINSE			02/21/09 01:59	1.0	2	
080	09b20n00080	X	RINSE			02/21/09 02:09	1.0	2	
081	09b20n00081	X	RINSE			02/21/09 02:19	1.0	2	
082	09b20n00082	X	RINSE			02/21/09 02:29	1.0	2	

JYF 02/23/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 77.

Standards used: 1=S11295 2=S10858 3=S11298 4=S11299 5=S11300 6=S11301 7=S11296 8=S11297 9=S11303 10=S11305 11=S11306 12=S10997 13=S10998 14=S11304

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 69074242

Date : 02/20/09 Reference : 09b20n00003
Sequence : MET06 09b20n00 Analyzed : 02/20/09 13:39

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	1719451	1821123	20403	517071	128771	16118	2936570	3271491	2682496	4624883
		LOWER LIMIT	515835	546337	6121	155121	38631	4835	880971	981447	804749	1387465
		UPPER LIMIT	2063341	2185348	24484	620485	154525	19342	3523884	3925789	3218995	5549860
012	ICB		1831915	1982418	21562	452389	116293	17396	3037874	3294107	2806723	4703554
013	ICSA		1366061	1610455	19497	441847	101186	14290	2132422	2150422	2149101	3524922
014	ICSAB		1337028	1550376	19305	452343	103530	14159	2113411	2142962	2127769	3529475
017	BLANK	QC483952	1756518	1820559	21321	500637	126373	16894	2954050	3302822	2682908	4687039
018	BS	QC483953	1821599	1909283	22009	486645	122413	17370	2842912	3055240	2723089	4540235
019	BSD	QC483954	1871146	1923923	20173	484837	121053	15887	2892512	3080856	2726409	4578864
020	MSS	210116-003	1790051	1828910	22106	473741	121812	17697	2892812	3193243	2636396	4597588
021	SER	QC483955	1757564	1830286	21308	415982	108826	17413	2925198	3227426	2684859	4594375
022	MS	QC483956	1766781	1836010	21258	493832	125014	17177	2891271	3207391	2663920	4601285
023	MSD	QC483957	1745846	1804420	21337	385315	100331	16989	2879884	3146466	2644184	4550284
024	PDS	QC483958	1764796	1806165	20439	462129	115912	16360	2750936	3020124	2591510	4423680
025	CCV		1849322	1860216	22002	456756	114426	17097	2807448	3057370	2671418	4509673
027	CCB		1731403	1757573	20403	444043	113924	16555	2835333	3228747	2579935	4519186
028	SAMPLE	209986-012	1812438	1828768	19429	450460	114908	15768	2936283	3322491	2685091	4674659
029	SAMPLE	210068-007	1761039	1834225	21994	463172	117602	17522	2961788	3303339	2692777	4658334
030	SAMPLE	210068-009	1772872	1861012	21703	461239	117844	17746	2974468	3342058	2727182	4723273
032	SAMPLE	209988-003	1812749	1871349	22705	417451	106806	17834	2850553	3105164	2658742	4556424
033	SAMPLE	209986-010	1842666	1870883	22425	450851	116219	18306	2965035	3306614	2716219	4674499
034	CCV		1841737	1848441	22205	462415	115190	17496	2836966	3073140	2641340	4530729
035	CCB		1768179	1787054	21308	460990	118003	17279	2890374	3255731	2629196	4575795
037	ICSA		1388958	1558431	20450	438923	101334	15023	2112421	2132629	2118375	3542110
038	ICSAB		1401489	1512281	19382	391595	91456	14357	2094537	2138846	2093292	3506158
041	MSS	209986-013	1794778	1786225	20802	386273	101458	17164	2904394	3249201	2676888	4603447
042	SER	QC483962	1800368	1798038	20541	472468	121634	16844	2942120	3317904	2676926	4659118
043	PDS	QC483965	1738425	1754314	20501	483448	122620	16611	2735349	2965729	2576872	4426064
044	SAMPLE	209986-002	1787971	1791552	20295	462504	119803	16639	2927201	3175905	2667576	4601242
045	SAMPLE	209986-004	1736642	1709410	20476	454119	117705	16895	2788957	3090265	2525755	4332312
046	SAMPLE	209986-005	1803180	1750921	20554	457702	118117	16833	2831584	3214060	2616050	4563040
047	SAMPLE	209986-008	1789752	1755369	19395	449946	115959	16066	2851217	3177716	2621208	4550263
048	SAMPLE	209986-009	1767729	1758416	18390	434773	112303	15611	2838246	3186120	2612388	4523558
049	CCV		1801613	1768246	20062	424503	108454	16210	2765698	3049568	2603316	4486388
050	CCB		1779050	1782421	20584	453153	117366	16731	2940650	3270033	2689993	4653041
052	MSS	210110-002	1564469	1545076	20127	444979	116609	16845	2611167	2985533	2354589	4127388
053	SER	QC484183	1796763	1775191	20691	430277	112747	17284	2981169	3394358	2687211	4715390
054	PDS	QC484184	1756993	1730692	17881	433478	114171	15136	2908863	3311175	2625374	4617349
055	SAMPLE	210110-001	1763111	1747259	20076	425058	111438	16956	2953054	3348257	2639952	4662972
056	SAMPLE	210110-003	1738238	1718710	19895	403275	107888	16613	2875980	3278543	2595846	4567207
057	SAMPLE	210110-005	1752433	1754041	20514	408351	107002	17021	2953636	3332811	2680127	4686090
058	SAMPLE	210110-006	1737473	1731526	20746	393506	105798	17259	2915495	3326126	2626270	4647432
059	SAMPLE	210115-002	1811149	1815423	21939	391828	103299	17778	2902416	3166712	2675558	4554516
060	SAMPLE	210115-003	1834204	1833505	21739	413277	107503	17646	2913119	3161891	2687094	4540995
061	SAMPLE	210115-005	1794270	1801394	21299	403729	105663	17563	2951902	3266933	2673678	4628296
062	CCV		1823587	1851658	21826	397934	102400	17585	2833906	3060643	2681276	4556166
063	CCB		1757368	1780369	20634	387398	102323	17017	2935432	3276749	2669503	4615733
065	SAMPLE	210115-006	1747947	1771795	21568	388449	103640	17590	2939079	3301447	2712573	4650019
066	SAMPLE	210115-007	1838354	1820554	22265	372425	98619	18045	2845924	3060473	2648294	4447231
069	SAMPLE	210115-008	1816501	1962937	24167	396430	103088	19283	3005833	3167286	2825950	4659456
070	SAMPLE	210115-009	1845966	1940010	22396	410856	106577	18022	2975585	3092777	2770646	4562686

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 69074242

Date : 02/20/09 Reference : 09b20n00003
Sequence : MET06 09b20n00 Analyzed : 02/20/09 13:39

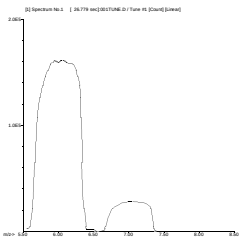
#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
071	SAMPLE	210115-011	1799634	1859513	22331	403223	105481	18310	2933217	3162540	2711047	4570123
072	SAMPLE	210115-012	1725591	1798521	20315	383822	101914	16762	2922007	3228557	2682507	4570084
073	CCV		1839879	1907663	23166	409131	105305	18668	2899610	3094643	2749858	4611461
075	CCB		1772703	1803555	21593	419244	110349	17845	2972424	3330163	2716731	4687570
076	ICSA		1374340	1465088	18933	391656	90656	14102	2090520	2134275	2090746	3483083
077	ICSAB		1382843	1472339	18400	395111	92254	13757	2113827	2185282	2113406	3558605

MET06 QC Tune Report

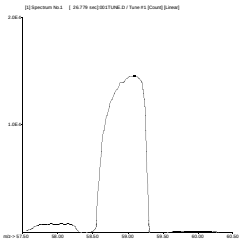
Data File: C:\ICPCHEM\1\DATA\09B20n00.B\001TUNE.D
Date Acquired: Feb 20 2009 01:22 pm
Acq. Method: TN6020.M
Operator:
Sample Name: tun,s11295
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\TN6020.M

RSD (%)

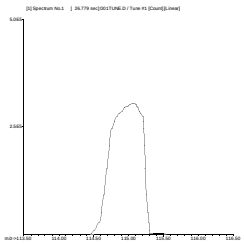
Element	Actual	Required	Flag
7 Li	0.76	5.00	
59 Co	0.51	5.00	
115 In	0.81	5.00	
205 Tl	0.94	5.00	



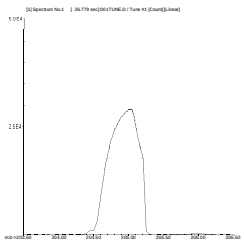
7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.10
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



115 In
Mass Calib.
Actual: 115.00
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



205 Tl
Mass Calib.
Actual: 204.95
Required: 204.90 - 205.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 METALS Water: EPA 6020

Inst : MET06 Reviewer : ---
Calnum : 69074242001 Date : 20-FEB-2009 13:39
Units : ug/L X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	09b20n00004	69074242004		20-FEB-2009 13:49	S11298, S10858
L2	09b20n00005	69074242005		20-FEB-2009 13:58	S11299, S10858
L3	09b20n00006	69074242006		20-FEB-2009 14:08	S11300, S10858
L4	09b20n00007	69074242007		20-FEB-2009 14:18	S11301, S10858
L5	09b20n00008	69074242008		20-FEB-2009 14:28	S11296, S10858
L6	09b20n00009	69074242009		20-FEB-2009 14:37	S11297, S10858

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	Flg
Cadmium	A	0.0319	0.0317	0.0340	0.0321	0.0319	0.0317	BLNK	-0.0030	31.5315		0.0322	1.000	0.995	
Lead	A	0.3416	0.3131	0.3112	0.2976	0.3044	0.3010	BLNK	-0.0056	3.31506		0.3115	1.000	0.995	
Silver	A	0.1814	0.1390	0.1350	0.1308	0.1279	0.1393	BLNK	-0.0058	7.29766		0.1423	0.998	0.995	
Arsenic	E	0.3696	0.3104	0.2455	0.2468	0.2515	0.2682	BLNK	-0.0236	3.77667		0.2820	0.999	0.995	
Chromium	E	8.4507	3.4031	2.7765	2.2287	2.1425	2.3107	BLNK	-0.2307	0.43981		3.5520	0.999	0.995	
Copper	E	15.196	6.7355	6.6970	4.1850	4.0054	4.1805	BLNK	-0.1986	0.24152		6.8332	1.000	0.995	
Nickel	E	2.3654	1.3678	1.4860	1.1766	1.1098	1.1738	BLNK	-0.0518	0.86157		1.4466	0.999	0.995	
Zinc	E	7.8650	1.3465	1.0076	0.5567	0.5053	0.5126	BLNK	-0.3533	1.96040		1.9656	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Cadmium	A	0.100	-2	0.500	-1	1.000	7	10.00	1	100.0	1	200.0	0
Lead	A	0.100	8	0.500	3	1.000	3	10.00	-1	100.0	1	200.0	0
Silver	A	0.100	27	0.500	0	1.000	-2	10.00	-5	100.0	-7	200.0	2
Arsenic	E	0.100	16	0.500	13	1.000	-10	10.00	-7	100.0	-5	200.0	1
Chromium	E	0.100	41	0.500	4	1.000	-1	10.00	-4	100.0	-6	200.0	2
Copper	E	0.100	68	0.500	23	1.000	42	10.00	-1	100.0	-3	200.0	1
Nickel	E	0.100	52	0.500	7	1.000	23	10.00	1	100.0	-4	200.0	1
Zinc	E	0.100	1089	0.500	93	1.000	62	10.00	6	100.0	-1	200.0	0

Instrument amount = a0 + response * a1 + response^2 * a2; BLNK=Y=aX+[blank]

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 METALS Water
EPA 6020

Inst : MET06
Calnum : 69074242001 Cal Date : 20-FEB-2009

ICV 69074242010 (09b20n00010 20-FEB-2009) stds: S11303, S10858

Analyte	Ch	Average RF	RF	Spiked	Quant	Units	%D	Max	Flags
Cadmium	A	0.0322	0.0333	100.0	105.1	ug/L	5	10	
Lead	A	0.3115	0.3150	100.0	104.4	ug/L	4	10	
Silver	A	0.1423	0.1349	100.0	98.41	ug/L	-2	10	
Arsenic	E	0.2820	0.2606	100.0	98.39	ug/L	-2	10	
Chromium	E	3.5520	2.1810	100.0	95.69	ug/L	-4	10	
Copper	E	6.8332	4.0928	100.0	98.65	ug/L	-1	10	
Nickel	E	1.4466	1.1378	100.0	97.98	ug/L	-2	10	
Zinc	E	1.9656	0.5056	100.0	98.76	ug/L	-1	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69074242012 File : 09b20n00012 Time : 20-FEB-2009 15:06
Cal : 69074242001 Caldate : 20-FEB-2009

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Cadmium	A	ND	0.1000	0.06044	ug/L	
Lead	A	ND	0.1000	0.05505	ug/L	
Silver	A	ND	0.1000	0.06124	ug/L	
Arsenic	E	ND	0.1000	0.06416	ug/L	
Chromium	E	ND	0.1000	0.03166	ug/L	
Copper	E	ND	0.1000	0.07274	ug/L	
Nickel	E	ND	0.1000	0.08200	ug/L	
Zinc	E	ND	0.1000	0.3547	ug/L	

ISTD (ICALBLK 09b20n00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1719451	1831915	6.54
Scandium	A	1821123	1982418	8.86
Scandium	E	20403	21562	5.68
Scandium	H	517071	452389	-12.51
Germanium	H	128771	116293	-9.69
Germanium	E	16118	17396	7.93
Indium	A	2936570	3037874	3.45
Bismuth	A	3271491	3294107	0.69
Yttrium	A	2682496	2806723	4.63
Terbium	A	4624883	4703554	1.70

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69074242013 File : 09b20n00013 Time : 20-FEB-2009 15:15
Cal : 69074242001 Caldate : 20-FEB-2009
Standards: S11305, S10858

Analyte	Ch	Quant	IQL	Units	Flags
Cadmium	A	1.549	0.1000	ug/L	!a+
Lead	A	0.5600	0.1000	ug/L	!a+
Silver	A	0.2382	0.1000	ug/L	!a+
Arsenic	E	0.2239	0.1000	ug/L	!a+
Chromium	E	2.085	0.1000	ug/L	!a+
Copper	E	2.013	0.1000	ug/L	!a+
Nickel	E	1.238	0.1000	ug/L	!a+
Zinc	E	2.364	0.1000	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	109900	ug/L	110
Calcium	A	300000	343400	ug/L	114
Magnesium	A	100000	107400	ug/L	107
Molybdenum	A	2000	2505	ug/L	125
Potassium	A	100000	113500	ug/L	114
Sodium	E	250000	270700	ug/L	108
Iron	H	250000	277300	ug/L	111

ISTD (ICALBLK 09b20n00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1719451	1366061	-20.55
Scandium	A	1821123	1610455	-11.57
Scandium	E	20403	19497	-4.44
Scandium	H	517071	441847	-14.55
Germanium	H	128771	101186	-21.42
Germanium	E	16118	14290	-11.34
Indium	A	2936570	2132422	-27.38
Bismuth	A	3271491	2150422	-34.27
Yttrium	A	2682496	2149101	-19.88
Terbium	A	4624883	3524922	-23.78

!=warning +=high bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69074242014 File : 09b20n00014 Time : 20-FEB-2009 15:26
Cal : 69074242001 Caldate : 20-FEB-2009
Standards: S11306, S10858

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	100.0	104.4	ug/L	4	20	
Silver	A	50.00	50.56	ug/L	1	20	
Arsenic	E	100.0	102.1	ug/L	2	20	
Chromium	E	200.0	193.6	ug/L	-3	20	
Copper	E	200.0	182.8	ug/L	-9	20	
Nickel	E	200.0	175.3	ug/L	-12	20	
Zinc	E	100.0	88.23	ug/L	-12	20	

ISTD (ICALBLK 09b20n00003)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	517071	452343	-12.52
Scandium	A	1821123	1550376	-14.87
Scandium	E	20403	19305	-5.38
Germanium	H	128771	103530	-19.60
Germanium	E	16118	14159	-12.15
Indium	A	2936570	2113411	-28.03
Yttrium	A	2682496	2127769	-20.68

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69074242025 File : 09b20n00025 Time : 20-FEB-2009 17:14
Cal : 69074242001 Caldate : 20-FEB-2009
Standards: S11304, S10858

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	0.0322	0.0327	100.0	103.0	ug/L	3	10	
Lead	A	0.3115	0.3114	100.0	103.2	ug/L	3	10	
Silver	A	0.1423	0.1310	100.0	95.59	ug/L	-4	10	
Arsenic	E	0.2820	0.2604	100.0	98.31	ug/L	-2	10	
Chromium	E	3.5520	2.1158	100.0	92.83	ug/L	-7	10	
Copper	E	6.8332	3.9973	100.0	96.34	ug/L	-4	10	
Nickel	E	1.4466	1.1017	100.0	94.87	ug/L	-5	10	
Zinc	E	1.9656	0.4951	100.0	96.70	ug/L	-3	10	

ISTD (ICALBLK 09b20n00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1719451	1849322	7.55
Scandium	A	1821123	1860216	2.15
Scandium	E	20403	22002	7.84
Scandium	H	517071	456756	-11.66
Germanium	H	128771	114426	-11.14
Germanium	E	16118	17097	6.07
Indium	A	2936570	2807448	-4.40
Bismuth	A	3271491	3057370	-6.55
Yttrium	A	2682496	2671418	-0.41
Terbium	A	4624883	4509673	-2.49

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69074242027 File : 09b20n00027 Time : 20-FEB-2009 17:33
Cal : 69074242001 Caldate : 20-FEB-2009

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Cadmium	A	ND	0.1000	0.06044	ug/L	
Lead	A	ND	0.1000	0.05505	ug/L	
Silver	A	ND	0.1000	0.06124	ug/L	
Arsenic	E	ND	0.1000	0.06416	ug/L	
Chromium	E	ND	0.1000	0.03166	ug/L	
Copper	E	ND	0.1000	0.07274	ug/L	
Nickel	E	ND	0.1000	0.08200	ug/L	
Zinc	E	ND	0.1000	0.3547	ug/L	

ISTD (ICALBLK 09b20n00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1719451	1731403	0.70
Scandium	A	1821123	1757573	-3.49
Scandium	E	20403	20403	0.00
Scandium	H	517071	444043	-14.12
Germanium	H	128771	113924	-11.53
Germanium	E	16118	16555	2.71
Indium	A	2936570	2835333	-3.45
Bismuth	A	3271491	3228747	-1.31
Yttrium	A	2682496	2579935	-3.82
Terbium	A	4624883	4519186	-2.29

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69074242037 File : 09b20n00037 Time : 20-FEB-2009 19:10
Cal : 69074242001 Caldate : 20-FEB-2009
Standards: S11305, S10858

Analyte	Ch	Quant	IQL	Units	Flags
Cadmium	A	1.734	0.1000	ug/L	!a+
Lead	A	0.5522	0.1000	ug/L	!a+
Silver	A	0.2191	0.1000	ug/L	!a+
Arsenic	E	0.2022	0.1000	ug/L	!a+
Chromium	E	2.019	0.1000	ug/L	!a+
Copper	E	1.875	0.1000	ug/L	!a+
Nickel	E	1.203	0.1000	ug/L	!a+
Zinc	E	2.458	0.1000	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	113900	ug/L	114
Calcium	A	300000	353200	ug/L	118
Magnesium	A	100000	112900	ug/L	113
Molybdenum	A	2000	2523	ug/L	126
Potassium	A	100000	117400	ug/L	117
Sodium	E	250000	263600	ug/L	105
Iron	H	250000	277400	ug/L	111

ISTD (ICALBLK 09b20n00003)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1719451	1388958	-19.22
Scandium	A	1821123	1558431	-14.42
Scandium	E	20403	20450	0.23
Scandium	H	517071	438923	-15.11
Germanium	H	128771	101334	-21.31
Germanium	E	16118	15023	-6.79
Indium	A	2936570	2112421	-28.07
Bismuth	A	3271491	2132629	-34.81
Yttrium	A	2682496	2118375	-21.03
Terbium	A	4624883	3542110	-23.41

!=warning +=high bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 210098 METALS Water
EPA 6020

Inst : MET06 IDF : 1.0
Seqnum : 69074242038 File : 09b20n00038 Time : 20-FEB-2009 19:19
Cal : 69074242001 Caldate : 20-FEB-2009
Standards: S11306, S10858

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Cadmium	A	100.0	105.8	ug/L	6	20	
Silver	A	50.00	50.61	ug/L	1	20	
Arsenic	E	100.0	100.9	ug/L	1	20	
Chromium	E	200.0	191.5	ug/L	-4	20	
Copper	E	200.0	178.8	ug/L	-11	20	
Nickel	E	200.0	173.2	ug/L	-13	20	
Zinc	E	100.0	87.22	ug/L	-13	20	

ISTD (ICALBLK 09b20n00003)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	517071	391595	-24.27
Scandium	A	1821123	1512281	-16.96
Scandium	E	20403	19382	-5.00
Germanium	H	128771	91456	-28.98
Germanium	E	16118	14357	-10.93
Indium	A	2936570	2094537	-28.67
Yttrium	A	2682496	2093292	-21.96

SAMPLE PREPARATION SUMMARY

Batch # : 148080
Started By : JYF
Method : 200.8
Spike #1 ID : S10511

Prep Date : 19-FEB-2009 12:30
Spike #2 ID : S10512

Analysis : ICAP
Finished By : JYF
Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
209988-001		Water	50	50	1	1.0						PP13/ICAP	
209988-003		Water	50	50	1	1.0						PP13/ICAP	
209998-002		Water	50	50	1	1.0						AL-200, AS-200, CU-200, FE-200, PB-200, ZN-200	
210065-001		Water	50	50	1	1.0						AG, AS, CD, CR, CU, NI, PB, ZN	
210065-002		Water	50	50	1	1.0						AG, AS, CD, CR, CU, NI, PB, ZN	
210068-001		Water	50	50	1	1.0						NA	
210068-005		Water	50	50	1	1.0						NA	
210068-006		Water	50	50	1	1.0						NA	
210068-007		Water	50	50	1	1.0						NA	
210068-008		Water	50	50	1	1.0						NA	
210068-009		Water	50	50	1	1.0						NA	
210098-001		Water	50	50	1	1.0						AG, AS, CD, CR, CU, NI, PB, ZN	
210098-002		Water	50	50	1	1.0						AG, AS, CD, CR, CU, NI, PB, ZN	
210116-001		Water	50	50	1	1.0						NA	
210116-003		Water	50	50	1	1.0						NA	MSS
210116-004		Water	50	50	1	1.0						NA	
210116-006		Water	50	50	1	1.0						NA	
210116-007		Water	50	50	1	1.0						NA	
QC483952	BLANK	Water	50	50	1	1.0							
QC483953	BS	Water	50	50	1	1.0		.25	.25				
QC483954	BSD	Water	50	50	1	1.0		.25	.25				
QC483955	SER	Water	50	50	1	1.0							
QC483956	MS	Water	50	50	1	1.0		.25	.25				
QC483957	MSD	Water	50	50	1	1.0		.25	.25				
QC483958	PDS	Water	50	50	1	1.0							

Reviewed by: JYF Date: 02/20/09

Water Digestion for ICP-MS

Curtis & Tompkins, Ltd.

LIMS Batch #: 148080
Digested by: JYF
Date Digested: 2/19/09
Time begun: 11:00

Digestion Method
☒ EPA 200.8 for ICP-MS
☐ _____

BK 2600
Page 89
Continued From: /
Continued On: /

Sample # and letter	Volume Sample (mL)	Final Volume (mL)	Filtered? (y/n)	Comments
210116-001 D	50	50	N	
-003 H				MSS
-004 D				
-006				
-007				
068-001 D				
-005				
-006				
-007				
-008				
-009				
098-001 G				
-002				
065-001 I				
-002				
209998-002 A				
988-001 E				
-003				
BLK				
BS				
BSD				
MS-03				
MSD-03				
				JJ 2/19/09

	Reagent ID or LIMS #	Initials / Date
Class-A digestion tubes, lot #	J71539-261	JJ 2/19
digestion temperature (90-95 degrees C)	95°C	
0.25 mL of spike solution was added to all spikes	510511	
	510512	
concentrated HCl	JTB G48030	
concentrated HNO3	JTB G47034	
☐ filtered thru' Whatman # 541	—	
Relinquished to ICP group	ICP-MS	

JJ 2/19/09
Prep Chemist Signature / Date

2/19/09
Reviewer Signature / Date

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 849072721

Instrument : MET14 Begun : 02/19/09 12:01
Method : EPA 7470A SOP Version : HG_water_rv12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	148058	ICALBLK	STD01REP1			02/19/09 12:01	1.0	
002	148058	ICAL	STD02REP1			02/19/09 12:03	1.0	1
003	148058	ICAL	STD03REP1			02/19/09 12:05	1.0	1
004	148058	ICAL	STD04REP1			02/19/09 12:07	1.0	1
005	148058	ICAL	STD05REP1			02/19/09 12:09	1.0	1
006	148058	ICAL	STD06REP1			02/19/09 12:11	1.0	1
007	148058	ICV				02/19/09 12:17	1.0	2
008	148058	ICB				02/19/09 12:19	1.0	
009	148058	BLANK	QC483870	Water	148058	02/19/09 12:21	1.0	
010	148058	BS	QC483871	Water	148058	02/19/09 12:23	1.0	
011	148058	BSD	QC483872	Water	148058	02/19/09 12:26	1.0	
012	148058	MSS	210075-002	Filtrate	148058	02/19/09 12:28	1.0	
013	148058	SER	QC483875	Filtrate	148058	02/19/09 12:30	5.0	
014	148058	MS	QC483873	Filtrate	148058	02/19/09 12:33	1.0	
015	148058	MSD	QC483874	Filtrate	148058	02/19/09 12:35	1.0	
016	148058	SAMPLE	209885-001	Water	148058	02/19/09 12:37	1.0	
017	148058	SAMPLE	209896-002	Filtrate	148058	02/19/09 12:39	1.0	
018	148058	SAMPLE	209987-001	Water	148058	02/19/09 12:41	1.0	
019	148058	CCV				02/19/09 12:44	1.0	3
020	148058	CCB				02/19/09 12:46	1.0	
021	148058	SAMPLE	209987-002	Water	148058	02/19/09 12:48	1.0	
022	148058	SAMPLE	210026-001	Water	148058	02/19/09 12:51	1.0	
023	148058	SAMPLE	210026-002	Water	148058	02/19/09 12:53	1.0	
024	148058	SAMPLE	210026-001	Filtrate	148058	02/19/09 12:55	1.0	
025	148058	SAMPLE	210026-002	Filtrate	148058	02/19/09 12:57	1.0	
026	148058	SAMPLE	210060-001	Water	148058	02/19/09 12:59	1.0	
027	148058	SAMPLE	210075-003	Filtrate	148058	02/19/09 13:02	1.0	
028	148058	SAMPLE	210075-004	Filtrate	148058	02/19/09 13:04	1.0	
029	148058	SAMPLE	210075-005	Filtrate	148058	02/19/09 13:06	1.0	
030	148058	SAMPLE	210075-006	Filtrate	148058	02/19/09 13:09	1.0	
031	148058	CCV				02/19/09 13:11	1.0	3
032	148058	CCB				02/19/09 13:13	1.0	
033	148058	SAMPLE	210075-007	Filtrate	148058	02/19/09 13:16	1.0	
034	148058	SAMPLE	210075-008	Filtrate	148058	02/19/09 13:18	1.0	
035	148058	SAMPLE	210075-009	Filtrate	148058	02/19/09 13:21	1.0	
036	148058	SAMPLE	210075-010	Filtrate	148058	02/19/09 13:23	1.0	
037	148058	SAMPLE	210075-011	Filtrate	148058	02/19/09 13:25	1.0	
038	148058	SAMPLE	210075-012	Filtrate	148058	02/19/09 13:27	1.0	
039	148058	CCV				02/19/09 13:29	1.0	3
040	148058	CCB				02/19/09 13:32	1.0	
041	148058	BLANK	QC483894	Water	148064	02/19/09 14:00	1.0	
042	148058	BS	QC483895	Water	148064	02/19/09 14:02	1.0	
043	148058	BSD	QC483896	Water	148064	02/19/09 14:04	1.0	
044	148058	MSS	209893-001	Water	148064	02/19/09 14:07	1.0	
045	148058	X	QC483899	Water	148064	02/19/09 14:09	5.0	
046	148058	MS	QC483897	Water	148064	02/19/09 14:12	1.0	
047	148058	MSD	QC483898	Water	148064	02/19/09 14:14	1.0	
048	148058	SAMPLE	209892-002	Water	148064	02/19/09 14:16	1.0	
049	148058	SAMPLE	209892-005	Water	148064	02/19/09 14:19	1.0	
050	148058	SAMPLE	209892-006	Water	148064	02/19/09 14:21	1.0	
051	148058	CCV				02/19/09 14:23	1.0	3
052	148058	CCB				02/19/09 14:26	1.0	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 849072721

Instrument : MET14 Begun : 02/19/09 12:01
Method : EPA 7470A SOP Version : HG_water_rv12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	148058	SAMPLE	209892-007	Water	148064	02/19/09 14:28	1.0	
054	148058	SAMPLE	209892-008	Water	148064	02/19/09 14:30	1.0	
055	148058	SAMPLE	209893-002	Water	148064	02/19/09 14:33	1.0	
056	148058	SAMPLE	209893-003	Water	148064	02/19/09 14:35	1.0	
057	148058	SAMPLE	209893-005	Water	148064	02/19/09 14:37	1.0	
058	148058	SAMPLE	209928-001	Water	148064	02/19/09 14:40	1.0	
059	148058	SAMPLE	209928-002	Water	148064	02/19/09 14:42	1.0	
060	148058	SAMPLE	209928-003	Water	148064	02/19/09 14:45	1.0	
061	148058	SAMPLE	209928-004	Water	148064	02/19/09 14:48	1.0	
062	148058	SAMPLE	210061-003	Water	148064	02/19/09 14:50	1.0	
063	148058	CCV				02/19/09 14:52	1.0	3
064	148058	CCB				02/19/09 14:54	1.0	
065	148058	SAMPLE	210097-001	Water	148064	02/19/09 14:57	1.0	
066	148058	SAMPLE	210098-001	Water	148064	02/19/09 14:59	1.0	
067	148058	SAMPLE	210098-002	Water	148064	02/19/09 15:01	1.0	
068	148058	SAMPLE	210102-001	Water	148064	02/19/09 15:04	1.0	
069	148058	SER	QC483899	Water	148064	02/19/09 15:06	5.0	
070	148058	CCV				02/19/09 15:08	1.0	3
071	148058	CCB				02/19/09 15:10	1.0	
072	148058	BLANK	QC483900	Water	148065	02/19/09 15:23	1.0	
073	148058	BS	QC483901	Water	148065	02/19/09 15:25	1.0	
074	148058	BSD	QC483902	Water	148065	02/19/09 15:28	1.0	
075	148058	MSS	210123-004	Filtrate	148065	02/19/09 15:30	1.0	
076	148058	SER	QC483905	Filtrate	148065	02/19/09 15:32	5.0	
077	148058	MS	QC483903	Filtrate	148065	02/19/09 15:34	1.0	
078	148058	MSD	QC483904	Filtrate	148065	02/19/09 15:37	1.0	
079	148058	SAMPLE	209935-001	Water	148065	02/19/09 15:39	1.0	
080	148058	SAMPLE	209935-002	Water	148065	02/19/09 15:41	1.0	
081	148058	SAMPLE	209935-003	Water	148065	02/19/09 15:43	1.0	
082	148058	CCV				02/19/09 15:46	1.0	3
083	148058	CCB				02/19/09 15:48	1.0	
084	148058	SAMPLE	209935-004	Water	148065	02/19/09 15:51	1.0	
085	148058	SAMPLE	210021-001	Water	148065	02/19/09 15:54	1.0	
086	148058	SAMPLE	210021-002	Water	148065	02/19/09 15:57	1.0	
087	148058	SAMPLE	210065-001	Water	148065	02/19/09 16:00	1.0	
088	148058	SAMPLE	210065-002	Water	148065	02/19/09 16:03	1.0	
089	148058	SAMPLE	210069-001	Water	148065	02/19/09 16:06	1.0	
090	148058	SAMPLE	210076-001	Water	148065	02/19/09 16:08	1.0	
091	148058	SAMPLE	210123-002	Filtrate	148065	02/19/09 16:11	1.0	
092	148058	SAMPLE	210123-003	Filtrate	148065	02/19/09 16:14	1.0	
093	148058	SAMPLE	210123-005	Filtrate	148065	02/19/09 16:16	1.0	
094	148058	CCV				02/19/09 16:19	1.0	3
095	148058	CCB				02/19/09 16:21	1.0	
096	148058	SAMPLE	210123-006	Filtrate	148065	02/19/09 16:27	1.0	
097	148058	SAMPLE	210123-007	Filtrate	148065	02/19/09 16:29	1.0	
098	148058	SAMPLE	210123-008	Filtrate	148065	02/19/09 16:31	1.0	
099	148058	SAMPLE	210123-009	Filtrate	148065	02/19/09 16:34	1.0	
100	148058	CCV				02/19/09 16:36	1.0	3
101	148058	CCB				02/19/09 16:38	1.0	

RFW 02/19/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 71.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 849072721

Instrument : MET14 Begun : 02/19/09 12:01
Method : EPA 7470A SOP Version : HG_water_rv12

RFW 02/19/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 72 through 101.

Standards used: 1=S11412 2=S11414 3=S11415

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 METALS Water: EPA 7470A

Inst : MET14
Calnum : 849072721001
Units : ug/L

Date : 19-FEB-2009 12:01
X Axis : R

Reviewer : ---
Type : WATER

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	148058	849072721002	STD02REP1	19-FEB-2009 12:03	S11412 (500X)
L2	148058	849072721003	STD03REP1	19-FEB-2009 12:05	S11412 (200X)
L3	148058	849072721004	STD04REP1	19-FEB-2009 12:07	S11412 (50X)
L4	148058	849072721005	STD05REP1	19-FEB-2009 12:09	S11412 (20X)
L5	148058	849072721006	STD06REP1	19-FEB-2009 12:11	S11412 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	Flg
Mercury	3640.0	2684.0	2586.5	2520.2	2513.6	LINR	-0.0483	4.00E-4		2788.9	1.000	.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Mercury	0.200	21	0.500	-2	2.000	1	5.000	0	10.00	0

Instrument amount = a0 + response * a1 + response^2 * a2; LINR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 METALS Water
EPA 7470A

Inst : MET14
Calnum : 849072721001 Cal Date : 19-FEB-2009 Type : WATER

ICV 849072721007 (19-FEB-2009) stds: S11414

Analyte	Average RF	RF	Spiked	Quant	Units	%D	Max	Flags
Mercury	2788.9	2555.8	5.000	5.060	ug/L	1	10	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 METALS Water
EPA 7470A

Inst : MET14 IDF : 1.0
Seqnum : 849072721039 File : 148058 Time : 19-FEB-2009 13:29
Cal : 849072721001 Caldate : 19-FEB-2009 Caltype : WATER
Standards: S11415

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2788.9	2582.4	5.000	5.110	ug/L	2	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 7470A

Inst : MET14 IDF : 1.0
Seqnum : 849072721040 File : 148058 Time : 19-FEB-2009 13:32
Cal : 849072721001 Caldate : 19-FEB-2009 Caltype : WATER

Analyte	Quant	IQL	MDL	Units	Flags
Mercury	ND	0.2000	0.03335	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 METALS Water
EPA 7470A

Inst : MET14 IDF : 1.0
Seqnum : 849072721051 File : 148058 Time : 19-FEB-2009 14:23
Cal : 849072721001 Caldate : 19-FEB-2009 Caltype : WATER
Standards: S11415

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2788.9	2601.8	5.000	5.150	ug/L	3	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 7470A

Inst : MET14 IDF : 1.0
Seqnum : 849072721052 File : 148058 Time : 19-FEB-2009 14:26
Cal : 849072721001 Caldate : 19-FEB-2009 Caltype : WATER

Analyte	Quant	IQL	MDL	Units	Flags
Mercury	ND	0.2000	0.03335	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 METALS Water
EPA 7470A

Inst : MET14 IDF : 1.0
Seqnum : 849072721063 File : 148058 Time : 19-FEB-2009 14:52
Cal : 849072721001 Caldate : 19-FEB-2009 Caltype : WATER
Standards: S11415

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2788.9	2535.8	5.000	5.020	ug/L	0	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 7470A

Inst : MET14 IDF : 1.0
Seqnum : 849072721064 File : 148058 Time : 19-FEB-2009 14:54
Cal : 849072721001 Caldate : 19-FEB-2009 Caltype : WATER

Analyte	Quant	IQL	MDL	Units	Flags
Mercury	ND	0.2000	0.03335	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 METALS Water
EPA 7470A

Inst : MET14 IDF : 1.0
Seqnum : 849072721070 File : 148058 Time : 19-FEB-2009 15:08
Cal : 849072721001 Caldate : 19-FEB-2009 Caltype : WATER
Standards: S11415

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2788.9	2558.4	5.000	5.070	ug/L	1	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 METALS Water
EPA 7470A

Inst : MET14 IDF : 1.0
Seqnum : 849072721071 File : 148058 Time : 19-FEB-2009 15:10
Cal : 849072721001 Caldate : 19-FEB-2009 Caltype : WATER

Analyte	Quant	IQL	MDL	Units	Flags
Mercury	ND	0.2000	0.03335	ug/L	

SAMPLE PREPARATION SUMMARY

Batch # : 148064
Started By : RFW
Method : METHOD
Spike #1 ID : S11412

Prep Date : 19-FEB-2009 10:15

Analysis : HG
Finished By : RFW
Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
209892-002		Water	50	50	1	1.0						PP13/HG	
209892-005		Water	50	50	1	1.0						PP13/HG	
209892-006		Water	50	50	1	1.0						PP13/HG	
209892-007		Water	50	50	1	1.0						PP13/HG	
209892-008		Water	50	50	1	1.0						PP13/HG	
209893-001		Water	50	50	1	1.0						PP13/HG	
209893-002		Water	50	50	1	1.0						PP13/HG	
209893-003		Water	50	50	1	1.0						PP13/HG	
209893-005		Water	50	50	1	1.0						PP13/HG	
209928-001		Water	50	50	1	1.0						PP13/HG	
209928-002		Water	50	50	1	1.0						PP13/HG	
209928-003		Water	50	50	1	1.0						PP13/HG	
209928-004		Water	50	50	1	1.0						PP13/HG	
210061-003		Water	50	50	1	1.0						HG	
210076-001		Water	50	50	1	1.0						(rebatched)	
210097-001		Water	50	50	1	1.0						T22/HG	
210098-001		Water	50	50	1	1.0						HG	
210098-002		Water	50	50	1	1.0						HG	
210102-001		Water	50	50	1	1.0						T22/HG	
QC483894	BLANK	Water	50	50	1	1.0							
QC483895	BS	Water	50	50	1	1.0		2.5					
QC483896	BSD	Water	50	50	1	1.0		2.5					
QC483897	MS	Water	50	50	1	1.0		2.5					
QC483898	MSD	Water	50	50	1	1.0		2.5					
QC483899	SER	Water	50	50	1	1.0							

Reviewed by: RFW Date: 02/19/09

Water Digestion for Mercury

Curtis & Tompkins, Ltd.

LIMS Batch #: 148064

Date Digested: 2/19/09

Digestion Method

☒ EPA 7470A/ EPA 245.1

☐ _____

BK2827

Page 57

Sample #	container ID	Volume Sample (mL)	Final Volume (mL)	Filtered? (y/n)	Comments
209892-002	E	50	50	N	
5	B				
6					
7					
8					
209893-001	G				MSS
2	D				
3					
5					
209928-001	A				
2					
3					
4					
210061-003	A				
210097-001	D				
210098-001	I				
2	I				
210102-001	F				
MB QC483894					
BS 95					
BSD 96					
MS 97					209893-001
MSD 98					

	Reagent ID/ LIMS# / Time	Initials / Date
Digestion Tube Lot #	CV081203	RW 2/19/09
2.5 mL of spike solution was added to all spikes	S11412	
ICAL Source LIMS S#	S11413	
ICV / CCV LIMS S#	S11414/S11415	
Digestion Temperature (degrees C)	95	
Digestion Started at (time)	1015	
concentrated H_2SO_4	G35026	
concentrated HNO_3	G47039	
5% $KMnO_4$	021009	
5% $K_2S_2O_8$	121208	
NaCl.hydroxylamine hydrochloride	020909	
Stannous Chloride	021209	
Digestion Completed at (time)	1215	
☐ filtered thru' 0.45 um syringe filter (lot #)		

2/19/09

Prep Chemist / Date

Continued from page ____

Continued on page ____

2/19/09

Reviewed by / Date

Laboratory Job Number 210098

ANALYTICAL REPORT

Ion Chromatography

Matrix: Water

Curtis & Tompkins, Ltd.

Chloride

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	148133
Units:	mg/L	Received:	02/18/09

Field ID:	E051	Diln Fac:	10.00
Type:	SAMPLE	Sampled:	02/18/09 07:50
Lab ID:	210098-001	Analyzed:	02/21/09 04:49

Analyte	Result	RL
Chloride	120	2.0

Field ID:	E049	Diln Fac:	5.000
Type:	SAMPLE	Sampled:	02/18/09 10:14
Lab ID:	210098-002	Analyzed:	02/21/09 09:10

Analyte	Result	RL
Chloride	30	1.0

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC484207	Analyzed:	02/20/09 15:18

Analyte	Result	RL
Chloride	ND	0.20

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Chloride

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	EPA 300.0
Field ID:	ZZZZZZZZZZ	Batch#:	148133
MSS Lab ID:	210166-007	Sampled:	02/19/09 08:26
Matrix:	Water	Received:	02/19/09
Units:	mg/L		

Type: BS Diln Fac: 1.000
Lab ID: QC484208 Analyzed: 02/20/09 15:39

Analyte	Spiked	Result	%REC	Limits
Chloride	4.000	4.133	103	90-110

Type: BSD Diln Fac: 1.000
Lab ID: QC484209 Analyzed: 02/20/09 15:57

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	4.000	4.098	102	90-110	1	20

Type: MS Diln Fac: 1.020
Lab ID: QC484210 Analyzed: 02/21/09 02:47

Analyte	MSS Result	Spiked	Result	%REC	Limits
Chloride	8.503	2.040	10.68	107 NM	80-120

Type: MSD Diln Fac: 1.020
Lab ID: QC484211 Analyzed: 02/21/09 03:05

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	2.040	10.64	105 NM	80-120	0	25

NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 210098 IC Water: EPA 300.0

Inst : IC03
Calnum : 629003521001
Units : mg/L

Name : IC03 CAL 002
Date : 02-JAN-2009 13:09
X Axis : A

Inj Vol : 25 uL

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	002_14	629003521014	L1	02-JAN-2009 13:09	S11105 (500X)
L2	002_15	629003521015	L2	02-JAN-2009 13:26	S11105 (250X)
L3	002_16	629003521016	L3	02-JAN-2009 13:43	S11105 (100X)
L4	002_17	629003521017	L4	02-JAN-2009 14:01	S11105 (25X)
L5	002_18	629003521018	L5	02-JAN-2009 14:18	S11105 (10X)
L6	002_19	629003521019	L6	02-JAN-2009 14:36	S11105 (5X)

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	Flg
Chloride	0.1450	0.1372	0.1384	0.1431	0.1531	0.1644	QORG		0.14042	0.001204	0.1469	1.000	0.990	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Chloride	0.200	3	0.400	-3	1.000	-2	4.000	-1	10.00	0	20.00	0

JLM 01/02/09 : ical pts integrated to match previous icals

Analyst: JLM Date: 01/02/09 Reviewer: LW Date: 01/07/09

Instrument response = a0 + amount * a1 + amount^2 * a2 (invert equation before quantitating); QORG=Quadratic regression forced through origin

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 210098 IC Water
EPA 300.0

Inst : IC03 Name : IC03 CAL 002
Calnum : 629003521001 Cal Date : 02-JAN-2009

ICV 629003521021 (002_21 02-JAN-2009) stds: S10785 (25X)

Analyte	Average RF	RF	Spiked	Quant	Units	%D	Max	Flags
Chloride	0.1469	0.1400	2.000	1.962	mg/L	-2	10	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 IC Water
EPA 300.0

Inst : IC03 Run Name : H IDF : 1.0
Seqnum : 629069768261 File : 048_261 Time : 20-FEB-2009 15:00
Cal : 629003521001 Caldate : 02-JAN-2009
Standards: S11105 (10X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Chloride	0.1469	0.1593	10.00	10.42	mg/L	4	10	

JLM 02/20/09 : Integrated to match integration of ICAL and CCV .

Analyst: JLM Date: 02/20/09 Reviewer: LW Date: 02/23/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 IC Water
EPA 300.0

Inst : IC03 Run Name : M IDF : 1.0
Seqnum : 629069768273 File : 048_273 Time : 20-FEB-2009 18:40
Cal : 629003521001 Caldate : 02-JAN-2009
Standards: S11105 (25X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Chloride	0.1469	0.1487	4.000	4.091	mg/L	2	10	

JLM 02/20/09 : Integrated to match integration of ICAL and CCV .

Analyst: JLM Date: 02/20/09 Reviewer: LW Date: 02/23/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 IC Water
EPA 300.0

Inst : IC03 Run Name : H IDF : 1.0
Seqnum : 629069768297 File : 048_297 Time : 21-FEB-2009 01:38
Cal : 629003521001 Caldate : 02-JAN-2009
Standards: S11105 (10X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Chloride	0.1469	0.1603	10.00	10.47	mg/L	5	10	

JLM 02/21/09 : Integrated to match integration of ICAL and CCV .

Analyst: JLM Date: 02/21/09 Reviewer: LW Date: 02/23/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 IC Water
EPA 300.0

Inst : IC03 Run Name : M IDF : 1.0
Seqnum : 629069768311 File : 048_311 Time : 21-FEB-2009 05:41
Cal : 629003521001 Caldate : 02-JAN-2009
Standards: S11105 (25X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Chloride	0.1469	0.1495	4.000	4.114	mg/L	3	10	

JLM 02/21/09 : Integrated to match integration of ICAL and CCV .

Analyst: JLM Date: 02/21/09 Reviewer: LW Date: 02/23/09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 210098 IC Water
EPA 300.0

Inst : IC03 Run Name : H IDF : 1.0
Seqnum : 629069768324 File : 048_324 Time : 21-FEB-2009 09:28
Cal : 629003521001 Caldate : 02-JAN-2009
Standards: S11105 (10X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Chloride	0.1469	0.1589	10.00	10.39	mg/L	4	10	

JLM 02/21/09 : Integrated to match integration of ICAL and CCV .

Analyst: JLM Date: 02/21/09 Reviewer: LW Date: 02/23/09

CURTIS & TOMPKINS BLANK USER REPORT FOR 210098 IC Water
EPA 300.0

Inst : IC03 Run Name : QC484207 IDF : 1.0
Seqnum : 629069768262.4 File : 048_262 Time : 20-FEB-2009 15:18

Analyte	Cal	Caldate	Quant	IQL	MDL	Units	Flags
Chloride	629003521001	02-JAN-2009	ND	0.2000	0.02734	mg/L	u

Analyst: MJB Date: 02/23/09 Reviewer: LW Date: 02/24/09

u=use

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 IC Water
EPA 300.0

Inst : IC03 IDF : 1.0
Seqnum : 629069768274 File : 048_274 Time : 20-FEB-2009 18:57

Analyte	Cal	Caldate	Quant	IQL	MDL	Units	Flags
Chloride	629003521001	02-JAN-2009	ND	0.2000	0.02734	mg/L	

JLM 02/20/09 : Integrated to match integration of ICAL and CCV .

Analyst: JLM Date: 02/20/09 Reviewer: LW Date: 02/23/09

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 IC Water
EPA 300.0

Inst : IC03 IDF : 1.0
Seqnum : 629069768298 File : 048_298 Time : 21-FEB-2009 01:55

Analyte	Cal	Caldate	Quant	IQL	MDL	Units	Flags
Chloride	629003521001	02-JAN-2009	ND	0.2000	0.02734	mg/L	

Analyst: JLM Date: 02/21/09 Reviewer: LW Date: 02/23/09

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 IC Water
EPA 300.0

Inst : IC03 IDF : 1.0
Seqnum : 629069768312 File : 048_312 Time : 21-FEB-2009 05:59

Analyte	Cal	Caldate	Quant	IQL	MDL	Units	Flags
Chloride	629003521001	02-JAN-2009	ND	0.2000	0.02734	mg/L	

Analyst: JLM Date: 02/21/09 Reviewer: LW Date: 02/23/09

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 210098 IC Water
EPA 300.0

Inst : IC03 IDF : 1.0
Seqnum : 629069768325 File : 048_325 Time : 21-FEB-2009 09:45

Analyte	Cal	Caldate	Quant	IQL	MDL	Units	Flags
Chloride	629003521001	02-JAN-2009	ND	0.2000	0.02734	mg/L	

Analyst: JLM Date: 02/21/09 Reviewer: LW Date: 02/23/09

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 629003521

Instrument : IC03 Begun : 01/02/09 10:41
Method : EPA 300.0 SOP Version : ANIONS_300_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
007	002_7	X	AS14A 10X			01/02/09 10:41	1.0		
008	002_8	X	BLK			01/02/09 10:58	1.0		
009	002_9	X	BLK			01/02/09 11:16	1.0		
010	002_10	X	CCV			01/02/09 11:45	1.0	1	
011	002_11	X	BLK			01/02/09 12:03	1.0		
012	002_12	X	CCV			01/02/09 12:32	1.0	2	
013	002_13	IB	CALIB			01/02/09 12:49	1.0		
014	002_14	ICAL	L1			01/02/09 13:09	1.0	2	
015	002_15	ICAL	L2			01/02/09 13:26	1.0	2	
016	002_16	ICAL	L3			01/02/09 13:43	1.0	2	
017	002_17	ICAL	L4			01/02/09 14:01	1.0	2	
018	002_18	ICAL	L5			01/02/09 14:18	1.0	2	
019	002_19	ICAL	L6			01/02/09 14:36	1.0	2	
020	002_20	ICB				01/02/09 14:53	1.0		
021	002_21	ICV				01/02/09 15:11	1.0	1	
022	002_22	CCB/MB	QC477859	Water	146584	01/02/09 15:28	1.0		
023	002_23	BS	QC477860	Water	146584	01/02/09 15:45	1.0	2	
024	002_24	BSD	QC477861	Water	146584	01/02/09 16:03	1.0	2	
025	002_25	MSS	208903-005	Water	146584	01/02/09 16:27	10.0		
026	002_26	MS	QC477862	Water	146584	01/02/09 16:45	10.0	2	
027	002_27	MSD	QC477863	Water	146584	01/02/09 17:02	10.0	2	
028	002_28	SAMPLE	208903-001	Water	146584	01/02/09 17:19	1.0		
029	002_29	X	BLK		146584	01/02/09 17:37	1.0		
030	002_30	X	BLK		146584	01/02/09 17:54	1.0		
031	002_31	SAMPLE	208903-002	Water	146584	01/02/09 18:12	5.0		
032	002_32	X	BLK		146584	01/02/09 18:29	1.0		
033	002_33	SAMPLE	208903-003	Water	146584	01/02/09 18:47	1.0		
034	002_34	X	BLK		146584	01/02/09 19:04	1.0		
035	002_35	X	BLK		146584	01/02/09 19:21	1.0		
036	002_36	SAMPLE	208903-004	Water	146584	01/02/09 19:39	1.0		1:CL=48
037	002_37	X	BLK		146584	01/02/09 19:56	1.0		
038	002_38	X	BLK		146584	01/02/09 20:14	1.0		
039	002_39	CCV	H		146584	01/02/09 20:31	1.0	2	
040	002_40	CCB			146584	01/02/09 20:48	1.0		
041	002_41	X	CCV		146584	01/02/09 21:06	1.0	2	
042	002_42	X	CCB		146584	01/02/09 21:23	1.0		
043	002_43	SAMPLE	208903-006	Water	146584	01/02/09 21:41	10.0		
044	002_44	SAMPLE	208903-009	Water	146584	01/02/09 21:58	10.0		
045	002_45	SAMPLE	208903-010	Water	146584	01/02/09 22:15	5.0		
046	002_46	X	BLK		146584	01/02/09 22:33	1.0		
047	002_47	SAMPLE	208903-011	Water	146584	01/02/09 22:50	5.0		1:CL=84
048	002_48	X	BLK		146584	01/02/09 23:08	1.0		
049	002_49	CCV	M		146584	01/02/09 23:25	1.0	2	
050	002_50	CCB			146584	01/02/09 23:42	1.0		
051	002_51	X	CCV		146584	01/03/09 00:00	1.0	2	
052	002_52	X	CCB		146584	01/03/09 00:17	1.0		

JLM 01/03/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 7 through 52.

Analyst: JLM Date: 01/02/09 Reviewer: LW Date: 01/07/09

Standards used: 1=S10785 2=S11105

Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 629069768

Instrument : IC03 Begun : 02/17/09 10:48
Method : EPA 300.0 SOP Version : ANIONS_300_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
007	048_7	X	AS14A 10X			02/17/09 10:48	1.0		
008	048_8	X	BLK			02/17/09 11:05	1.0		
009	048_9	X	BLK			02/17/09 11:23	1.0		
010	048_10	X	BLK			02/17/09 11:40	1.0		
011	048_11	CCV	L			02/17/09 12:00	1.0	1	
012	048_12	CCB/MB	QC483505	Water	147967	02/17/09 12:35	1.0		
013	048_13	BS	QC483506	Water	147967	02/17/09 12:53	1.0	1	
014	048_14	BSD	QC483507	Water	147967	02/17/09 13:10	1.0	1	
015	048_15	MSS	210041-003	Water	147967	02/17/09 13:27	25.0		
016	048_16	SAMPLE	210041-006	Water	147967	02/17/09 13:45	25.0		
017	048_17	SAMPLE	210041-002	Water	147967	02/17/09 14:02	1.0		
018	048_18	SAMPLE	210041-001	Water	147967	02/17/09 14:20	1.0		
019	048_19	SAMPLE	210041-005	Water	147967	02/17/09 14:37	1.0		2:SO4=130
020	048_20	MSS	210041-003	Water	147967	02/17/09 14:54	1.0		2:CL=170
021	048_21	X	BLK		147967	02/17/09 15:12	1.0		
022	048_22	X	BLK		147967	02/17/09 15:29	1.0		
023	048_23	SAMPLE	210041-006	Water	147967	02/17/09 15:47	1.0		2:CL=170
024	048_24	X	BLK		147967	02/17/09 16:04	1.0		
025	048_25	X	BLK		147967	02/17/09 16:21	1.0		
026	048_26	CCV	M		147967	02/17/09 16:39	1.0	1	
027	048_27	CCB			147967	02/17/09 16:56	1.0		
028	048_28	SAMPLE	210056-004	Water	147967	02/17/09 17:14	5.0		
029	048_29	SAMPLE	210068-005	Water	147967	02/17/09 18:44	10.0		
030	048_30	SAMPLE	210068-006	Water	147967	02/17/09 19:01	50.0		
031	048_31	SAMPLE	210068-007	Water	147967	02/17/09 19:19	100.0		
032	048_32	SAMPLE	210068-008	Water	147967	02/17/09 19:36	5.0		
033	048_33	SAMPLE	210068-009	Water	147967	02/17/09 19:53	100.0		
034	048_34	SAMPLE	210068-005	Water	147967	02/17/09 20:26	1.0		1:CL=42
035	048_35	X	BLK		147967	02/17/09 20:43	1.0		
036	048_36	X	BLK		147967	02/17/09 21:00	1.0		
037	048_37	SAMPLE	210068-006	Water	147967	02/17/09 21:18	2.0		1:CL=160
038	048_38	X	BLK		147967	02/17/09 21:35	1.0		
039	048_39	X	BLK		147967	02/17/09 21:53	1.0		
040	048_40	SAMPLE	210067-002	Water	147967	02/17/09 22:10	1.0		2:SO4=250
041	048_41	X	BLK		147967	02/17/09 22:27	1.0		
042	048_42	SAMPLE	210067-001	Water	147967	02/17/09 22:45	2.0		2:SO4=210
043	048_43	X	BLK		147967	02/17/09 23:02	1.0		
044	048_44	X	BLK		147967	02/17/09 23:20	1.0		
045	048_45	CCV	H		147967	02/17/09 23:37	1.0	1	
046	048_46	CCB			147967	02/17/09 23:54	1.0		
047	048_47	X	H		147967	02/18/09 00:12	1.0	1	
048	048_48	X			147967	02/18/09 00:29	1.0		
049	048_49	SAMPLE	210067-003	Water	147967	02/18/09 00:47	2.0		2:SO4=380
050	048_50	X	BLK		147967	02/18/09 01:04	1.0		
051	048_51	X	BLK		147967	02/18/09 01:21	1.0		
052	048_52	SAMPLE	210067-004	Water	147967	02/18/09 01:39	2.0		2:SO4=430
053	048_53	X	BLK		147967	02/18/09 01:56	1.0		
054	048_54	X	BLK		147967	02/18/09 02:14	1.0		
055	048_55	SAMPLE	210067-005	Water	147967	02/18/09 02:31	2.0		2:SO4=390
056	048_56	X	BLK		147967	02/18/09 02:48	1.0		
057	048_57	X	BLK		147967	02/18/09 03:06	1.0		
058	048_58	SAMPLE	210067-006	Water	147967	02/18/09 03:23	2.0		2:SO4=370

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 629069768

Instrument : IC03 Begun : 02/17/09 10:48
Method : EPA 300.0 SOP Version : ANIONS_300_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
059	048_59	X	BLK		147967	02/18/09 03:41	1.0		
060	048_60	X	BLK		147967	02/18/09 03:58	1.0		
061	048_61	SAMPLE	210067-007	Water	147967	02/18/09 04:16	2.0		2:SO4=210
062	048_62	X	BLK		147967	02/18/09 04:33	1.0		
063	048_63	X	BLK		147967	02/18/09 04:50	1.0		
064	048_64	SAMPLE	210068-007	Water	147967	02/18/09 05:08	1.0		1:CL=140
065	048_65	X	BLK		147967	02/18/09 05:25	1.0		
066	048_66	X	BLK		147967	02/18/09 05:43	1.0		
067	048_67	SAMPLE	210068-008	Water	147967	02/18/09 06:00	1.0		2:SO4=140
068	048_68	X	BLK		147967	02/18/09 06:17	1.0		
069	048_69	SAMPLE	210068-009	Water	147967	02/18/09 06:35	1.0		1:CL=46
070	048_70	X	BLK		147967	02/18/09 06:52	1.0		
071	048_71	X	BLK		147967	02/18/09 07:10	1.0		
072	048_72	SAMPLE	210067-001	Water	147967	02/18/09 07:27	50.0		
073	048_73	SAMPLE	210056-004	Water	147967	02/18/09 07:44	1.0		2:SO4=84
074	048_74	CCV	M		147967	02/18/09 08:02	1.0	1	
075	048_75	CCB			147967	02/18/09 08:19	1.0		
076	048_76	X	M		147967	02/18/09 08:37	1.0	1	
077	048_77	X	CCB		147967	02/18/09 08:54	1.0		
078	048_78	MS	QC483603	Water	147967	02/18/09 09:12	25.0	1	
079	048_79	MSD	QC483604	Water	147967	02/18/09 09:29	25.0	1	
080	048_80	SAMPLE	210067-001	Water	147967	02/18/09 09:46	25.0		
081	048_81	SAMPLE	210067-002	Water	147967	02/18/09 10:04	5.0		1:SO4=56
082	048_82	SAMPLE	210067-002	Water	147967	02/18/09 10:21	10.0		
083	048_83	SAMPLE	210067-003	Water	147967	02/18/09 10:39	50.0		
084	048_84	SAMPLE	210067-004	Water	147967	02/18/09 10:56	50.0		
085	048_85	SAMPLE	210067-005	Water	147967	02/18/09 11:14	50.0		
086	048_86	SAMPLE	210067-006	Water	147967	02/18/09 11:31	50.0		
087	048_87	SAMPLE	210067-007	Water	147967	02/18/09 11:48	25.0		
088	048_88	CCV	H		147967	02/18/09 12:06	1.0	1	
089	048_89	CCB			147967	02/18/09 12:23	1.0		
090	048_90	MSS	210041-003	Water	147967	02/18/09 12:41	2.0		1:CL=100
091	048_91	X	BLK		147967	02/18/09 12:58	1.0		
092	048_92	SAMPLE	210068-006	Water	147967	02/18/09 13:15	1.0		2:CL=240
093	048_93	X	BLK		147967	02/18/09 13:35	1.0		
094	048_94	X	BLK		147967	02/18/09 13:53	1.0		
095	048_95	SAMPLE	210041-006	Water	147967	02/18/09 14:10	2.0		1:CL=100
096	048_96	X	BLK		147967	02/18/09 14:27	1.0		
097	048_97	SAMPLE	210041-005	Water	147967	02/18/09 14:45	10.0		
098	048_98	CCV	M			02/18/09 15:02	1.0	1	
099	048_99	CCB/MB	QC483784	Water	148032	02/18/09 15:20	1.0		
100	048_100	BS	QC483785	Water	148032	02/18/09 15:37	1.0	1	
101	048_101	BSD	QC483786	Water	148032	02/18/09 15:55	1.0	1	
102	048_102	SAMPLE	210074-004	Water	148032	02/18/09 16:12	1.0		1:CL=100
103	048_103	SAMPLE	210074-008	Water	148032	02/18/09 16:29	10.0		1:CL=60
104	048_104	SAMPLE	210070-001	Water	148032	02/18/09 16:47	25.0		
105	048_105	SAMPLE	210074-008	Water	148032	02/18/09 17:04	1.0		1:CL=300
106	048_106	X	BLK		148032	02/18/09 17:21	1.0		
107	048_107	SAMPLE	210114-002	Water	148032	02/18/09 17:39	5.0		
108	048_108	MSS	210116-003	Water	148032	02/18/09 18:01	5.0		
109	048_109	CCV	H		148032	02/18/09 18:18	1.0	1	
110	048_110	CCB			148032	02/18/09 18:36	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 629069768

Instrument : IC03 Begun : 02/17/09 10:48
Method : EPA 300.0 SOP Version : ANIONS_300_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
111	048_111	SAMPLE	210118-001	Water	148032	02/18/09 18:53	10.0		
112	048_112	SAMPLE	210116-006	Water	148032	02/18/09 19:10	1.0		1:CL=31
113	048_113	X	BLK		148032	02/18/09 19:28	1.0		
114	048_114	X	BLK		148032	02/18/09 19:45	1.0		
115	048_115	SAMPLE	210070-001	Water	148032	02/18/09 20:03	1.0		2:SO4=380
116	048_116	X	BLK		148032	02/18/09 20:20	1.0		
117	048_117	X	BLK		148032	02/18/09 20:38	1.0		
118	048_118	SAMPLE	210116-007	Water	148032	02/18/09 20:55	1.0		1:CL=31
119	048_119	X	BLK		148032	02/18/09 21:12	1.0		
120	048_120	X	BLK		148032	02/18/09 21:30	1.0		
121	048_121	MSS	210116-003	Water	148032	02/18/09 21:47	1.0		2:SO4=94
122	048_122	X	BLK		148032	02/18/09 22:05	1.0		
123	048_123	SAMPLE	210116-004	Water	148032	02/18/09 22:22	1.0		2:SO4=160
124	048_124	X	BLK		148032	02/18/09 22:39	1.0		
125	048_125	MS	QC483811	Water	148032	02/18/09 22:57	5.0	1	
126	048_126	MSD	QC483812	Water	148032	02/18/09 23:14	5.0	1	
127	048_127	X	QC483811		148032	02/18/09 23:32	5.0	1	
128	048_128	X	QC483812		148032	02/18/09 23:49	5.0	1	
129	048_129	CCV	M		148032	02/19/09 00:06	1.0	1	
130	048_130	CCB			148032	02/19/09 00:24	1.0		
131	048_131	X	CCV		148032	02/19/09 00:41	1.0	1	
132	048_132	X	CCB		148032	02/19/09 00:59	1.0		
133	048_133	SAMPLE	210116-004	Water	148032	02/19/09 01:16	5.0		
134	048_134	SAMPLE	210114-002	Water	148032	02/19/09 01:34	2.0		1:CL=42
135	048_135	X	BLK		148032	02/19/09 01:51	1.0		
136	048_136	SAMPLE	210114-001	Water	148032	02/19/09 02:08	1.0		1:CL=36
137	048_137	X	BLK		148032	02/19/09 02:26	1.0		
138	048_138	SAMPLE	210114-001	Water	148032	02/19/09 02:43	5.0		
139	048_139	SAMPLE	210118-001	Water	148032	02/19/09 03:01	5.0		1:CL=21
140	048_140	SAMPLE	210118-002	Water	148032	02/19/09 03:18	5.0		
141	048_141	SAMPLE	210118-004	Water	148032	02/19/09 03:35	5.0		
142	048_142	SAMPLE	210118-002	Water	148032	02/19/09 03:53	1.0		1:CL=74
143	048_143	X	BLK		148032	02/19/09 04:10	1.0		
144	048_144	SAMPLE	210118-004	Water	148032	02/19/09 04:28	1.0		2:CL=82
145	048_145	X	BLK		148032	02/19/09 04:45	1.0		
146	048_146	CCV	H		148032	02/19/09 05:02	1.0	1	
147	048_147	CCB			148032	02/19/09 05:20	1.0		
148	048_148	X	CCV		148032	02/19/09 05:37	1.0	1	
149	048_149	X	CCB		148032	02/19/09 05:55	1.0		
150	048_150	SAMPLE	210117-006	Water	148032	02/19/09 06:12	1.0		2:CL=110
151	048_151	X	BLK		148032	02/19/09 06:30	1.0		
152	048_152	X	BLK		148032	02/19/09 06:47	1.0		
153	048_153	SAMPLE	210117-008	Water	148032	02/19/09 07:04	1.0		2:CL=200
154	048_154	X	BLK		148032	02/19/09 07:22	1.0		
155	048_155	X	BLK		148032	02/19/09 07:39	1.0		
156	048_156	SAMPLE	210117-005	Water	148032	02/19/09 07:57	2.0		2:CL=270
157	048_157	X	BLK		148032	02/19/09 08:14	1.0		
158	048_158	X	BLK		148032	02/19/09 08:31	1.0		
159	048_159	SAMPLE	210117-009	Water	148032	02/19/09 08:49	10.0		1:CL=330
160	048_160	X	BLK		148032	02/19/09 09:06	1.0		
162	048_162	SAMPLE	210117-004	Water	148032	02/19/09 09:41	2.0		2:SO4=180
163	048_163	X	BLK		148032	02/19/09 09:58	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 629069768

Instrument : IC03 Begun : 02/17/09 10:48
Method : EPA 300.0 SOP Version : ANIONS_300_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
164	048_164	SAMPLE	210117-004	Water	148032	02/19/09 10:16	1.0		2:SO4=310
165	048_165	X	BLK		148032	02/19/09 10:33	1.0		
166	048_166	X	BLK		148032	02/19/09 10:51	1.0		
167	048_167	SAMPLE	210117-004	Water	148032	02/19/09 11:08	25.0		
168	048_168	SAMPLE	210117-005	Water	148032	02/19/09 11:25	5.0		1:CL=150
169	048_169	SAMPLE	210117-008	Water	148032	02/19/09 11:43	10.0		1:CL=32
170	048_170	SAMPLE	210117-006	Water	148032	02/19/09 12:00	5.0		1:CL=30
171	048_171	X	BLK		148032	02/19/09 12:18	1.0		
172	048_172	CCV	M			02/19/09 12:35	1.0	1	
173	048_173	CCB/MB	QC483941	Water	148077	02/19/09 12:53	1.0		
174	048_174	BS	QC483942	Water	148077	02/19/09 13:10	1.0	1	
175	048_175	BSD	QC483943	Water	148077	02/19/09 13:27	1.0	1	
176	048_176	SAMPLE	210115-011	Water	148077	02/19/09 13:45	1000		
177	048_177	SAMPLE	210115-005	Water	148077	02/19/09 14:02	10.0		2:CL=270
178	048_178	X	BLK		148077	02/19/09 14:20	1.0		
179	048_179	SAMPLE	210115-012	Water	148077	02/19/09 14:48	5.0		2:CL=250
180	048_180	X	BLK		148077	02/19/09 15:06	1.0		
181	048_181	SAMPLE	210115-006	Water	148077	02/19/09 15:23	1.0		
182	048_182	SAMPLE	210115-007	Water	148077	02/19/09 15:44	2500		
183	048_183	SAMPLE	210115-002	Water	148077	02/19/09 16:01	25.0		1:CL=280
184	048_184	X	BLK		148077	02/19/09 16:19	1.0		
185	048_185	SAMPLE	210115-003	Water	148077	02/19/09 16:36	25.0		1:CL=310
186	048_186	X	BLK		148077	02/19/09 16:55	1.0		
187	048_187	CCV	H		148077	02/19/09 17:13	1.0	1	
188	048_188	CCB			148077	02/19/09 17:30	1.0		
189	048_189	SAMPLE	210162-001	Water	148077	02/19/09 17:47	1.0		
190	048_190	MSS	210163-001	Water	148077	02/19/09 18:05	1.0		3:SO4=68
191	048_191	SAMPLE	210166-017	Water	148077	02/19/09 18:29	2500		
192	048_192	SAMPLE	210166-013	Water	148077	02/19/09 18:46	100.0		
193	048_193	SAMPLE	210166-014	Water	148077	02/19/09 19:03	25.0		
194	048_194	SAMPLE	210115-011	Water	148077	02/19/09 19:21	25.0		2:CL=280
195	048_195	X	BLK		148077	02/19/09 19:38	1.0		
196	048_196	X	BLK		148077	02/19/09 19:56	1.0		
197	048_197	SAMPLE	210115-007	Water	148077	02/19/09 20:13	50.0		2:CL=270
198	048_198	X	BLK		148077	02/19/09 20:30	1.0		
199	048_199	X	BLK		148077	02/19/09 20:48	1.0		
200	048_200	SAMPLE	210115-008	Water	148077	02/19/09 21:05	100.0		1:CL=180
201	048_201	X	BLK		148077	02/19/09 21:23	1.0		
202	048_202	SAMPLE	210115-009	Water	148077	02/19/09 21:40	100.0		1:CL=200
203	048_203	X	BLK		148077	02/19/09 21:57	1.0		
204	048_204	SAMPLE	210166-017	Water	148077	02/19/09 22:15	100.0		1:CL=190
205	048_205	X	BLK		148077	02/19/09 22:32	1.0		
206	048_206	CCV	M		148077	02/19/09 22:50	1.0	1	
207	048_207	CCB			148077	02/19/09 23:07	1.0		
208	048_208	X	CCV		148077	02/19/09 23:24	1.0	1	
209	048_209	X	CCB		148077	02/19/09 23:42	1.0		
210	048_210	SAMPLE	210166-018	Water	148077	02/19/09 23:59	100.0		2:CL=200
211	048_211	X	BLK		148077	02/20/09 00:17	1.0		
212	048_212	SAMPLE	210163-002	Water	148077	02/20/09 00:34	1.0		1:CL=88
213	048_213	X	BLK		148077	02/20/09 00:52	1.0		
214	048_214	SAMPLE	210162-002	Water	148077	02/20/09 01:09	1.0		
215	048_215	SAMPLE	210162-003	Water	148077	02/20/09 01:26	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 629069768

Instrument : IC03 Begun : 02/17/09 10:48
Method : EPA 300.0 SOP Version : ANIONS_300_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
216	048_216	SAMPLE	210166-013	Water	148077	02/20/09 01:44	5.0		1:CL=150
217	048_217	X	BLK		148077	02/20/09 02:01	1.0		
218	048_218	SAMPLE	210166-004	Water	148077	02/20/09 02:19	25.0		1:CL=260
219	048_219	X	BLK		148077	02/20/09 02:36	1.0		
220	048_220	X	BLK		148077	02/20/09 02:53	1.0		
221	048_221	SAMPLE	210166-008	Water	148077	02/20/09 03:11	50.0		2:CL=250
222	048_222	X	BLK		148077	02/20/09 03:28	1.0		
223	048_223	X	BLK		148077	02/20/09 03:46	1.0		
224	048_224	SAMPLE	210166-014	Water	148077	02/20/09 04:03	1.0		2:CL=210
225	048_225	X	BLK		148077	02/20/09 04:20	1.0		
226	048_226	X	BLK		148077	02/20/09 04:38	1.0		
227	048_227	MS	QC484055	Water	148077	02/20/09 04:55	5.0	1	
228	048_228	MSD	QC484056	Water	148077	02/20/09 05:13	5.0	1	
229	048_229	CCV	H		148077	02/20/09 05:30	1.0	1	
230	048_230	CCB			148077	02/20/09 05:47	1.0		
231	048_231	X	CCV		148077	02/20/09 06:05	1.0	1	
232	048_232	X	CCB		148077	02/20/09 06:22	1.0		
233	048_233	MSS	210163-001	Water	148077	02/20/09 06:40	5.0		
234	048_234	SAMPLE	210115-005	Water	148077	02/20/09 06:57	250.0		1:CL=23
235	048_235	SAMPLE	210115-005	Water	148077	02/20/09 07:15	50.0		1:CL=94
236	048_236	X	BLK		148077	02/20/09 07:32	1.0		
237	048_237	SAMPLE	210115-012	Water	148077	02/20/09 07:49	20.0		1:CL=99
238	048_238	X	BLK		148077	02/20/09 08:07	1.0		
239	048_239	SAMPLE	210115-012	Water	148077	02/20/09 08:24	200.0		
240	048_240	SAMPLE	210115-002	Water	148077	02/20/09 08:42	1000		
241	048_241	SAMPLE	210115-003	Water	148077	02/20/09 08:59	1000		
242	048_242	SAMPLE	210115-008	Water	148077	02/20/09 09:16	2500		
243	048_243	SAMPLE	210115-009	Water	148077	02/20/09 09:34	2500		
244	048_244	SAMPLE	210166-008	Water	148077	02/20/09 09:51	2500		
245	048_245	CCV	M		148077	02/20/09 10:09	1.0	1	
246	048_246	CCB			148077	02/20/09 10:26	1.0		
247	048_247	MS	QC484055	Water	148077	02/20/09 10:56	5.0	1	
248	048_248	MSD	QC484056	Water	148077	02/20/09 11:14	5.0	1	
249	048_249	SAMPLE	210166-018	Water	148077	02/20/09 11:31	2500		
250	048_250	SAMPLE	210166-004	Water	148077	02/20/09 11:49	1000		
251	048_251	SAMPLE	210115-005	Water	148077	02/20/09 12:06	500.0		
252	048_252	SAMPLE	210166-014	Water	148077	02/20/09 12:23	5.0		1:CL=65
253	048_253	SAMPLE	210166-018	Water	148077	02/20/09 12:41	200.0		1:CL=130
254	048_254	X	BLK		148077	02/20/09 12:58	1.0		
255	048_255	SAMPLE	210166-008	Water	148077	02/20/09 13:16	100.0		1:CL=160
256	048_256	X	BLK		148077	02/20/09 13:33	1.0		
257	048_257	SAMPLE	210115-011	Water	148077	02/20/09 13:51	100.0		1:CL=110
258	048_258	X	BLK		148077	02/20/09 14:08	1.0		
259	048_259	SAMPLE	210115-007	Water	148077	02/20/09 14:25	100.0		1:CL=170
260	048_260	X	BLK		148077	02/20/09 14:43	1.0		
261	048_261	CCV	H			02/20/09 15:00	1.0	1	
262	048_262	CCB/MB	QC484207	Water	148133	02/20/09 15:18	1.0		
263	048_263	BS	QC484208	Water	148133	02/20/09 15:39	1.0	1	
264	048_264	BSD	QC484209	Water	148133	02/20/09 15:57	1.0	1	
265	048_265	MSS	210166-007	Water	148133	02/20/09 16:14	1.0		
266	048_266	SAMPLE	210166-010	Water	148133	02/20/09 16:32	20.0		1:CL=280
267	048_267	X	BLK		148133	02/20/09 16:55	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 629069768

Instrument : IC03 Begun : 02/17/09 10:48
Method : EPA 300.0 SOP Version : ANIONS_300_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
268	048_268	SAMPLE	210184-003	Water	148133	02/20/09 17:13	25.0		
269	048_269	SAMPLE	210204-001	Water	148133	02/20/09 17:30	1.0		1:CL=27
270	048_270	SAMPLE	210184-001	Water	148133	02/20/09 17:48	5.0		1:CL=42
271	048_271	SAMPLE	210184-002	Water	148133	02/20/09 18:05	25.0		1:CL=55
272	048_272	SAMPLE	210166-012	Water	148133	02/20/09 18:22	1.0		2:SO4=110
273	048_273	CCV	M		148133	02/20/09 18:40	1.0	1	
274	048_274	CCB			148133	02/20/09 18:57	1.0		
275	048_275	SAMPLE	210166-003	Water	148133	02/20/09 19:15	25.0		2:CL=270
276	048_276	X	BLK		148133	02/20/09 19:32	1.0		
277	048_277	X	BLK		148133	02/20/09 19:49	1.0		
278	048_278	SAMPLE	210166-002	Water	148133	02/20/09 20:07	25.0		2:CL=260
279	048_279	X	BLK		148133	02/20/09 20:24	1.0		
280	048_280	X	BLK		148133	02/20/09 20:42	1.0		
281	048_281	SAMPLE	210166-011	Water	148133	02/20/09 20:59	10.0		1:CL=280
282	048_282	X	BLK		148133	02/20/09 21:16	1.0		
283	048_283	X	BLK		148133	02/20/09 21:34	1.0		
284	048_284	SAMPLE	210166-005	Water	148133	02/20/09 21:51	1.0		1:CL=24
285	048_285	SAMPLE	210204-002	Water	148133	02/20/09 22:09	1.0		
286	048_286	SAMPLE	210204-003	Water	148133	02/20/09 22:26	1.0		
287	048_287	SAMPLE	210184-003	Water	148133	02/20/09 22:43	2.0		4:CL=140
288	048_288	X	BLK		148133	02/20/09 23:01	1.0		
289	048_289	X	BLK		148133	02/20/09 23:18	1.0		
290	048_290	SAMPLE	210184-001	Water	148133	02/20/09 23:36	1.0		2:CL=150
291	048_291	X	BLK		148133	02/20/09 23:53	1.0		
292	048_292	X	BLK		148133	02/21/09 00:11	1.0		
293	048_293	SAMPLE	210184-002	Water	148133	02/21/09 00:28	2.0		2:CL=330
294	048_294	X	BLK		148133	02/21/09 00:45	1.0		
295	048_295	X	BLK		148133	02/21/09 01:03	1.0		
296	048_296	SAMPLE	210160-001	Water	148133	02/21/09 01:20	10.0		
297	048_297	CCV	H		148133	02/21/09 01:38	1.0	1	
298	048_298	CCB			148133	02/21/09 01:55	1.0		
299	048_299	X	CCV		148133	02/21/09 02:12	1.0	1	
300	048_300	X	CCB		148133	02/21/09 02:30	1.0		
301	048_301	MS	QC484210	Water	148133	02/21/09 02:47	1.02	1	
302	048_302	MSD	QC484211	Water	148133	02/21/09 03:05	1.02	1	
303	048_303	X	QC484210		148133	02/21/09 03:22	1.02	1	
304	048_304	X	QC484211		148133	02/21/09 03:39	1.02	1	
305	048_305	SAMPLE	210204-001	Water	148133	02/21/09 03:57	2.0		
306	048_306	SAMPLE	210204-002	Water	148133	02/21/09 04:14	2.0		
307	048_307	SAMPLE	210204-003	Water	148133	02/21/09 04:32	2.0		
308	048_308	SAMPLE	210098-001	Water	148133	02/21/09 04:49	10.0		
309	048_309	SAMPLE	210098-002	Water	148133	02/21/09 05:06	10.0		
310	048_310	SAMPLE	210065-001	Water	148133	02/21/09 05:24	5.0		
311	048_311	CCV	M		148133	02/21/09 05:41	1.0	1	
312	048_312	CCB			148133	02/21/09 05:59	1.0		
313	048_313	X	CCV		148133	02/21/09 06:16	1.0	1	
314	048_314	X	CCB		148133	02/21/09 06:34	1.0		
315	048_315	SAMPLE	210065-002	Water	148133	02/21/09 06:51	5.0		
316	048_316	SAMPLE	210136-001	Water	148133	02/21/09 07:08	10.0		
317	048_317	SAMPLE	210166-002	Water	148133	02/21/09 07:26	1000		
318	048_318	SAMPLE	210166-003	Water	148133	02/21/09 07:43	1000		
319	048_319	SAMPLE	210166-010	Water	148133	02/21/09 08:01	1000		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 629069768

Instrument : IC03 Begun : 02/17/09 10:48
Method : EPA 300.0 SOP Version : ANIONS_300_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
320	048_320	SAMPLE	210166-011	Water	148133	02/21/09 08:18	500.0		
321	048_321	SAMPLE	210166-005	Water	148133	02/21/09 08:35	5.0		
322	048_322	SAMPLE	210166-012	Water	148133	02/21/09 08:53	5.0		
323	048_323	SAMPLE	210098-002	Water	148133	02/21/09 09:10	5.0		
324	048_324	CCV	H		148133	02/21/09 09:28	1.0	1	
325	048_325	CCB			148133	02/21/09 09:45	1.0		
326	048_326	SAMPLE	210136-001	Water	148133	02/21/09 10:02	2.0		
327	048_327	SAMPLE	210166-002	Water	148133	02/21/09 10:20	100.0		1:CL=100
328	048_328	SAMPLE	210166-003	Water	148133	02/21/09 10:37	100.0		1:CL=110
329	048_329	CCV	M			02/21/09 10:55	1.0	1	
330	048_330	CCB/MB	QC484263	Water	148145	02/21/09 11:12	1.0		
331	048_331	BS	QC484264	Water	148145	02/21/09 11:29	1.0	1	
332	048_332	BSD	QC484265	Water	148145	02/21/09 11:47	1.0	1	
333	048_333	MSS	210155-001	Water	148145	02/21/09 12:04	1.0		
334	048_334	SAMPLE	210155-006	Water	148145	02/21/09 12:22	1.0		
335	048_335	SAMPLE	210155-011	Water	148145	02/21/09 12:39	1.0		
336	048_336	X	BLK		148145	02/21/09 13:03	1.0		
337	048_337	SAMPLE	210155-004	Water	148145	02/21/09 13:24	1.0		
338	048_338	SAMPLE	210155-009	Water	148145	02/21/09 13:41	1.0		
339	048_339	SAMPLE	210155-015	Water	148145	02/21/09 13:59	1.0		
340	048_340	SAMPLE	210110-001	Water	148145	02/21/09 14:16	5.0		
341	048_341	CCV	H		148145	02/21/09 14:33	1.0	1	
342	048_342	CCB			148145	02/21/09 14:51	1.0		
343	048_343	MS	QC484266	Water	148145	02/21/09 15:08	1.02	1	
344	048_344	MSD	QC484267	Water	148145	02/21/09 15:26	1.02	1	
345	048_345	SDUP	QC484269	Water	148145	02/21/09 15:43	1.0		
346	048_346	SAMPLE	210110-001	Water	148145	02/21/09 16:00	1.0		2:SO4=84
347	048_347	X	BLK		148145	02/21/09 16:18	1.0		
348	048_348	SAMPLE	210110-002	Water	148145	02/21/09 16:35	1.0		2:SO4=84
349	048_349	X	BLK		148145	02/21/09 16:53	1.0		
350	048_350	SAMPLE	210110-003	Water	148145	02/21/09 17:10	1.0		3:SO4=190
351	048_351	X	BLK		148145	02/21/09 17:27	1.0		
352	048_352	SAMPLE	210110-005	Water	148145	02/21/09 17:45	1.0		
353	048_353	SAMPLE	210110-006	Water	148145	02/21/09 18:02	1.0		3:SO4=180
354	048_354	X	BLK		148145	02/21/09 18:20	1.0		
355	048_355	SAMPLE	210110-002	Water	148145	02/21/09 18:37	5.0		
356	048_356	SAMPLE	210110-003	Water	148145	02/21/09 18:55	25.0		
357	048_357	CCV	M		148145	02/21/09 19:12	1.0	1	
358	048_358	CCB			148145	02/21/09 19:29	1.0		
359	048_359	X	CCV		148145	02/21/09 19:47	1.0	1	
360	048_360	X	CCB		148145	02/21/09 20:04	1.0		
361	048_361	SAMPLE	210110-006	Water	148145	02/21/09 20:22	5.0		
362	048_362	SAMPLE	210155-002	Water	148145	02/21/09 20:39	1.0		
363	048_363	SAMPLE	210155-003	Water	148145	02/21/09 20:56	1.0		
364	048_364	SAMPLE	210155-005	Water	148145	02/21/09 21:14	1.0		
365	048_365	SAMPLE	210155-007	Water	148145	02/21/09 21:31	1.0		
366	048_366	SAMPLE	210155-008	Water	148145	02/21/09 21:49	1.0		
367	048_367	SAMPLE	210155-010	Water	148145	02/21/09 22:06	1.0		
368	048_368	SAMPLE	210155-012	Water	148145	02/21/09 22:23	1.0		
369	048_369	X	BLK		148145	02/21/09 22:41	1.0		
370	048_370	SAMPLE	210155-013	Water	148145	02/21/09 22:58	1.0		
371	048_371	X	BLK		148145	02/21/09 23:16	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 629069768

Instrument : IC03 Begun : 02/17/09 10:48
Method : EPA 300.0 SOP Version : ANIONS_300_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
372	048_372	SAMPLE	210155-014	Water	148145	02/21/09 23:33	1.0		
373	048_373	X	BLK		148145	02/21/09 23:50	1.0		
374	048_374	CCV	H		148145	02/22/09 00:08	1.0	1	
375	048_375	CCB			148145	02/22/09 00:25	1.0		
376	048_376	X	CCV		148145	02/22/09 00:43	1.0	1	
377	048_377	X	CCB		148145	02/22/09 01:00	1.0		

JLM 02/18/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 7 through 89.

MJB 02/20/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 90 through 241.

JLM 02/22/09 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 242 through 377.

Analyst: JLM Date: 02/18/09 Reviewer: LW Date: 02/23/09

Standards used: 1=S11105

Curtis & Tompkins, Ltd. **Water Prep Log** Ion Chromatography

Analysis: ☒ Anions EPA 300 / EPA 9056
☐ Perchlorate (ClO_4) EPA 314
☐ Cr6+ EPA 7199

Batch#: 148133
Date Started: 2/20/09
Prep Chemist: JLM

BK 2832
Page 66

	Sample #	Conductivity	Estimated Dilution Factor	Filters Used	Comments
1	210065-001 G	0.89	5x	S	
2	↓ 002 ↓	0.87	↓	↓	
3	210098-001 G	1.42	10x		
4	↓ 002 ↓	1.12	5x/10x		
5	210136-001 H	1.13	2x/10x		
6	210160-001 E	0.84	10x		
7	210166-002 F	32.7	25x/100x/1000x		
8	003 F	33.4	↓ ↓ ↓		
9	005 I	0.45	1x/5x		
10	007 R	0.42	1x		MSS
11	010 G	26.4	20x/1000x		
12	011 F	13.6	10x/5000x		
13	012 F	0.78	1x/5x		
14	210184-001 G	1.51	1x/5x		
15	002	4.75	2x/25x		
16	003 ↓	4.14	↓ ↓		white + viscous
17	210204-001 D	0.51	1x/2x		
18	002	0.33			
19	003 ↓	0.40	↓ ↓	↓	
20	MB QC484207	N/A	1x	N/A	
	BS 08				
	BSD 09	↓		↓	
	MS 10	0.42		S	
	MSD 11	↓	↓	↓	

		Mfg & Lot # / Time / Program	Initials / Date
	Eluent Reagent ID	MJB 12/15/08	JLM 2/20/09
BS/BSD Spiked with	0.2 mL of :	S11105	
MS/MSD Spiked with	0.1 mL of :	↓	
Filters Used:	Ag: OnGuard II Ag	N/A	
	Na: OnGuard II Na		
	P: OnGuard II P		
	RP: OnGuard II RP	↓	
	S: 0.20um/0.45um	Acrodisc #21700086	↓

JLM 2/20/09
Extraction Chemist / Date

Continued from page ___
Continued on page ___

KB 2/23/09
Reviewed by / Date

Laboratory Job Number 210098

ANALYTICAL REPORT

Wet Chemistry

Matrix: Water

Curtis & Tompkins, Ltd.

Chemical Oxygen Demand

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	148240
Matrix:	Water	Received:	02/18/09
Units:	mg/L	Prepared:	02/24/09 13:00
Diln Fac:	1.000	Analyzed:	02/24/09 15:00

Field ID	Type	Lab ID	Result	RL	Sampled
E051	SAMPLE	210098-001	120	10	02/18/09 07:50
E049	SAMPLE	210098-002	70	10	02/18/09 10:14
	BLANK	QC484674	ND	10	

ND= Not Detected
RL= Reporting Limit

40.0

Curtis & Tompkins, Ltd.

Batch QC Report

Chemical Oxygen Demand

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	148240
Field ID:	ZZZZZZZZZZ	Sampled:	02/10/09 14:58
MSS Lab ID:	209916-001	Received:	02/11/09
Matrix:	Water	Prepared:	02/24/09 13:00
Units:	mg/L	Analyzed:	02/24/09 15:00
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC484675		100.0	103.7	104	85-115		
MS	QC484676	10.58	5.000	27.51	339 *	75-125		
MSD	QC484677		5.000	10.58	0 *	75-125	89 *	20

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Sample Batch Report

Batch Number: 148240
Date Started: 24-FEB-2009
Batched by : Patrick Perin

Analysis : COD
Bgroup : N/A
Department : Wet Chemistry

Sample	Type		Client	Matrix	Analyses	Due Date
209916-001			Streamborn Consult	Water	COD	24-FEB-2009
209916-002			Streamborn Consult	Water	COD	24-FEB-2009
209916-003			Streamborn Consult	Water	COD	24-FEB-2009
209916-004			Streamborn Consult	Water	COD	24-FEB-2009
209932-001			Acme Fill Corp.	Water	COD	24-FEB-2009
210098-001			Baseline Environme	Water	COD	24-FEB-2009
210098-002			Baseline Environme	Water	COD	24-FEB-2009
210102-001			SOMA Environmental	Water	COD	24-FEB-2009
210114-001			LFR Levine Fricke	Water	COD	24-FEB-2009
210114-002			LFR Levine Fricke	Water	COD	24-FEB-2009
QC484674	BLANK			Water	COD	
QC484675	LCS			Water	COD	
QC484676	MS	of 209916-001		Water	COD	
QC484677	MSD	of 209916-001		Water	COD	

Analysis:	COD - Chemical Oxygen Demand	Analyst:	PAP
	FCOD - Chemical Oxygen Demand (Filtered)	Prep Date:	2/24/2009
Method:	SMWW 5220D / EPA 410.4	Analysis Date:	2/24/2009
Instrument:	Hach DR 2800	Batch Number:	148240 COD
Wavelength:	600 nm		
SOP#:	COD_rv 10.doc		

INITIAL CALIBRATION

Calibration Date: 6/30/2008

	ABS	RF
10.0	0.004	0.0004000
20.0	0.012	0.0006000
40.0	0.018	0.0004500
80.0	0.037	0.0004625
100.0	0.046	0.0004600
130.0	0.061	0.0004692
150.0	0.070	0.0004667

Correlation Coefficient: 0.9989

Average Response Factor: 0.0004726

%RSD: 12.90

Note: Sample results based on average response factor.

CALIBRATION VERIFICATION DATA

			ABS	Result	True Value (mg/L)	%Rec	Limits
ICV	2	1	0.049	103.68	100.0	104%	90 - 110%
ICB	2	1	0.000	ND			
CCV	2	1	0.047	99.44	100.0	99%	90 - 110%
CCB	2	1	0.000	ND			
CCV	2	1	0.047	99.44	100.0	99%	90 - 110%
CCB	2	1	0.000	ND			

QC DATA	Sample Vol. Used (mL)	Dilution Factor	ABS	RESULT (mg/L)	Spike (mg/L)	True Value (mg/L)	RPD	%REC	Reporting Limit (mg/L)
MB	2	1	0.000	ND					10.0
LCS	2	1	0.049	103.68	100.0			104	10.0
209916-001	2	1	0.005	10.58					10.0
MS	2	1	0.013	27.51	5			339 *	10.0
MSD	2	1	0.005	10.58	5		89 *	0 *	10.0

QC Limits	Recovery	RPD
LCS/ BS/ BSD	90 - 110	20
SSPIKE/ SDUP	66 - 129	20

Reviewed by / Date: 2/24/09

Curtis & Tompkins, Ltd.
F:\inorgan\wetstuff\cod.xls

Analysis:	COD - Chemical Oxygen Demand	Prep Date:	2/24/2009
	FCOD - Chemical Oxygen Demand (Filtered)	Analysis Date:	2/24/2009
Method:	SMWW 5220D / EPA 410.4	Batch Number:	146240

SAMPLE	Sample Vol. Used (mL)	Dilution Factor	ABS	RESULT (mg/L)	Reporting Limit (mg/L)
209916-002	2	1	0.005	10.58	10.0
209916-003	2	1	0.008	16.93	10.0
209916-004	2	1	0.003	ND	10.0
209932-001	2	4	0.058	490.87	40.0
210098-001	2	1	0.056	118.49	10.0
210098-002	2	1	0.033	69.82	10.0
210102-001	2	1	0.006	12.69	10.0
210114-001	2	2	0.045	190.42	20.0
210114-002	2	4	0.043	363.92	40.0

FCOD: Samples filtered thru' a Whatman 934-AH glass fiber filter prior to analysis.

Reviewed by / Date: Lm 2/24/09

COD (Chemical Oxygen Demand) - SM 5220D

Curtis & Tompkins, Ltd.

LIMS Batch #: 148240
Analyzed by: AP

Filtered (y/n): N
Filter Lot#: —

Benchbook#: BK2850
Page: 4

Date ON: 2/24/09
Time ON: 13:00
Temp ON: 150°C

Date OFF: 2/24/09
Time OFF: 15:00
Temp OFF: 150°C

Sample #	Container ID	pH	Sample Vol (mL)	PDF	Absorbance	Comments
~~ICS/MB~~		<2	2	1x	~~0.049~~ 0.000	AP 2/24/09
ICV/LCS					0.049	
209916-001	H				0.005	
-001 MS			2		0.013	
-001 MSD					0.005	
-002			2		0.005	
-003					0.008	
-004	I				0.003	
209037-001	A			4x	~~0.056~~	0.058
210098-001	H			1x	0.056	
-002					0.033	
210102-001	D				0.006	
CCV					0.047	
CCB					0.000	
210114-001	A			2x	0.045	
-002				4x	0.043	
CCV				1x	0.047	
CCB					0.000	

AP 2/24/09

☒ Short-Range Tubes (wavelength: 600nm), Lot#: 10886
☐ Long-Range Tubes (wavelength: 620nm), Lot#: _____

KHP LIMS#: S9628
Std Conc (mg/L): 1000
Std Vol Added (mL): 0.40 for ms/msd
Spike diluted to 100 mg/L for LCS. 2mL added

2/24/09
Analyst / Date

2/24/09
Reviewed by / Date

Curtis & Tompkins, Ltd.

Dissolved Sulfide

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Analysis:	SM4500S2-D
Project#:	Y0239-04.A3		
Analyte:	Dissolved Sulfide	Batch#:	148178
Matrix:	Water	Sampled:	02/18/09
Units:	mg/L	Received:	02/18/09
Diln Fac:	1.000	Analyzed:	02/23/09

Field ID	Type	Lab ID	Result	RL
E051	SAMPLE	210098-001	ND	0.04
E049	SAMPLE	210098-002	ND	0.04
	BLANK	QC484407	ND	0.04

ND= Not Detected
RL= Reporting Limit

25.0

Curtis & Tompkins, Ltd.

Batch QC Report

Dissolved Sulfide

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Analysis:	SM4500S2-D
Project#:	Y0239-04.A3		
Analyte:	Dissolved Sulfide	Diln Fac:	1.000
Field ID:	E054	Batch#:	148178
MSS Lab ID:	210065-001	Sampled:	02/17/09
Matrix:	Water	Received:	02/17/09
Units:	mg/L	Analyzed:	02/23/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC484408		0.6930	0.6995	101	88-114		
MS	QC484409	<0.04000	0.6930	0.7373	106	75-125		
MSD	QC484410		0.6930	0.7319	106	75-125	1	20

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Sample Batch Report

Batch Number: 148178
Date Started: 23-FEB-2009
Batched by : Benjamin Phillips

Analysis : DISS SULFIDE
Bgroup : N/A
Department : Wet Chemistry

Sample	Type		Client	Matrix	Analyses	Due Date
210065-001			Baseline Environme	Water	DISS SULFIDE	23-FEB-2009
210065-002			Baseline Environme	Water	DISS SULFIDE	23-FEB-2009
210098-001			Baseline Environme	Water	DISS SULFIDE	24-FEB-2009
210098-002			Baseline Environme	Water	DISS SULFIDE	24-FEB-2009
210136-001			Baseline Environme	Water	DISS SULFIDE	25-FEB-2009
QC484407	BLANK			Water	DISS SULFIDE	
QC484408	LCS			Water	DISS SULFIDE	
QC484409	MS	of 210065-001		Water	DISS SULFIDE	
QC484410	MSD	of 210065-001		Water	DISS SULFIDE	

Analysis:	DISSOLVED SULFIDE	Analyst:	BJP
Method:	SMWW 4500S2-D / EPA 376.2	Prep Date:	02/23/09
Instrument:	Perkin-Elmer Lambda 25	Analysis Date:	02/23/09
Wavelength:	626 nm	Batch:	148178
SOP#:	sulfide_376_rv 4.doc	Matrix:	Water

INITIAL CALIBRATION DATA Calibration Date: 10/30/2008

Conc (mg/L)	Absorb	RF
0.000	0.0000	
0.027	0.0100	0.3704
0.053	0.0214	0.4038
0.213	0.1007	0.4728
0.444	0.2101	0.4732
0.889	0.4171	0.4692
1.778	0.8169	0.4594

Correlation Coefficient (r):	0.9999
Avg Rf:	0.4415
%RSD:	9.9

Note: Average Rf used to calculate sample results.

CONTINUING CALIBRATION DATA

	Absorb	Conc (mg/L)	True (mg/L)	Recovery	CV Limits
ICV/ LCS	0.3088	0.6995	0.6933	101%	90 - 110%
ICB/ MB	0.0000	0.000	0.00		
CCV	0.3087	0.6993	0.6933	101%	90 - 110%
CCB	0.0000	0.000	0.00		

Analysis: **DISSOLVED SULFIDE**
Method: SMWW 4500S2-D / EPA 376.2

Prep Date: 2/23/09
Analysis Date: 2/23/09
Batch: 148178
Matrix: Water

Sample & Batch QC	Sample Vol (mL)	D.F.	Sample Absorb	Color Blk Absorb	Report mg/L	Reporting Limit (mg/L)	Vol Spike Added (mL)	Std Conc. (mg/L)	Spiked @ (mg/L)	% Rec	% RPD
MB	7.5000	1.0000	0.0000		ND	0.040					
LCS / BS	7.5000	1.0000	0.3088		0.6995	0.040	0.0500	104.00	0.693	101	
210065-001	7.5000	1.0000	0.0108		ND	0.040					
MS	7.5000	1.0000	0.3255		0.7373	0.040	0.0500	104.000	0.693	106	
MSD	7.5000	1.0000	0.3231		0.7319	0.040	0.0500	104.000	0.693	106	1
210065-001	7.5000	1.0000	0.0108		ND	0.040					
210065-002	7.5000	1.0000	0.0104		ND	0.040					
210098-001	7.5000	1.0000	0.0107		ND	0.040					
210098-002	7.5000	1.0000	0.0089		ND	0.040					
210136-001	7.5000	1.0000	0.0077		ND	0.040					

Normality = [((Vi * Ni)-(Vna * Nna))*16000]/Vs

Vi	5.00
Ni	0.0250
Vna	4.35
Nna	0.0250
Vs	0.10
Concentration	2600 mg/L
	104 (25x dil'n used for spiking)

Vi , Ni are the volume and normality of the iodine solution
Vna, Nna are the volume and normality of the sodium thiosulfate solution
Vs is the volume of the sulfide standard (1.0mL)

QC Limits	RPD	Recovery
LCS/ BS/ BSD	20	90 - 110
MS/ MSD	20	54 - 130

Reviewed by / date: DMB 2/23/09

Concentration Results

Date: 2/23/2009 Time: 4:07:21 PM
Instrument: PerkinElmer Lambda 25 Serial No: 101N5091105
Method: SULF1008
Ordinate mode: Single wavelength
Slit: UV/VIS: 1.00 nm
Baseline: No correction (0.00 0.00)
Result Filename: 148178.RCO
Autozero performed: 2/23/2009 4:07:19 PM
Analyst: 0.00 [analyst]

Wavelength(s)		Sample ID	Ordinate	Factor	Concentration		Sample Info
626.0	0.0	ICB_MB	-0.000	1.0000	-0.000	mg/L	
626.0	0.0	ICV_LCS	0.3088	1.0000	0.6684	mg/L	
626.0	0.0	065-1	0.0108	1.0000	0.0234	mg/L	
626.0	0.0	065-1MS	0.3255	1.0000	0.7045	mg/L	
626.0	0.0	065-1MSD	0.3231	1.0000	0.6993	mg/L	
626.0	0.0	065-2	0.0104	1.0000	0.0225	mg/L	
626.0	0.0	098-1	0.0107	1.0000	0.0233	mg/L	
626.0	0.0	098-2	0.0089	1.0000	0.0193	mg/L	
626.0	0.0	136-1	0.0077	1.0000	0.0166	mg/L	
626.0	0.0	CCV	0.3087	1.0000	0.6681	mg/L	
626.0	0.0	CCB	-0.000	1.0000	-0.000*	mg/L	

Date : 2/23/2009 Time : 16:07:23

CALIBRATION

Date: 2/23/2009 Time: 4:07:19 PM
Instrument: PerkinElmer Lambda 25 Serial No: 101N5091105
Method: SULF1008
Ordinate mode: Single wavelength
Baseline: No correction (0.00 0.00)
Analyst: WETCHEM

Wavelength(s)		Sample ID	Concentration		Ord. value	Comment
626.0	0.0	1.A01	0.0000	mg/L	-0.000	EMD 48196839
626.0	0.0	2.A02	0.0270	mg/L	0.0100	EMD 48196839
626.0	0.0	3.A03	0.0530	mg/L	0.0214	EMD 48196839
626.0	0.0	4.A04	0.2130	mg/L	0.1007	EMD 48196839
626.0	0.0	5.A05	0.4440	mg/L	0.2101	EMD 48196839
626.0	0.0	6.A06	0.8890	mg/L	0.4171	EMD 48196839
626.0	0.0	7.A07	1.7780	mg/L	0.8169	EMD 48196839

Equation: y = 4.620356e-01 * x

Residual error: 0.004219
Correlation coefficient: 0.999901

Sample	Vol. colored (2/23/09)	DF	ABS
ICB/MB	7.5mL	1x	See data
★ ICV/LCS			
210065-1			
★ -1 MS			
★ -1 MSD			
-2			
210088-1			
-2			
210136-1			
★ CCV			
CCB			

★ Plus 0.050mL of 104 mg/L Std. (5565-5) (See EXCEL)

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
[illegible]	2/23/09	[illegible]	2/23/09

Curtis & Tompkins, Ltd.

pH

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	EPA 9040C
Analyte:	pH	Batch#:	148044
Matrix:	Water	Received:	02/18/09
Units:	SU	Analyzed:	02/18/09 21:40
Diln Fac:	1.000		

Field ID	Lab ID	Result	RL	Sampled
E051	210098-001	6.7	1.0	02/18/09 07:50
E049	210098-002	7.0	1.0	02/18/09 10:14

RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

pH

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	EPA 9040C
Analyte:	pH	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	148044
Type:	SDUP	Received:	02/18/09
Matrix:	Water	Analyzed:	02/18/09 21:40
Units:	SU		

MSS Lab ID	Lab ID	MSS Result	Result	RL	RPD	Lim	Sampled
210083-001	QC483834	7.430	7.410	1.000	0	20	02/18/09 10:00
210123-004	QC483836	7.330	7.310	1.000	0	20	02/18/09 09:21

RL= Reporting Limit
RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Sample Batch Report

Batch Number: 148044
Date Started: 18-FEB-2009
Batched by : Shu Ting Liu

Analysis : PH
Bgroup : N/A
Department : Wet Chemistry

Sample	Type	Client	Matrix	Analyses	Due Date
210083-001		Kaiser Permanente	Water	PH	19-FEB-2009
210097-001		LFR Levine Fricke	Water	PH	24-FEB-2009
210098-001		Baseline Environme	Water	PH	24-FEB-2009
210098-002		Baseline Environme	Water	PH	24-FEB-2009
210105-001		The Remediation Gr	Water	PH	02-MAR-2009
210110-001		AMEC Geomatrix, In	Water	PH	24-FEB-2009
210110-002		AMEC Geomatrix, In	Water	PH	24-FEB-2009
210110-003		AMEC Geomatrix, In	Water	PH	24-FEB-2009
210110-005		AMEC Geomatrix, In	Water	PH	24-FEB-2009
210110-006		AMEC Geomatrix, In	Water	PH	24-FEB-2009
210123-002		Sullivan Internati	Water	PH	23-FEB-2009
210123-003		Sullivan Internati	Water	PH	23-FEB-2009
210123-004		Sullivan Internati	Water	PH	23-FEB-2009
210123-005		Sullivan Internati	Water	PH	23-FEB-2009
210123-006		Sullivan Internati	Water	PH	23-FEB-2009
210123-007		Sullivan Internati	Water	PH	23-FEB-2009
210123-008		Sullivan Internati	Water	PH	23-FEB-2009
210123-009		Sullivan Internati	Water	PH	20-FEB-2009
QC483834	SDUP of 210083-001		Water	PH	
QC483836	SDUP of 210123-004		Water	PH	

pH Analysis Benchbook **Curtis & Tompkins, Ltd.**

LIMS Batch #: 148044 Date: 2/18/09 Benchbook#: **BK 2849**
Matrix: water Time: 21:40 Page: **2**
Analyst: STL

Method (check one): ☑ Water (EPA 9040c/ SM4500H+B) ☐ Soil (EPA 9045c)

Cal Std-1 ph: 4 LIMS#: 510608 Slope: 102
Cal Std-2 ph: 7 LIMS#: 59872 (slope limits: 92 - 102)
Cal Std-3 ph: 10 LIMS#: 511168

Run	Sample #	Container ID	pH (S.U.)	2nd Reading* (water only)	Soil Prep Wt(g)/Vol(mL)	Comments
1	ICV		6.99			ICV/CCV=>5 10496
	210083-001	A	7.43	7.44		
	SDUP-001	A	7.41	7.42		RPD=>0.270%
	210097-001	E	7.30	7.31		
5	210098-001	G	6.69	6.71		
	-002	G	6.98	6.99		
	210105-001	A	7.61	7.62		
	210110-001	E	7.45	7.46		
	-002		7.46	7.47		
10	-003		7.49	7.50		
	-005		6.93	6.94		
	CCV		7.04			
	-006	E	8.55	8.57		
	210123-002	J	8.41	8.42		
15	-003	J	8.35	8.36		
	-004	AB	7.33	7.34		
	SDUP-004	AB	7.31	7.32		RPD=>0.273%
	-005	J	7.55	7.57		
	-006		7.49	7.50		
20	-007		4.72	4.73		
	-008		4.92	4.90		
	-009		4.54	4.53		
	CCV		7.04			
25						

* 2nd aliquot must be within 0.1 SU

2/18/09
Analyst / Date

2/18/09
Reviewed by / Date

Curtis & Tompkins, Ltd.

Total Suspended Solids (TSS)

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Sampled:	02/18/09
Matrix:	Water	Received:	02/18/09
Units:	mg/L	Analyzed:	02/20/09
Batch#:	148126		

Field ID	Type	Lab ID	Result	RL	Diln Fac
E051	SAMPLE	210098-001	480	20	4.000
E049	SAMPLE	210098-002	3,140	100	20.00
	BLANK	QC484173	ND	5	1.000

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Suspended Solids (TSS)

Lab #:	210098	Location:	Doyle Drive Replacement Project
Client:	Baseline Environmental	Prep:	METHOD
Project#:	Y0239-04.A3	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	148126
MSS Lab ID:	210149-001	Sampled:	02/19/09
Matrix:	Water	Received:	02/19/09
Units:	mg/L	Analyzed:	02/20/09

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
BS	QC484174		50.00	50.00		100	75-125		
BSD	QC484175		50.00	48.00		96	75-125	4	20
SSPIKE	QC484176	45.00	50.00	79.00		68	39-151		
SDUP	QC484177	45.00		38.00	5.000			17	20

RL= Reporting Limit
RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Sample Batch Report

Batch Number: 148126
Date Started: 20-FEB-2009
Batched by : Shu Ting Liu

Analysis : TSS
Bgroup : N/A
Department : Wet Chemistry

Sample	Type		Client	Matrix	Analyses	Due Date
210037-001			Bode Gravel Co.	Water	TSS	27-FEB-2009
210038-003			Burlington Norther	Water	TSS	27-FEB-2009
210039-001			City of Berkeley -	Water	TSS	27-FEB-2009
210040-001			National Gypsum	Water	TSS	27-FEB-2009
210051-001			Svendsen's Boat Wo	Water	TSS	27-FEB-2009
210051-002			Svendsen's Boat Wo	Water	TSS	27-FEB-2009
210059-001			City of Berkeley -	Water	TSS	27-FEB-2009
210060-001			SIMS METAL AMERICA	Water	TSS	23-FEB-2009
210061-002			IMTT	Water	TSS	23-FEB-2009
210065-001			Baseline Environme	Water	TSS	23-FEB-2009
210065-002			Baseline Environme	Water	TSS	23-FEB-2009
210071-001			Owens Brockway	Water	TSS	27-FEB-2009
210072-001			Owens Brockway	Water	TSS	27-FEB-2009
210097-001			LFR Levine Fricke	Water	TSS	24-FEB-2009
210098-001			Baseline Environme	Water	TSS	24-FEB-2009
210098-002			Baseline Environme	Water	TSS	24-FEB-2009
210102-001			SOMA Environmental	Water	TSS	24-FEB-2009
210114-001			LFR Levine Fricke	Water	TSS	24-FEB-2009
210114-002			LFR Levine Fricke	Water	TSS	24-FEB-2009
210149-001			Acme Fill Corp.	Water	TSS	03-MAR-2009
QC484173	BLANK			Water	TSS	
QC484174	BS			Water	TSS	
QC484175	BSD			Water	TSS	
QC484176	SSPIKE	of 210149-001		Water	TSS	
QC484177	SDUP	of 210149-001		Water	TSS	

Analysis: **Total Suspended Solids**
Method: **SMWW 2540D / EPA 160.2**

Analyst: STL
Analysis Date: **20-Feb-09**
Batch #: **148126**

Matrix: Water
SOP#: TSS_rv6

Sample	Sample Vol (mL)	DF (100/vol)	Filter Mass (g)	Constant Mass (g)	Residue Mass (g)	Report (mg/L)	Reporting Limit (mg/L)	Spike Std Conc.(mg/L)	Spike Vol Used (mL)	Spiked @ (mg/L)	Recovery,%	RPD,%
MB	100	1	0.1114	0.1116	0.0002	ND	5					
BS	100	1	0.1123	0.1173	0.0050	50	5	500	10	50	100	
BSD	100	1	0.1121	0.1169	0.0048	48	5	500	10	50	96	4
210149-001	100	1	0.1107	0.1152	0.0045	45	5					
								500	10			
SSPIKE	100	1	0.1108	0.1187	0.0079	79	5	500	10	50	68	
SDUP	100	1	0.1111	0.1149	0.0038	38	5					17
210037-001	100	1	0.1102	0.1119	0.0017	17	5					
210038-003	100	1	0.1105	0.1123	0.0018	18	5					
210039-001	25	4	0.1122	0.1320	0.0198	792	20					
210040-001	100	1	0.1119	0.1122	0.0003	ND	5					
210051-001	100	1	0.1111	0.1137	0.0026	26	5					
210051-002	100	1	0.1117	0.1149	0.0032	32	5					
210059-001	100	1	0.1091	0.1157	0.0066	66	5					
210060-001	20	5	0.1112	0.1240	0.0128	640	25					
210061-002	100	1	0.1106	0.1111	0.0005	5	5					
210065-001	5	20	0.1120	0.2085	0.0965	19,300	100					
210065-002	10	10	0.1128	0.1341	0.0213	2,130	50					
210071-001	100	1	0.1116	0.1194	0.0078	78	5					
210072-001	100	1	0.1117	0.1129	0.0012	12	5					
210097-001	100	1	0.1112	0.1124	0.0012	12	5					
210098-001	25	4	0.1108	0.1229	0.0121	484	20					
210098-002	5	20	0.1111	0.1268	0.0157	3,140	100					
210102-001	100	1	0.1114	0.1121	0.0007	7	5					
210114-001	80	1	0.1115	0.1166	0.0051	64	6					
210114-002	100	1	0.1110	0.1153	0.0043	43	5					
210149-001	100	1	0.1107	0.1152	0.0045	45	5					

QC Limits	RPD	Recovery
LCS/ BS/ BSD	20	80 - 120
MS/ MSD	39	38 - 146

Note: Because the regulatory holding time is based on the prep date, the analysis date referenced above is the prep date.

Reviewed by / date: DMB 2/23/09

Curtis & Tompkins, Ltd
F:\inorgan\data\February 2009\tss-148126

Version 6.6, Effective 1/28/08

TSS (Total Suspended Solids)
SM 2540D / EPA 160.2

Curtis & Tompkins, Ltd.

LIMS Batch #: 148126
Filtered by (initials): STL

Prep Date: 2/20/09
Prep Time: 12:35

Benchbook#: **BK2814**
Page: **29**

Filter Mfg/ Lot#: EE 756130R
Spike Std LIMS#: 511018

Spike Std Conc (mg/L): 500
Spike Std Vol Added (mL): 10

	In	Out	In-2	Out-2	In-3	Out-3
Date:	2/20/09	2/20/09	2/20/09	2/20/09		
Time:	13:20	14:20	15:25	16:25		
Temp (C):	105°	105°	105°	105°		
Weighed by:		STL		STL		

	Sample #	Container ID	Sample Vol. Filtered (mL)	Dish ID	Dish Wt (g)	1st Dry Wt.(g)	2nd Dry Wt (g)*	3rd Dry Wt (g)*
1	MB		100	P9700	0.1114	0.1117	0.1116	
	BS		↓	01	0.1123	0.1174	0.1173	
	BSD			02	0.1121	0.1170	0.1169	
	210037-001	D		03	0.1102	0.1120	0.1119	
5	210038-003	A	1 ↓	04	0.1105	0.1125	0.1123	
	210039-001	D	25	05	0.1122	0.1320	0.1320	
	210040-001	D	100	P9606	0.1119	0.1122	0.1122	
	210051-001	D	↓	07	0.1111	0.1137	0.1137	
	-002	D		08	0.1117	0.1148	0.1149	
10	210059-001	D	↓	09	0.1091	0.1156	0.1157	
	210060-001	C	20	10	0.1112	0.1241	0.1240	
	210061-002	A	100	11	0.1106	0.1110	0.1111	
	210065-001	G	5	12	0.1120	0.2084	0.2085	
	-002	G	10	13	0.1128	0.1340	0.1341	
15	210071-001	G	100	14	0.1116	0.1193	0.1194	
	210072-001	E	↓	15	0.1117	0.1129	0.1129	
	210097-001	E	↓	16	0.1112	0.1124	0.1124	
	210098-001	G	25	17	0.1108	0.1229	0.1229	
	-002	G	5	18	0.1111	0.1267	0.1268	
20	210102-001	E	100	19	0.1114	0.1121	0.1121	
	210114-001	E	80	20	0.1115	0.1166	0.1166	
	-002	F	100	21	0.1110	0.1154	0.1153	
	210149-001	B	↓	22	0.1107	0.1153	0.1152	
	SSPIKE-001	↓	↓	23	0.1108	0.1187	0.1187	
	SDUP-001	↓	↓	24	0.1111	0.1148	0.1149	

* Constant weight must be within 0.0005 from previous reading.

SR 2/20/09
Analyst / Date

2/20/09
Reviewed by / Date