Level C Data Package Deliverables

Wet Chemistry

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Wet Analysis Results for Method SM2320B

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	SM2320B
Project ID:	JPL	Service ID:	33465	Collected by:	

Component Name: Bicarbonate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3465-1	MW-1	Water	05/30/03	05/30/03	06/02/03	03W3113	mg/L	2	219	
03-3465-2	MW-9	Water	05/30/03	05/30/03	06/02/03	03W3113	mg/L	2	175	
03-3465-3	MW-10	Water	05/30/03	05/30/03	06/02/03	03W3113	mg/L	2	219	
03W3113-MB-01	03W3113-MB-01	Water	06/02/03	06/02/03	06/02/03	03W3113	mg/L	2	<2	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method SM2320B

Client Name: GEOFON, Inc.
Project ID: JPL

Project No: 04-4428.10
Service ID: 33465

Anal. Method SM2320B
Collected by:

Component Name: Carbonate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3465-1	MW-1	Water	05/30/03	05/30/03	06/02/03	03W3113	mg-$CaCO_3$/L	2	<2	U
03-3465-2	MW-9	Water	05/30/03	05/30/03	06/02/03	03W3113	mg-$CaCO_3$/L	2	<2	U
03-3465-3	MW-10	Water	05/30/03	05/30/03	06/02/03	03W3113	mg-$CaCO_3$/L	2	<2	U
03W3113-MB-01	03W3113-MB-01	Water	06/02/03	06/02/03	06/02/03	03W3113	mg-$CaCO_3$/L	2	<2	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 9040B

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 9040B
Project ID: JPL Service ID: 33465 Collected by:

Component Name: pH
CAS No: 10-29-7

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3465-1	MW-1	Water	05/30/03	05/30/03	05/30/03	03W3109	pH unit	0.01	7.36	
03-3465-2	MW-9	Water	05/30/03	05/30/03	05/30/03	03W3109	pH unit	0.01	7.00	
03-3465-3	MW-10	Water	05/30/03	05/30/03	05/30/03	03W3109	pH unit	0.01	6.79	
03W3109-MB-01	03W3109-MB-01	Water	05/30/03	05/30/03	05/30/03	03W3109	pH unit	0.01	6.85	

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 160.1

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 160.1
Project ID: JPL Service ID: 33465 Collected by:

Component Name: Solids, Total Dissolved (TDS)
CAS No: 10-33-3

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3465-1	MW-1	Water	05/30/03	05/30/03	06/02/03	03W3111	mg/L	10	367	
03-3465-2	MW-9	Water	05/30/03	05/30/03	06/02/03	03W3111	mg/L	10	298	
03-3465-3	MW-10	Water	05/30/03	05/30/03	06/02/03	03W3111	mg/L	10	705	
03W3111-MB-01	03W3111-MB-01	Water	06/02/03	06/02/03	06/02/03	03W3111	mg/L	10	<10	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 7196

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	7196
Project ID:	JPL	Service ID:	33465	Collected by:	

Component Name: Chromium (VI)
CAS No: 1333-82-0

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3465-1	MW-1	Water	05/30/03	05/30/03	05/30/03	03W3108	mg/L	0.01	<0.01	U
03-3465-2	MW-9	Water	05/30/03	05/30/03	05/30/03	03W3108	mg/L	0.01	<0.01	U
03-3465-3	MW-10	Water	05/30/03	05/30/03	05/30/03	03W3108	mg/L	0.01	<0.01	U
03W3108-MB-01	03W3108-MB-01	Water	05/30/03	05/30/03	05/30/03	03W3108	mg/L	0.01	<0.01	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 314.0

Client Name: GEOFON, Inc.
Project ID: JPL

Project No: 04-4428.10
Service ID: 33465

Anal. Method 314.0
Collected by:

Component Name: Perchlorate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3465-1	MW-1	Water	05/30/03	05/30/03	05/30/03	03W3074	μg/L	4	<4	U
03-3465-2	MW-9	Water	05/30/03	05/30/03	05/30/03	03W3074	μg/L	4	<4	U
03-3465-3	MW-10	Water	05/30/03	05/30/03	05/30/03	03W3074	μg/L	4	17.5	
03W3074-MB-01	03W3074-MB-01	Water	05/30/03	05/30/03	05/30/03	03W3074	μg/L	4	<4	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	300.0
Project ID:	JPL	Service ID:	33465	Collected by:	

Component Name: Chloride Cl^-
CAS No: 16887-00-6

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3465-1	MW-1	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	0.8	30.8	
03-3465-2	MW-9	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	0.5	18.7	
03-3465-3	MW-10	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	2	99.4	
03W3095-MB-01	03W3095-MB-01	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	0.2	<0.2	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name: GEOFON, Inc.
Project ID: JPL

Project No: 04-4428.10
Service ID: 33465

Anal. Method 300.0
Collected by:

Component Name: Sulfate SO_4^{--}
CAS No: 14808-79-8

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3465-1	MW-1	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	2	59.5	
03-3465-2	MW-9	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	1.3	42.5	
03-3465-3	MW-10	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	5	141	
03W3095-MB-01	03W3095-MB-01	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	0.5	<0.5	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 300.0
Project ID: JPL Service ID: 33465 Collected by:

Component Name: Nitrate as N
CAS No: 14797-55-8

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3465-1	MW-1	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	0.16	1.4	
03-3465-2	MW-9	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	0.1	1.9	
03-3465-3	MW-10	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	0.4	14.4	
03W3095-MB-01	03W3095-MB-01	Water	05/30/03	05/30/03	05/30/03	03W3095	mg/L	0.04	<0.04	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method SM2320B

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33465
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3113		
LCS Filename:	-	Date Analyzed:	060203	Time Analyzed:	11:45
LCSD Filename:	-	Date Analyzed:	060203	Time Analyzed:	11:45

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
BICARBONATE	mg/L	100	0	101	101	80-120
CARBONATE	mg-$CaCO_3$/L	100	0	101	101	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BICARBONATE	mg/L	100	99.6	100	1	20	80-120
CARBONATE	mg-$CaCO_3$/L	100	99.6	100	1	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 300.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33465
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3095		
LCS Filename:	-	Date Analyzed:	053003	Time Analyzed:	12:15
LCSD Filename:	-	Date Analyzed:	053003	Time Analyzed:	12:30

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHLORIDE CL^-	mg/L	4.0	0	4.02	101	80-120
NITRATE AS N	mg/L	1.5	0	1.52	101	80-120
SULFATE SO_4^{--}	mg/L	15	0	15.0	100	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHLORIDE CL^-	mg/L	4.0	4.03	101	0	20	80-120
NITRATE AS N	mg/L	1.5	1.54	103	2	20	80-120
SULFATE SO_4^{--}	mg/L	15	15.1	101	1	25	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 300.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33465
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3095		
MS Filename:	-	Date Analyzed:	053003	Time Analyzed:	13:32
MSD Filename:	-	Date Analyzed:	053003	Time Analyzed:	13:45
MS Sample No:	MW-6	Sample Lab ID:	03-3444-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHLORIDE CL^-	mg/L	160	118	285	104	75-125
NITRATE AS N	mg/L	60.0	10.7	70.5	100	75-125
SULFATE SO_4^{--}	mg/L	600	165	780	103	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHLORIDE CL^-	mg/L	160	283	103	1	20	75-125
NITRATE AS N	mg/L	60.0	71.5	101	1	20	75-125
SULFATE SO_4^{--}	mg/L	600	777	102	1	25	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 314.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33465
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3074		
LCS Filename:	-	Date Analyzed:	053003	Time Analyzed:	
LCSD Filename:	-	Date Analyzed:	053003	Time Analyzed:	

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
PERCHLORATE	μg/L	25	0	24.3	97	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PERCHLORATE	μg/L	25	25.3	101	4	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 314.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33465
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3074		
MS Filename:	-	Date Analyzed:	053003	Time Analyzed:	
MSD Filename:	-	Date Analyzed:	053003	Time Analyzed:	
MS Sample No:	MW-6	Sample Lab ID:	03-3444-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
PERCHLORATE	μg/L	50	2.3	49.6	99	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PERCHLORATE	μg/L	50	51.2	102	3	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D - Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 160.1

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33465
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3111		
LCS Filename:	-	Date Analyzed:	060203	Time Analyzed:	08:52
LCSD Filename:	-	Date Analyzed:	060203	Time Analyzed:	08:52

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	0	388	97	88-108
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	402	101	4	20	88-108
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 160.1

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33465
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3111		
MS Filename:	-	Date Analyzed:	060203	Time Analyzed:	08:52
MSD Filename:	-	Date Analyzed:	060203	Time Analyzed:	08:52
MS Sample No:	MW-1	Sample Lab ID:	03-3465-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	367	777	103	80-119
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	774	102	1	20	80-119
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 7196

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33465
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3108		
LCS Filename:	-	Date Analyzed:	053003	Time Analyzed:	14:57
LCSD Filename:	-	Date Analyzed:	053003	Time Analyzed:	14:57

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.262	105	80-115
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0.264	106	1	19	80-115
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 7196

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33465
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3108		
MS Filename:	-	Date Analyzed:	053003	Time Analyzed:	14:57
MSD Filename:	-	Date Analyzed:	053003	Time Analyzed:	14:57
MS Sample No:	MW-1	Sample Lab ID:	03-3465-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.242	96	78-115
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0.246	98	2	19	78-115
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

6A

INITIAL CALIBRATION DATA

Lab Name: Applied P & Ch Lab Contract: 33465

Analysis: Chromium (VI) Calibration Date: 01/29/2003

Concentration (mg/L)	0.000	0.0125	0.050	0.125	0.250	0.50
Absorbance	0.000	0.006	0.041	0.109	0.214	0.415

A= 0.000 + 0.836C

A=Absorbance

C=Concentration (mg/L)

r= 0.9997

Wet Chemistry QC Report B
Duplicate Results

Matrix: Water

APCL Service ID: 03-3465

Analysis	Batch ID	Analysis Date	Sample Name	Unit	Result	Duplicate Result	RPD %	RPD Control limit
Alkalinity	03W3113	06/02/2003	03-3444-1	mg-$CaCO_3$/L	284	282	1	20
PH	03W3109	05/30/2003	NW-1	PH	7.36	7.32	1	20
Solids,Total Dissol	03W3111	06/02/2003	NW-10	mg/L	705	715	1	20

Note: N/A = Not applicable; NR: Not requested; NC= Not Calculated; ND: Not detected.

FORM-7

Applied P & Ch Laboratory

CCV Recovery for Wet Analysis

Client Name: GEOFON, Inc. Contract No.: Lab Code: APCL
Case No: SAS No.: Service ID: 33465
Project ID: JPL Project No.: 04-4428.10

#	Component Name	Method	Batch No.	Unit	Expe-cted	Test Result	Rec. %	Dev. %	Flag	Control Limit, %	Test Date
1	Chloride Cl^-	300.0	03W3095	mg/L	4.0	4.01	100	0	√	90-110	05/30/2003
	NITRATE as N-NO_3^-, BY	300.0	03W3095	mg/L	1.5	1.53	102	2	√	90-110	05/30/2003
	SULFATE SO_4^{--}, BY I	300.0	03W3095	mg/L	15	15.0	100	0	√	90-110	05/30/2003
	Chloride Cl^-	300.0	03W3095	mg/L	4.0	4.17	104	4	√	90-110	05/30/2003
	NITRATE as N-NO_3^-, BY	300.0	03W3095	mg/L	1.5	1.52	101	1	√	90-110	05/30/2003
	SULFATE SO_4^{--}, BY I	300.0	03W3095	mg/L	15	15.0	100	0	√	90-110	05/30/2003
	Chloride Cl^-	300.0	03W3095	mg/L	4.0	4.01	100	0	√	90-110	05/30/2003
	NITRATE as N-NO_3^-, BY	300.0	03W3095	mg/L	1.5	1.51	101	1	√	90-110	05/30/2003
	SULFATE SO_4^{--}, BY I	300.0	03W3095	mg/L	15	14.9	99	-1	√	90-110	05/30/2003
2	Perchlorate	314.0	03W3074	μg/L	50	49.7	99	-1	√	90-110	05/30/2003
	Perchlorate	314.0	03W3074	μg/L	50	52.5	105	5	√	90-110	05/30/2003
	Perchlorate	314.0	03W3074	μg/L	50	50.8	102	2	√	90-110	05/30/2003
	Perchlorate	314.0	03W3074	μg/L	50	52.3	105	5	√	90-110	05/30/2003
3	Chromium (VI)	7196	03W3108	mg/L	0.25	0.251	100	0	√	90-110	05/30/2003
	Chromium (VI)	7196	03W3108	mg/L	0.25	0.246	98	-2	√	90-110	05/30/2003

Applied P & Ch Laboratory
13700 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Alkalinity/OH/CO_3/HCO_3 (310.1/SM2320B) Worksheet

Batch # 03W3113 Matrix: W Titrant H_2SO_4 Lot # W7952 Concentration (C) 0.02575 N; Test Date: 6/2/03 Analyst: DL SOP: G-51

#	Sample ID	Dilution $V_f/V_i=f_1$	Smpl Amnt V, mL	H_2SO_4 (mL) by Phnln S_A	E_A	A	H_2SO_4 (mL) by MR-BCG S_B	E_B	B	Phnln-Alk., P	Tot. Alk., T (in unit of $mgCaCO_3/L$)	OH^-	CO_3^{2-}	HCO_3^-	Note & Anomaly
1	MB: T1116	/ =	100			0			0		0	0	0	0	
2	LCS	/ =	100						7.90		100.9				
3	LCSD	/ =	100						7.80		99.6				
4	3391-1	/ =	50.0			0			4.50		115.0	0	0	115.0	
5	-2	/ =	50.0			0			4.50		115.0	0	0	115.0	
6	3413-1	/ =	50.0			0			9.15		233.8	0	0	233.8	
7	3414-1	/ =	50.0			0			5.70		145.6	0	0	145.6	
8	-2	/ =	50.0			0			6.00		153.3	0	0	153.3	
9	3444-1	/ =	50.0			0			11.10		283.6	0	0	283.6	
10	-2	/ =	50.0			0			4.85		123.9	0	0	123.9	
11	-3	/ =	50.0			0			7.60		194.2	0	0	194.2	
12	3461-1	/ =	50.0			0			8.55		218.5	0	0	218.5	
13	-2	/ =	50.0			0			6.85		175.0	0	0	175.0	
14	-3	/ =	50.0			0			8.55		218.5	0	0	218.5	
15		/ =													
16		/ =													
17		/ =													
18		/ =													
19		/ =													
20		/ =													
Dup.	3444-1	/ =	50.0			0			11.05		282.3	0	0	282.3	

Titration Results	OH^- ($CaCO_3$ mg/L)	CO_3^{2-} ($CaCO_3$ mg/L)	HCO_3^- ($CaCO_3$ mg/L)
P=0	0	0	T
P<T/2	0	2P	T-2P
P=T/2	0	2P	0
P>T/2	2P-T	2(T-P)	0
P = T	T	0	0

Calculation:

$A=S_A-E_A$

$B=S_B-E_B$

$P=50{,}000\ f_1\ A\ C\ /V$

$T=50{,}000\ f_1\ (A+B)\ C\ /V$

APCL Form 5-101, Nov. 29, 1999 Ver 3.2

Using blue pen. Correcting by red pen.

File: [CUST.DOC.WET]ALK.TEX

Root-File: [CUST.DOC.WET]ALK.ROOT.TEX

1-Page-File: [CUST.DOC.WET]ALK1.TEX

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Chromium (VI) (7196) Worksheet

Batch #03W3108 Matrix: W [Holding Time: 24 hours!!] Test Date: 5/30/03 Analyst: Br

Lot #: Reagent Water _____ Diphenylcazide solution _____ Test Time: 14:57 SOP: G-22

Calibration	STD Lot #	$C_{std} \times V_{std}/V_f = C_i$	A_i	$RF_i = A_i/C_i$	Calibration results	Note
STD-1	W-	× / = mg/L			Least Square [RF]=	Cal. Code:
STD-2	W-	× / = mg/L			Average $\bar{RF}$=	
STD-3	W-	× / = mg/L			C.C.=0.9997 (≥ 0.995)	
STD-4	W-	× / = mg/L			RSD= % (≤ 15%)	
STD-5	W-	× / = mg/L			Ref. page	
STD-6	W-	× / = mg/L			A=0.000+0.836C	

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0=f_1$	Treat. Ratio $V/X=f_2$	540 nm A	Concentration $C'=A/\bar{RF}$	C (Sample) $C=f_1 f_2 C'$	Anomaly Note
CCV	Lot: W-7850	Expected Conc.:	×	/ =0.25 mg/L	0.210	0.25 mg/L	REC. %	90-110 %
Method Blank	Bl. Lot: T1116		$/X_0$ = 1	95.0/ =	0.000	mg/L	0.000 ppm	
LCS1	Bl. Lot: "		$/X_0$ = 1	95.0/ =	0.219	mg/L	0.262 ppm	
Sample-1	3465-1		$/X_0$ =	95.0/ =	0.002	mg/L	0.002 ppm	
MS on S-1	1		$/X_0$ =	95.0/ =	0.201	mg/L	0.240 ppm	
MSD on S-1	1		$/X_0$ =	95.0/ =	0.204	mg/L	0.244 ppm	
Sample 2	2		$/X_0$ =	95.0/ =	0.003	mg/L	0.003 ppm	
Sample 3	3		$/X_0$ =	95.0/ =	0.004	mg/L	0.005 ppm	
Sample 4			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 5			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 6			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 7			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 8			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 9			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 10			$/X_0$ =	95.0/ =		mg/L	ppm	
Blank	Lot:		$/X_0$ =	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot: T1116		$/X_0$ = 1	95.0/ =	0.221	mg/L	0.264 ppm	
Sample 11			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 12			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 13			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 14			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 15			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 16			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 17			$/X_0$ = 5/30/03	95.0/ =		mg/L	ppm	
Sample 18			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 19			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 20			$/X_0$ =	95.0/ =		mg/L	ppm	
MTX Dup.	closing 0.25 mg/L		$/X_0$ =	95.0/ =	0.206	0.246 mg/L	ppm	

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL)/X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
MS	W-7850	× / =0.25 ppm	%	80-120 %/80-120 %
MSD	W-	× / = ppm	%	.. ..
LCS	W-7759	× / = ppm	%	80-120 %/80-120 %
LCSD	W-	× / = ppm	%	.. ..

PQL/MDL (in ppm)	
PQL(w)	0.01
PQL(s)	0.05
MDL(w)	0.005
MDL(s)	0.025

APCL form S-155 May 08, 1996. Ver. 3.1 No pencil. Use blue pen for record. Use red pen for correction.
File:[CUST.DOC.WET]CR6.TEX Root-file: CR6_ROOT.TEX 1-Page-File: CR61.TEX
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Chromium (VI) (7196) Worksheet

Batch # 03W1295 Matrix: W [Holding Time: 24 hours!!] Test Date: 1/29/03 Analyst: BN

Lot #: Reagent Water _____ Diphenylcazide solution _____ Test Time: _____ SOP: G-22

Calibration	STD Lot #	$C_{std} \times V_{std}/V_f = C_i$	A_i	$RF_i = A_i/C_i$	Calibration results	Note
STD-1	W-7191	× / =0.000mg/L	0.000		Least Square [RF]=	Cal. Code:
STD-2	W-	× / =0.025mg/L	0.006		Average RF=	A=0.000+0.836C
STD-3	W-	× / =0.050mg/L	0.041		C.C.=0.9917 (≥ 0.995)	
STD-4	W-	× / =0.125mg/L	0.109		RSD= % (≤ 15%)	
STD-5	W-	× / =0.250mg/L	0.214		Ref. page	
STD-6	W-	× / =0.500mg/L	0.415		A=0.003+Bi'Ki/03	

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0=f_1$	Treat. Ratio $V/X=f_2$	540 nm A	Concentration $C'=A/\bar{RF}$	C (Sample) $C=f_1\ f_2\ C'$	Anomaly Note
CCV	Lot: W-7076.	Expected Conc.:	× /	=0.25 mg/L	0.216	0.258 mg/L	REC. %	90-110 %
Method Blank	Bl. Lot: T1115		/X_0 = 1	95.0/ =	0.000	mg/L	0.00 ppm	
LCS1	Bl. Lot: "		/X_0 =	95.0/ =	0.204	mg/L	0.244 ppm	
Sample-1	1369-1		/X_0 =	95.0/ =	0.000	mg/L	0.00 ppm	
MS on S-1	6		/X_0 =	95.0/ =	0.223	mg/L	0.266 ppm	
MSD on S-1	6		/X_0 =	95.0/ =	0.230	mg/L	0.275 ppm	
Sample 2	2		/X_0 =	95.0/ =	0.004	mg/L	0.005 ppm	
Sample 3	3		/X_0 =	95.0/ =	0.002	mg/L	0.002 ppm	
Sample 4	4		/X_0 =	95.0/ =	0.001	mg/L	0.001 ppm	
Sample 5	5		/X_0 =	95.0/ =	0.002	mg/L	0.002 ppm	
Sample 6	6		/X_0 =	95.0/ =	0.004	mg/L	0.005 ppm	
Sample 7			/X_0 =	95.0/ =		mg/L	ppm	
Sample 8			/X_0 =	95.0/ =		mg/L	ppm	
Sample 9			/X_0 =	95.0/ =		mg/L	ppm	
Sample 10			/X_0 =	95.0/ =		mg/L	ppm	
Blank	Lot:		/X_0 =	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot: T1115		/X_0 = 1	95.0/ =	0.210	mg/L	0.251 ppm	
Sample 11			/X_0 =	95.0/ =		mg/L	ppm	
Sample 12			/X_0 =	95.0/ =		mg/L	ppm	
Sample 13			/X_0 =	95.0/ =		mg/L	ppm	
Sample 14			/X_0 =	95.0/ =		mg/L	ppm	
Sample 15			/X_0 =	95.0/ =		mg/L	ppm	
Sample 16			/X_0 =	95.0/ =		mg/L	ppm	
Sample 17			/X_0 =	95.0/ =		mg/L	ppm	
Sample 18			/X_0 =	95.0/ =		mg/L	ppm	
Sample 19			/X_0 =	95.0/ =		mg/L	ppm	
Sample 20			/X_0 =	95.0/ =		mg/L	ppm	
MTX Dup.	closing 0.25mg/L		/X_0 =	95.0/ =	0.204	mg/L	0.244 ppm	

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL)/X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
MS	W-7076	× / =0.25 ppm	%	80-120 %/80-120 %
MSD	W-	× / = ppm	%	.. ..
LCS	W-7191	× / = ppm	%	80-120 %/80-120 %
LCSD	W-	× / = ppm	%	.. ..

PQL/MDL (in ppm)	
PQL(w)	0.01
PQL(s)	0.05
MDL(w)	0.005
MDL(s)	0.025

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File:[CUST.DOC.WET]CR6.TEX Root-file: CR6_ROOT.TEX 1-Page-File: CR61.TEX
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pH (150.1/9045B) Worksheet

Temperature compensation must be performed by the instrument automatically. Analyst [illegible] SOP: G-44

Batch # 03W3100 Analysis Date: 5/30/03
Starting Time: 11:00 Ending Time: :
Matrix ☐ Aaueous ☐ Soil

Standard	4.00	7.00	10.00
Lot #		030660-24	030659-24
Temperature °C		25.0	25.0
pH Reading		7.01	10.01
T-corrected pH		7.00	10.00
Control Limit	±0.05 pH unit		

#	Sample ID	Pre-treat	pH	Note
MB	T 1116		6.88	
1	3471-1		5.60	
2				
3				
4				
5				
6				
7				
8				
9				
10			5/30/03	
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Dup.	3471-1		5.46	

Batch # 03W3109 Analysis Date: 5/30/03
Starting Time: 16:13 Ending Time: :
Matrix ☒ Aaueous ☐ Soil

Standard	4.00	7.00	10.00
Lot #		030660-24	030659-24
Temperature °C		24.2	24.2
pH Reading		7.07	10.02
T-corrected pH		7.00	10.01
Control Limit	±0.05 pH unit		

#	Sample ID	Pre-treat	pH	Note
MB	T1116		6.85	
1	3465-1		7.36	
2	-2		7.00	
3	-3		6.79	
4				
5				
6				
7				
8				
9				
10			5/30/03	
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Dup.	3465-1		7.32	

TDS

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Solid Analysis (160.1, 160.2, 160.3) Worksheet

Batch # 03W2111 Matrix W Method: 160.1 Balance No. _____ Date 6/21/03 Analyst: _____

EPA 160.1 TDS – Total Dissolved (filterable) Solids — Dry for 1hr. or more at 180 °C

EPA 160.2 TSS – Total Suspended (nonfilterable) Soilds — Dry for 1hr. or more at 103-105 °C

EPA 160.3 TS – Total Solids — Dry for 1hr. or more at 103-105 °C

Other method (specify):

Result= $10^6 \times \Delta W \times f_1 / V$ SOP: G-81

#	Analysis Type	Sample ID (STD Lot #)	Treatment Ratio $V_1/X=f_1$	Volume V, mL	W_1 g	W_2 1st, g	W_2 2nd, g	$\Delta W = W_2 - W_1$, g	Results (ppm)	Note
1	Blank	T1116	1 =	100	116.0180	116.0083	116.0182		2	31
2	LCS	T1116	1 =	100	115.3113	115.3501	115.3501		388	38
3	Sample-1	3473-1	1 =	25	114.3752	114.4663	114.4664		3648	A
4	MS on S-1	3465-1	1 =	100	104.3137	104.3913	104.3914		777	3
5	MSD on S-1	3465-1	1 =	100	112.8981	112.9755	112.9755		774	4
6	Sample-2	3473-2	1 =	25	121.3168	121.4129	121.4131		3852	I
7	Sample-3	3	1 =	↓	114.2616	114.3946	114.3947		5324	N
8	Sample-4	4	1 =	↓	103.9430	104.0400	104.0400		3880	14
9	Sample-5	5	1 =	↓	112.3034	112.3920	112.3920		3544	K
10	Sample-6	6	1 =	50	111.7876	111.8483	111.8484		1216	R
11	Sample-7	7	1 =	↓	105.3102	105.3621	105.3621		1038	12
12	Sample-8	8	1 =	↓	107.7154	107.7587	107.7586		864	O
13	Sample-9	9	1 =	↓	116.5555	116.5964	116.5963		816.	101
14	Sample-10	3471-1	1 =	100	113.9045	113.9084	113.9085		40	P
15	LCSD	T1116	1 =	100	115.9148	115.9550	115.9550		402	Y9
16	Sample-11	3469-2	1 =	100	115.8619	115.8966	115.8966		347	30
17	Sample-12	3465-1	1 =	↓	114.1383	114.1751	114.1750		367	C3
18	Sample-13	2	1 =	↓	117.6045	117.6343	117.6343		298	X5
19	Sample-14	3	1 =	↓	98.0957	98.1661	98.1662		705	Y1
20	Sample-15		1 =							
21	Sample-16		1 =							
22	Sample-17		1 =							
23	Sample-18		1 =							
24	Sample-19		1 =							
25	Sample-20		1 =							
26	Mtx Dup.	3465-3	1 =	100	113.1767	113.2481	113.2482		715	25

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL)/X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
MS	W- 7618	× 1 = 400 ppm	%	85-115 %/80-120 %
MSD	W- "	× 1 = ppm	%	.. ..
LCS	W- 7619	× 1 = ppm	%	90-110 %/85-115 %
LCSD	W- "	× 1 = ppm	%	.. ..

PQL/MDL (in ppm)	
PQL(w)	10
PQL(s)	50
MDL(w)	4
MDL(s)	20

APCL form 5-127, March 7, 1995. Ver. 3.0 No pencil. Use blue pen for record. Use red pen for correction.

FILE: [CUST.DOC.WET]TDS .TEX ROOT-FILE: TDS_ROOT.TEX CONTROL-FILE: TDS.000 1-Page file: TDS1.TEX

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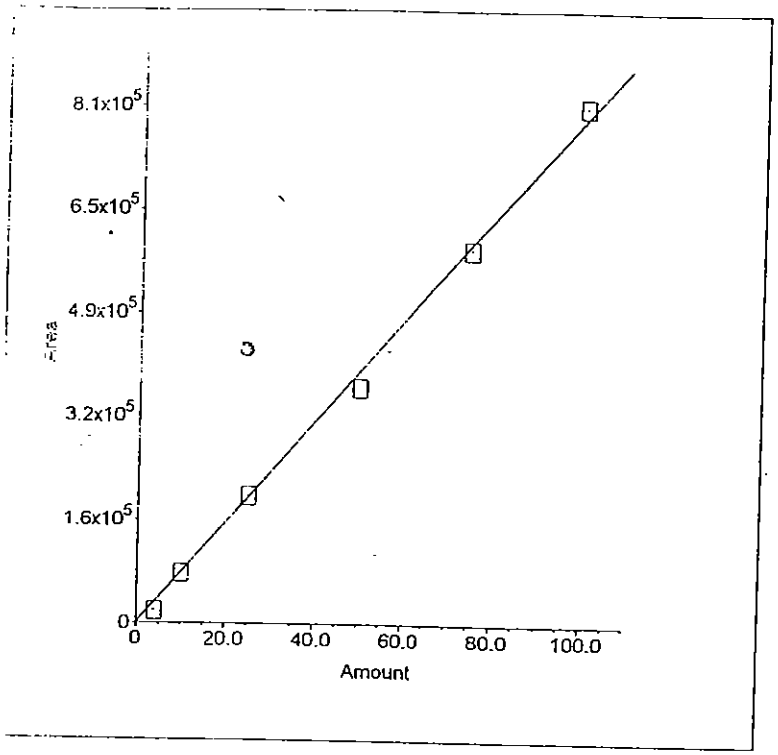
ent:perchlorate
External Fit Type:Linear
ce Calibration:Area
997193
Amt=0.0001248*Resp+0



Line	Sample	Sample Type	Level	Method	Data File	Volume	Dilution	Weight	Int. Std.
1	MB	Sample		e314.0-7.met	c:\data\e314.0-7\mb	1	1	1	1
2	STD1 4ppb W6875A	Calibration	1	e314.0-7.met	c:\data\e314.0-7\std1	1	1	1	1
3	STD2 10ppb W6875B	Calibration	2	e314.0-7.met	c:\data\e314.0-7\std2	1	1	1	1
4	STD3 25ppb W6875C	Calibration	3	e314.0-7.met	c:\data\e314.0-7\std3	1	1	1	1
5	STD4 50ppb W6875D	Calibration	4	e314.0-7.met	c:\data\e314.0-7\std4	1	1	1	1
6	STD5 75ppb W6875E	Calibration	5	e314.0-7.met	c:\data\e314.0-7\std5	1	1	1	1
7	STD6 100ppb W6875F	Calibration	6	e314.0-7.met	c:\data\e314.0-7\std6	1	1	1	1
8	ICV 50ppb W6876B	Sample		e314.0-7.met	c:\data\e314.0-7\icv	1	1	1	1
9	ICB	Sample		e314.0-7.met	c:\data\e314.0-7\icb	1	1	1	1
10	ICCS 4PPB W6876A	Sample		e314.0-7.met	c:\data\e314.0-7\iccs	1	1	1	1
11	MDL-W-1	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-w-1	1	1	1	1
12	MDL-W-2	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-w-2	1	1	1	1
13	MDL-W-3	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-w-3	1	1	1	1
14	MDL-W-4	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-w-4	1	1	1	1
15	MDL-W-5	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-w-5	1	1	1	1
16	MDL-W-6	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-w-6	1	1	1	1
17	MDL-W-7	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-w-7	1	1	1	1
18	MDL-W-8	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-w-8	1	1	1	1
19	MDL-S-1	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-s-1	1	5	1	1
20	MDL-S-2	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-s-2	1	5	1	1
21	MDL-S-3	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-s-3	1	5	1	1
22	MDL-S-4	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-s-4	1	5	1	1
23	MDL-S-5	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-s-5	1	5	1	1
24	MDL-S-6	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-s-6	1	5	1	1
25	MDL-S-7	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-s-7	1	5	1	1
26	MDL-S-8	Sample		e314.0-7.met	c:\data\e314.0-7\mdl-s-8	1	5	1	1
27	CCV 50PPB W6876A	Sample		e314.0-7.met	c:\data\e314.0-7\ccv	1	1	1	1
28	1	Sample		aastopcl.met		1	1	1	1

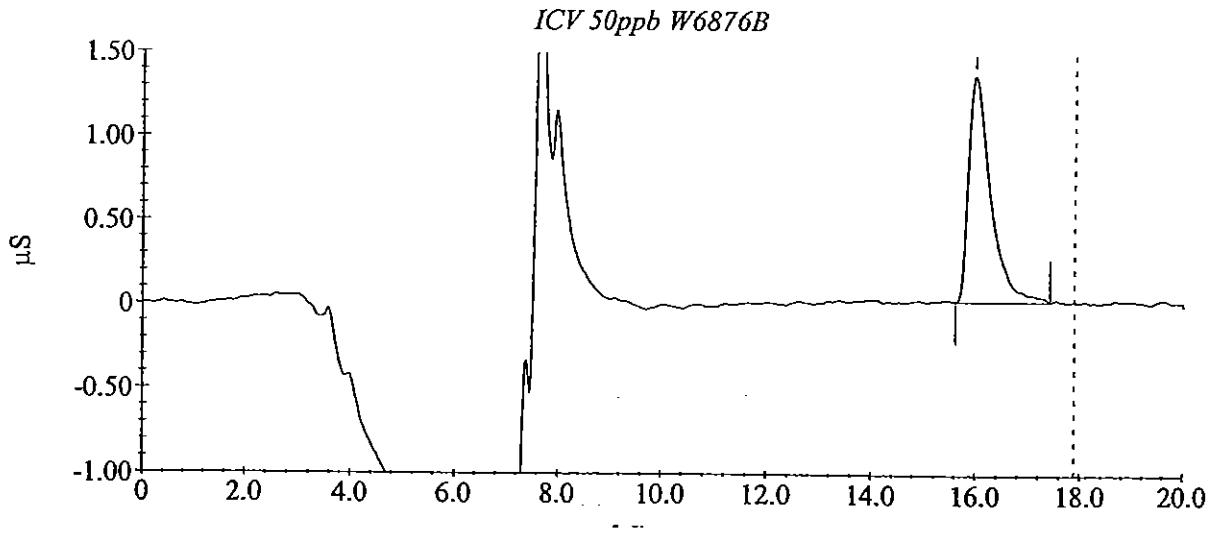
APCL Perchlorate Analysis Report

Sample Name : ICV 50ppb W6876B
Data File Name : C:\DATA\E314.0-7\ICV_008.DXD

Method File Name : c:\peaknet\method\e314.0-7.met
Date Time Collected : 11/14/2001 3:05:15 PM
System Operator : Wang Wei
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	15.98	49.58	397380	13468



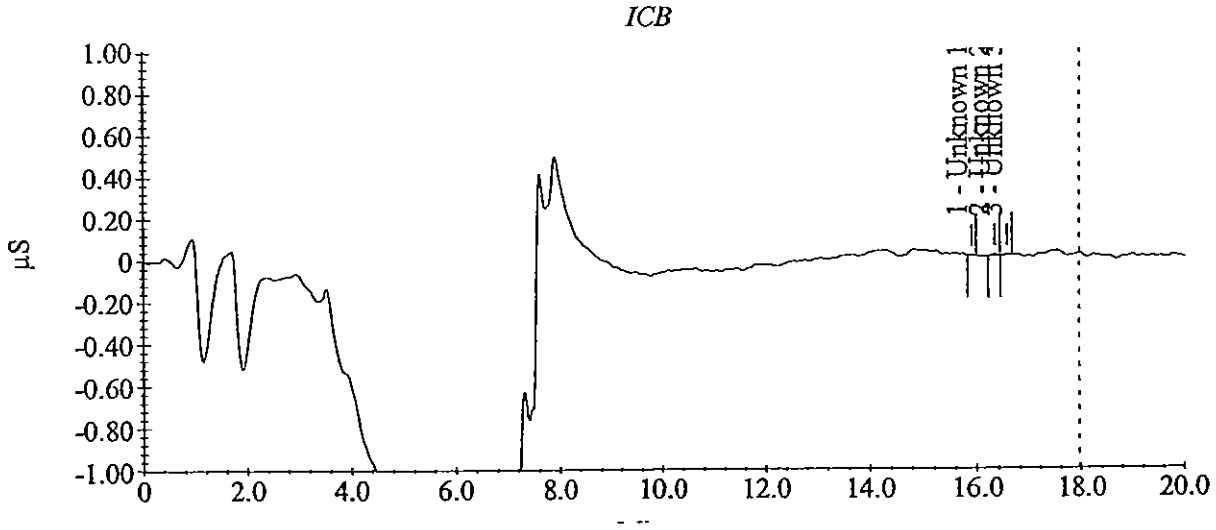
APCL Perchlorate Analysis Report

Sample Name : ICB
Data File Name : C:\DATA\E314.0-7\ICB_009.DXD

Method File Name : c:\peaknet\method\e314.0-7.met
Date Time Collected : 11/14/2001 3:32:19 PM
System Operator : Wang Wei
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height



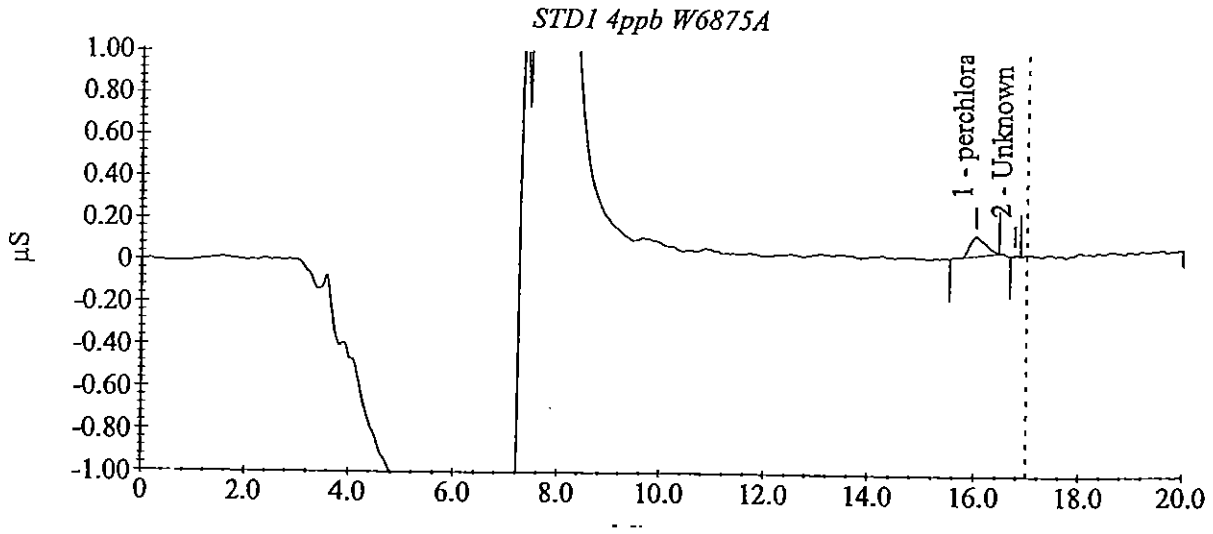
Calibration Update Report

Sample Name : STD1 4ppb W6875A
Data File Name : C:\DATA\E314.0-7\STD1_002.DXD

Method File Name : c:\peaknet\method\e314.0-7.met
Schedule File Name : c:\peaknet\schedule\e314.0-7.sch
Date Time Collected : 11/14/2001 12:50:35 PM
Calibration Date : 11/14/2001 1:10:47 PM
System Operator : Wang Wei

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	perchlorate	16.03	3926	19371	19371



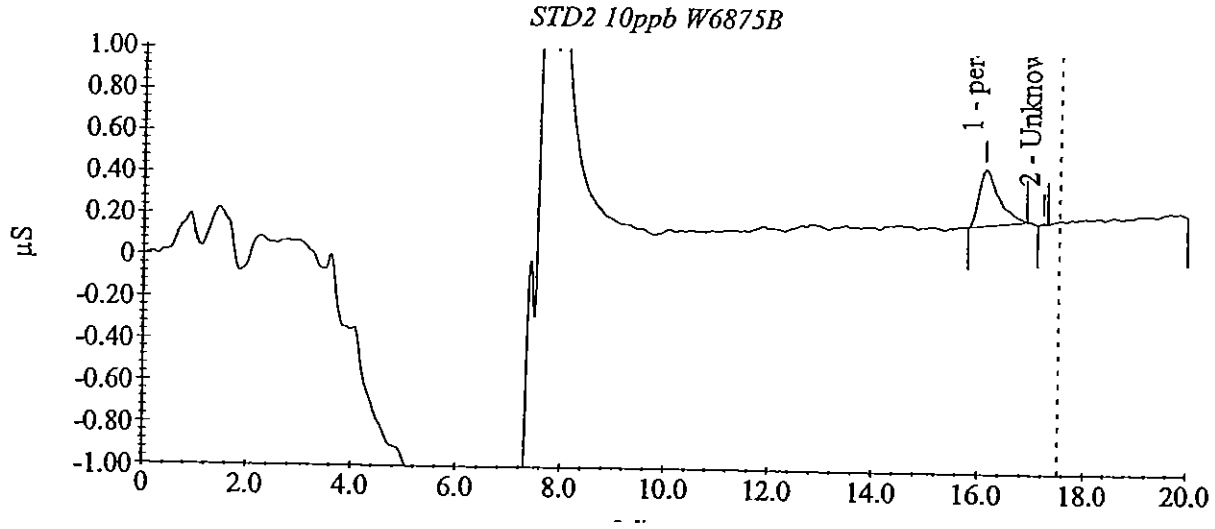
Calibration Update Report

Sample Name : STD2 10ppb W6875B
Data File Name : C:\DATA\E314.0-7\STD2_003.DXD

Method File Name : c:\peaknet\method\e314.0-7.met
Schedule File Name : c:\peaknet\schedule\e314.0-7.sch
Date Time Collected : 11/14/2001 1:13:01 PM
Calibration Date : 11/14/2001 1:33:13 PM
System Operator : Wang Wei

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	perchlorate	16.12	12741	70547	79002



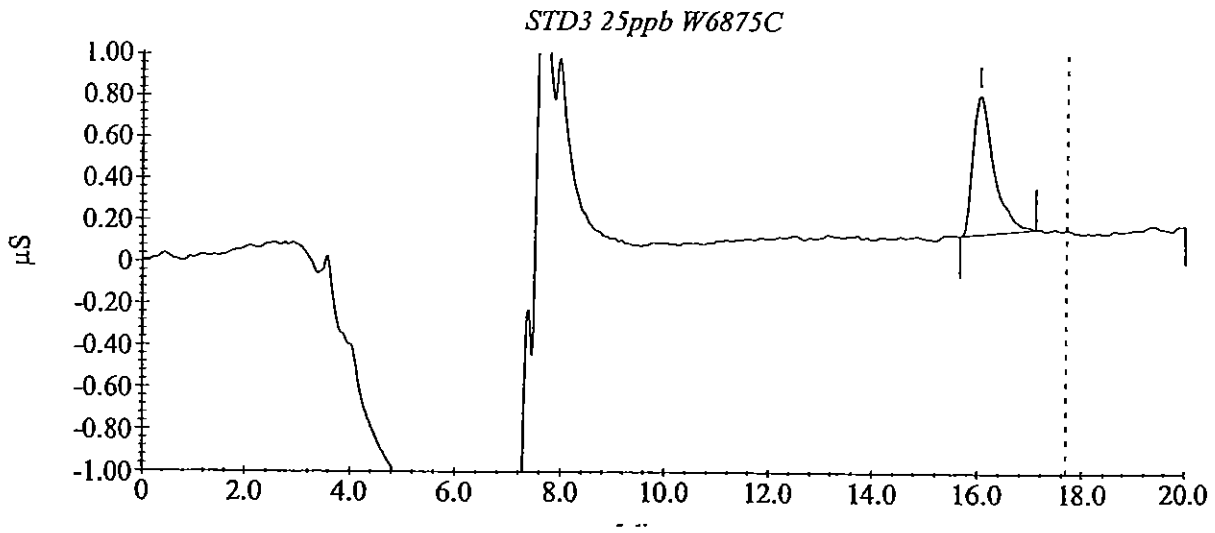
Calibration Update Report

Sample Name : STD3 25ppb W6875C
Data File Name : C:\DATA\E314.0-7\STD3_004.DXD

Method File Name : c:\peaknet\method\e314.0-7.met
Schedule File Name : c:\peaknet\schedule\e314.0-7.sch
Date Time Collected : 11/14/2001 1:35:27 PM
Calibration Date : 11/14/2001 1:55:39 PM
System Operator : Wang Wei

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	perchlorate	16.03	36148	181269	202985



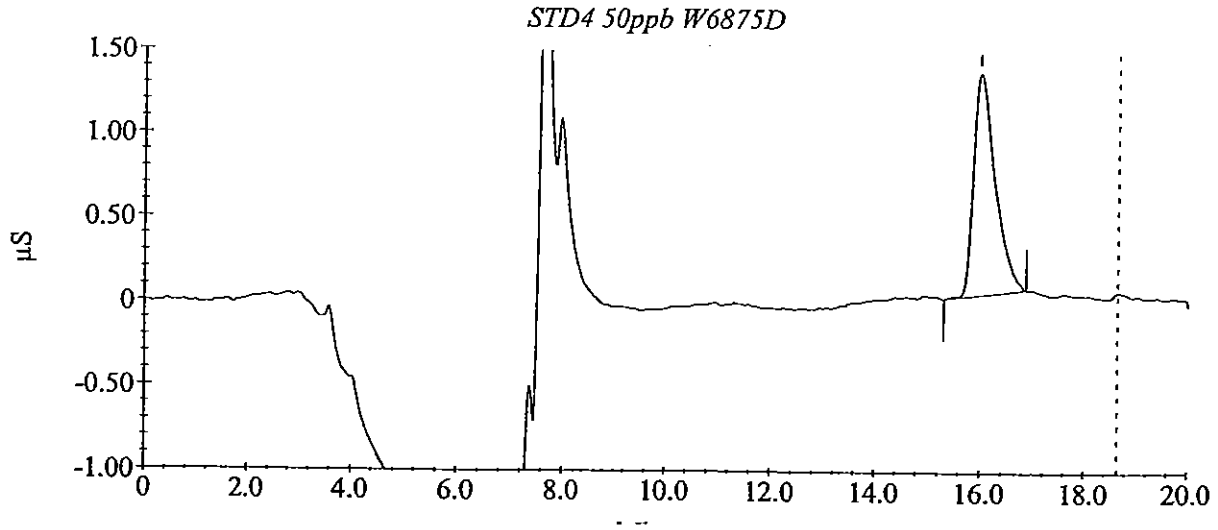
Calibration Update Report

Sample Name : STD4 50ppb W6875D
Data File Name : C:\DATA\E314.0-7\STD4_005.DXD

Method File Name : c:\peaknet\method\e314.0-7.met
Schedule File Name : c:\peaknet\schedule\e314.0-7.sch
Date Time Collected : 11/14/2001 1:57:54 PM
Calibration Date : 11/14/2001 2:18:06 PM
System Operator : Wang Wei

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	perchlorate	15.98	75953	373818	373818



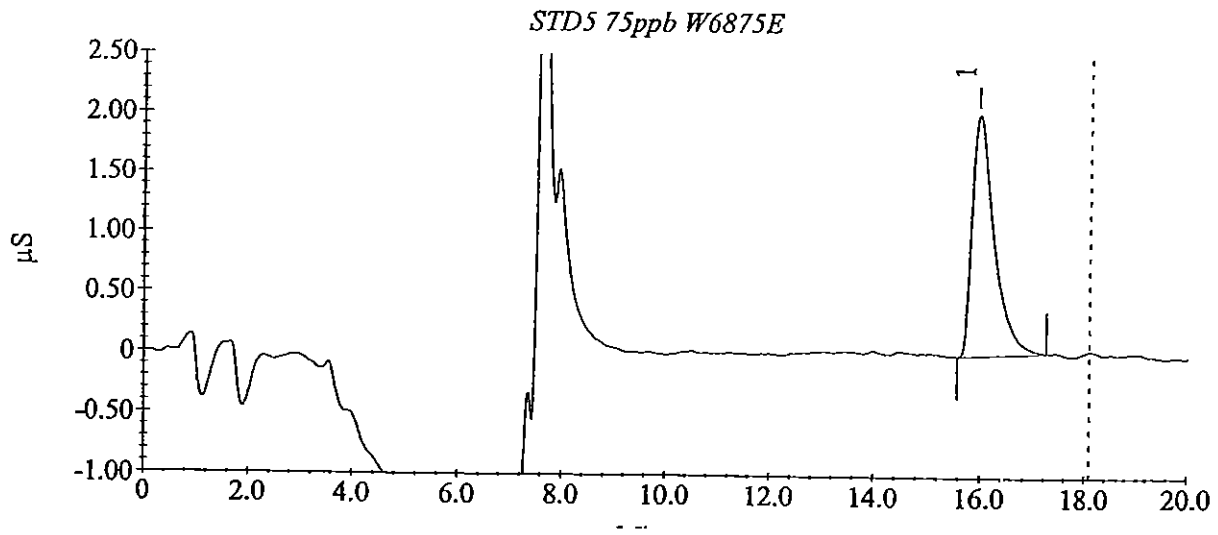
Calibration Update Report

Sample Name : STD5 75ppb W6875E
Data File Name : C:\DATA\E314.0-7\STD5_006.DXD

Method File Name : c:\peaknet\method\e314.0-7.met
Schedule File Name : c:\peaknet\schedule\e314.0-7.sch
Date Time Collected : 11/14/2001 2:20:20 PM
Calibration Date : 11/14/2001 2:40:32 PM
System Operator : Wang Wei

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	perchlorate	15.95	113073	577926	592432



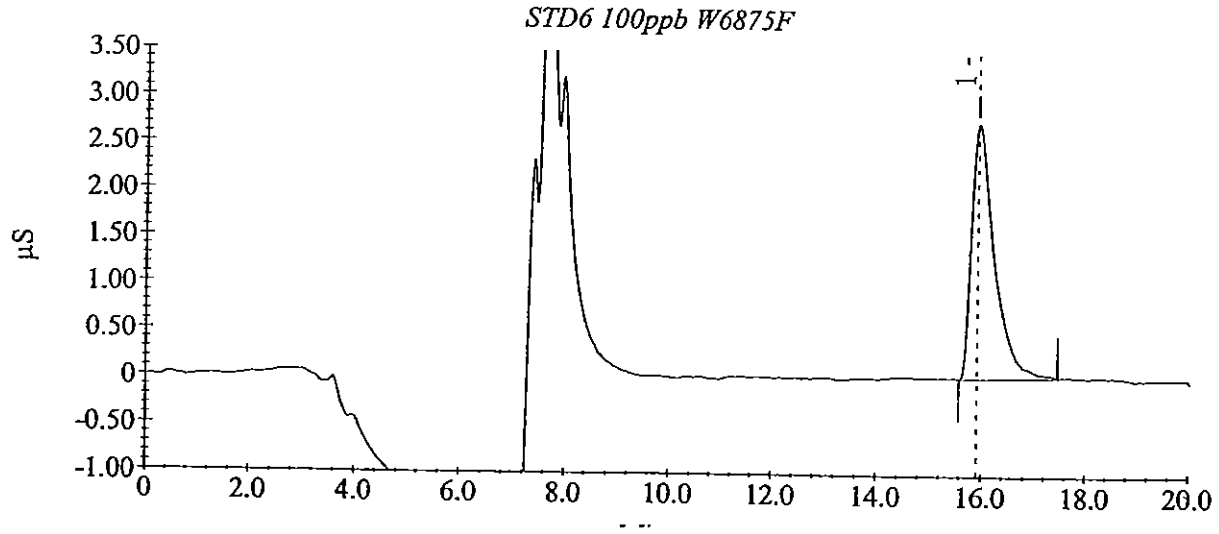
Calibration Update Report

Sample Name : STD6 100ppb W6875F
Data File Name : C:\DATA\E314.0-7\STD6_007.DXD

Method File Name : c:\peaknet\method\e314.0-7.met
Schedule File Name : c:\peaknet\schedule\e314.0-7.sch
Date Time Collected : 11/14/2001 2:42:47 PM
Calibration Date : 11/14/2001 3:03:00 PM
System Operator : Wang Wei

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	perchlorate	15.92	151126	818433	819871



DIONEX METHOD PARAMETERS - E300-063.MET

Method Comment: APCL EPA 300 ANALYSIS DX-100
Column ID: Dionex AS4A-SC
Analyst ID: David

System Parameters

System Name: DX-100
Number of Detectors..... 1
Run Time (minutes)..... 10.00
Sampling Rate (seconds)..... 0.20

Detector 1 Type..... COND
Detector 1 real time plot scale maximum (uS)..... 30.000
minimum..... -3.000
Detector 1 Output Equivalent to 1 Volt (in uS) 30.00
Detector 1 ACI Analog Input Connection DET1
Save Data File..... Yes
Data File Name: C:\DX\DATA\03W1991\W1991Q01.D10

-- DETECTOR 1 PARAMETERS --

Report Options

Create ASCII Report File..... No
Print Report..... Yes
Print All Components..... Yes
Print Components Found..... No
Print Missing Components..... No
Print All Peaks..... No
Print Unknown Peaks..... No
Print Chromatogram..... Yes
Autoscale Chromatogram Maximum..... No
Autoscale Chromatogram Minimum..... No
Fill Peaks with Color ..... No
Draw Grid Lines on Chromatogram..... No
Show Component Fraction Numbers..... No
Label with Peak Number..... No
Label with Retention Times on Chromatogram..... Yes
Label with Component Name..... Yes
Format File Name: C:\DX\METHOD\DEFAULT.PRF

Integration Parameters

Starting Peak Width (seconds)..... 10.0
Peak Threshold 2.000
Peak Area Reject..... 1000
Area Reject for Reference Peaks..... 1000

Data Events

Time	Description
0.13	Start peak detection
10.00	Stop peak detection

Calibration Parameters

Number Of Levels for Calibration	6
Force Calibration Curve Through Origin	No
Calibration Fit Type	Linear
Replace Or Average Calibrations	Replace
External or Internal Calibration	External
Calculate Unknowns by Area or Height	Area
Default Sample Volume	1.0
Default Dilution Factor	1.0
Default Response Factor for Unknown Peaks	0.0
Calibration Standard Volume	1.0
Internal Standard Amount in Samples	1.0
Amount Units	ppm

Component # 4 Bromide Retention Time 3.45
Reference Comp. Nitrate-N Window Size 0.20 min.
Amount = K0 + K1*Area
K0 = 4.58974E-002
K1 = 4.83279E-006

Level	Amount	Area	Height
1	7.50000E-002	13830	1488
2	1.50000E+000	298206	30100
3	3.00000E+000	591234	61776
4	6.00000E+000	1219933	128845
5	7.50000E+000	1559887	166594
6	0.00000E+000	0	0

Component # 5 Nitrate-N Retention Time 3.87
Reference Comp. Nitrate-N Window Size 0.25 min.
Amount = K0 + K1*Area
K0 = 4.24689E-002
K1 = 8.05553E-007

Level	Amount	Area	Height
1	3.75000E-002	40157	3802
2	7.50000E-001	849179	77129
3	1.50000E+000	1713421	152776
4	3.00000E+000	3610927	313707
5	3.75000E+000	4688990	396441
6	0.00000E+000	0	0

Component # 6 Phosphate-P Retention Time 6.38
Reference Comp. Phosphate-P Window Size 0.60 min.
Amount = K0 + K1*Area
K0 = 8.68926E-002
K1 = 2.12227E-006

Level	Amount	Area	Height
1	7.50000E-002	24783	1450
2	1.50000E+000	642376	38579
3	3.00000E+000	1301126	79971
4	6.00000E+000	2756481	168994
5	7.50000E+000	3546397	217521
6	0.00000E+000	0	0

Component Table -- Last Modified: 17:42 on Fri, 21 Mar 2003

Component # 1 Fluoride Retention Time 1.32
Reference Comp. Fluoride Window Size 0.15 min.
Amount = K0 + K1*Area
K0 = -9.62851E-004
K1 = 1.37614E-006

Level	Amount	Area	Height
1	2.50000E-002	28534	2732
2	5.00000E-001	373164	44629
3	1.00000E+000	707646	82595
4	2.00000E+000	1435865	173007
5	2.50000E+000	1837162	220914
6	0.00000E+000	0	0

Component # 2 Chloride Retention Time 1.97
Reference Comp. Chloride Window Size 0.15 min.
Amount = K0 + K1*Area
K0 = 1.28188E-001
K1 = 1.95287E-006

Level	Amount	Area	Height
1	1.00000E-001	51206	7044
2	2.00000E+000	909455	126181
3	4.00000E+000	1856586	261681
4	8.00000E+000	3987563	585791
5	1.00000E+001	5142155	754321
6	0.00000E+000	0	0

Component # 3 Nitrite-N Retention Time 2.33
Reference Comp. Chloride Window Size 0.15 min.
Amount = K0 + K1*Area
K0 = 2.38085E-002
K1 = 9.76240E-007

Level	Amount	Area	Height
1	3.75000E-002	30884	3582
2	7.50000E-001	734006	79701
3	1.50000E+000	1468106	162005
4	3.00000E+000	3021523	336616
5	3.75000E+000	3856614	429219
6	0.00000E+000	0	0

Component # 7 Sulfate Retention Time 7.92
Reference Comp. Sulfate Window Size 0.90 min.
Amount = K0 + K1*Area
K0 = 5.32283E-001
K1 = 2.53252E-006

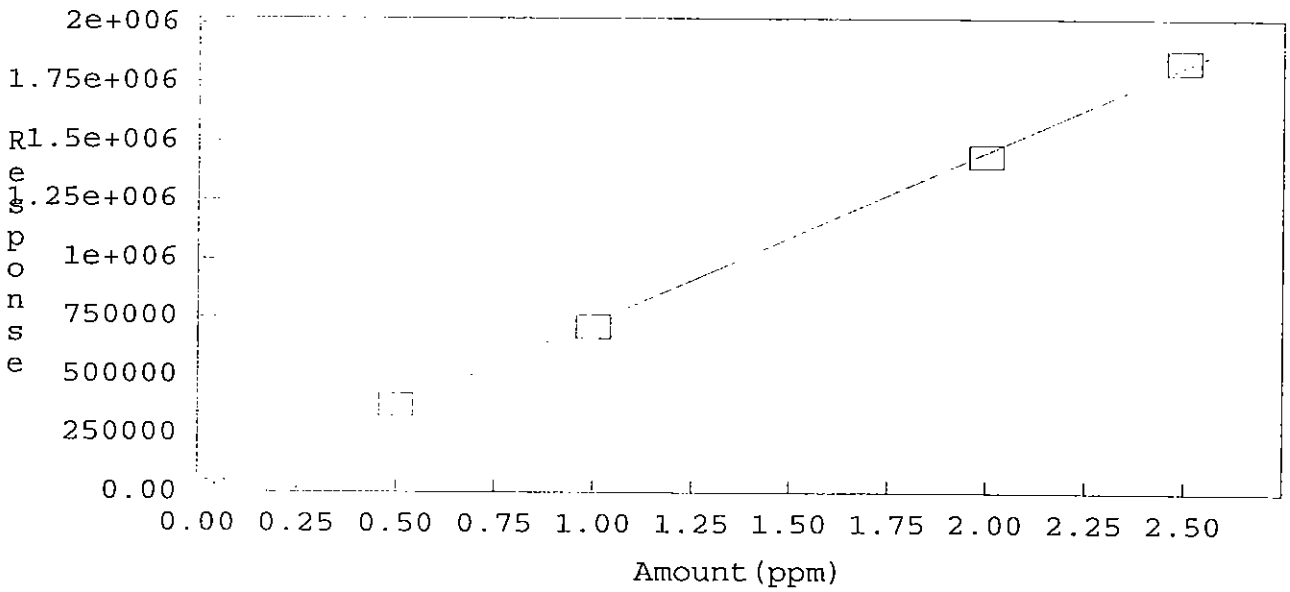
Level	Amount	Area	Height
1	3.76000E-001	129999	6524
2	7.50000E+000	2598757	138579
3	1.50000E+001	5330209	287851
4	3.00000E+001	11507107	615917
5	3.75000E+001	14859049	776426
6	0.00000E+000	0	0

Timed Events File: C:\DX\METHOD\W761CAL.TE

Step	Time	Description
Init		ACI Autosmp OFF
Init		ACI pump st ON
Init		ACI inject OFF
Init		ACI auto zer OFF
Init		ACI TTL 1 OFF
Init		ACI TTL 2 OFF
Init		ACI TTL 3 OFF
Init		ACI TTL 4 OFF
Init		ACI OFF
Init		ACI OFF
1	0.0	ACI Autosmp ON
1	0.0	ACI auto zer ON
2	2.5	ACI Autosmp OFF
2	2.5	ACI inject ON
2	2.5	ACI TTL 1 ON
2	2.5	Start Sampling

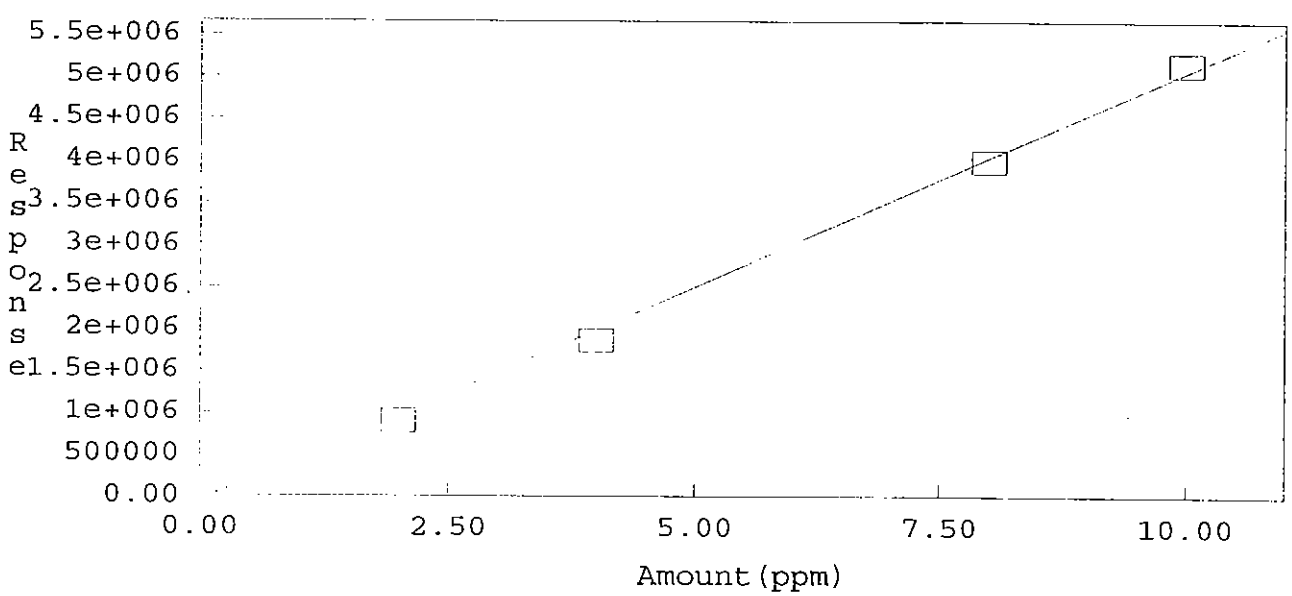
Method: E300-063.MET - Last Updated: 17:42 on Fri, 21 Mar 2003

Component: Fluoride
Fit Type: Linear
r^2 = 0.999552
Amt = Resp * 1.376e-006 + -0.000962
Resp = Amt * 7.267e+005 + 699.7
Standardization: External
Calibration: Area



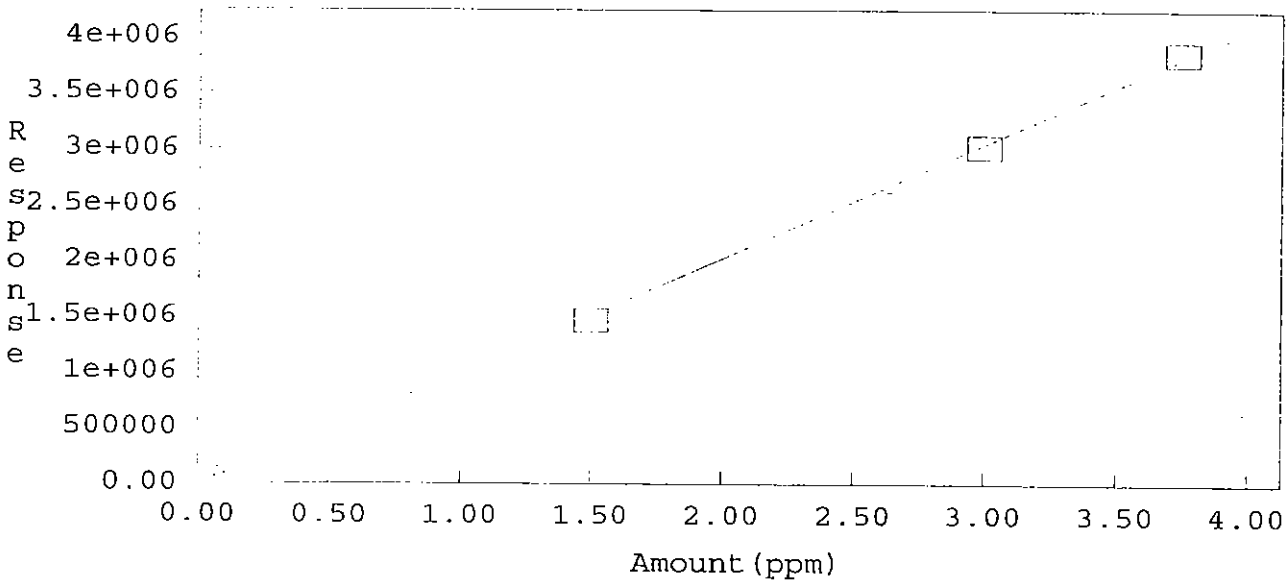
Method: C:\DX\METHOD\E300-063.MET

Component: Chloride
Fit Type: Linear
r^2 = 0.998409
Amt = Resp * 1.953e-006 + 0.1282
Resp = Amt * 5.121e+005 + -6.564e+00
Standardization: External
Calibration: Area



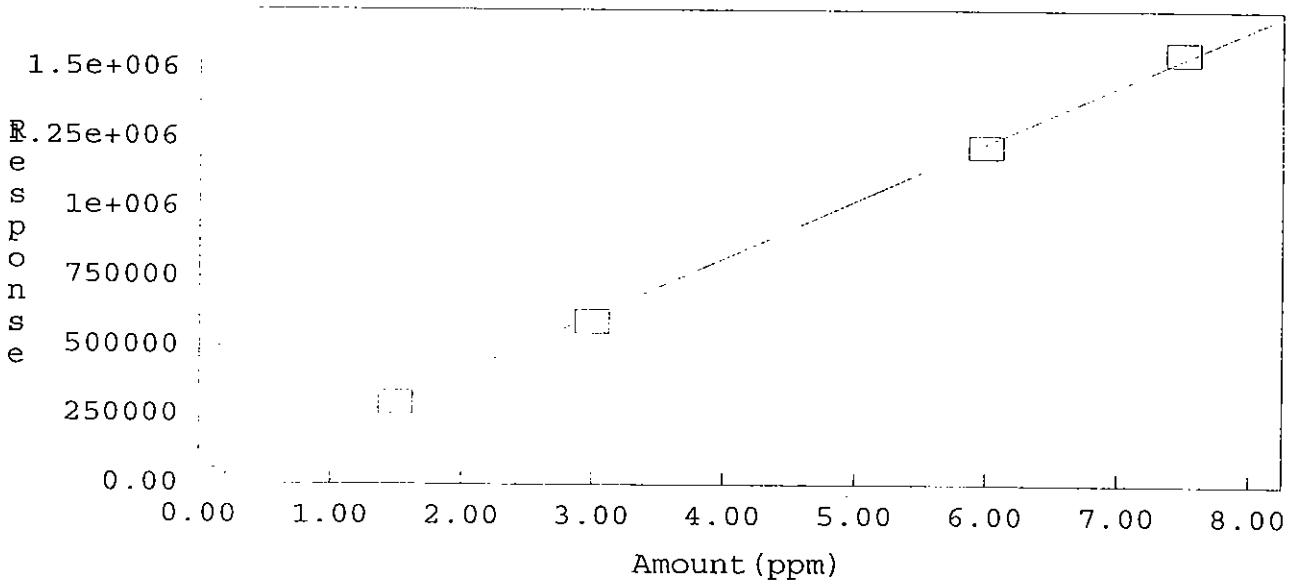
Method: C:\DX\METHOD\E300-063.MET

Component: Nitrite-N
Fit Type: Linear
r^2 = 0.999594
Amt = Resp * 9.762e-007 + 0.02381
Resp = Amt * 1.024e+006 + -2.439e+00
Standardization: External
Calibration: Area



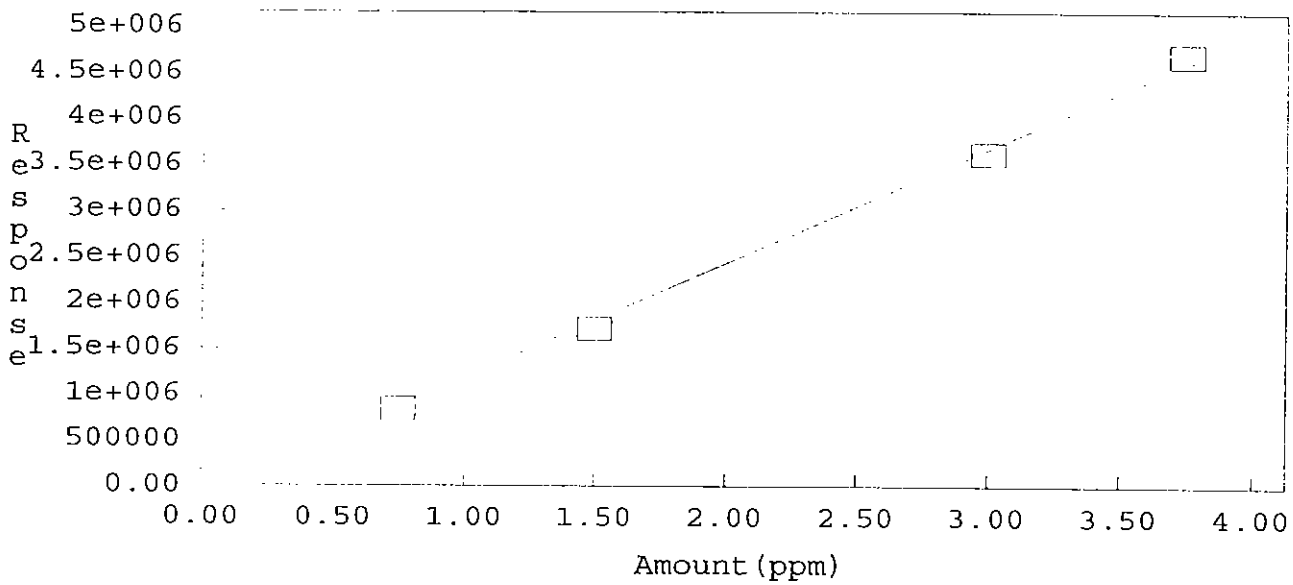
Method: C:\DX\METHOD\E300-063.MET

Component: Bromide
Fit Type: Linear
r^2 = 0.999518
Amt = Resp * 4.833e-006 + 0.0459
Resp = Amt * 2.069e+005 + -9497
Standardization: External
Calibration: Area



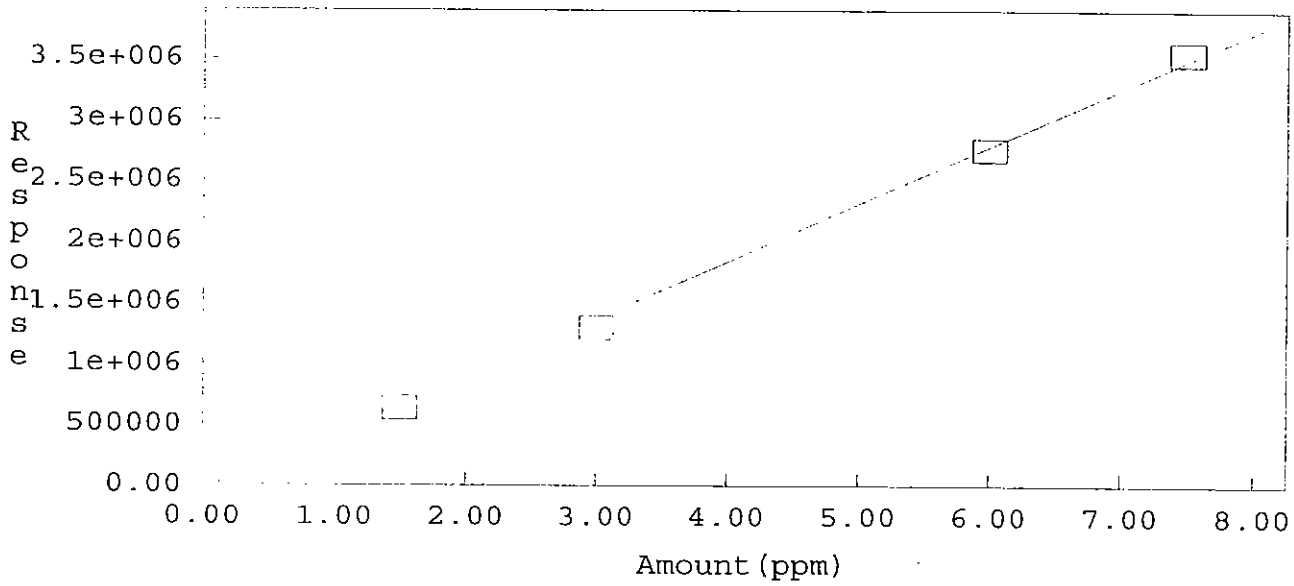
Method: C:\DX\METHOD\E300-063.MET

Component: Nitrate-N
Fit Type: Linear
r^2 = 0.998618
Amt = Resp * 8.056e-007 + 0.04247
Resp = Amt * 1.241e+006 + -5.272e+00
Standardization: External
Calibration: Area



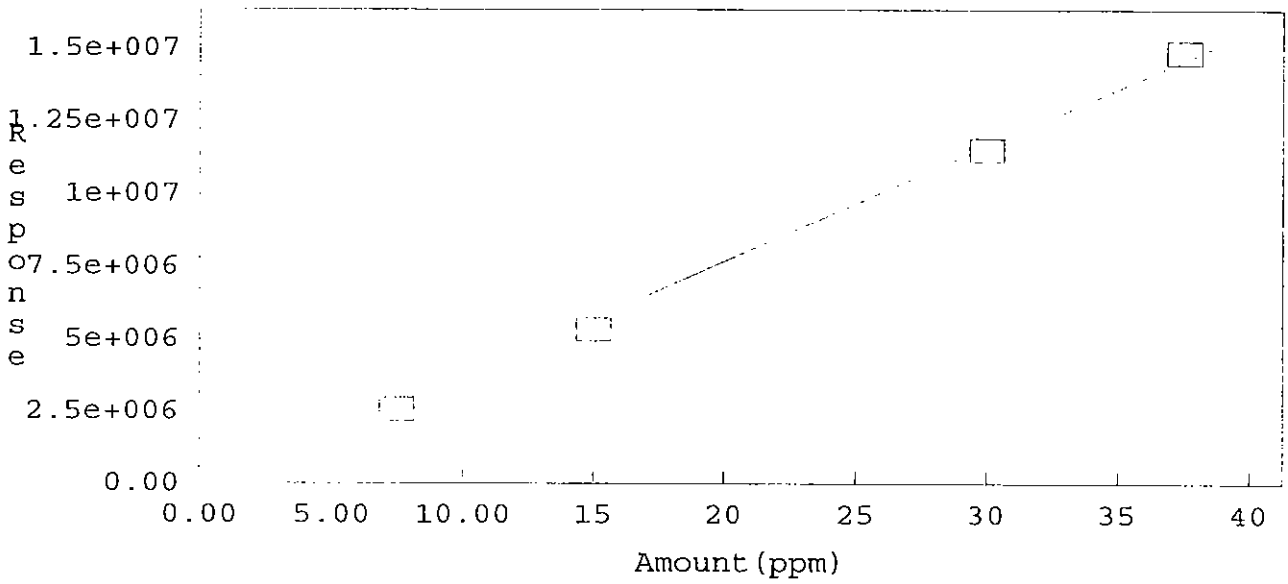
Method: C:\DX\METHOD\E300-063.MET

Component: Phosphate-P
Fit Type: Linear
r^2 = 0.998898
Amt = Resp * 2.122e-006 + 0.08689
Resp = Amt * 4.712e+005 + -4.094e+00
Standardization: External
Calibration: Area



Method: C:\DX\METHOD\E300-063.MET

Component: Sulfate
Fit Type: Linear
r^2 = 0.998245
Amt = Resp * 2.533e-006 + 0.5323
Resp = Amt * 3.949e+005 + -2.102e+00
Standardization: External
Calibration: Area



DIONEX SCHEDULE - C:\DX\SCHEDULE\E300-063.SCH

Inj#	Sample Name	Method	Data File	Vol.	Dil.	Int.Std.
1	autocal1r	..\E300-063	..\W7767Q01.D01	1	1	1
2	autocal2r	..\E300-063	..\W7767Q01.D02	1	1	1
3	autocal3r	..\E300-063	..\W7767Q01.D03	1	1	1
4	autocal4r	..\E300-063	..\W7767Q01.D04	1	1	1
5	autocal5r	..\E300-063	..\W7767Q01.D05	1	1	1
6	autocal6r	..\E300-063	..\W7767Q01.D06	1	1	1
7	icv-w7768-100X	..\E300-063	..\W7768Q01.D07	1	1	1
8	icb	..\E300-063	..\W7767Q01.D08	1	1	1

Comment:

Analyst DL

Date 3/21/03

Instrument J

Sample	Sample Type	Level	Method	Data File	Volume	Dilution	Weight
##03w3074kw ipc 25ppb w7759	Sample		e314-011.met	w3074k ipc 25ppb	1	1	1
ccv 50ppb w7827e	Sample		e314-011.met	w3074k q01	1	1	1
ccb	Sample		e314-011.met	w3074k ccb01	1	1	1
lcs 25ppb w7827d	Sample		e314-011.met	w3074k l01	1	1	1
LCS 18PPB W7685D	Sample		e314-011.met	w3074k j01	1	1	1
ICCS 4ppb w7827b	Sample		e314-011.met	w3074k iccs 4ppb	1	1	1
mb	Sample		e314-011.met	w3074k k01	1	1	1
3381-01 F=2	Sample		e314-011.met	3381-01	1	2	1
3381-06 f=3	Sample		e314-011.met	3381-06	1	3	1
3381-07 F=2	Sample		e314-011.met	3381-07	1	2	1
3391-01 f=1	Sample		e314-011.met	3391-01	1	1	1
3391-02 f=1	Sample		e314-011.met	3391-02	1	1	1
ccv 50ppb w7827e	Sample		e314-011.met	w3074k q02	1	1	1
ccb	Sample		e314-011.met	w3074k k02	1	1	1
3414-01 F=1	Sample		e314-011.met	3414-01	1	1	1
3414-02 F=1	Sample		e314-011.met	3414-02_016.dxd	1	1	1
3391-01 MD F=3	Sample		e314-011.met	w3074k d01_017.dxd	1	3	1
3414-02 MS50PPB F=1 W7428B	Sample		e314-011.met	w3074k m01_018.dxd	1	1	1
3414-02 MSD50PPB F=1 W7428B	Sample		e314-011.met	w3074k n01_019.dxd	1	1	1
3391-02 F=50	Sample		e314-011.met	3391-02a_020.dxd	1	50	1
ccv 50ppb w7827e	Sample		e314-011.met	w3074k q03_021.dxd	1	1	1
CCV 50PPB W7827E	Sample		e314-011.met	w3074k q04	1	1	1
CCB	Sample		e314-011.met	w3074k k03	1	1	1
3444-01 F=1	Sample		e314-011.met	3444-01	1	1	1
3444-02 F=1	Sample		e314-011.met	3444-02	1	1	1
3444-02 F=100	Sample		e314-011.met	3444-02a	1	100	1
3444-03 F=1	Sample		e314-011.met	3444-03a	1	1	1
3444-01 MS50PPB F=1 W7428B	Sample		e314-011.met	w3074k m02	1	1	1
3444-01 MSD50PPB F=1 W7428B	Sample		e314-011.met	w3074k n02	1	1	1
3444-02 MS50PPB F=100 W7428B	Sample		e314-011.met	w3074k m03	1	100	1
3444-02 MSD250PPB F=100 W7428B	Sample		e314-011.met	w3074k n03_031.dxd	1	100	1
CCV 50PPB W7827E	Sample		e314-011.met	w3074k q05_032.dxd	1	1	1
CCB	Sample		e314-011.met	w3074k k04	1	1	1
3465-01 F=1	Sample		e314-011.met	3465-01	1	1	1
3465-02 F=1	Sample		e314-011.met	3465-02	1	1	1
3465-03 F=1	Sample		e314-011.met	3465-03	1	1	1
CCV 50PPB W7827E	Sample		e314-011.met	w3074k q06	1	1	1

Analyst [illegible]

Date 5/29-30/03

Instrument Zc-k

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DIONEX SCHEDULE - C:\DX\SCHEDULE\03W3095.SCH

Inj#	Sample Name	Method	Data File	Vol.	Dil.	Int.Std.
1	##03W3095, W CCVW79	..\E300-063	..\W3095Q01.D01	1	1	1
2	MB RW1413	..\E300-063	..\W3095K11.D02	1	1	1
3	LCS W7934-100X	..\E300-063	..\W3095L01.D03	1	1	1
4	LCSD W7934-100X	..\E300-063	..\W3095J01.D04	1	1	1
5	3444-1 F=20	..\E300-063	..\3444-101.D05	1	20	1
6	3444-2 F=4	..\E300-063	..\3444-201.D06	1	4	1
7	3444-3 F=4	..\E300-063	..\3444-301.D07	1	4	1
8	$3444-1 MS F=40	..\E300-063	..\W3095M01.D08	1	40	1
9	$3444-1 MSD F=40	..\E300-063	..\W3095N01.D09	1	40	1
10	$3444-2 MS F=8	..\E300-063	..\W3095M01.D10	1	8	1
11	$3444-2 MSD F=8	..\E300-063	..\W3095N01.D11	1	8	1
12	CCV2W7933-100X	..\E300-063	..\W3095Q01.D12	1	1	1
13	MB RW1413	..\E300-063	..\W3095K01.D13	1	1	1
14	3465-1 F=4	..\E300-063	..\3465-101.D14	1	4	1
15	3465-2 F=2.5	..\E300-063	..\3465-201.D15	1	2.5	1
16	3465-3 F=10	..\E300-063	..\3465-301.D16	1	10	1
17	CCV3W7933-100X	..\E300-063	..\W3095Q01.D17	1	1	1
18		..\STOP.MET		1	1	1

Comment:
LCS/LCSD LOT # W7934
MS/MSD LOT # W7933
ELUENT LOT # W7868
ANALYTICAL METHOD 9056/E300 MATRIX W

Analyst DR
Date 7/25/03
Instrument J

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

June 5, 2003

GEOFON, Inc.
Attention: Leo Williamson
22632 Golden Spring Dr Ste 270
Diamond Bar CA 91765

Dear Leo Williamson,

This package contains samples in our Service ID 03-3015 and your project : 04-4428.10 JPL. Enclosed please find:

(1) Original analytical report.
(2) Original Chain of Custody.
(3) One diskette containing EDD deliverable.
(4) One original Level C Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
GEOFON, Inc.
Attention: Leo Williamson
22632 Golden Spring Dr Ste 270
Diamond Bar CA 91765
Tel: (909)396-7662 Fax: (909)396-1455

Service ID #: 801-033015
Collected by: Leo Williamson
Collected on: 05/01/03

Received: 05/01/03
Extracted: N/A
Tested: 05/01-13/03
Reported: 05/20/03

Sample Description: Water from MW-3.
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-5-2Q03 03-03015-1	EB-9-5/1/03 03-03015-2	MW-3-1 03-03015-3	MW-3-2 03-03015-4
BICARBONATE	SM2320B	mg/L	2	181	<2	202	187
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	<2	<2	<2	<2
PH	9040	pH unit	0.01	7.55	6.98	7.72	8.05
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	249	9.0J	350	278
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	5.8	<4	<4	4.2
Dilution Factor				4	1.25	4	4
CHLORIDE CL^-	300.0	mg/L	0.2	14.9	0.19J	19.4	14.2
NITRATE AS N	300.0	mg/L	0.04	1.2	0.068	1.6	1.2
SULFATE SO_4^{--}	300.0	mg/L	0.5	37.5	<0.63	49.9	35.7
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	<5	<5	<5	<5
CALCIUM	200.7	µg/L	200	49,800	<200	57,600	49,900
IRON	200.7	µg/L	50	278	50.5	1,160	326
MAGNESIUM	200.7	µg/L	100	18,700	45.9J	22,600	18,000
POTASSIUM	200.7	µg/L	400	2,540	134J	3,170	2,420
SODIUM	200.7	µg/L	2000	18,600	<2000	23,600	18,900
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.4J
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-5-2Q03 03-03015-1	EB-9-5/1/03 03-03015-2	MW-3-1 03-03015-3	MW-3-2 03-03015-4
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	0.4J	0.5J	0.4J	0.4J
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	3J	3J	4J	3J
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-3-3 03-03015-5	MW-3-4 03-03015-6	MW-3-5 03-03015-7	TB-9-5/1/03 03-03015-8
BICARBONATE	SM2320B	mg/L	2	143	128	88.3	-
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	<2	5.2	40.8	-
PH	9040	pH unit	0.01	8.00	8.66	9.64	-
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	249	200	259	-
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	-
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4	-
Dilution Factor				8	2	2	1
CHLORIDE CL^-	300.0	mg/L	0.2	36.8	11.5	9.1	-
NITRATE AS N	300.0	mg/L	0.04	<0.32	0.17	0.11	-
SULFATE SO_4^{--}	300.0	mg/L	0.5	40.9	11.0	9.5	-
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	<5	<5	4.3J	-
CALCIUM	200.7	µg/L	200	29,800	9,690	1,790	-
IRON	200.7	µg/L	50	288	143	789	-
MAGNESIUM	200.7	µg/L	100	14,000	6,830	251	-
POTASSIUM	200.7	µg/L	400	3,050	2,000	1,190	-
SODIUM	200.7	µg/L	2000	42,700	47,600	77,300	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	0.7J	0.6J
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	0.9	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE (DB	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-3-3 03-03015-5	MW-3-4 03-03015-6	MW-3-5 03-03015-7	TB-9-5/1/03 03-03015-8
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	0.7	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	0.5	0.4J	0.5	1.4
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	3J	3J	4J	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	0.4J	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: 04-4428.10 JPL

APCL Service ID: 03-3015

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: JPL/04-4428.10

For GEOFON, Inc.

APCL Service No: 03-3015

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-3-5	03-03015-7
MW-3-4	03-03015-6
MW-3-3	03-03015-5
MW-3-2	03-03015-4
MW-3-1	03-03015-3
TB-9-5/1/03	03-03015-8
EB-9-5/1/03	03-03015-2
DUPE-5-2Q03	03-03015-1

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196 (Chromium (VI)),
314.0 (Perchlorate, low level),
300.0 (Anions by IC),
SM2320B (Carbonate),
SM2320B (Bicarbonate),
9040B (pH),
160.1 (Solids, Total Dissolved (TDS)),
200.7 (Metals by ICP),
206.2 (Arsenic, As, by GFAA),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

(1) EPA 524.2:

Methylene Chloride in the amount of 4.5 ug/L was detected in the Method Blank of batch 03G2456, exceeding to 0.5 ug/L reporting limit. Methylene Chloride was also detected in the field samples, due to lab

contamination.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & Ch Laboratory

GEOFON INCORPORATED

22632 GOLDEN SPRINGS DR., SUITE 270
DIAMOND BAR, CA 91765 • (909) 396-7662 • FAX (909) 396-1455

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

MW-3 0028

GEOFON'S LAB COORDINATOR: Leo W. Williamson	LAB COORDINATOR'S PHONE: (909) 396-7662	LAB COORDINATOR'S FAX: (909) 396-1455	LABORATORY SERVICE ID: –	LABORATORY CONTACT: Kenny Ehan	MAIL REPORT (COMPANY NAME): GEOFON, INC.
PROJECT NAME: JPL GWMON-2Q03	PROJECT LOCATION: MW-3 (Settling Ponds)	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 399-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Leo W. Williamson
PROJECT CONTACT: Leo W. Williamson	PROJECT PHONE NUMBER: (714) 920-8729	PROJECT FAX: (909) 396-1455	LABORATORY ADDRESS: 13760 Magnolia Ave.		ADDRESS: 22632 Golden Springs Dr. #270
PROJECT ADDRESS: 4800 Oak Grove Dr.	CITY, STATE AND ZIPCODE: Pasadena, CA.	CLIENT: US NAVY SWDIV	CITY, STATE AND ZIPCODE: Chino, CA. 91710		CITY, STATE AND ZIPCODE: Diamond Bar, CA. 91765
PROJECT MANAGER: Asrar Faheem	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T	524.2 (VOCs)	200.7 & 200.9 (Minerals)	7196 CHex (Chrome)	SM 2320B (Carbonate/Bicarbonate)	300.0 Cl/SO4/NO3	314.0 (Perchlorate)	160.1 (TDS) + 9040B (pH)	200.8 (Cr & Pb)	Comments
1	MW-3-5	H_2O	5/1/03	750	HCl NONE HNO_3	3+1 + 1+1	III	NORMAL	X	X	X	X	X	X	X	X	MINERALS: Na / K / Ca / As / Mg / Fe
2	MW-3-4	↓	↓	945	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
3	MW-3-3	↓	↓	925	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
4	MW-3-2	↓	↓	1050	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
5	MW-3-1	↓	↓	1130	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
6																	
7	TB-9-5/1/03	H_2O	—	—	HCl	2	III	NORMAL	X								
8	EB-9-5/1/03	↓	5/1/03	805	HCl NONE HNO_3	3+1 + 1+1	↓	↓	X	X	X	X	X	X	X	X	
9	DUPE-5-2Q03	↓	↓	—	↓	↓	IV	↓	X	X	X	X	X	X	X	X	
10																	

3015

SAMPLES COLLECTED BY: Leo W. Williamson	COURIER AND AIR BILL NUMBER:			COOLER TEMPERATURE UPON RECEIPT:
RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Leo W. Williamson	[signature]	5/1/03	1240	
[signature]	[signature]	5/1/03	1405	

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager

Applied P & Ch Laboratory
13760 Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Receiving Checklist

APCL ServiceID: 3015 **Client Name/Project:** Geotom

1. Sample Arrival

Date/Time Received 5/1/03 1405 Date/Time Opened 5/1/03 1405 By (name): Kenny Chan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Adam Wood

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By:
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold ____ # Received 8
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: ___ ☑ #Samples OK?
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): ____

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Temp °C 4.1

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12

If Not, pH = ____ Preserved by: ☐ Client ☐ APCL ☐ Third Party ____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☐ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr
☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: ____

Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?

Labels: ☑ Unique ID? ☑ Date/Time ☐ Preserved?

7. Turn Around Time

☐ RUSH TAT: ____ ☑ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H_2O ☑ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: ____
☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name:____)Date/Time:____

Received/Checked by: [signature] Date: 1 May 2003 Time: 7:42 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal.texfiles]smprcl.tex.

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

03-03015 (0470_ 138) (2202777_ 138)

05/01/03

Part 1: General Information

☐	Company Information	Name:	*GEOFON, Inc.*
		Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
☐	Project Information	Project Description:	*JPL*
		Project #:	*04-4428.10*
☐	Billing Information	P.O. #:	
		Bill Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
		Lab Project ID:	
		Client Database #:	*3*
☐	Receiving Information	Who Received Sample?	*Kenny Chan*
		Receiving Date/Time:	*05/01/03 1405*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*4.1 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Rush 5 working day(s)*
☐	QC Option:		*NEESA C*
☐	Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	MW-3-5	VOC	03-03015-7-α	W	V	C	40	3	G	050103	N	0	7	☐
	MW-3-5	Metals	03-03015-7-β	W	P	N	500	1	G	050103	N	0	7	☐
	MW-3-5	300	03-03015-7-γ	W	P		1000	1	G	050103	N	0	7	☐
2	MW-3-4	VOC	03-03015-6-α	W	V	C	40	3	G	050103	N	0	7	☐
	MW-3-4	Metals	03-03015-6-β	W	P	N	500	1	G	050103	N	0	7	☐
	MW-3-4	300	03-03015-6-γ	W	P		1000	1	G	050103	N	0	7	☐
3	MW-3-3	VOC	03-03015-5-α	W	V	C	40	3	G	050103	N	0	7	☐
	MW-3-3	Metals	03-03015-5-β	W	P	N	500	1	G	050103	N	0	7	☐
	MW-3-3	300	03-03015-5-γ	W	P		1000	1	G	050103	N	0	7	☐
4	MW-3-2	VOC	03-03015-4-α	W	V	C	40	3	G	050103	N	0	7	☐
	MW-3-2	Metals	03-03015-4-β	W	P	N	500	1	G	050103	N	0	7	☐
	MW-3-2	300	03-03015-4-γ	W	P		1000	1	G	050103	N	0	7	☐
5	MW-3-1	VOC	03-03015-3-α	W	V	C	40	3	G	050103	N	0	7	☐
	MW-3-1	Metals	03-03015-3-β	W	P	N	500	1	G	050103	N	0	7	☐
	MW-3-1	300	03-03015-3-γ	W	P		1000	1	G	050103	N	0	7	☐
6	TB-9-5/1/03	VOC	03-03015-8	W	V	C	40	2	G	050103	N	0	7	☐
7	EB-9-5/1/03	VOC	03-03015-2-α	W	V	C	40	3	G	050103	N	0	7	☐
	EB-9-5/1/03	Metals	03-03015-2-β	W	P	N	500	1	G	050103	N	0	7	☐
	EB-9-5/1/03	300	03-03015-2-γ	W	P		1000	1	G	050103	N	0	7	☐
8	DUPE-5-2Q03	VOC	03-03015-1-α	W	V	C	40	3	G	050103	N	0	7	☐
	DUPE-5-2Q03	Metals	03-03015-1-β	W	P	N	500	1	G	050103	N	0	7	☐
	DUPE-5-2Q03	300	03-03015-1-γ	W	P		1000	1	G	050103	N	0	7	☐

Part 3: Analysis Information

Test Items:

- ☐ *524.2* Volatile Organic Compounds
- ☐ *7196A* Chromium (VI)
- ☐ *314.0/300.0* Perchlorate, low level
- ☐ *300.0* Chloride Cl^- by IC
- ☐ *300.0* Sulfate (SO_4^{--}), by IC
- ☐ *300.0/SM4500NO3* Nitrate (NO_3^-) as N by IC
- ☐ *SM2320B* Carbonate
- ☐ *SM2320B* Bicarbonate
- ☐ *9040B/150.1* pH
- ☐ *160.1* Solids, Total Dissolved (TDS)
- ☐ *200.7/6010B* Sodium, Na, by ICP
- ☐ *200.7/6010B* Calcium, Ca, by ICP

☐ *200.7/6010B* Potassium, K, by ICP

☐ *200.7/6010B* Magnesium, Mg, by ICP

☐ *200.7/6010B* Iron, Fe, by ICP

☐ *206.2/7060A* Arsenic, As, by GFAA

☐ *8270-SIM* 1,4-Dioxane

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCH	CL	SO4	NO3	CARBON	BICARB	
1	MW-3-5	VOC	03-03015-7-α	W	X								☐
	MW-3-5	Metals	03-03015-7-β	W									☐
	MW-3-5	300	03-03015-7-γ	W		X	X	X	X	X	X	X	☐
2	MW-3-4	VOC	03-03015-6-α	W	X								☐
	MW-3-4	Metals	03-03015-6-β	W									☐
	MW-3-4	300	03-03015-6-γ	W		X	X	X	X	X	X	X	☐
3	MW-3-3	VOC	03-03015-5-α	W	X								☐
	MW-3-3	Metals	03-03015-5-β	W									☐
	MW-3-3	300	03-03015-5-γ	W		X	X	X	X	X	X	X	☐
4	MW-3-2	VOC	03-03015-4-α	W	X								☐
	MW-3-2	Metals	03-03015-4-β	W									☐
	MW-3-2	300	03-03015-4-γ	W		X	X	X	X	X	X	X	☐
5	MW-3-1	VOC	03-03015-3-α	W	X								☐
	MW-3-1	Metals	03-03015-3-β	W									☐
	MW-3-1	300	03-03015-3-γ	W		X	X	X	X	X	X	X	☐
6	TB-9-5/1/03	VOC	03-03015-8	W	X								☐
7	EB-9-5/1/03	VOC	03-03015-2-α	W	X								☐
	EB-9-5/1/03	Metals	03-03015-2-β	W									☐
	EB-9-5/1/03	300	03-03015-2-γ	W		X	X	X	X	X	X	X	☐
8	DUPE-5-2Q03	VOC	03-03015-1-α	W	X								☐
	DUPE-5-2Q03	Metals	03-03015-1-β	W									☐
	DUPE-5-2Q03	300	03-03015-1-γ	W		X	X	X	X	X	X	X	☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	PH	TDS	NA	CA	K	MG	FE	AS	
1	MW-3-5	VOC	03-03015-7-α	W									☐
	MW-3-5	Metals	03-03015-7-β	W			X	X	X	X	X	X	☐
	MW-3-5	300	03-03015-7-γ	W	X	X							☐
2	MW-3-4	VOC	03-03015-6-α	W									☐
	MW-3-4	Metals	03-03015-6-β	W			X	X	X	X	X	X	☐
	MW-3-4	300	03-03015-6-γ	W	X	X							☐
3	MW-3-3	VOC	03-03015-5-α	W									☐
	MW-3-3	Metals	03-03015-5-β	W			X	X	X	X	X	X	☐
	MW-3-3	300	03-03015-5-γ	W	X	X							☐
4	MW-3-2	VOC	03-03015-4-α	W									☐

	MW-3-2	Metals	03-03015-4-β	W			X	X	X	X	X	X	☐
	MW-3-2	300	03-03015-4-γ	W	X	X							☐
5	MW-3-1	VOC	03-03015-3-α	W									☐
	MW-3-1	Metals	03-03015-3-β	W			X	X	X	X	X	X	☐
	MW-3-1	300	03-03015-3-γ	W	X	X							☐
6	TB-9-5/1/03	VOC	03-03015-8	W									☐
7	EB-9-5/1/03	VOC	03-03015-2-α	W									☐
	EB-9-5/1/03	Metals	03-03015-2-β	W			X	X	X	X	X	X	☐
	EB-9-5/1/03	300	03-03015-2-γ	W	X	X							☐
8	DUPE-5-2Q03	VOC	03-03015-1-α	W									☐
	DUPE-5-2Q03	Metals	03-03015-1-β	W			X	X	X	X	X	X	☐
	DUPE-5-2Q03	300	03-03015-1-γ	W	X	X							☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	DIOXANE	
1	MW-3-5	VOC	03-03015-7-α	W		☐
	MW-3-5	Metals	03-03015-7-β	W		☐
	MW-3-5	300	03-03015-7-γ	W		☐
2	MW-3-4	VOC	03-03015-6-α	W		☐
	MW-3-4	Metals	03-03015-6-β	W		☐
	MW-3-4	300	03-03015-6-γ	W		☐
3	MW-3-3	VOC	03-03015-5-α	W		☐
	MW-3-3	Metals	03-03015-5-β	W		☐
	MW-3-3	300	03-03015-5-γ	W		☐
4	MW-3-2	VOC	03-03015-4-α	W		☐
	MW-3-2	Metals	03-03015-4-β	W		☐
	MW-3-2	300	03-03015-4-γ	W		☐
5	MW-3-1	VOC	03-03015-3-α	W		☐
	MW-3-1	Metals	03-03015-3-β	W		☐
	MW-3-1	300	03-03015-3-γ	W		☐
6	TB-9-5/1/03	VOC	03-03015-8	W		☐
7	EB-9-5/1/03	VOC	03-03015-2-α	W		☐
	EB-9-5/1/03	Metals	03-03015-2-β	W		☐
	EB-9-5/1/03	300	03-03015-2-γ	W		☐
8	DUPE-5-2Q03	VOC	03-03015-1-α	W		☐
	DUPE-5-2Q03	Metals	03-03015-1-β	W		☐
	DUPE-5-2Q03	300	03-03015-1-γ	W		☐

☐ Client"s Requirement: **RUN ~~MS/MSD ON SAMPLE~~ #**

Login By En-Yu Paul Kou

Check By DK

Level C Data Package Deliverables

Volatile Organics

Applied P & Ch Laboratory

5307

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/13/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03G2456-MB-01	Received Date:	05/13/2003
Sample ID:	**03G2456-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	05/13/03	Anal. Date:	05/13/03
Batch No:	03G2456	Prep. No:	–	Anal. Time:	15:55
Data File Name:	G2456K01	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N) N	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	3	J
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	4.5	
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	70-129	102
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	97
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	101
4	TOLUENE-D8	2037-26-5	73-129	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	94
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	88
3	FLUOROBENZENE	462-06-6	50-200	90
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5310

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456K01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 15:55 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 13 16:41 2003
Print Time : Wed May 14 11:30 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.64	7.63	0.002	96	70	1477.639	10.00		0.01	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	1123.135	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	551.400	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.001	111	113	687.620	20.22	20.2	101.09%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.09	0.001	65	102	612.894	19.42	19.4	97.11%	
55	55	toluene-d8	9.91	9.90	0.000	98	100	2924.298	20.45	20.4	102.23%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	850.379	20.26	20.3	101.32%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
18	18	methylene chlorid	4.22	4.20	0.002	84	49	152.465	4.48	4.5	96	
95	95	Tert butyl alcoho	4.49	4.40	0.011	59	57	0.299	0.51	0.5	71	#
33	33	2-butanoneMEK X10	5.97	5.92	0.007	43	72	11.916	2.55	2.6	96	
<<< I2 : ISTD ID = 47 >>>												
50	50	Et methacrylate	10.37	10.37	0.000	69	99	0.613	0.85	0.9	57	
57	57	2-hexanone X5	10.78	10.75	0.002	43	58	12.467	1.18	1.2	92	

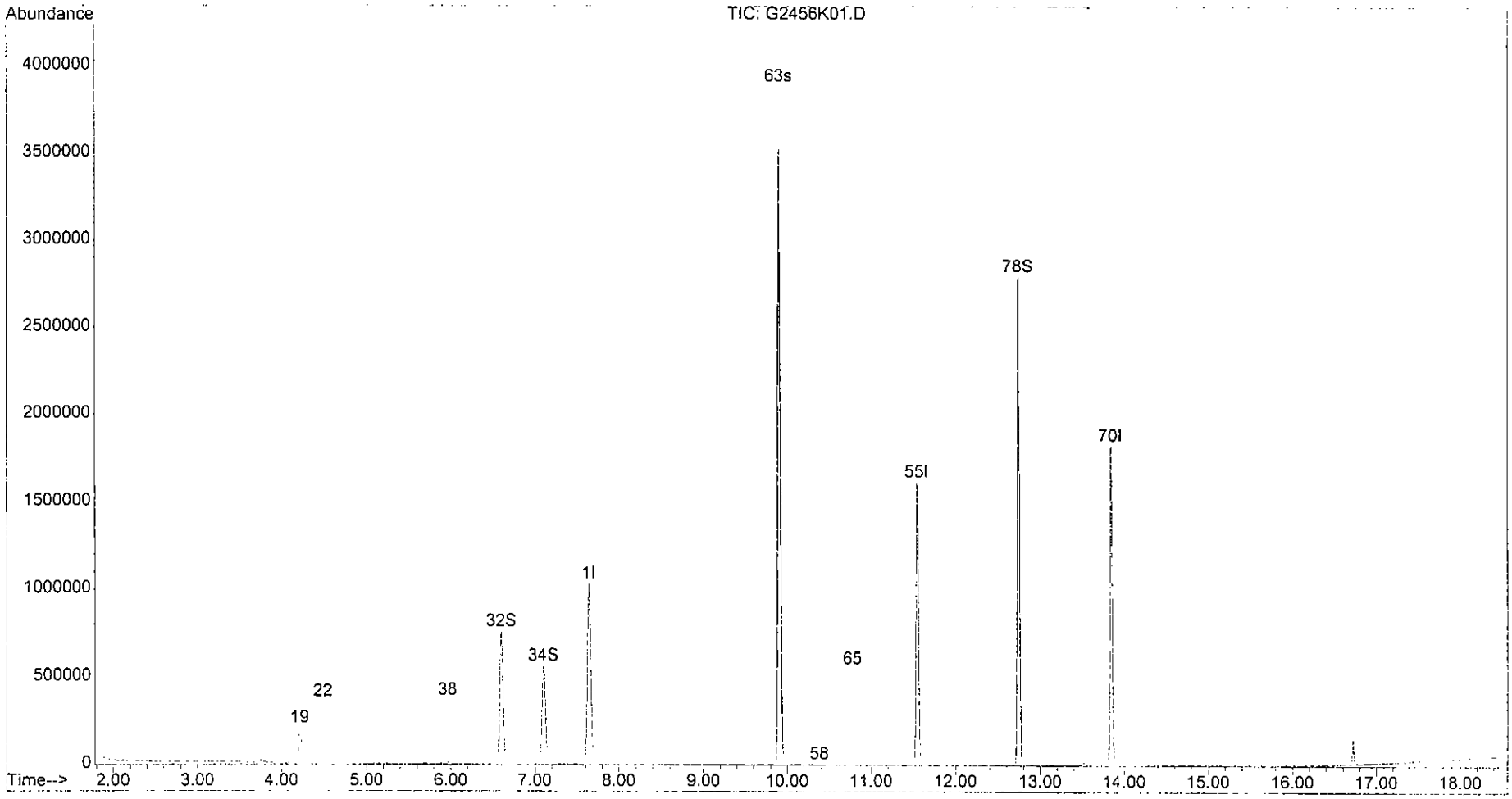
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

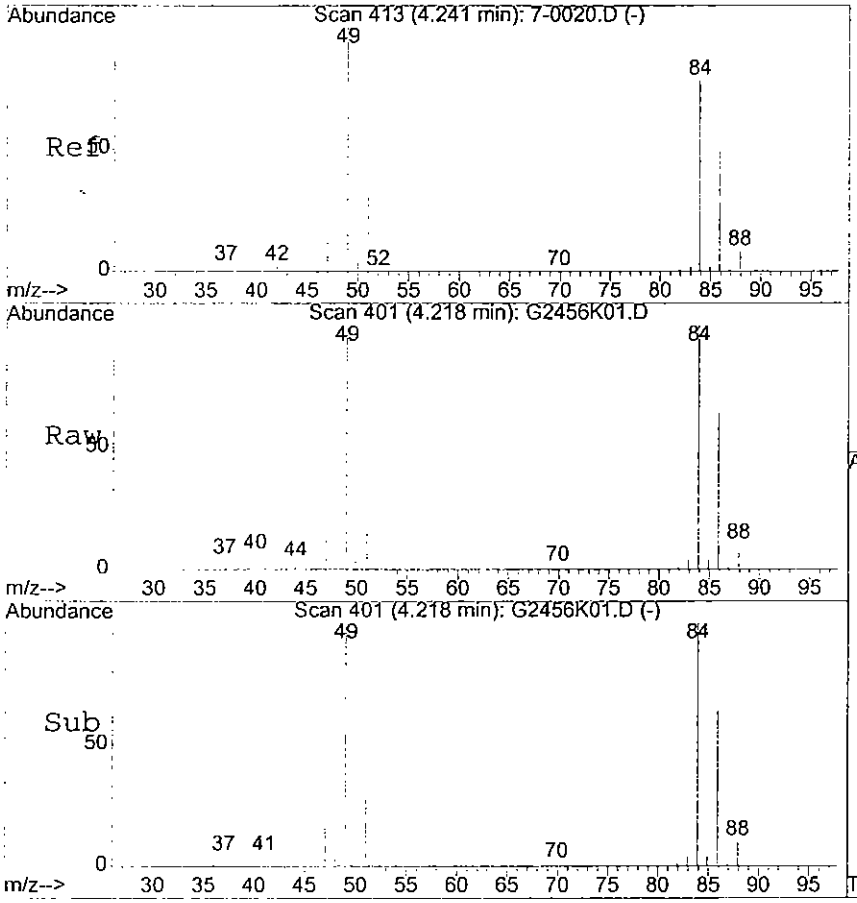
Quantitation Report: **Applied P &Ch Lab** EPA 8260

5311

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456K01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 15:55 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 13 16:41 2003
Print Time : Wed May 14 11:30 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

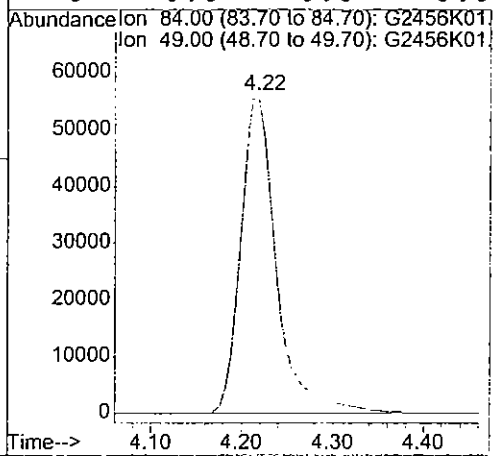


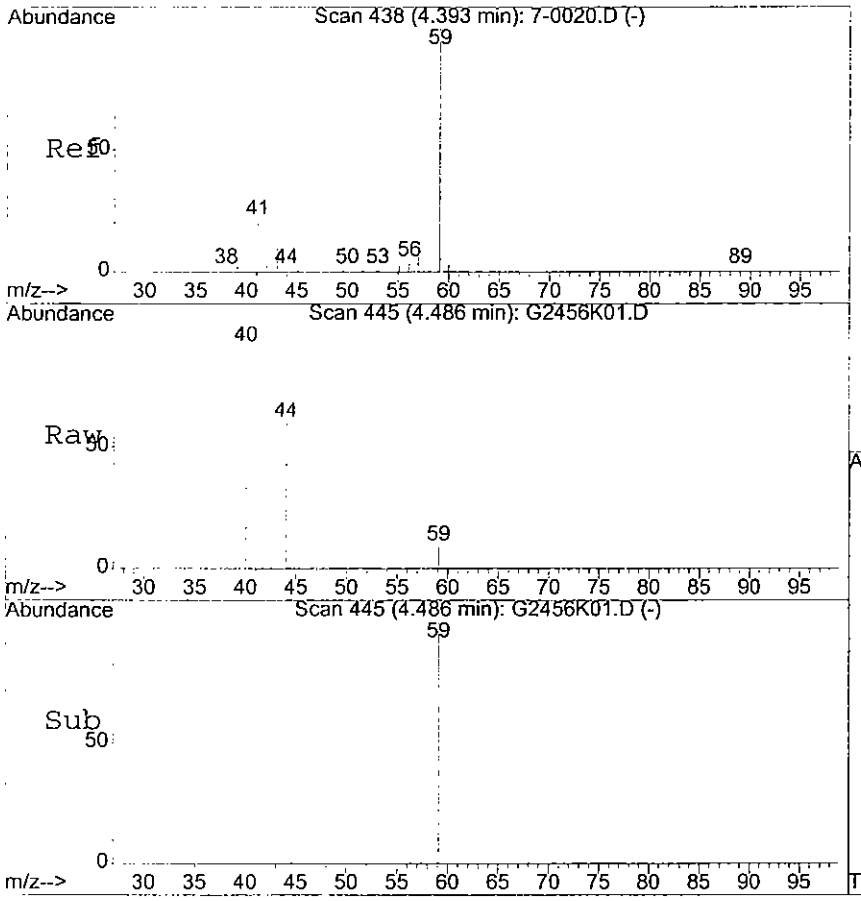


#19
18 methylene chloride
Concen: 4.48 ppb
RT: 4.22 min Scan# 401
Delta R.T. 0.02 min
Lab File: G2456K01.D
Acq: 13 May 2003 3:55 pm

Tgt Ion:84 Resp: 152465

Ion	Ratio	Lower	Upper
84	100		
49	98.7	83.2	123.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

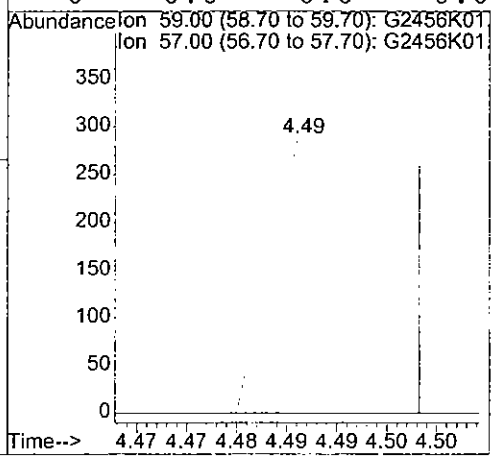


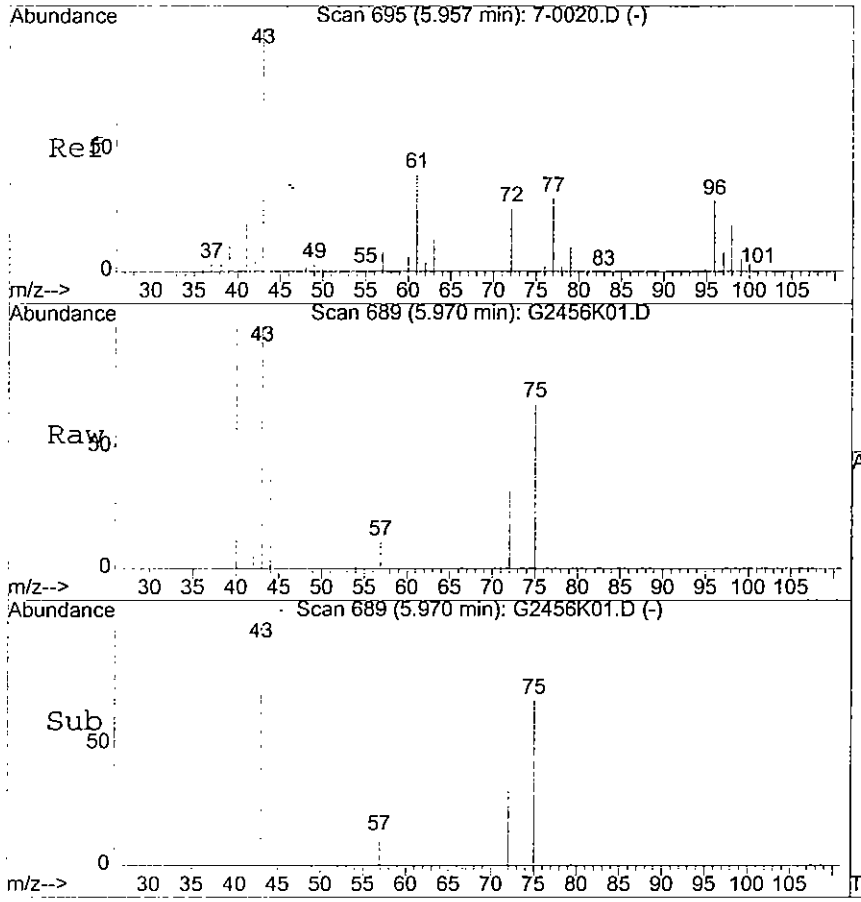


#22
95 Tert butyl alcoholx10
Concen: 0.51 ppb
RT: 4.49 min Scan# 445
Delta R.T. 0.09 min
Lab File: G2456K01.D
Acq: 13 May 2003 3:55 pm

Tgt Ion:59 Resp: 299

Ion	Ratio	Lower	Upper
59	100		
57	0.0	8.8	13.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

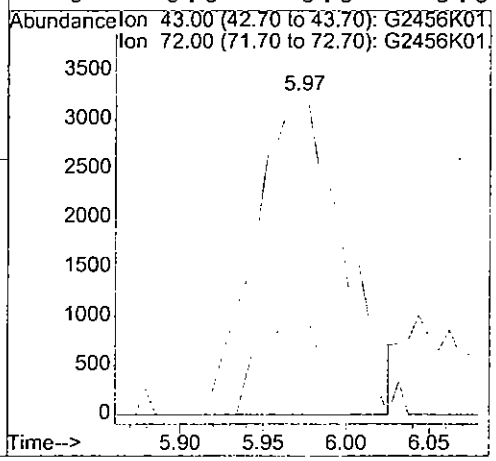


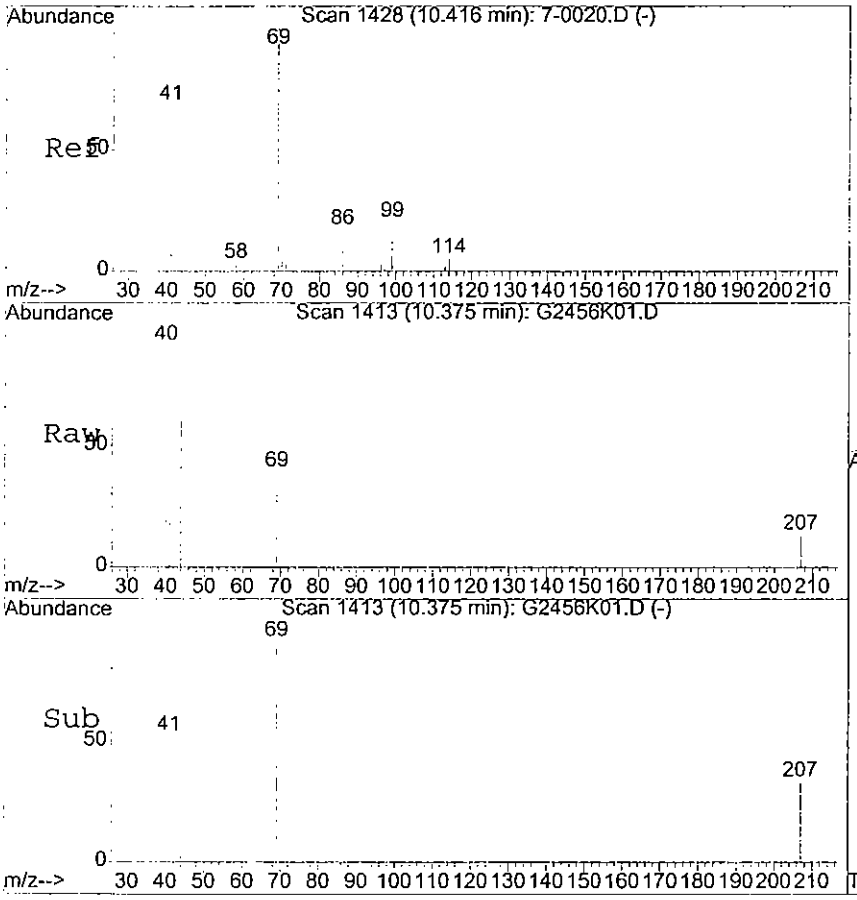


#38
33 2-butanoneMEK X10
Concen: 2.55 ppb
RT: 5.97 min Scan# 689
Delta R.T. 0.05 min
Lab File: G2456K01.D
Acq: 13 May 2003 3:55 pm

Tgt Ion:43 Resp: 11916

Ion	Ratio	Lower	Upper
43	100		
72	32.4	10.4	50.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

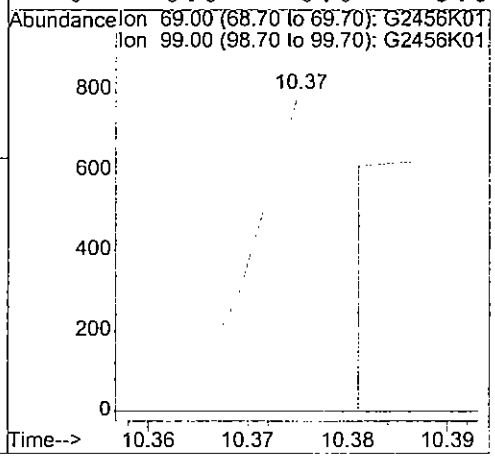


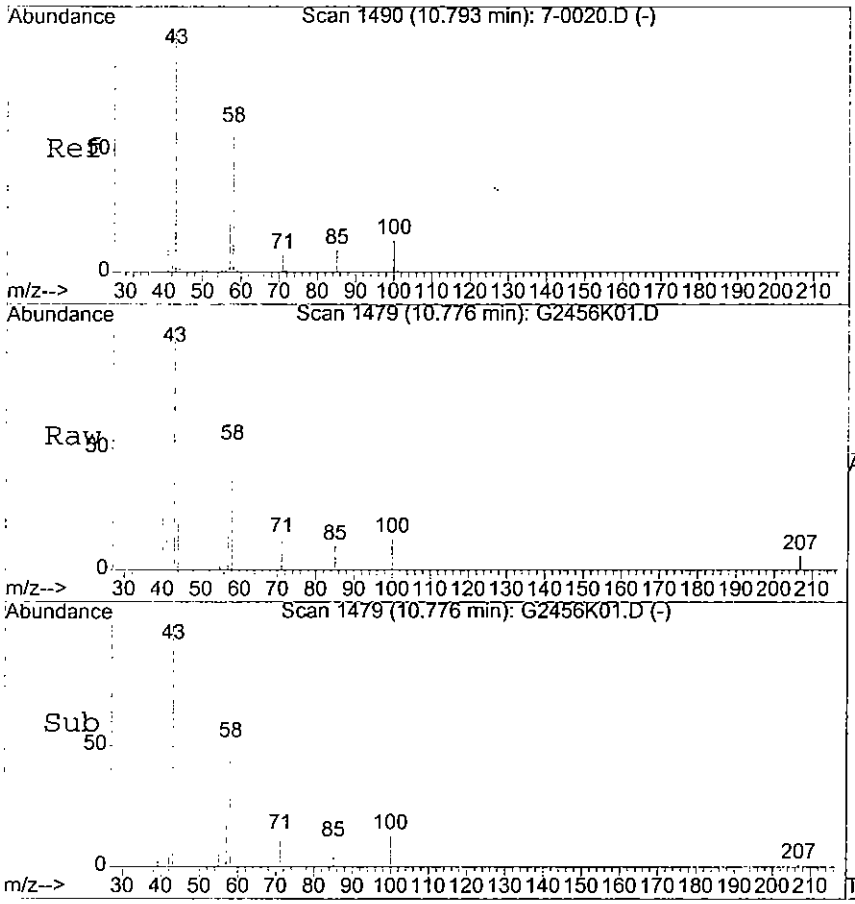


#58
50 Et methacrylate
Concen: 0.85 ppb
RT: 10.37 min Scan# 1413
Delta R.T. 0.01 min
Lab File: G2456K01.D
Acq: 13 May 2003 3:55 pm

Tgt Ion:69 Resp: 613

Ion	Ratio	Lower	Upper
69	100		
99	0.0	0.0	39.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

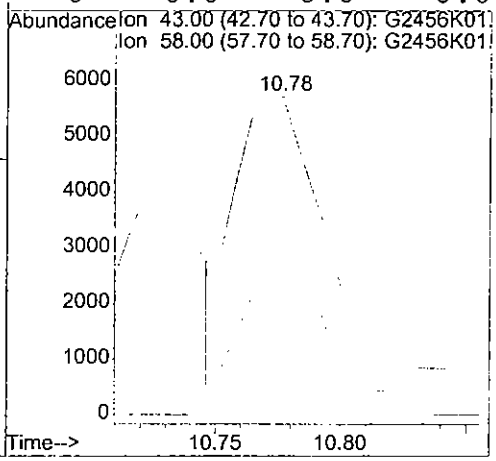




#65
57 2-hexanone X5
Concen: 1.18 ppb
RT: 10.78 min Scan# 1479
Delta R.T. 0.02 min
Lab File: G2456K01.D
Acq: 13 May 2003 3:55 pm

Tgt Ion:43 Resp: 12467

Ion	Ratio	Lower	Upper
43	100		
58	51.8	38.0	78.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-1	Received Date:	05/01/2003
Sample ID:	**DUPE-5-2Q03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	05/13/03	Anal. Date:	05/13/03
Batch No:	03G2456	Prep. No:	–	Anal. Time:	19:59
Data File Name:	3015-01	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N) N	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	μg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	μg/L	0.5	0.4	J
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	μg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	μg/L	10	3	J
44	NAPHTHALENE	91-20-3	μg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	μg/L	0.5	<0.5	U
46	STYRENE	100-42-5	μg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	μg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	μg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	μg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	μg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	μg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	μg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	μg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	μg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	μg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	μg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	μg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	μg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	μg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	μg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	μg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	μg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	μg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	101
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	104
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	105
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	90
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	85
3	FLUOROBENZENE	462-06-6	50-200	84
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5317

Data Filename: C:\MSDCHEM\1\DATA\03G2456\3015-01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 19:59 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 10:56 2003
Print Time : Wed May 14 10:56 2003
Miscleneous :

Sample : f=1 524.2
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.64	7.63	0.002	96	70	1386.679	10.00		0.01	
47	47	Chlorobezene-d5	11.55	11.54	0.000	117	82	1073.509	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	537.220	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.000	111	113	669.856	20.99	21.0	104.94%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.09	0.000	65	102	613.006	20.70	20.7	103.50%	
55	55	toluene-d8	9.91	9.90	0.000	98	100	2836.087	20.75	20.7	103.73%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	823.971	20.15	20.2	100.77%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
18	18	methylene chlorid	4.22	4.20	0.002	84	49	15.768	0.39	0.4	92	
95	95	Tert butyl alcoho	4.47	4.40	0.009	59	57	0.190	0.35	~~0.3~~	~~71~~	#
26	26	tetrahydrofuranX5	6.38	6.32	0.007	42	72	2.156	0.57	~~0.6~~	~~77~~	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	0.816	21.87	~~21.9~~	~~28~~	#
<<< I2 : ISTD ID = 47 >>>												
54	54	MIBK	9.78	9.76	0.002	43	58	49.326	3.25	3.3	99	

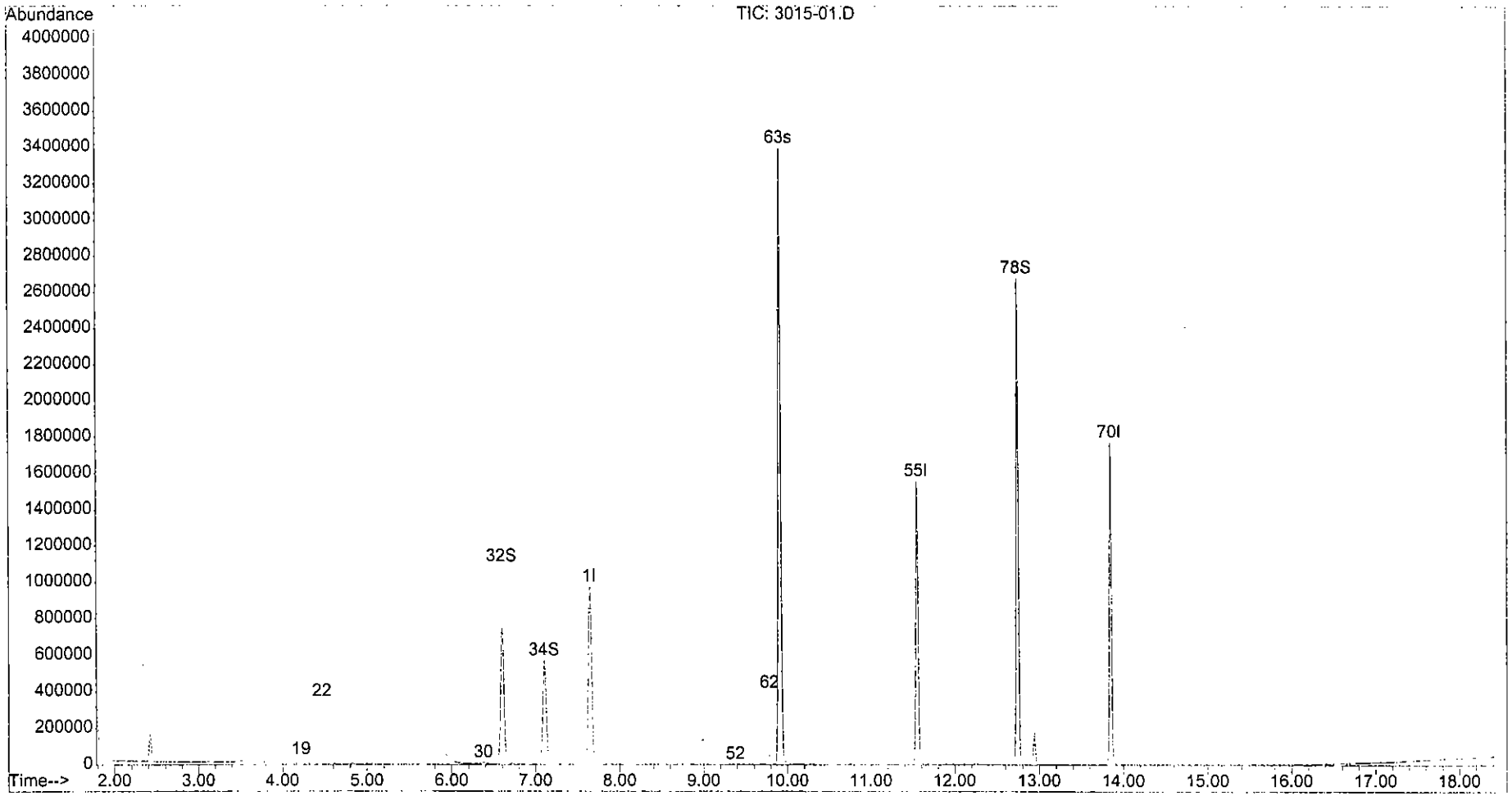
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

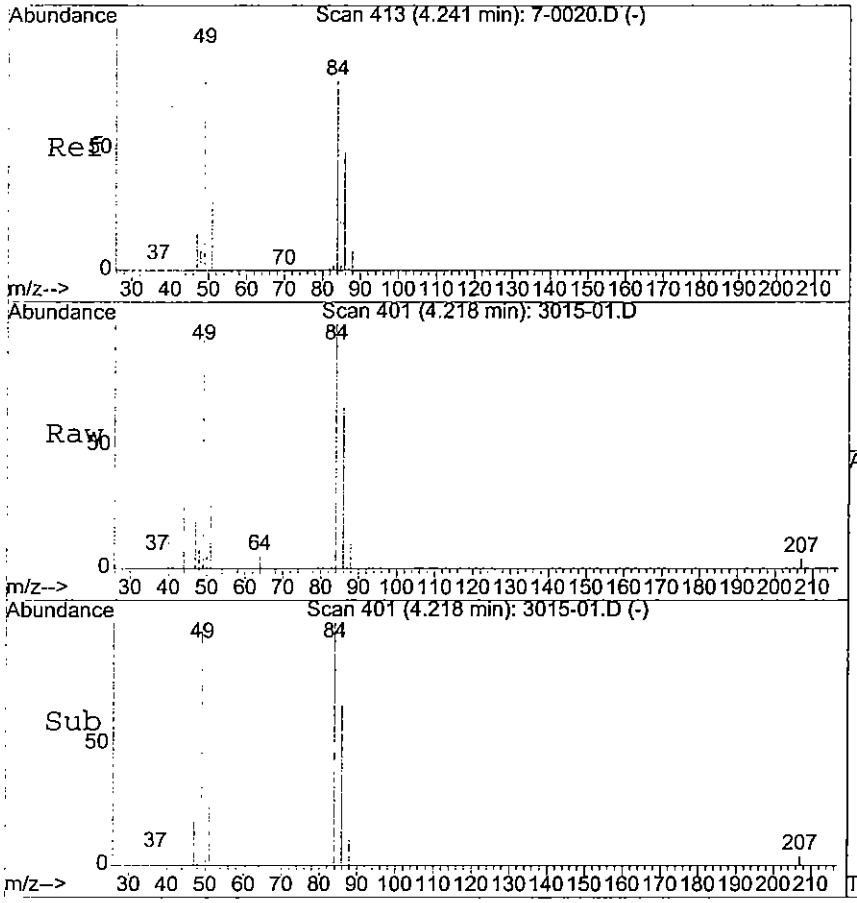
Quantitation Report: **Applied P &Ch Lab** EPA 8260

5318

Data Filename: C:\MSDCHEM\1\DATA\03G2456\3015-01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 19:59 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 10:56 2003
Print Time : Wed May 14 10:56 2003
Miscleneous :

Sample : f=1 524.2
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

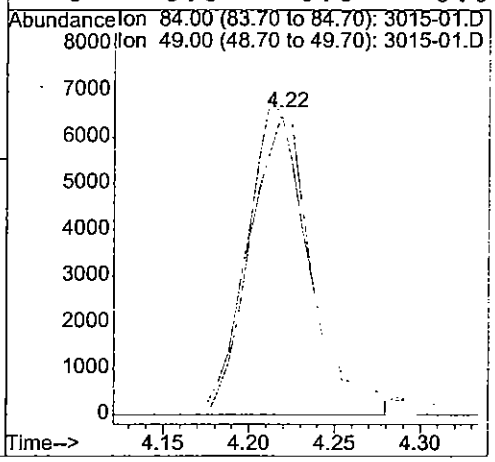


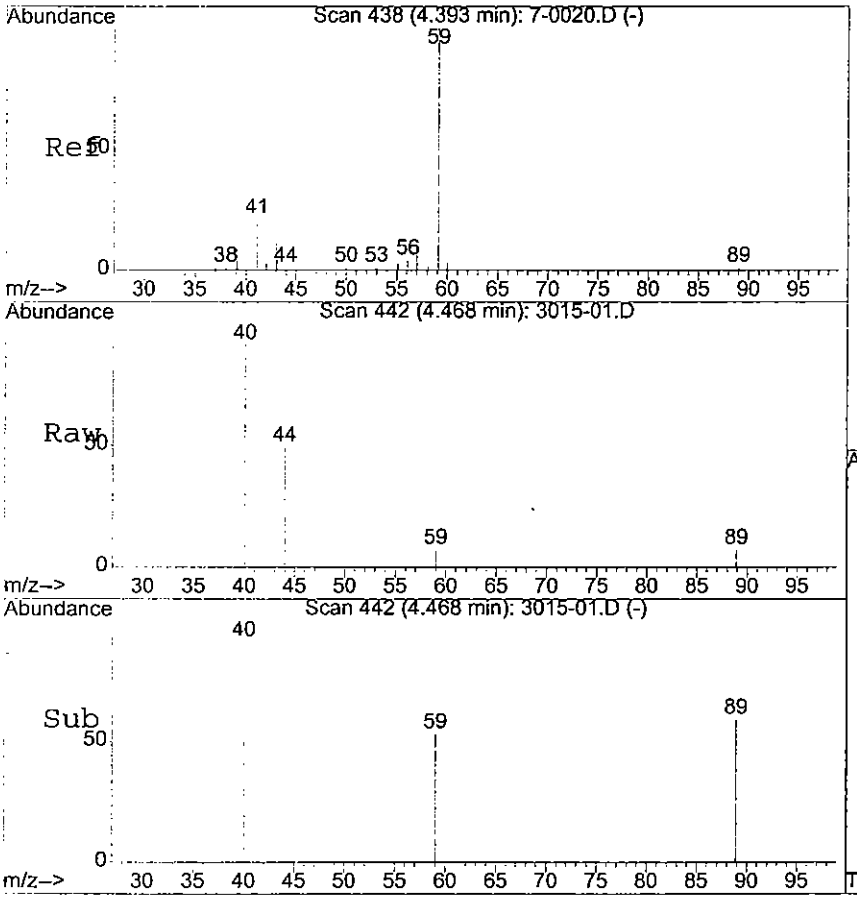


#19
18 methylene chloride
Concen: 0.39 ppb
RT: 4.22 min Scan# 401
Delta R.T. 0.02 min
Lab File: 3015-01.D
Acq: 13 May 2003 7:59 pm

Tgt Ion:84 Resp: 15768

Ion	Ratio	Lower	Upper
84	100		
49	94.5	83.2	123.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

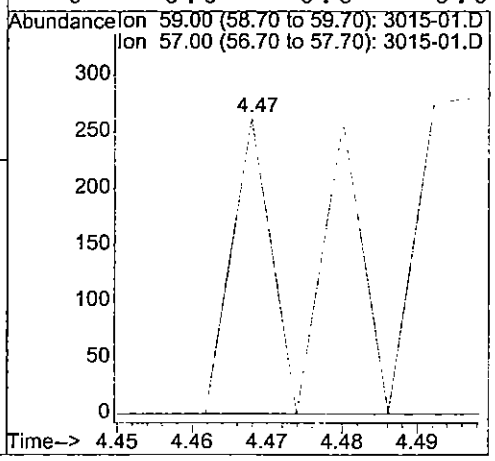


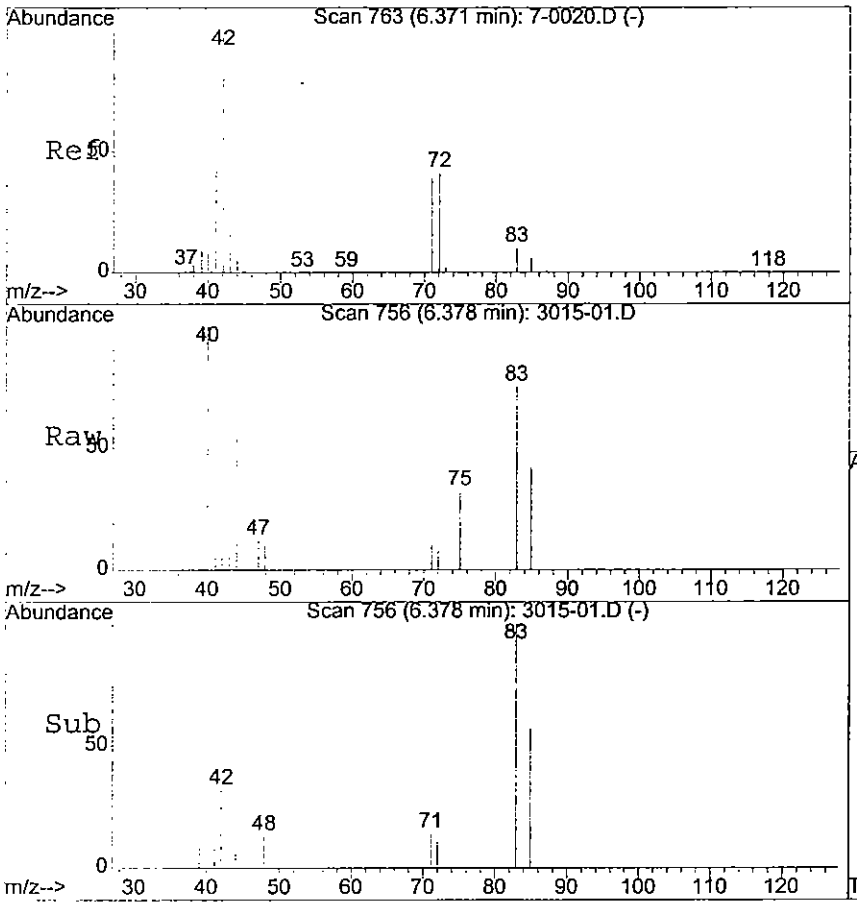


#22
95 Tert butyl alcoholx10
Concen: 0.35 ppb
RT: 4.47 min Scan# 442
Delta R.T. 0.07 min
Lab File: 3015-01.D
Acq: 13 May 2003 7:59 pm

Tgt Ion:59 Resp: 190

Ion	Ratio	Lower	Upper
59	100		
57	0.0	8.8	13.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

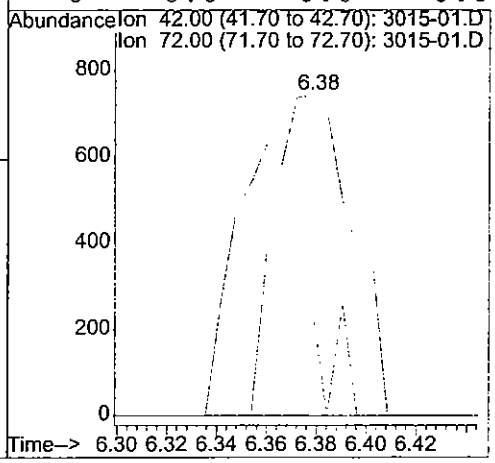


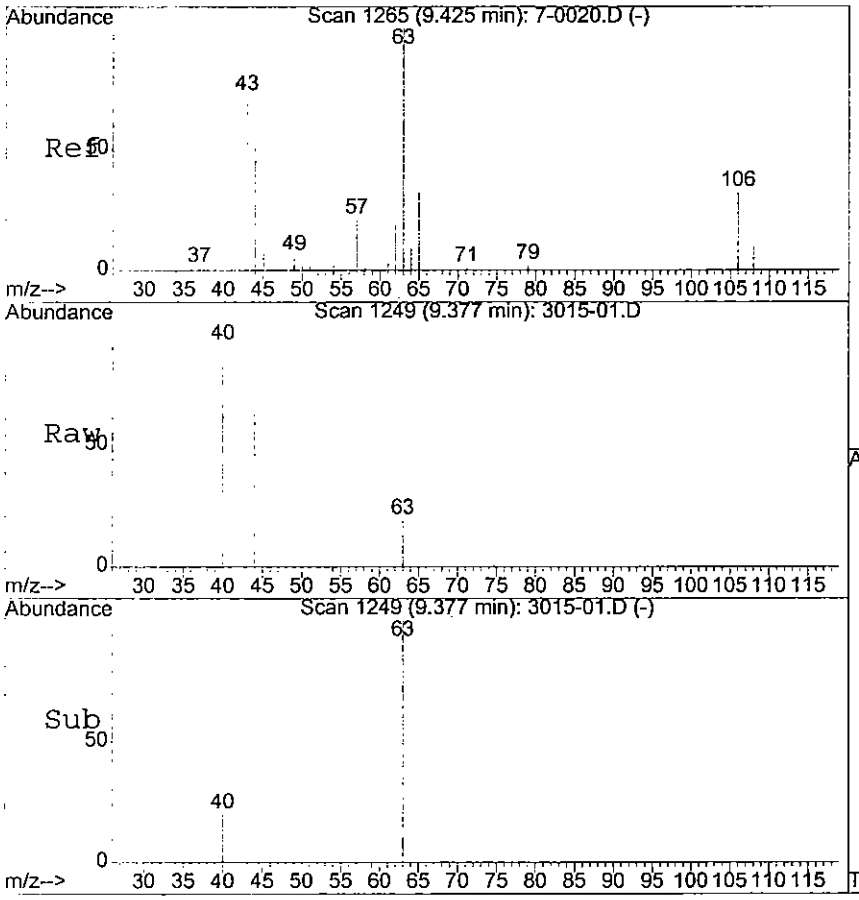


#30
26 tetrahydrofuranX5
Concen: 0.57 ppb
RT: 6.38 min Scan# 756
Delta R.T. 0.05 min
Lab File: 3015-01.D
Acq: 13 May 2003 7:59 pm

Tgt Ion:42 Resp: 2156

Ion	Ratio	Lower	Upper
42	100		
72	34.4	30.4	70.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

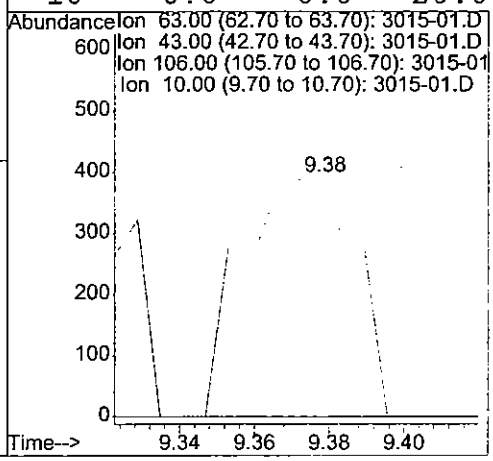


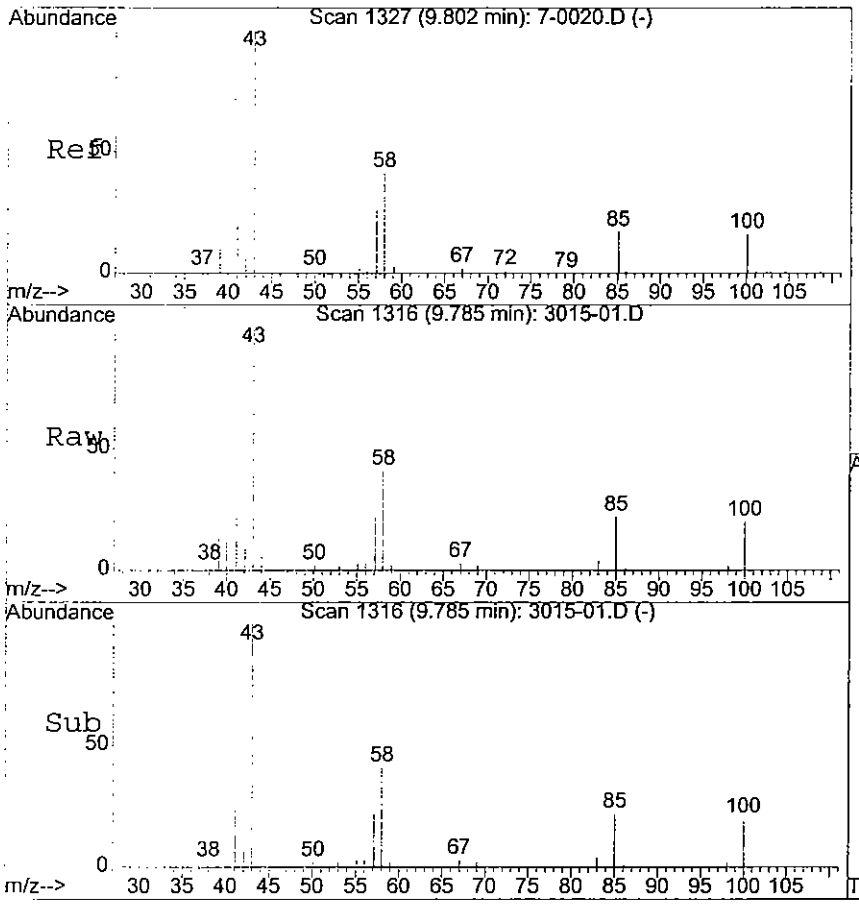


#52
44 2-ClEt-Vi-ether10
Concen: 21.87 ppb
RT: 9.38 min Scan# 1249
Delta R.T. 0.01 min
Lab File: 3015-01.D
Acq: 13 May 2003 7:59 pm

Tgt Ion:63 Resp: 816

Ion	Ratio	Lower	Upper
63	100		
43	0.0	40.0	80.0#
106	0.0	11.6	51.6#
10	0.0	0.0	20.0

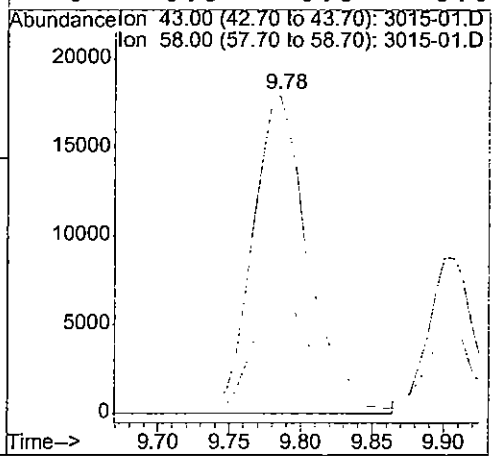




#62
54 MIBK
Concen: 3.25 ppb
RT: 9.78 min Scan# 1316
Delta R.T. 0.02 min
Lab File: 3015-01.D
Acq: 13 May 2003 7:59 pm

Tgt Ion:43 Resp: 49326

Ion	Ratio	Lower	Upper
43	100		
58	41.4	22.1	62.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0



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Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-2	Received Date:	05/01/2003
Sample ID:	**EB-9-5/1/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	05/13/03	Anal. Date:	05/13/03
Batch No:	03G2456	Prep. No:	–	Anal. Time:	20:26
Data File Name:	3015-02	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N) N	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	μg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	μg/L	0.5	0.5	J
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	μg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	μg/L	10	3	J
44	NAPHTHALENE	91-20-3	μg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	μg/L	0.5	<0.5	U
46	STYRENE	100-42-5	μg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	μg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	μg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	μg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	μg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	μg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	μg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	μg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	μg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	μg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	μg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	μg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	μg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	μg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	μg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	μg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	μg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	μg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	102
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	104
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	106
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	89
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	85
3	FLUOROBENZENE	462-06-6	50-200	84
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

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Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-3	Received Date:	05/01/2003
Sample ID:	**MW-3-1**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	05/13/03	Anal. Date:	05/13/03
Batch No:	03G2456	Prep. No:	–	Anal. Time:	20:53
Data File Name:	3015-03	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N) N	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	μg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	μg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	μg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	μg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	μg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	μg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	μg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	μg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	μg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	μg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	μg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	μg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	μg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	μg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	μg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	μg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	μg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	μg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	μg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	μg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	μg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	μg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	μg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	μg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	μg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	μg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	μg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	μg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	μg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	μg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	μg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	μg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	μg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	μg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	μg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	μg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	μg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	μg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	μg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	0.4	J
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	4	J
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	103
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	101
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	104
4	TOLUENE-D8	2037-26-5	73-129	105
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	89
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	84
3	FLUOROBENZENE	462-06-6	50-200	84
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

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Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-4	Received Date:	05/01/2003
Sample ID:	**MW-3-2**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	05/13/03	Anal. Date:	05/13/03
Batch No:	03G2456	Prep. No:	–	Anal. Time:	21:20
Data File Name:	3015-04	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N) N	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	μg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	μg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	μg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	μg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	μg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	μg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	μg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	μg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	μg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	μg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	μg/L	0.5	0.4	J
12	CHLOROBENZENE	108-90-7	μg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	μg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	μg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	μg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	μg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	μg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	μg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	μg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	μg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	μg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	μg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	μg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	μg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	μg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	μg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	μg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	μg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	μg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	μg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	μg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	μg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	μg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	μg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	μg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	μg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	μg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	μg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	μg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	0.4	J
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	3	J
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	102
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	104
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	106
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	89
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	85
3	FLUOROBENZENE	462-06-6	50-200	83
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-5	Received Date:	05/01/2003
Sample ID:	**MW-3-3**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	05/13/03	Anal. Date:	05/13/03
Batch No:	03G2456	Prep. No:	–	Anal. Time:	21:47
Data File Name:	3015-05	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	0.9	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE (DB	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	0.5	B
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	3	J
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	102
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	102
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	106
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	90
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	86
3	FLUOROBENZENE	462-06-6	50-200	84
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-6	Received Date:	05/01/2003
Sample ID:	**MW-3-4**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	05/13/03	Anal. Date:	05/13/03
Batch No:	03G2456	Prep. No:	–	Anal. Time:	22:14
Data File Name:	3015-06	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE (DB	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
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26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
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32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	0.4	J
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	3	J
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	103
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	102
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	107
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	88
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	83
3	FLUOROBENZENE	462-06-6	50-200	82
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-7	Received Date:	05/01/2003
Sample ID:	**MW-3-5**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	05/13/03	Anal. Date:	05/13/03
Batch No:	03G2456	Prep. No:	–	Anal. Time:	22:41
Data File Name:	3015-07	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	μg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	μg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	μg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	μg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	μg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	μg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	μg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	μg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	μg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	μg/L	10	0.7	J
11	CARBON TETRACHLORIDE	56-23-5	μg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	μg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	μg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	μg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	μg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	μg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	μg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	μg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE (DB	96-12-8	μg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	μg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	μg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	μg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	μg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	μg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	μg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	μg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	μg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	μg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	μg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	μg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	μg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	μg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	μg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	μg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	μg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	μg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	μg/L	0.5	0.7	
38	HEXACHLOROBUTADIENE	87-68-3	μg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	μg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	0.5	B
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	4	J
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	0.4	J
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	103
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	104
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	106
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	88
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	85
3	FLUOROBENZENE	462-06-6	50-200	82
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-8	Received Date:	05/01/2003
Sample ID:	**TB-9-5/1/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	05/13/03	Anal. Date:	05/13/03
Batch No:	03G2456	Prep. No:	–	Anal. Time:	23:08
Data File Name:	3015-08	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	0.6	J
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE (DB	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	1.4	B
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	101
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	102
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	106
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	89
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	85
3	FLUOROBENZENE	462-06-6	50-200	83
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		SDG Number:	033015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G2456		

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	S3 % #	S4 % #	TOT OUT
1	03G2456-LCS-01	03G2456-LCS-01	95	89	97	100	0
2	MW-23-5MS	03-2987-6MS	92	84	91	96	0
3	MW-23-5MSD	03-2987-6MSD	95	92	98	99	0
4	03G2456-MB-01	03G2456-MB-01	102	97	101	103	0
5	DUPE-5-2Q03	03-3015-1	101	104	105	104	0
6	EB-9-5/1/03	03-3015-2	102	104	106	104	0
7	MW-3-1	03-3015-3	103	101	104	105	0
8	MW-3-2	03-3015-4	102	104	106	104	0
9	MW-3-3	03-3015-5	102	102	106	104	0
10	MW-3-4	03-3015-6	103	102	107	104	0
11	MW-3-5	03-3015-7	103	104	106	104	0
12	TB-9-5/1/03	03-3015-8	101	102	106	104	0
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

	QC Control Limit
S1 = 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	70-129
S2 = 1,2-DICHLOROETHANE-D4	70-129
S3 = DIBROMOFLUOROMETHANE	70-122
S4 = TOLUENE-D8	73-129

Column to be used to flag recovery values:

* – Values outside of contract required QC Limits D – Surrogate diluted out I – Matrix Interference

FORM-3A

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G2456		
LCS Filename:	G2456L01	Date Analyzed:	051303	Time Analyzed:	13:41
LCSD Filename:	–	Date Analyzed:	–	Time Analyzed:	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
BENZENE	μg/L	20	0	19.9	100	65-120
CHLOROBENZENE	μg/L	20	0	19.9	100	65-134
1,1-DICHLOROETHENE	μg/L	20	0	17.9	90	65-127
TOLUENE	μg/L	20	0	20.1	101	65-134
TRICHLOROETHENE	μg/L	20	0	20.4	102	67-122
# of Out-of-control					0	

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5338

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456L01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 13:41 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:23 2003
Print Time : Wed May 14 11:23 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.64	7.63	0.002	96	70	1536.499	10.00		0.01	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	1124.739	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	592.039	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.001	111	113	687.220	19.43	19.4	97.16%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.09	0.000	65	102	581.899	17.73	17.7	88.67%	
55	55	toluene-d8	9.91	9.90	0.000	98	100	2864.942	20.00	20.0	100.01%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	851.876	18.91	18.9	94.53%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.88	1.86	0.002	85	87	674.911	17.67	17.7	100	
4	4	Chloromethane	2.10	2.08	0.003	50	52	613.855	17.01	17.0	98	
2	2	F114	2.03	2.00	0.003	85	135	354.280	18.67	18.7	53	m 05/14/03
5	5	vinyl chloride	2.22	2.20	0.002	62	64	686.383	17.96	18.0	100	
6	6	bromomethane	2.60	2.58	0.003	94	96	377.178	16.40	16.4	99	
7	7	chloroethane	2.72	2.70	0.002	64	66	454.038	18.70	18.7	0	m 05/14/03
8	8	tri-Cl-F-methane	3.03	3.01	0.002	101	103	1051.809	18.31	18.3	100	
91	91	Acetonitrile X10	4.07	4.00	0.008	41	40	1207.516	247.56	247.6	36	#?
9	9	acrolein X10	3.51	3.48	0.003	56	55	600.481	165.17	165.2	0	m
11	11	acetone X10	3.70	3.67	0.004	43	58	895.036	269.78	269.8	0	m 05/14/03
12	12	ethyl ether X5	3.37	3.35	0.002	59	74	1767.758	90.40	90.4	100	
13	13	11-dichloroethene	3.63	3.62	0.002	61	96	838.851	17.86	17.9	0	m 05/14/03
14	14	Iodomethane	3.80	3.79	0.002	142	127	779.926	21.97	22.0	95	
15	15	F-113	3.65	3.63	0.002	101	151	656.975	19.16	19.2	98	?
16	16	acrylonitrile X10	4.52	4.49	0.003	53	52	1035.673	204.42	204.4	100	
17	17	carbon disulfide	3.90	3.88	0.002	76	78	2188.869	16.13	16.1	100	
94	94	Isopropyl Alcohol	3.93	3.90	0.004	45	43	33.363	207.21	207.2	83	m 05/14/03
18	18	methylene chlorid	4.22	4.20	0.002	84	49	724.916	20.93	20.9	95	
19	19	t-12-di-Cl-ethene	4.57	4.56	0.002	96	61	758.326	19.37	19.4	95	?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5339

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456L01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 13:41 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:23 2003
Print Time : Wed May 14 11:23 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.59	4.57	0.002	73	57	1405.359	19.70	19.7	100	?
95	95	Tert butyl alcoho	4.46	4.40	0.007	59	57	257.364	424.83	424.8	98	
94	94	allyl chloride	4.07	4.05	0.002	41	76	1207.516	24.76	24.8	95	?
21	21	11-dichloroethane	5.11	5.10	0.002	63	83	1238.364	19.03	19.0	99	
97	97	propionitrile	6.01	5.98	0.003	54	51	42.148	22.96	23.0	74	#
22	22	c-12-di-Cl-ethene	5.91	5.90	0.002	96	61	787.359	20.19	20.2	100	?
23	23	22-Dichloropropan	5.92	5.90	0.002	77	97	1052.406	22.24	22.2	99	?
24	24	Br-Cl-methane	6.24	6.23	0.002	128	130	311.004	20.17	20.2	99	
25	25	chloroform	6.37	6.35	0.002	83	85	1285.325	19.59	19.6	98	
26	26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	396.561	94.22	94.2	90	
98	98	Diisopropyl ether	5.24	5.22	0.002	45	87	2032.588	19.22	19.2	96	
99	99	ETBE	5.73	5.72	0.002	59	87	1640.173	20.18	20.2	98	
30	30	12-dichloroethane	7.22	7.21	0.002	64	62	214.941	17.82	17.8	97	?
32	32	vinyl acetate X5	5.19	5.17	0.002	43	86	4510.253	94.94	94.9	98	
92	92	Nitro Methane(x10	5.91	5.78	0.018	61	46	995.370	176.74	176.7	30	#?
33	33	2-butanoneMEK X10	5.93	5.92	0.002	43	72	1259.973	259.63	259.6	96	?
93	93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	590.750	29.47	29.5	98	
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	1193.535	20.33	20.3	100	
35	35	11-Di-Cl-propene	6.90	6.89	0.002	75	110	997.351	19.78	19.8	100	?
36	36	benzene	7.21	7.19	0.002	78	52	3070.626	19.87	19.9	98	?
37	37	CCl4	6.91	6.90	0.002	117	119	1063.909	21.47	21.5	100	?
100	100	Isobutyl alcohol	7.15	7.11	0.005	43	42	109.096	384.42	384.4	75	#
38	38	thiophene	7.53	7.52	0.002	84	58	1575.045	20.15	20.1	97	
39	39	12-di-Cl-propane	8.56	8.55	0.002	63	76	643.432	19.41	19.4	97	
40	40	trichloroethene	8.24	8.23	0.002	130	132	861.685	20.42	20.4	99	
41	41	dibromomethane	8.73	8.72	0.000	174	172	324.616	20.26	20.3	98	
101	101	TAME	7.41	7.40	0.002	73	43	1473.227	20.25	20.2	96	
42	42	Br-di-Cl-methane	8.96	8.95	0.000	83	85	909.109	19.91	19.9	98	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	318.697	20.50	20.5	99	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	109.700	46.70	46.7	96	
45	45	c-13-di-Cl-propen	9.56	9.55	0.000	75	110	1027.888	20.99	21.0	97	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	816.837	19.39	19.4	98	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5340

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456L01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 13:41 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:23 2003
Print Time : Wed May 14 11:23 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	460.818	19.69	19.7	97	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	794.483	19.19	19.2	98	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	689.754	18.82	18.8	99	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	596.652	20.75	20.8	100	
52	52	bromoform	12.42	12.42	0.000	173	174	323.606	21.09	21.1	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	693.056	18.53	18.5	96	
54	54	MIBK	9.77	9.76	0.000	43	58	309.686	19.48	19.5	98	
56	56	toluene	9.99	9.98	0.000	91	92	3386.295	20.11	20.1	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	1081.417	102.51	102.5	98	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	440.475	20.08	20.1	100	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	881.008	20.34	20.3	98	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	2159.135	19.91	19.9	100	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	733.870	21.17	21.2	100	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	446.685	18.75	18.7	86	#?
64	64	Et-Bz	11.70	11.70	0.000	91	106	3894.446	18.69	18.7	99	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	5952.515	37.22	37.2	97	
66	66	styrene	12.24	12.24	0.000	104	78	2343.214	19.18	19.2	99	?
67	67	o-xylene	12.22	12.22	0.000	91	106	3076.944	18.76	18.8	98	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	494.667	17.20	17.2	98	
69	69	123-tri-Cl-Pr	12.92	12.91	0.000	110	97	145.390	17.40	17.4	99	?
71	71	isopropylbenzene	12.60	12.60	0.000	105	120	3926.024	19.36	19.4	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	856.265	18.95	19.0	97	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	80.199	16.12	16.1	80	#?
73	73	n-propylbenzene	13.00	13.00	0.000	120	78	1149.711	19.25	19.3	99	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	963.347	19.09	19.1	100	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	964.276	18.64	18.6	97	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	3345.793	19.21	19.2	99	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	3658.089	19.30	19.3	99	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	3390.957	18.97	19.0	98	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	3037.207	19.43	19.4	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5341

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456L01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 13:41 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:23 2003
Print Time : Wed May 14 11:23 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	1811.384	18.72	18.7	99	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	4497.388	19.57	19.6	100	
82	82	14-DCB	13.87	13.87	0.000	146	148	1776.770	18.30	18.3	98	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	187.097	20.89	20.9	94	
84	84	12-DCB	14.21	14.21	0.000	146	148	1543.754	18.50	18.5	100	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	1011.454	20.45	20.5	98	?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	94.667	17.71	17.7	94	
87	87	124-tri-Cl-Bz	15.58	15.59	0.000	180	182	1191.546	19.79	19.8	99	
88	88	naphthalene	15.79	15.79	0.000	128	129	1843.292	20.89	20.9	100	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	678.792	18.90	18.9	99	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	978.491	19.55	19.5	100	

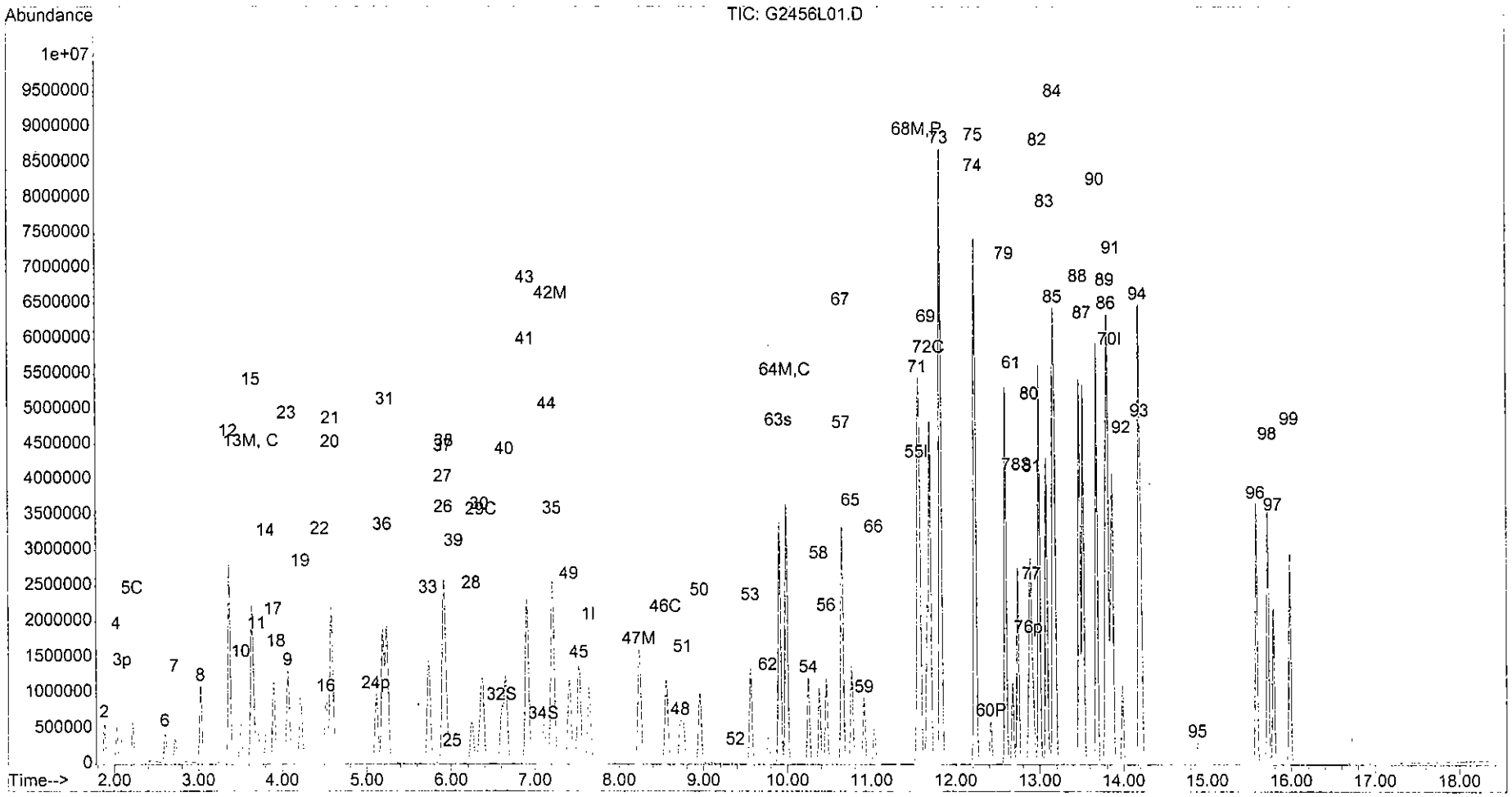
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5342

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456L01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 13:41 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:23 2003
Print Time : Wed May 14 11:23 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000



FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G2456		
MS Filename:	G2456M01	Date Analyzed:	051303	Time Analyzed:	14:08
MSD Filename:	G2456N01	Date Analyzed:	051303	Time Analyzed:	14:35
MS Sample No:	**MW-23-5**	Sample Lab ID:	03-2987-6		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	μg/L	20	0	18.8	94	65-121
CHLOROBENZENE	μg/L	20	0	19.0	95	65-134
1,1-DICHLOROETHENE	μg/L	20	0	17.3	87	65-127
TOLUENE	μg/L	20	0	19.3	97	65-134
TRICHLOROETHENE	μg/L	20	0	19.5	98	65-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	μg/L	20	19.6	98	4	28	65-121
CHLOROBENZENE	μg/L	20	19.8	99	4	35	65-134
1,1-DICHLOROETHENE	μg/L	20	17.9	90	3	31	65-127
TOLUENE	μg/L	20	19.8	99	2	35	65-134
TRICHLOROETHENE	μg/L	20	20.4	102	4	30	65-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5344

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456M01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:08 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:25 2003
Print Time : Wed May 14 11:25 2003
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.64	7.63	0.002	96	70	1674.220	10.00		0.01	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	1209.063	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	627.928	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.000	111	113	700.886	18.19	18.2	90.94%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.09	0.000	65	102	599.673	16.77	16.8	83.86%	
55	55	toluene-d8	9.91	9.90	0.000	98	100	2960.007	19.22	19.2	96.12%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	878.926	18.39	18.4	91.96%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.88	1.86	0.002	85	87	709.995	17.06	17.1	99	
4	4	Chloromethane	2.10	2.08	0.003	50	52	629.962	15.98	16.0	99	
2	2	F114	2.02	2.00	0.003	85	135	341.298	16.50	16.5	55	m 05/14/03
5	5	vinyl chloride	2.22	2.20	0.002	62	64	723.571	17.38	17.4	100	
6	6	bromomethane	2.60	2.58	0.003	94	96	388.403	15.50	15.5	98	
7	7	chloroethane	2.72	2.70	0.002	64	66	472.670	17.86	17.9	0	m
8	8	tri-Cl-F-methane	3.03	3.01	0.002	101	103	1119.275	17.88	17.9	100	
91	91	Acetonitrile X10	4.07	4.00	0.008	41	40	1281.466	241.11	241.1	34	#?
9	9	acrolein X10	3.50	3.48	0.002	56	55	650.603	164.23	164.2	97	
11	11	acetone X10	3.70	3.67	0.004	43	58	899.233	247.30	247.3	97	
12	12	ethyl ether X5	3.37	3.35	0.002	59	74	1820.700	85.44	85.4	100	
13	13	11-dichloroethene	3.63	3.62	0.002	61	96	882.897	17.25	17.2	98	?
14	14	Iodomethane	3.80	3.79	0.002	142	127	800.874	20.82	20.8	96	
15	15	F-113	3.65	3.63	0.002	101	151	692.261	18.53	18.5	0	m
16	16	acrylonitrile X10	4.51	4.49	0.002	53	52	1076.913	195.07	195.1	99	
17	17	carbon disulfide	3.90	3.88	0.002	76	78	2267.567	15.34	15.3	99	? 05/14/03
94	94	Isopropyl Alcohol	3.92	3.90	0.002	45	43	32.410	180.08	180.1	1	m
18	18	methylene chlorid	4.21	4.20	0.002	84	49	758.406	20.09	20.1	96	
19	19	t-12-di-Cl-ethene	4.57	4.56	0.002	96	61	781.613	18.32	18.3	97	?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5345

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456M01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:08 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:25 2003
Print Time : Wed May 14 11:26 2003
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.58	4.57	0.002	73	57	1459.641	18.78	18.8	99	?
95	95	Tert butyl alcoho	4.44	4.40	0.005	59	57	277.901	421.00	421.0	85	#
94	94	allyl chloride	4.07	4.05	0.002	41	76	1281.466	24.11	24.1	94	?
21	21	11-dichloroethane	5.11	5.10	0.002	63	83	1275.056	17.98	18.0	99	
97	97	propionitrile	6.00	5.98	0.002	54	51	43.278	21.64	21.6	87	#
22	22	c-12-di-Cl-ethene	5.91	5.90	0.002	96	61	808.682	19.03	19.0	99	?
23	23	22-Dichloropropan	5.92	5.90	0.002	77	97	1103.592	21.40	21.4	99	?
24	24	Br-Cl-methane	6.25	6.23	0.002	128	130	317.329	18.88	18.9	98	
25	25	chloroform	6.37	6.35	0.002	83	85	1321.102	18.48	18.5	99	
26	26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	419.069	91.38	91.4	93	
98	98	Diisopropyl ether	5.23	5.22	0.002	45	87	2083.746	18.08	18.1	96	
99	99	ETBE	5.73	5.72	0.002	59	87	1704.895	19.25	19.3	98	
30	30	12-dichloroethane	7.22	7.21	0.002	64	62	222.493	16.93	16.9	100	?
32	32	vinyl acetate X5	5.19	5.17	0.002	43	86	4651.848	89.86	89.9	97	
92	92	Nitro Methane(x10	5.91	5.78	0.018	61	46	1019.982	166.22	166.2	30	#?
33	33	2-butanoneMEK X10	5.93	5.92	0.002	43	72	1294.318	244.77	244.8	96	?
93	93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	592.424	27.12	27.1	100	
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	1248.958	19.52	19.5	99	
35	35	11-Di-Cl-propene	6.90	6.89	0.002	75	110	1047.277	19.06	19.1	99	?
36	36	benzene	7.21	7.19	0.002	78	52	3159.484	18.76	18.8	98	?
37	37	CCl4	6.91	6.90	0.002	117	119	1116.014	20.67	20.7	100	?
100	100	Isobutyl alcohol	7.14	7.11	0.003	43	42	109.873	355.31	355.3	68	#
38	38	thiophene	7.53	7.52	0.002	84	58	1618.677	19.00	19.0	97	
39	39	12-di-Cl-propane	8.56	8.55	0.000	63	76	663.173	18.36	18.4	98	
40	40	trichloroethene	8.24	8.23	0.002	130	132	895.103	19.46	19.5	98	
41	41	dibromomethane	8.73	8.72	0.000	174	172	336.001	19.25	19.2	99	
101	101	TAME	7.41	7.40	0.002	73	43	1536.223	19.38	19.4	95	
42	42	Br-di-Cl-methane	8.96	8.95	0.000	83	85	931.313	18.72	18.7	99	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	337.211	19.91	19.9	97	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	122.927	47.41	47.4	96	
45	45	c-13-di-Cl-propen	9.56	9.55	0.000	75	110	1060.991	19.88	19.9	97	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	848.754	18.53	18.5	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5346

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456M01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:08 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:25 2003
Print Time : Wed May 14 11:26 2003
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	470.696	18.71	18.7	98	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	826.959	18.58	18.6	98	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	721.107	18.32	18.3	100	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	619.222	20.03	20.0	100	
52	52	bromoform	12.42	12.42	0.000	173	174	339.043	20.55	20.6	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	720.394	17.92	17.9	96	
54	54	MIBK	9.77	9.76	0.000	43	58	318.093	18.62	18.6	100	
56	56	toluene	9.99	9.98	0.000	91	92	3491.524	19.29	19.3	100	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	1094.419	96.51	96.5	95	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	457.027	19.38	19.4	99	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	915.998	19.67	19.7	100	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	2219.156	19.04	19.0	99	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	761.485	20.44	20.4	100	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	465.960	18.44	18.4	84	#?
64	64	Et-Bz	11.70	11.70	0.000	91	106	4004.027	18.11	18.1	100	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	6125.628	36.11	36.1	97	
66	66	styrene	12.24	12.24	0.000	104	78	2409.918	18.60	18.6	100	?
67	67	o-xylene	12.22	12.22	0.000	91	106	3161.139	18.18	18.2	98	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	518.397	16.99	17.0	100	
69	69	123-tri-Cl-Pr	12.92	12.91	0.000	110	97	151.317	17.07	17.1	99	?
71	71	isopropylbenzene	12.60	12.60	0.000	105	120	4069.281	18.92	18.9	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	882.643	18.42	18.4	98	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	85.003	16.11	16.1	80	#?
73	73	n-propylbenzene	13.00	13.00	0.000	120	78	1199.155	18.93	18.9	98	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	998.030	18.65	18.7	99	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	1007.102	18.36	18.4	100	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	3450.790	18.68	18.7	99	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	3840.539	19.11	19.1	100	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	3505.512	18.49	18.5	98	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	3165.540	19.09	19.1	96	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5347

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456M01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:08 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:25 2003
Print Time : Wed May 14 11:26 2003
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	1875.847	18.28	18.3	100	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	4691.146	19.25	19.2	99	
82	82	14-DCB	13.87	13.87	0.000	146	148	1831.979	17.79	17.8	99	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	198.866	20.93	20.9	98	
84	84	12-DCB	14.21	14.21	0.000	146	148	1596.999	18.05	18.0	100	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	1051.179	20.04	20.0	98	?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	100.205	17.68	17.7	93	
87	87	124-tri-Cl-Bz	15.58	15.59	0.000	180	182	1248.815	19.56	19.6	99	
88	88	naphthalene	15.79	15.79	0.000	128	129	1972.178	21.08	21.1	100	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	721.766	18.94	18.9	99	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	1028.427	19.37	19.4	100	

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Quantitation Report: **Applied P &Ch Lab** EPA 8260

5348

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456M01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:08 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:25 2003
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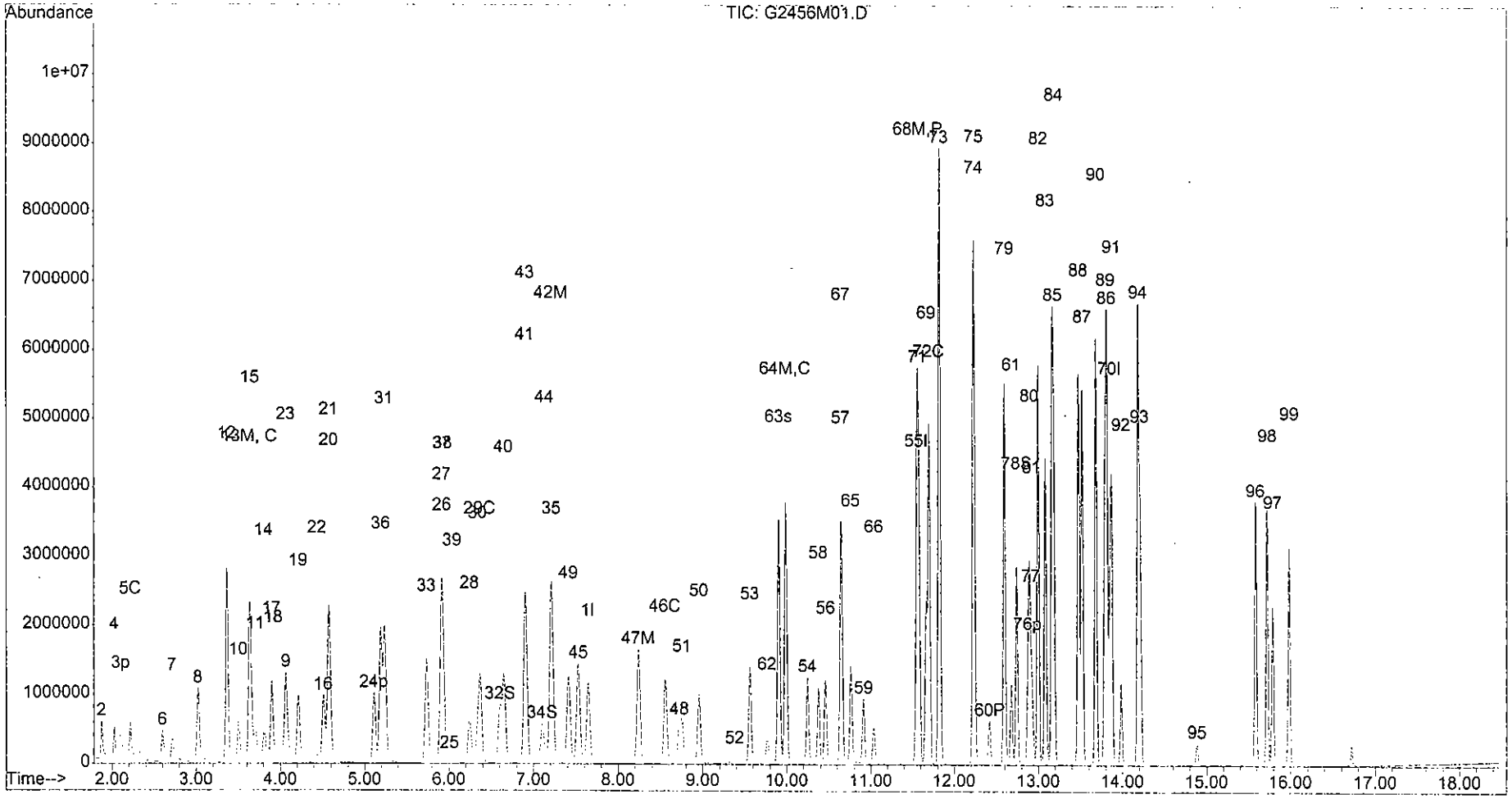
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000



Quantitation Report: **Applied P &Ch Lab** EPA 8260

5349

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456N01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:35 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:29 2003
Print Time : Wed May 14 11:29 2003
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.64	7.63	0.002	96	70	1632.156	10.00		0.01	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	1205.698	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	637.369	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.001	111	113	732.781	19.51	19.5	97.53%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.09	0.000	65	102	643.030	18.45	18.4	92.24%	
55	55	toluene-d8	9.91	9.90	0.000	98	100	3028.254	19.72	19.7	98.62%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	916.803	18.90	18.9	94.50%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.88	1.86	0.002	85	87	708.573	17.47	17.5	100	m
4	4	Chloromethane	2.11	2.08	0.004	50	52	629.276	16.39	16.4	99	05/14/03
2	2	F114	2.03	2.00	0.003	85	135	381.170	18.91	18.9	58	m
5	5	vinyl chloride	2.22	2.20	0.002	62	64	743.432	18.31	18.3	99	
6	6	bromomethane	2.60	2.58	0.003	94	96	393.181	16.09	16.1	95	
7	7	chloroethane	2.72	2.70	0.002	64	66	464.050	17.98	18.0	0	m
8	8	tri-Cl-F-methane	3.03	3.01	0.002	101	103	1146.954	18.79	18.8	100	05/14/03
91	91	Acetonitrile X10	4.07	4.00	0.008	41	40	1351.653	260.87	260.9	38	#?
9	9	acrolein X10	3.51	3.48	0.003	56	55	806.131	208.74	208.7	0	m
11	11	acetone X10	3.71	3.67	0.005	43	58	931.558	263.96	264.0	0	m 05/14/03
12	12	ethyl ether X5	3.37	3.35	0.002	59	74	1985.054	95.56	95.6	99	
13	13	11-dichloroethene	3.63	3.62	0.002	61	96	890.724	17.85	17.9	0	m?
14	14	Iodomethane	3.81	3.79	0.002	142	127	821.527	21.80	21.8	93	05/14/03
15	15	F-113	3.65	3.63	0.002	101	151	722.075	19.83	19.8	0	m
16	16	acrylonitrile X10	4.52	4.49	0.003	53	52	1264.278	234.91	234.9	98	
17	17	carbon disulfide	3.90	3.88	0.002	76	78	2318.287	16.09	16.1	100	
94	94	Isopropyl Alcohol	3.93	3.90	0.003	45	43	29.522	165.44	165.4	96	m 05/14/03
18	18	methylene chlorid	4.22	4.20	0.002	84	49	783.190	21.29	21.3	94	
19	19	t-12-di-Cl-ethene	4.57	4.56	0.002	96	61	798.823	19.21	19.2	93	?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5350

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456N01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:35 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:29 2003
Print Time : Wed May 14 11:29 2003
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.59	4.57	0.002	73	57	1658.627	21.89	21.9	99	?
95	95	Tert butyl alcoho	4.46	4.40	0.007	59	57	357.554	555.63	555.6	97	
94	94	allyl chloride	4.07	4.05	0.002	41	76	1351.653	26.09	26.1	93	?
21	21	11-dichloroethane	5.11	5.10	0.002	63	83	1298.314	18.78	18.8	99	
97	97	propionitrile	6.01	5.98	0.004	54	51	46.466	23.83	23.8	81	#?
22	22	c-12-di-Cl-ethene	5.91	5.90	0.002	96	61	831.581	20.08	20.1	99	?
23	23	22-Dichloropropan	5.92	5.90	0.002	77	97	1113.950	22.16	22.2	99	?
24	24	Br-Cl-methane	6.24	6.23	0.002	128	130	337.071	20.58	20.6	99	
25	25	chloroform	6.37	6.35	0.002	83	85	1351.322	19.39	19.4	100	
26	26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	511.818	114.48	114.5	93	
98	98	Diisopropyl ether	5.24	5.22	0.002	45	87	2181.227	19.41	19.4	96	
99	99	ETBE	5.73	5.72	0.002	59	87	1857.469	21.52	21.5	98	
30	30	12-dichloroethane	7.22	7.21	0.002	64	62	237.629	18.54	18.5	98	?
32	32	vinyl acetate X5	5.19	5.17	0.002	43	86	5239.974	103.83	103.8	97	
92	92	Nitro Methane(x10	5.91	5.78	0.018	61	46	1058.739	176.98	177.0	58	m?
33	33	2-butanoneMEK X10	5.93	5.92	0.002	43	72	1502.543	291.47	291.5	95	?
93	93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	739.131	34.71	34.7	100	?
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	1282.411	20.56	20.6	99	
35	35	11-Di-Cl-propene	6.90	6.89	0.002	75	110	1071.199	20.00	20.0	99	?
36	36	benzene	7.21	7.19	0.002	78	52	3212.748	19.57	19.6	98	?
37	37	CCl4	6.91	6.90	0.002	117	119	1150.108	21.85	21.8	98	?
100	100	Isobutyl alcohol	7.16	7.11	0.006	43	42	153.051	507.70	507.7	74	#
38	38	thiophene	7.53	7.52	0.002	84	58	1680.348	20.23	20.2	96	
39	39	12-di-Cl-propane	8.56	8.55	0.000	63	76	692.984	19.68	19.7	97	
40	40	trichloroethene	8.24	8.23	0.002	130	132	916.076	20.43	20.4	99	
41	41	dibromomethane	8.73	8.72	0.000	174	172	371.539	21.83	21.8	100	
101	101	TAME	7.41	7.40	0.002	73	43	1732.658	22.42	22.4	95	
42	42	Br-di-Cl-methane	8.96	8.95	0.000	83	85	983.221	20.27	20.3	98	
43	43	Me-methacrylate	8.76	8.75	0.000	69	100	404.470	24.49	24.5	99	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	159.800	56.00	56.0	95	
45	45	c-13-di-Cl-propen	9.56	9.55	0.000	75	110	1125.303	21.63	21.6	97	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	928.458	20.70	20.7	96	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

05/14/03

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5351

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456N01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:35 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:29 2003
Print Time : Wed May 14 11:29 2003
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	529.130	21.09	21.1	95	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	916.940	20.66	20.7	98	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	854.514	21.62	21.6	99	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	679.169	22.03	22.0	99	
52	52	bromoform	12.42	12.42	0.000	173	174	386.525	23.50	23.5	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	820.234	20.46	20.5	97	
54	54	MIBK	9.77	9.76	0.000	43	58	401.654	23.57	23.6	100	
56	56	toluene	9.99	9.98	0.000	91	92	3572.285	19.79	19.8	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	1328.135	117.45	117.4	96	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	514.432	21.87	21.9	99	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	941.987	20.29	20.3	100	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	2295.539	19.75	19.7	99	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	794.018	21.37	21.4	98	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	482.990	18.83	18.8	85	#?
64	64	Et-Bz	11.70	11.70	0.000	91	106	4113.891	18.34	18.3	99	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	6257.587	36.34	36.3	97	
66	66	styrene	12.24	12.24	0.000	104	78	2495.543	18.97	19.0	100	?
67	67	o-xylene	12.22	12.22	0.000	91	106	3233.523	18.32	18.3	98	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	609.769	19.69	19.7	98	
69	69	123-tri-Cl-Pr	12.92	12.91	0.000	110	97	177.638	19.75	19.7	100	?
71	71	isopropylbenzene	12.60	12.60	0.000	105	120	4184.264	19.17	19.2	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	925.327	19.02	19.0	98	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	104.167	19.08	19.1	78	#?
73	73	n-propylbenzene	13.00	13.00	0.000	120	78	1223.435	19.03	19.0	98	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	1019.333	18.77	18.8	99	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	1024.613	18.40	18.4	98	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	3507.639	18.70	18.7	98	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	3908.462	19.16	19.2	100	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	3555.711	18.47	18.5	98	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	3230.716	19.20	19.2	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5352

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456N01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:35 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:29 2003
Print Time : Wed May 14 11:29 2003
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	1939.271	18.62	18.6	100	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	4798.326	19.40	19.4	99	
82	82	14-DCB	13.87	13.87	0.000	146	148	1918.427	18.35	18.4	99	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	235.716	24.12	24.1	99	
84	84	12-DCB	14.21	14.21	0.000	146	148	1687.390	18.78	18.8	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	1070.329	20.10	20.1	100	?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	121.948	20.95	21.0	98	
87	87	124-tri-Cl-Bz	15.59	15.59	0.000	180	182	1305.690	20.15	20.1	100	
88	88	naphthalene	15.79	15.79	0.000	128	129	2238.703	23.57	23.6	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	732.587	18.94	18.9	100	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	1114.842	20.69	20.7	100	

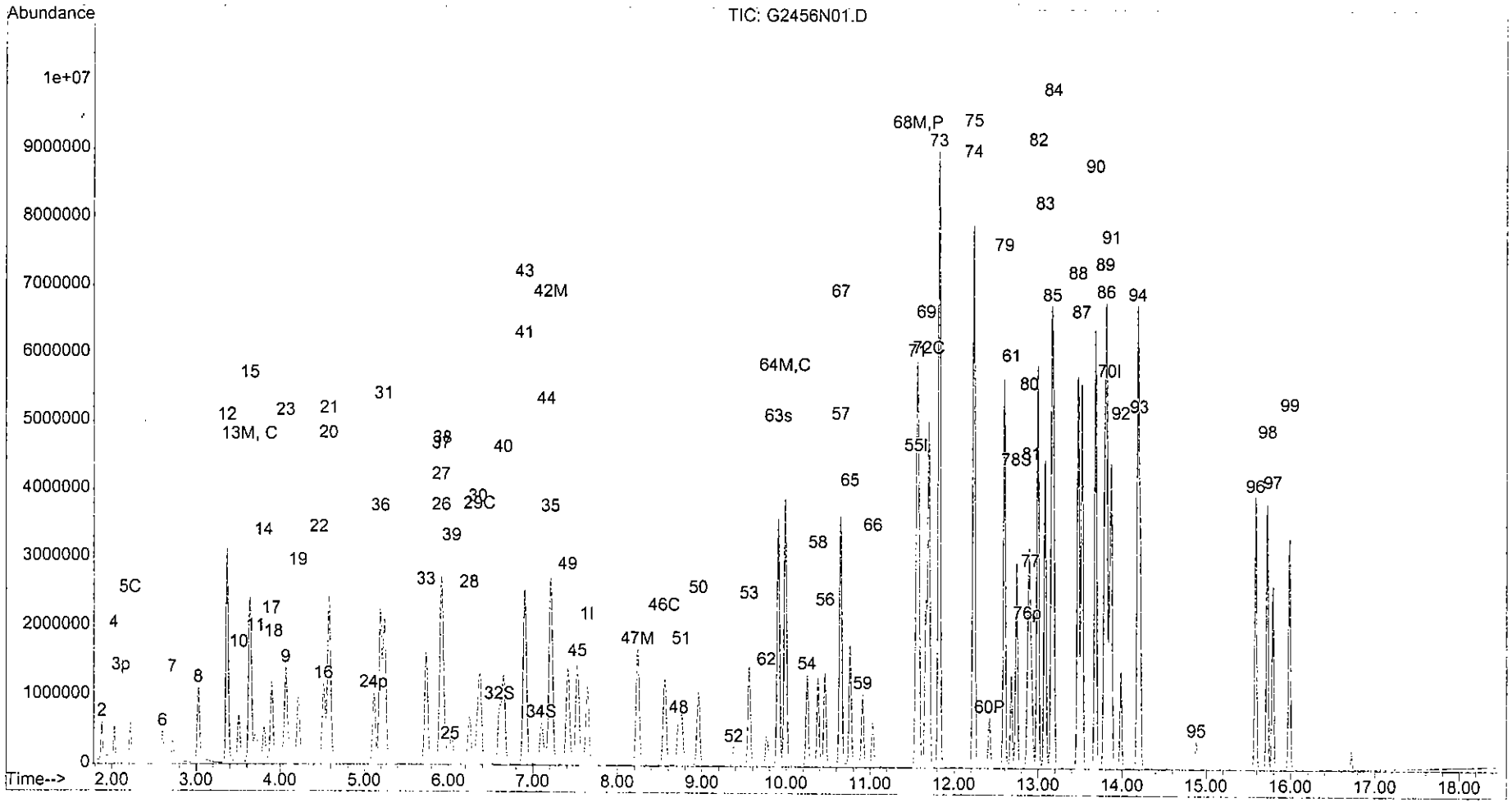
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5353

Data Filename: C:\MSDCHEM\1\DATA\03G2456\G2456N01.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 14:35 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 11:29 2003
Print Time : Wed May 14 11:29 2003
Miscleneous :

Sample : f=1 $2987-06
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000



Quantitation Report: **Applied P &Ch Lab** EPA 8260

5354

Data Filename: C:\MSDCHEM\1\DATA\03G2456\2987-06.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 17:16 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 10:56 2003
Print Time : Wed May 14 11:30 2003
Miscleneous :

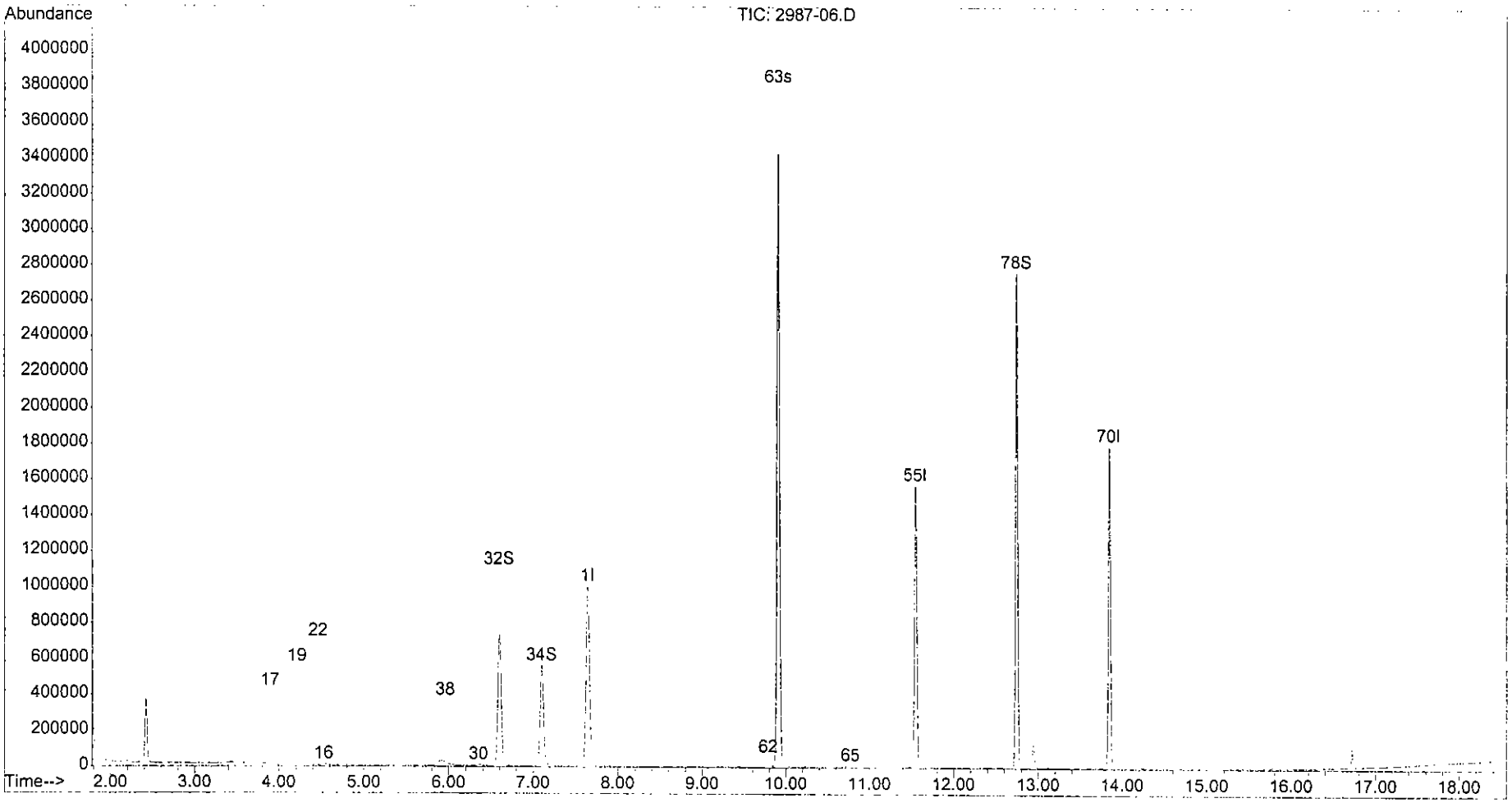
Sample : f=1 ms 524.2
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.64	7.63	0.002	96	70	1430.404	10.00		0.01	
47	47	Chlorobezene-d5	11.55	11.54	0.000	117	82	1094.707	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	539.535	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.000	111	113	680.105	20.66	20.7	103.29%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.09	0.000	65	102	601.479	19.69	19.7	98.45%	
55	55	toluene-d8	9.91	9.90	0.000	98	100	2882.132	20.67	20.7	103.37%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	831.046	20.24	20.2	101.20%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
16	16	acrylonitrile X10	4.53	4.49	0.005	53	52	6.715	1.42	~~1.4~~	~~87~~	
17	17	carbon disulfide	3.90	3.88	0.002	76	78	113.791	0.90	0.9	99	
18	18	methylene chlorid	4.22	4.20	0.002	84	49	22.111	0.57	0.6	89	
95	95	Tert butyl alcoho	4.46	4.40	0.007	59	57	0.450	0.80	~~0.8~~	~~71~~	#
26	26	tetrahydrofuranX5	6.36	6.32	0.005	42	72	5.968	1.52	1.5	88	
33	33	2-butanoneMEK X10	5.96	5.92	0.006	43	72	4.489	0.99	~~1.0~~	~~78~~	
<<< I2 : ISTD ID = 47 >>>												
54	54	MIBK	9.78	9.76	0.002	43	58	51.034	3.30	3.3	96	
57	57	2-hexanone X5	10.77	10.75	0.002	43	58	6.489	0.63	0.6	88	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 8260

5355

Data Filename: C:\MSDCHEM\1\DATA\03G2456\2987-06.D
Method : C:\MSDCHEM\1\METHODS\826WA010.M
Acq. Time : May 13 17:16 2003
Method Update: Thu Apr 10 14:53 2003
Quant. Time : May 14 10:56 2003
Print Time : Wed May 14 11:30 2003
Miscleneous :

Sample : f=1 ms 524.2
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000