Level C Data Package Deliverables

Wet Chemistry

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Wet Analysis Results for Method 314.0

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 314.0
Project ID: JPL Service ID: 34572 Collected by:

Component Name: Perchlorate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-4572-1	DUPE-5-3-Q03	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	2.1	B
03-4572-2	EB-7-8-11-03	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	<4	U
03-4572-3	MW-12-1	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	<4	U
03-4572-4	MW-12-2	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	3.4	B
03-4572-5	MW-12-3	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	2.8	B
03-4572-6	MW-12-4	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	5.6	
03-4572-7	MW-12-5	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	1.9	B
03-4572-8	MW-22-1	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	2.7	B
03-4572-9	MW-22-2	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	2.4	B
03-4572-10	MW-22-3	Water	08/11/03	08/11/03	08/12/03	03W4044	μg/L	4	2.2	B
03W4044-MB-01	03W4044-MB-01	Water	08/12/03	08/12/03	08/12/03	03W4044	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 7196

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	7196
Project ID:	JPL	Service ID:	34572	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
03-4572-1	DUPE-5-3-Q03	Water	08/11/03	08/11/03	08/11/03	03W4039	mg/L	0.01	<0.01	U
03-4572-2	EB-7-8-11-03	Water	08/11/03	08/11/03	08/11/03	03W4039	mg/L	0.01	<0.01	U
03-4572-3	MW-12-1	Water	08/11/03	08/11/03	08/11/03	03W4039	mg/L	0.01	<0.01	U
03-4572-4	MW-12-2	Water	08/11/03	08/11/03	08/11/03	03W4039	mg/L	0.01	<0.01	U
03-4572-5	MW-12-3	Water	08/11/03	08/11/03	08/11/03	03W4039	mg/L	0.01	<0.01	U
03-4572-8	MW-22-1	Water	08/11/03	08/11/03	08/11/03	03W4039	mg/L	0.01	<0.01	U
03-4572-9	MW-22-2	Water	08/11/03	08/11/03	08/11/03	03W4039	mg/L	0.01	<0.01	U
03-4572-10	MW-22-3	Water	08/11/03	08/11/03	08/11/03	03W4039	mg/L	0.01	<0.01	U
03W4039-MB-01	03W4039-MB-01	Water	08/11/03	08/11/03	08/11/03	03W4039	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.

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:	34572
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W4044		
LCS Filename:	-	Date Analyzed:	081203	Time Analyzed:	
LCSD Filename:	-	Date Analyzed:	–	Time Analyzed:	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
PERCHLORATE	μg/L	25	0	28.5	114	80-120
# 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: _____

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:	34572
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W4044		
MS Filename:	-	Date Analyzed:	081203	Time Analyzed:	
MSD Filename:	-	Date Analyzed:	081203	Time Analyzed:	
MS Sample No:	**MW-12-4**	Sample Lab ID:	03-4572-6		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
PERCHLORATE	μg/L	50.0	5.6	67.7	124	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	50.0	67.9	125	1	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 7196

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	34572
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W4039		
LCS Filename:	-	Date Analyzed:	081103	Time Analyzed:	13:42
LCSD Filename:	-	Date Analyzed:	081103	Time Analyzed:	13:42

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.252	101	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	0.257	103	2	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:	34572
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W4039		
MS Filename:	-	Date Analyzed:	081103	Time Analyzed:	13:42
MSD Filename:	-	Date Analyzed:	081103	Time Analyzed:	13:42
MS Sample No:	**MW-22-3**	Sample Lab ID:	03-4572-10		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.223	89	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	0.217	87	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: 34572

Analysis: Chromium (VI) Calibration Date: 7/28/03

Concentration (mg/L)	0.000	0.0125	0.050	0.125	0.250	0.50
Absorbance	0.000	0.007	0.017	0.107	0.212	0.420

A=-0.001+ 0.846C

A=Absorbance

C=Concentration (mg/L)

r= 0.9999

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:	34572
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	Perchlorate	314.0	03W4044	μg/L	50.0	52.1	104	4	√	85-115	08/12/2003
	Perchlorate	314.0	03W4044	μg/L	50.0	49.6	99	-1	√	85-115	08/12/2003
	Perchlorate	314.0	03W4044	μg/L	50.0	49.2	98	-2	√	85-115	08/12/2003
2	Chromium (VI)	7196	03W4039	mg/L	0.25	0.247	99	-1	√	90-110	08/11/2003
	Chromium (VI)	7196	03W4039	mg/L	0.25	0.246	98	-2	√	90-110	08/11/2003

Applied P & Ch Laboratory

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Chromium (VI) (7196) Worksheet

Batch # P2 Matrix: W & SGS [Holding Time: 24 hours!!] Test Date: 7/28/03 Analyst: [illegible]

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

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-7757	× / = 0.00 mg/L	0.000		Least Square [RF]=	Cal. Code:
STD-2	W-	× / = 0.005 mg/L	0.007		Average $\bar{RF}$=	
STD-3	W-	× / 0.025 = 0.05 mg/L	0.017		C.C. 0.9979 (≥ 0.995)	
STD-4	W-	× / = 0.125 mg/L	0.107		RSD= % (≤ 15%)	
STD-5	W-	× / = 0.250 mg/L	0.212		Ref. page	
STD-6	W-	× / = 0.50 mg/L	0.420		A = -0.001 + 0.846C	

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) $C = f_1 f_2 C'$	Anom: Note
CCV	Lot: W-7853	Expected Conc.:	×	/ = 0.25 mg/L	0.218	0.259 mg/L	REC. %	90-110
Method Blank	Bl. Lot:		$/X_0$ =	95.0/ =	0.000	0.000 mg/L	ppm	
LCS1	Bl. Lot:		$/X_0$ =	95.0/ =	0.210	0.250 mg/L	ppm	
Sample-1	4177-37	1ml→100ml	$/X_0$ = 1	95.0/ = 2	0.290	0.687 mg/L	ppm	
MS on S-1	37	0.5ml→100ml	$/X_0$ =	95.0/ = 2	0.287	0.682 mg/L	ppm	report
MSD on S-1	4175-15	10.0g	50.0mL $/X_0$ = 5	95.0/ = 10	0.050	3.04 mg/L	ppm	
Sample 2	15	4	$/X_0$ =	95.0/ = 2	0.247	2.94 mg/L	ppm	report
Sample 3			$/X_0$ =	95.0/ =		mg/L	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:		$/X_0$ =	95.0/ =		mg/L	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.	doping 0.15mg/L		$/X_0$ =	95.0/ =	0.218	0.259 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-	× / = ppm	%	80-120 %/80-120 %
MSD	W-	× / = ppm	%	.. ..
LCS	W-	× / = 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 5-155 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
Control limits are subjected to change. The updated values are given in the latest version of APCL Technical Handbook Vol. 2

plied P & Ch Laboratory
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Chromium (VI) V(7196) Worksheet

[Holding Time: 24 hours!!]

Test Date: 8/11/03 Analyst: [illegible]

Test Time: 13:42

SOP: G-22

#: 03W4039 Matrix: W

#: Reagent Water _____ Diphenylcazide solution _____

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.=0.9999 (≥ 0.995)	
STD-4	W-	× / = mg/L			RSD= % (≤ 15%)	
STD-5	W-	× / = mg/L			Ref. page	
STD-6	W-	× / = mg/L			A=-0.001+0.846C	

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- 7757	Expected Conc.:	× /	=0.25 mg/L	0.208	0.247 mg/L	REC. %	90-110 %
Method Blank	Bl. Lot: T1117		$/X_0$ =	95.0/ =	0.000	mg/L	0.001 ppm	
LCS1	Bl. Lot: "		$/X_0$ =	95.0/ =	0.212	mg/L	0.252 ppm	
Sample-1	4572-1		$/X_0$ =	95.0/ =	0.006	mg/L	0.008 ppm	
MS on S-1	10		$/X_0$ =	95.0/ =	0.188	mg/L	0.223 ppm	
MSD on S-1	10		$/X_0$ =	95.0/ =	0.183	mg/L	0.217 ppm	
Sample 2	2		$/X_0$ =	95.0/ =	0.000	mg/L	0.001 ppm	
Sample 3	3		$/X_0$ =	95.0/ =	0.000	mg/L	0.001 ppm	
Sample 4	4		$/X_0$ =	95.0/ =	0.001	mg/L	0.002 ppm	
Sample 5	5		$/X_0$ =	95.0/ =	0.004	mg/L	0.006 ppm	
Sample 6	8		$/X_0$ =	95.0/ =	0.004	mg/L	0.006 ppm	
Sample 7	9		$/X_0$ =	95.0/ =	0.002	mg/L	0.004 ppm	
Sample 8	10		$/X_0$ =	95.0/ =	0.003	mg/L	0.005 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: T1117		$/X_0$ =	95.0/ =	0.216	mg/L	0.257 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 0.25 mg/L		$/X_0$ =	95.0/ =	0.207	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- 7757	× / = 0.25 ppm	%	80-120 %/80-120 %
MSD	W- "	× / = ppm	%	.. ..
LCS	W- 7853	× / = 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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Control limits are subjected to change. The updated values are given in the latest version of APCL Technical Handbook Vol. 2

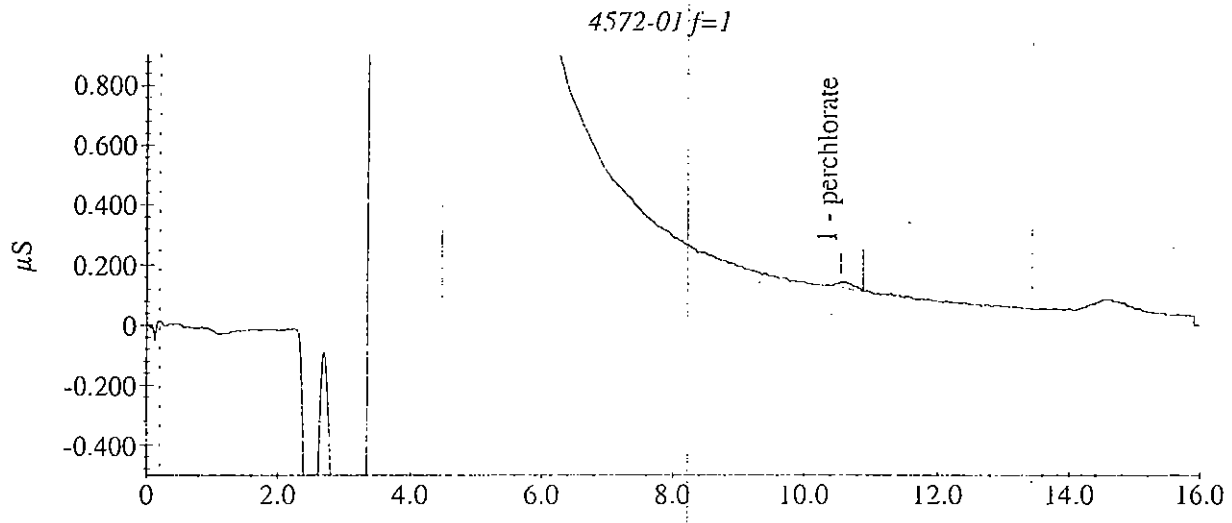
APCL Perchlorate Analysis Report

Sample Name : 4572-01 f=1
Data File Name : C:\DATA\03W4044K\4572-01_008.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 11:34:14 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.55	2.07	3509.30	176.37



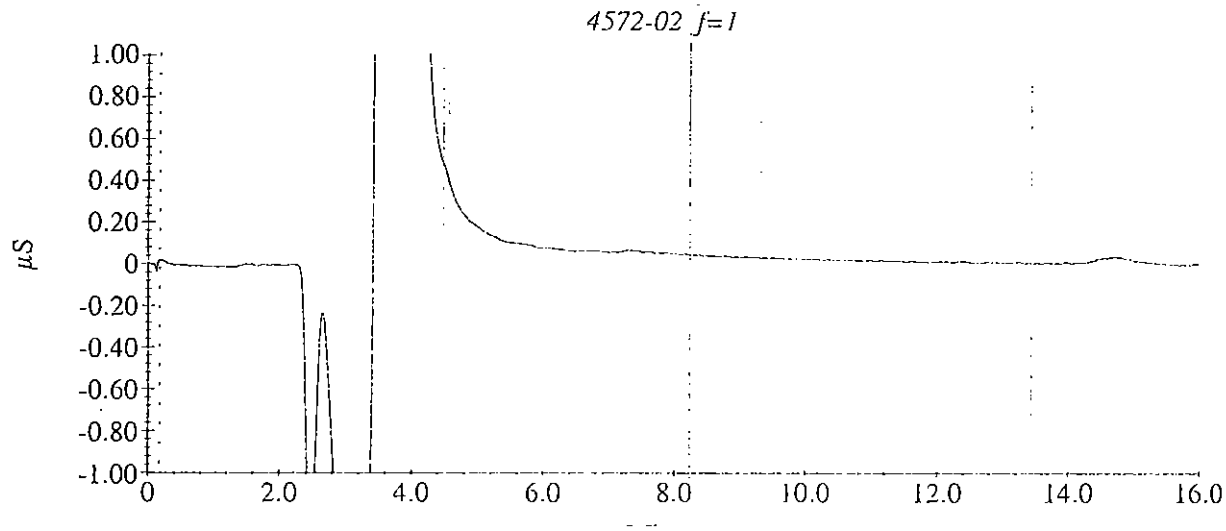
APCL Perchlorate Analysis Report

Sample Name : 4572-02 f=1
Data File Name : C:\DATA\03W4044K\4572-02_009.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 11:52:40 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



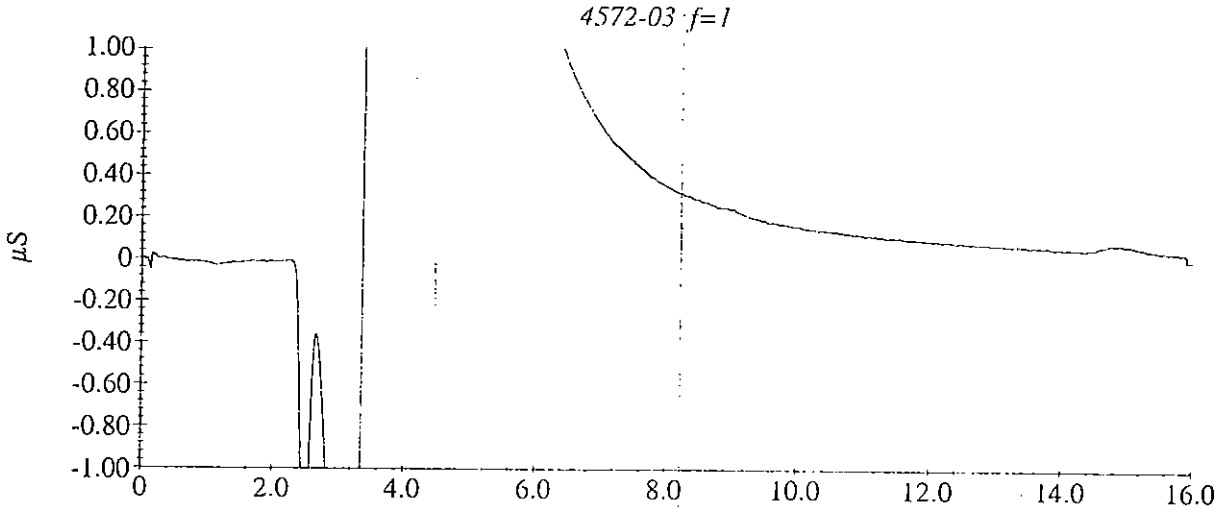
APCL Perchlorate Analysis Report

Sample Name : 4572-03 f=1
Data File Name : C:\DATA\03W4044K\4572-03_010.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 12:11:09 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



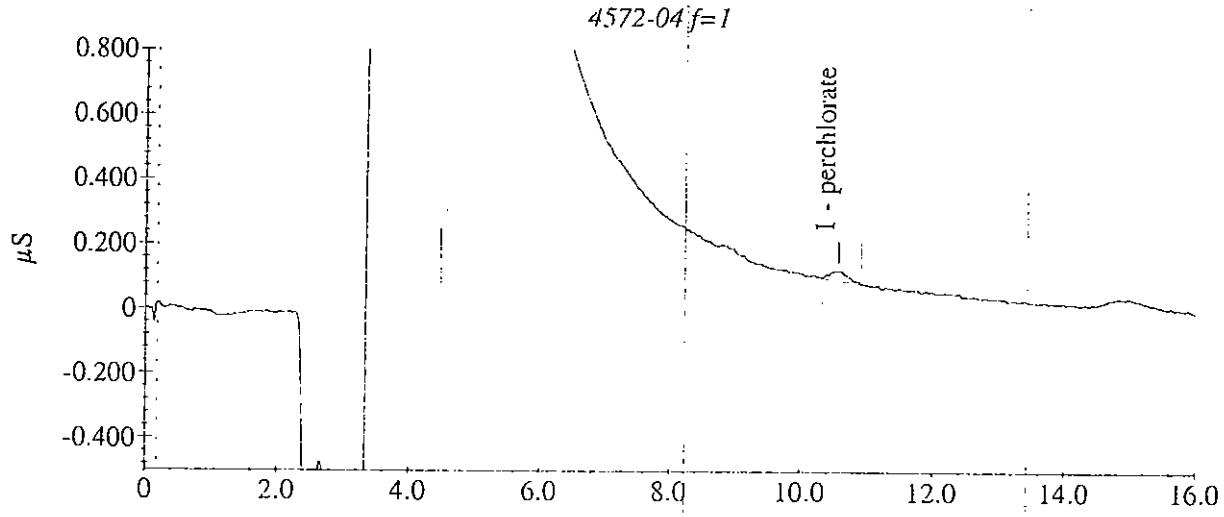
APCL Perchlorate Analysis Report

Sample Name : 4572-04 f=1
Data File Name : C:\DATA\03W4044K\4572-04_011.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 12:29:32 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.57	3.37	5725.90	291.46



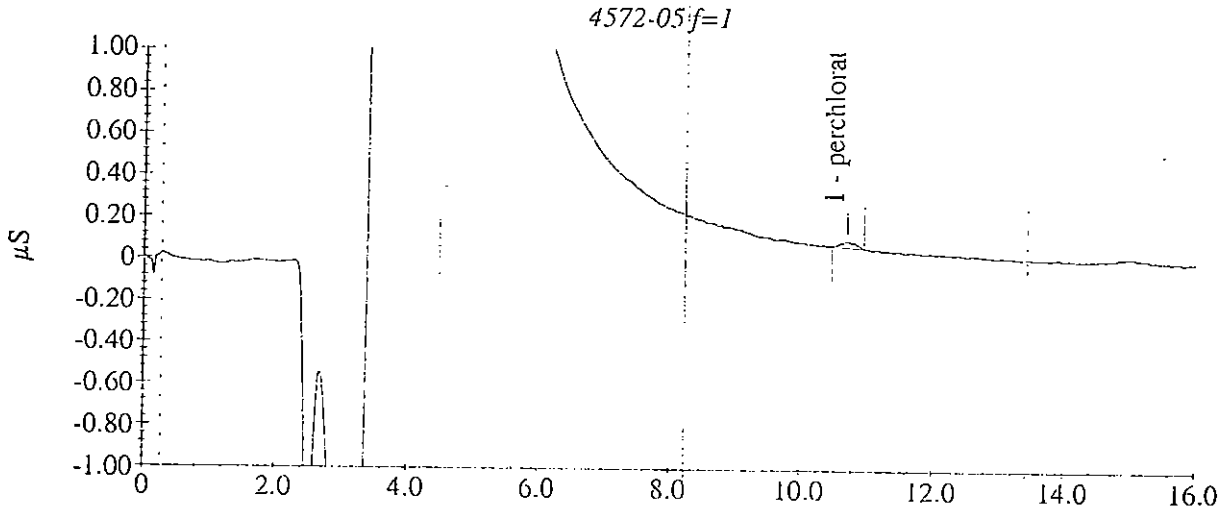
APCL Perchlorate Analysis Report

Sample Name : 4572-05 f=1
Data File Name : C:\DATA\03W4044K\4572-05_012.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 12:47:57 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.70	2.77	4697.05	276.83



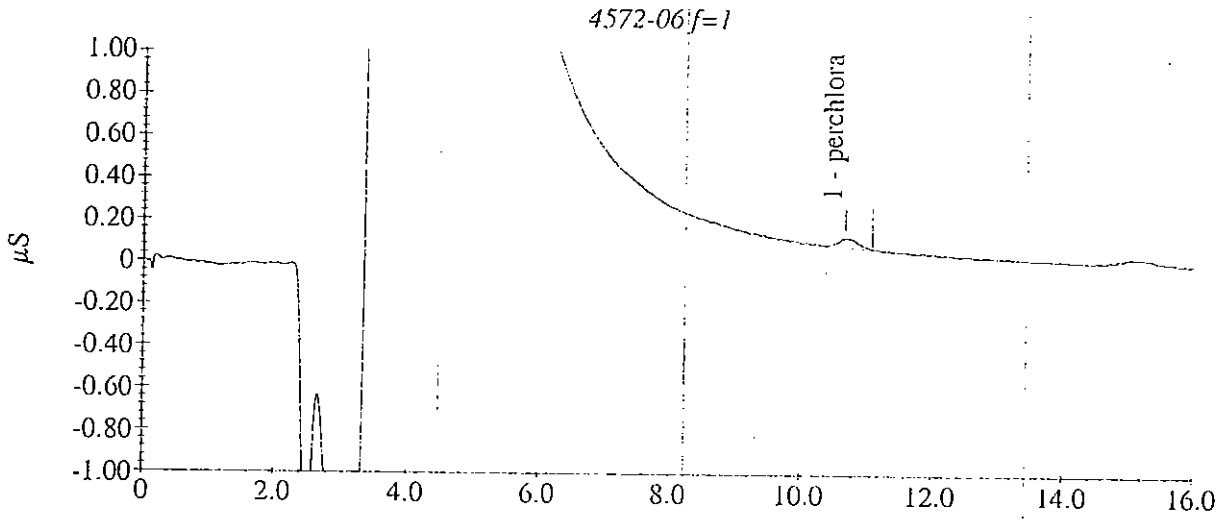
APCL Perchlorate Analysis Report

Sample Name : 4572-06 f=1
Data File Name : C:\DATA\03W4044K\4572-06_013.DXD

Method File Name : C:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 1:06:23 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.68	5.55	9416.75	435.70



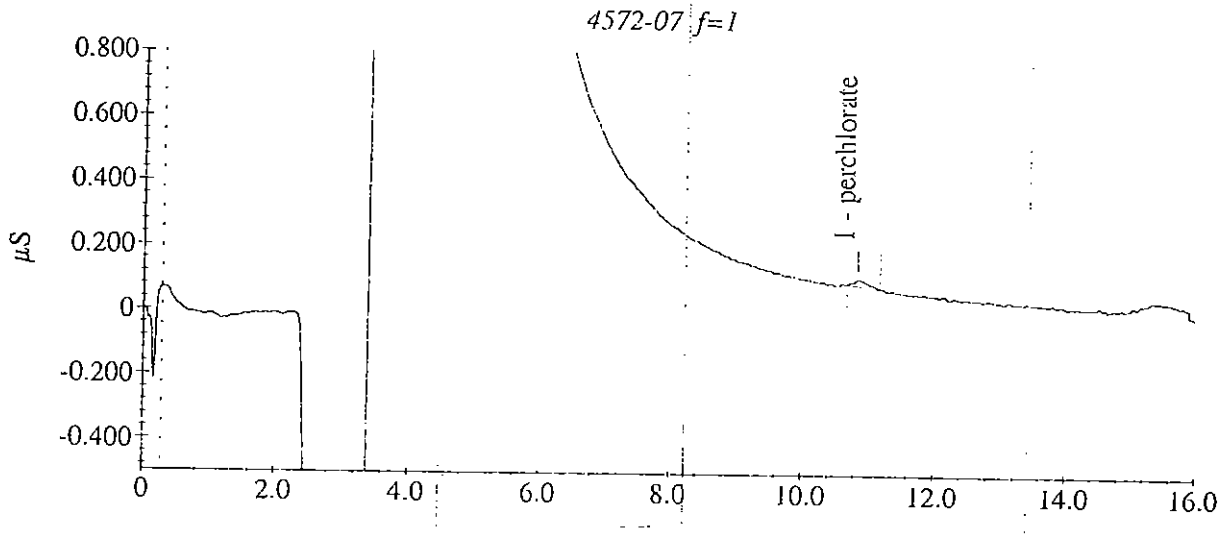
APCL Perchlorate Analysis Report

Sample Name : 4572-07 f=1
Data File Name : C:\DATA\03W4044K\4572-07_016.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 2:01:44 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.83	1.88	3189.75	194.76



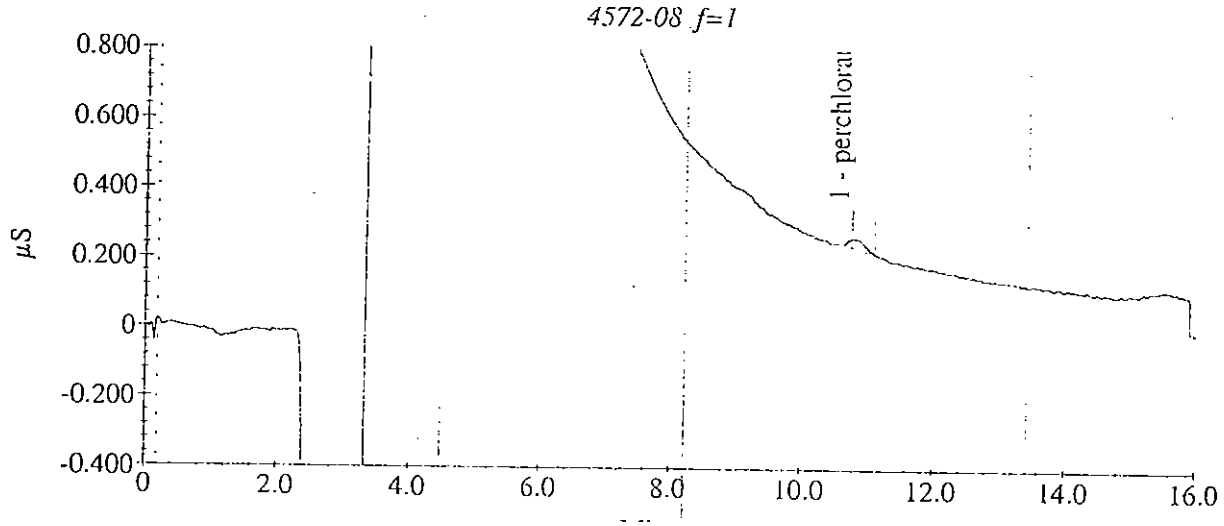
APCL Perchlorate Analysis Report

Sample Name : 4572-08 f=1
Data File Name : C:\DATA\03W4044K\4572-08_017.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 2:20:10 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.77	2.67	4530.60	244.50



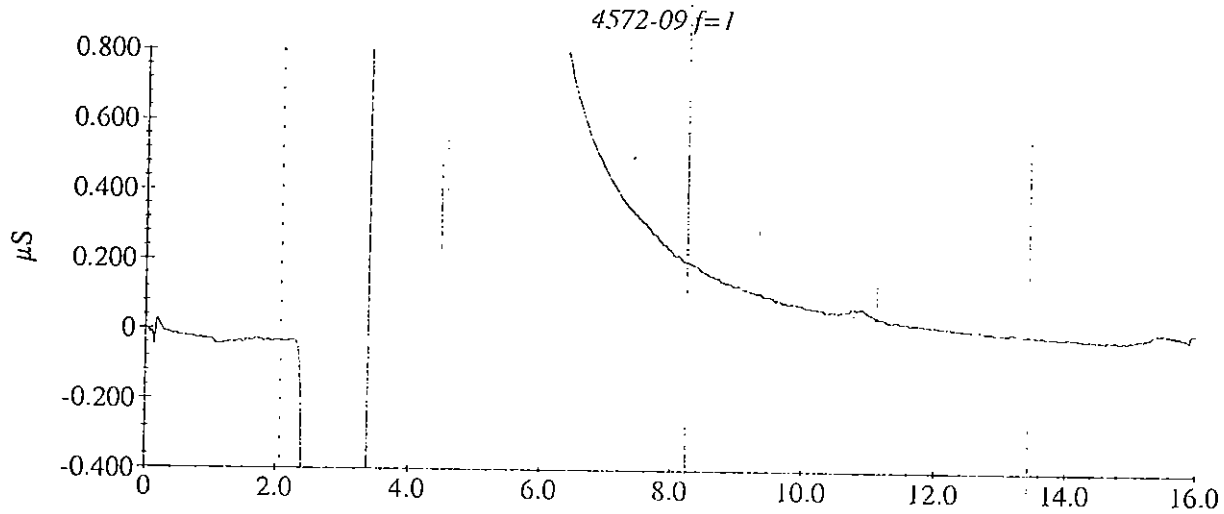
APCL Perchlorate Analysis Report

Sample Name : 4572-09 f=1
Data File Name : C:\DATA\03W4044K\4572-09_018.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 2:38:29 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.75	2.42	4099.00	184.74



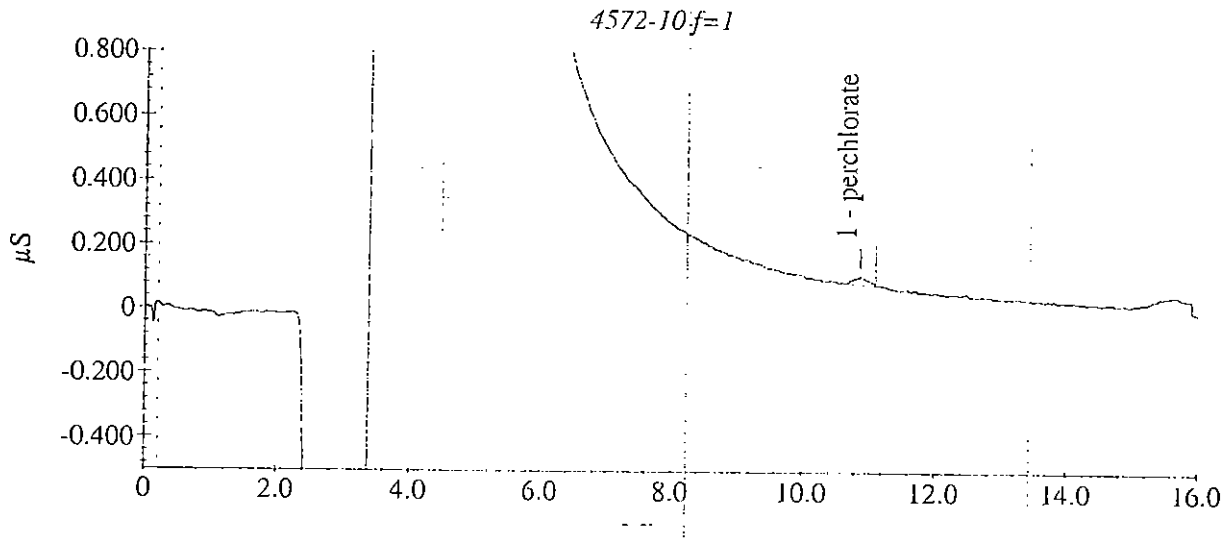
APCL Perchlorate Analysis Report

Sample Name : 4572-10 f=1
Data File Name : C:\DATA\03W4044K\4572-10_019.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 2:56:55 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.87	2.20	3740.10	249.76



Schedule File: C:\PeakNet\schedule\03w4044k.sch

Line	Sample	Sample Type	Level	Method	Data File	Volume	Dilution
1	##03w4044kw ipc 25ppb w8032	Sample		e314-011.met	c:\data\03w4044k\w4044 ipc 25ppb_001.dxd	1	1
2	lcs 25ppb w8087	Sample		e314-011.met	c:\data\03w4044k\w4044 l01_003.dxd	1	1
3	LCS 18PPB W8033a	Sample		e314-011.met	c:\data\03w4044k\w4044 j01_004.dxd	1	1
4	ICCS 4ppb w8088	Sample		e314-011.met	c:\data\03w4044k\w4044 iccs 4ppb_005.dxd	1	1
5	mb	Sample		e314-011.met	c:\data\03w4044k\w4044 k01_006.dxd	1	1
6	ccv 50ppb w8082	Sample		e314-011.met	c:\data\03w4044k\w4044 q01_007.dxd	1	1
7	4572-01 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-01_008.dxd	1	1
8	4572-02 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-02_009.dxd	1	1
9	4572-03 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-03_010.dxd	1	1
10	4572-04 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-04_011.dxd	1	1
11	4572-05 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-05_012.dxd	1	1
12	4572-06 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-06_013.dxd	1	1
13	ccv 50ppb w8082	Sample		e314-011.met	c:\data\03w4044k\w4044 q02_014.dxd	1	1
14	ccb	Sample		e314-011.met	c:\data\03w4044k\w4044 ccb_015.dxd	1	1
15	4572-07 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-07_016.dxd	1	1
16	4572-08 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-08_017.dxd	1	1
17	4572-09 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-09_018.dxd	1	1
18	4572-10 f=1	Sample		e314-011.met	c:\data\03w4044k\4572-10_019.dxd	1	1
19	4572-06 ms 50ppb f=1 w8033b	Sample		e314-011.met	c:\data\03w4044k\w4044 m01_020.dxd	1	1
20	4572-06 msd 50ppb f=1 w8033b	Sample		e314-011.met	c:\data\03w4044k\w4044 n01_021.dxd	1	1
21	ccv 50ppb w8082	Sample		e314-011.met	c:\data\03w4044k\w4044 q03_022.dxd	1	1
22		Sample		aastopcl.met		1	1

Analyst Wei W

Date 8/12/03

Instrument LC-K

2536

Schedule File: C:\PeakNet\schedule\03w4044k.sch

Line	Weight	Int. Std.	Comment
1	1	1	
2	1	1	
3	1	1	
4	1	1	
5	1	1	
6	1	1	
7	1	1	
8	1	1	
9	1	1	
10	1	1	
11	1	1	
12	1	1	
13	1	1	
14	1	1	
15	1	1	
16	1	1	
17	1	1	
18	1	1	
19	1	1	
20	1	1	
21	1	1	
22	1	1	

Default Method Path: C:\PEAKNET\METHOD
Default Data Path: C:\DATA\03W3650K
Comment:

2537

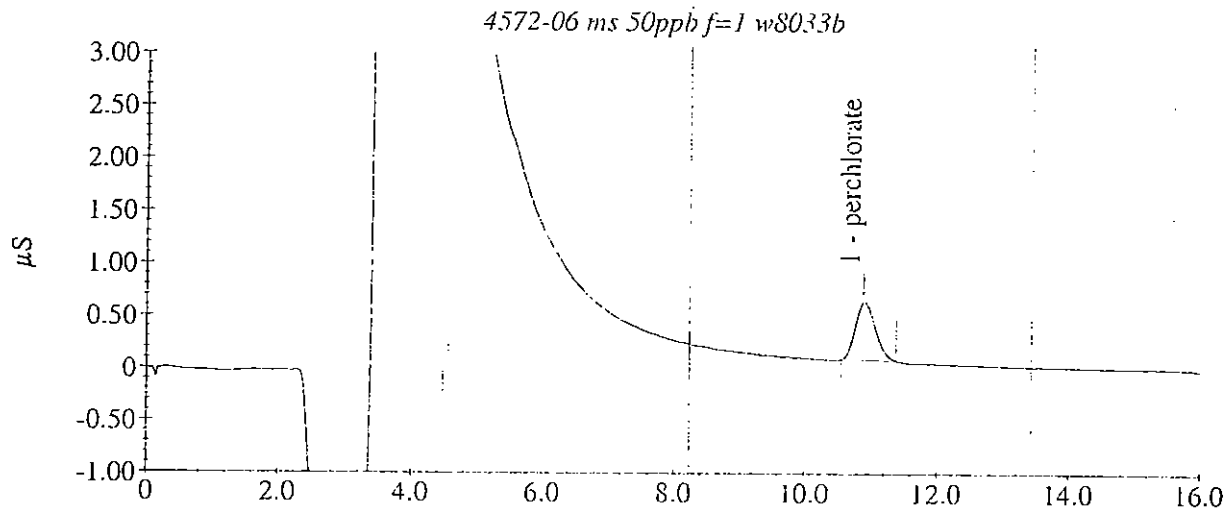
APCL Perchlorate Analysis Report

Sample Name : 4572-06 ms 50ppb f=1 w8033b
Data File Name : C:\DATA\03W4044K\W4044 M01_020.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 3:15:22 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.88	67.71	114905.35	5484.64



Rec 124.32%

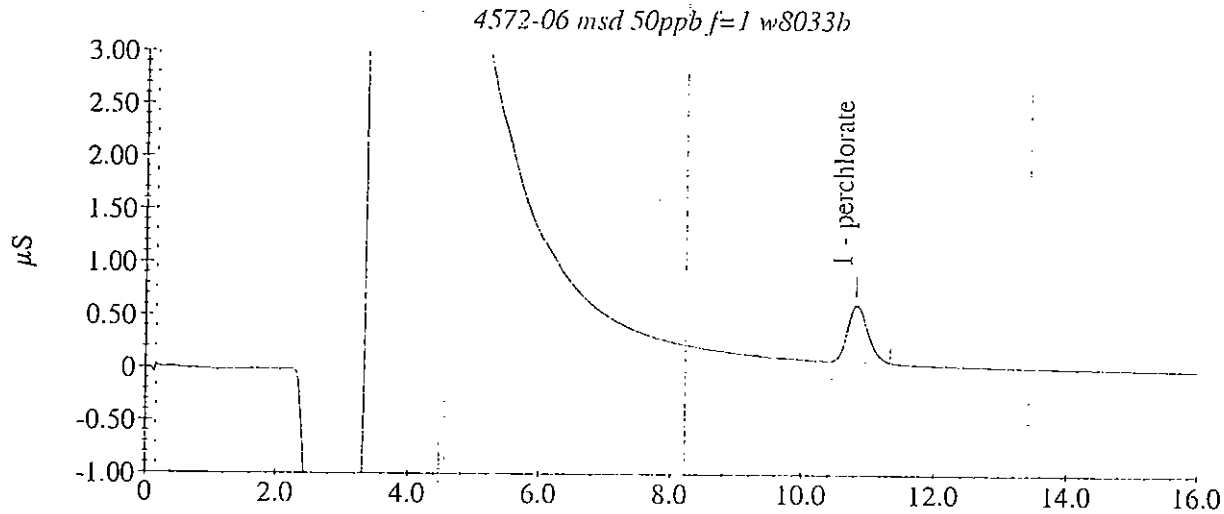
APCL Perchlorate Analysis Report

Sample Name : 4572-06 msd 50ppb f=1 w8033b
Data File Name : C:\DATA\03W4044K\W4044 N01_021.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 3:33:48 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.82	67.87	115184.90	5390.58



Rec 124.64%

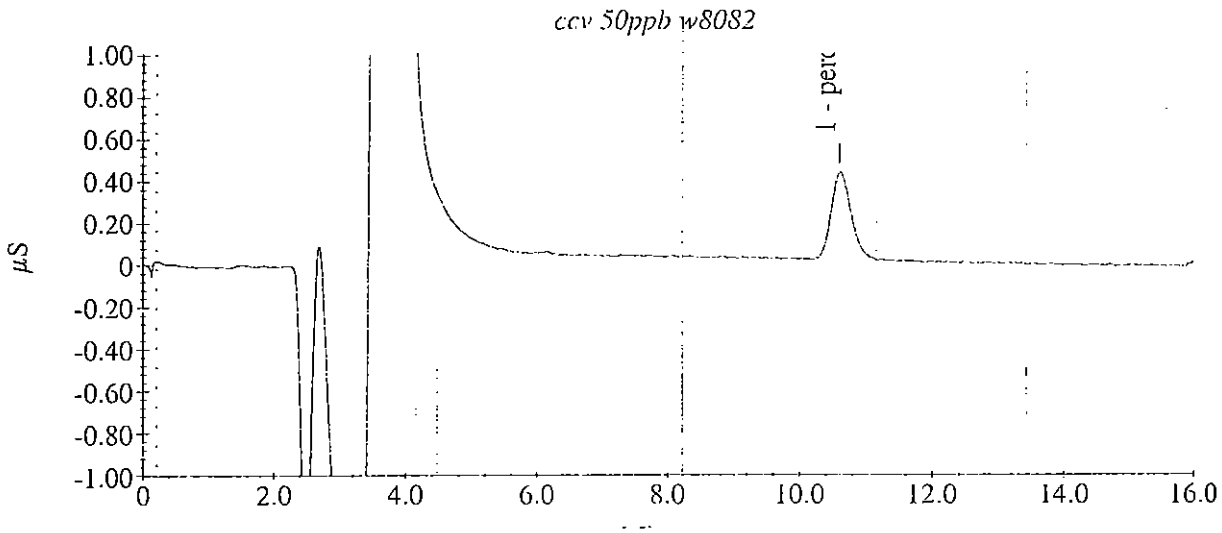
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w8082
Data File Name : C:\DATA\03W4044K\W4044 Q01_007.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 11:14:51 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.60	52.07	88363.85	4157.51



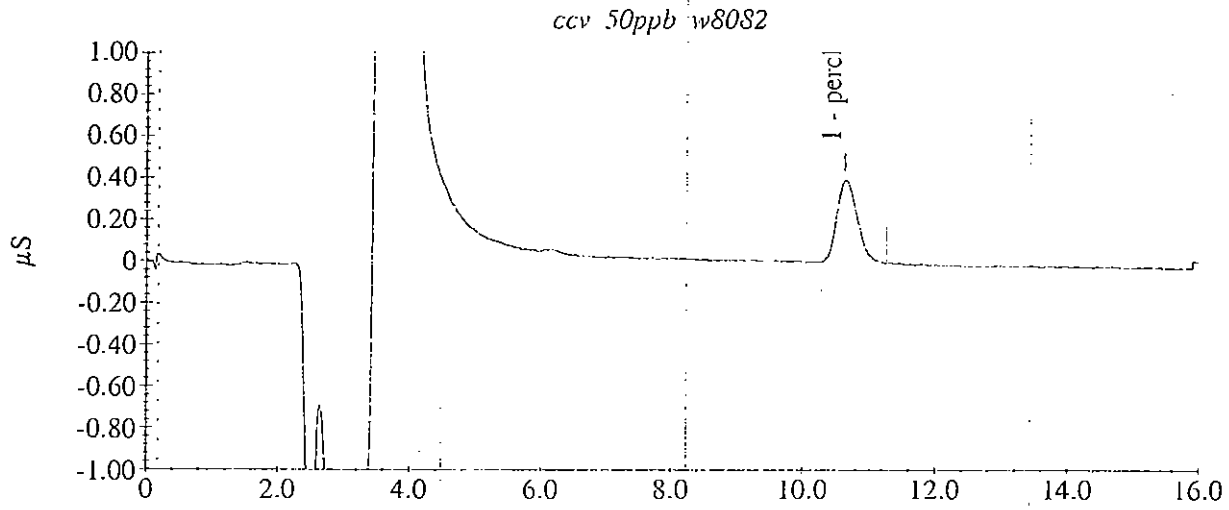
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w8082
Data File Name : C:\DATA\03W4044K\W4044 Q02_014.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 1:24:50 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.63	49.60	84167.10	3931.42



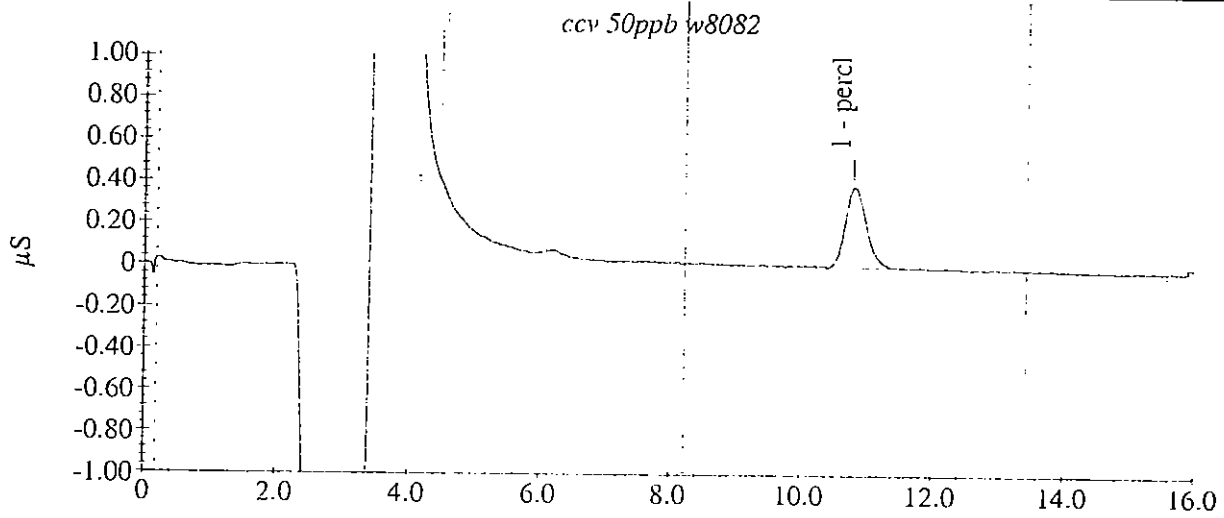
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w8082
Data File Name : C:\DATA\03W4044K\W4044 Q03_022.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 3:52:09 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.80	49.19	83472.90	3808.85



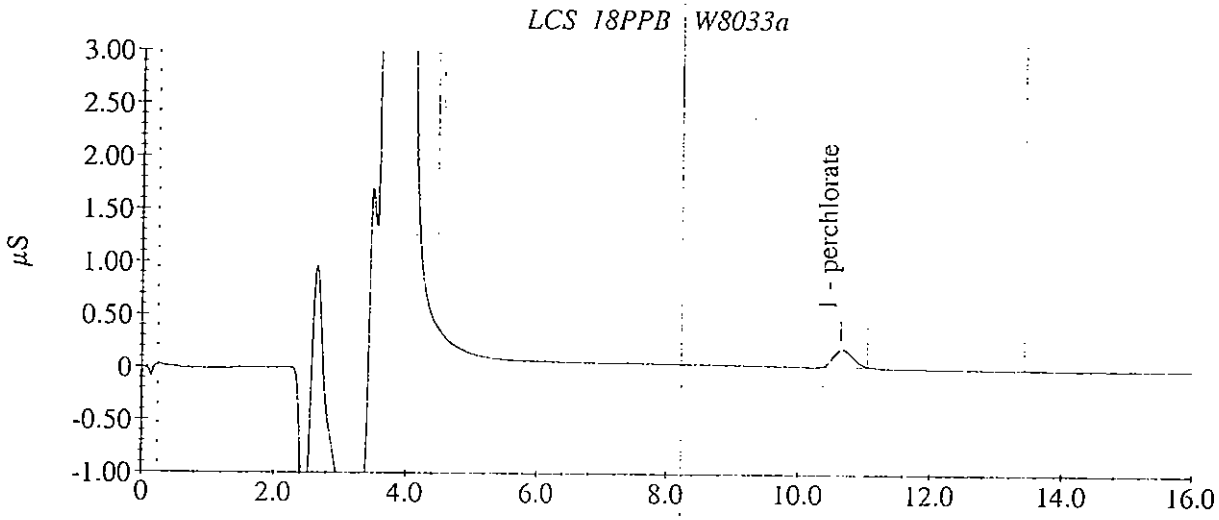
APCL Perchlorate Analysis Report

Sample Name : LCS 18PPB W8033a
Data File Name : C:\DATA\03W4044K\W4044 J01_004.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 10:19:31 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.65	19.81	33627.00	1709.24



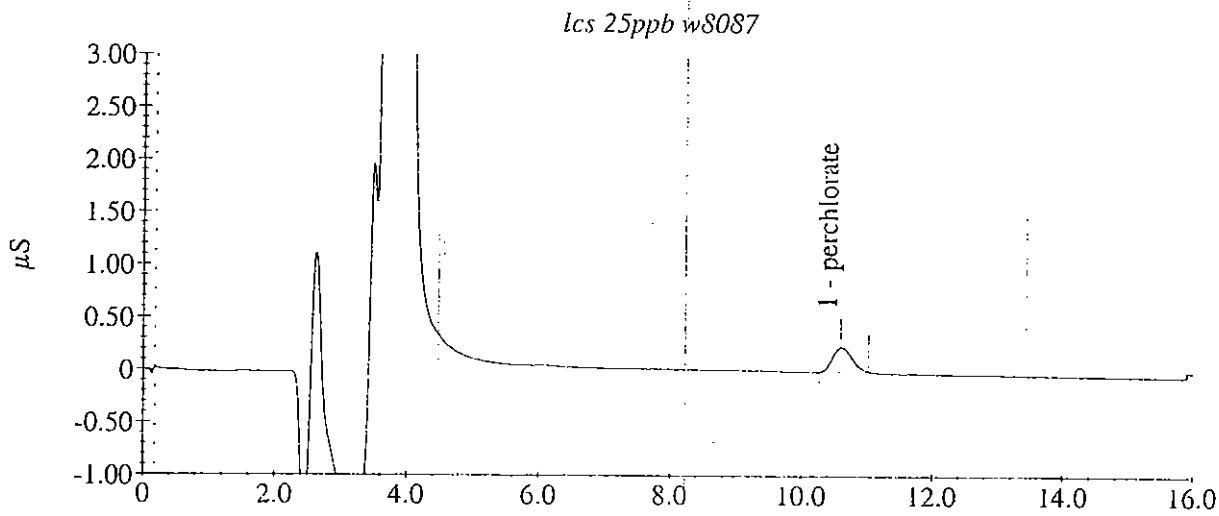
APCL Perchlorate Analysis Report

Sample Name : lcs 25ppb w8087
Data File Name : C:\DATA\03W4044K\W4044 L01_003.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 10:01:04 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.60	28.46	48303.50	2377.57



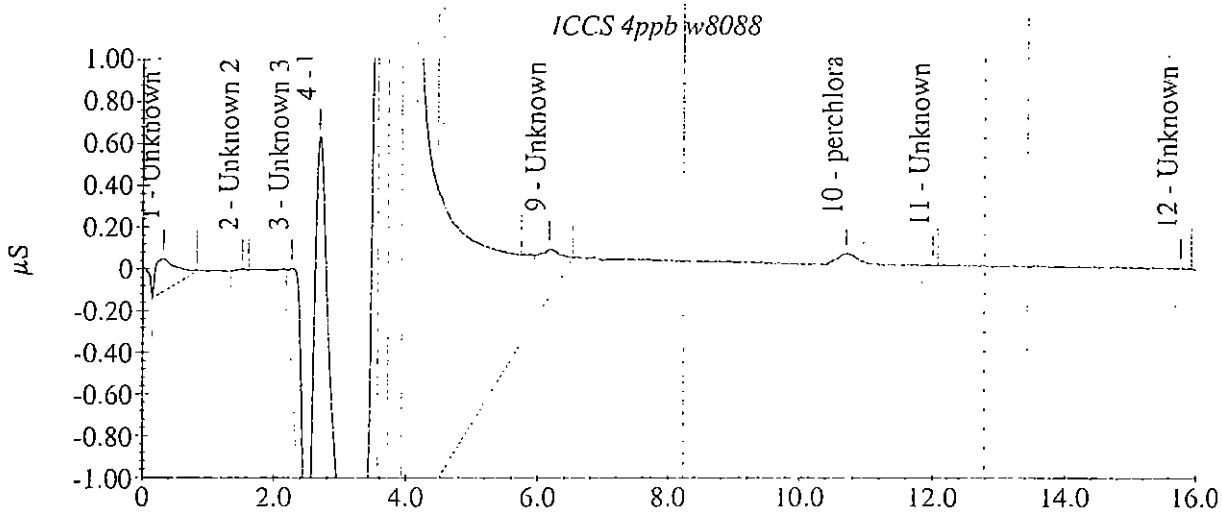
APCL Perchlorate Analysis Report

Sample Name : ICCS 4ppb w8088
Data File Name : C:\DATA\03W4044K\W4044 ICCS 4PPB_005.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 10:37:58 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
10	perchlorate	10.70	4.95	8403.50	459.55



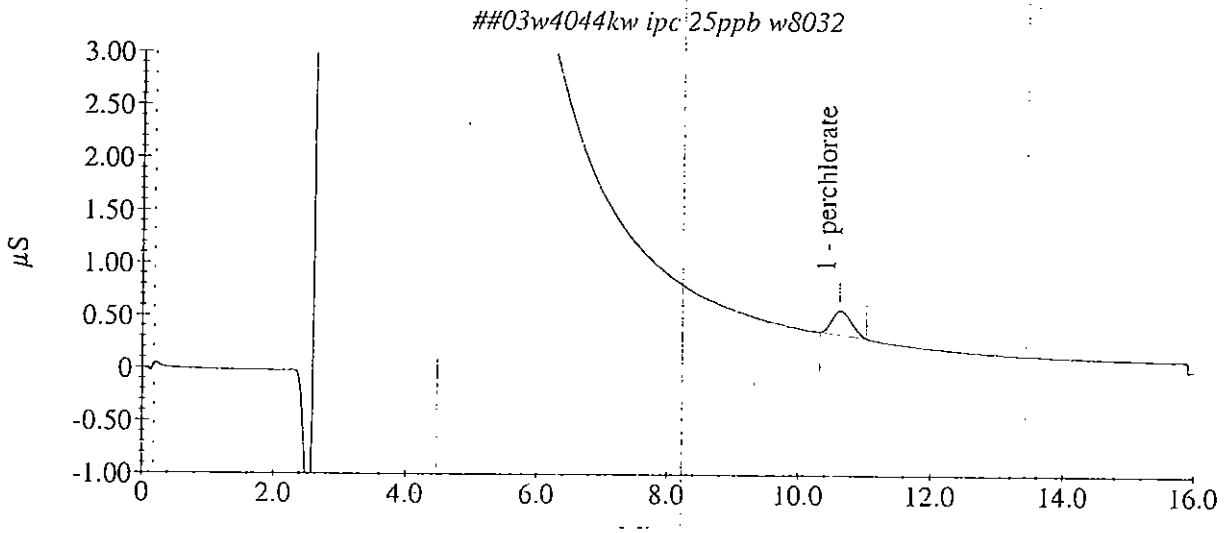
APCL Perchlorate Analysis Report

Sample Name : ##03w4044kw ipc 25ppb w8032
Data File Name : C:\DATA\03W4044K\W4044 IPC 25PPB_001.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 9:21:39 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	10.62	27.46	46605.60	2295.61



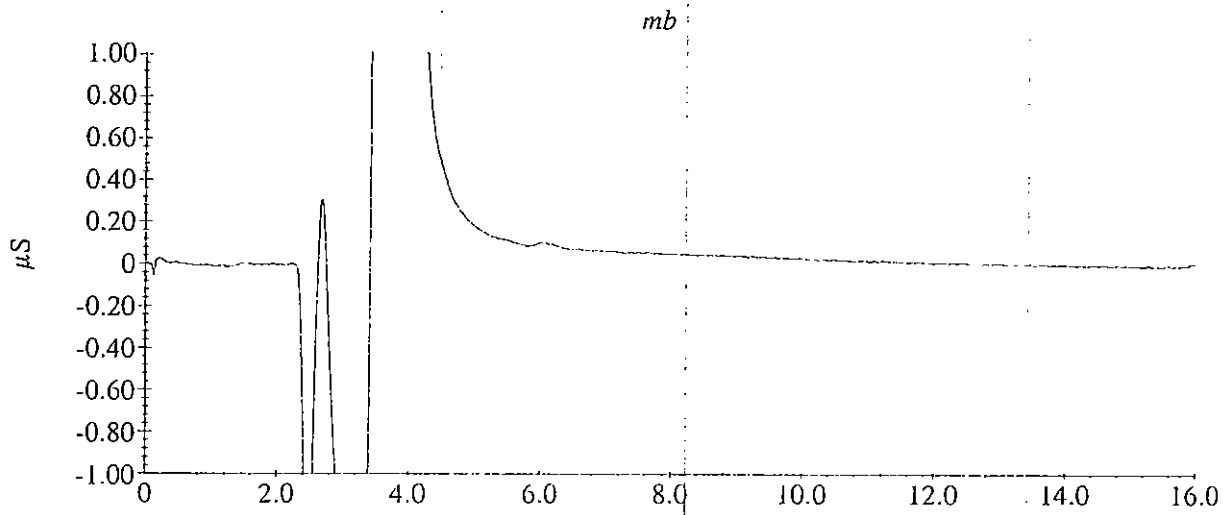
APCL Perchlorate Analysis Report

Sample Name : mb
Data File Name : C:\DATA\03W4044K\W4044 K01_006.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 10:56:24 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



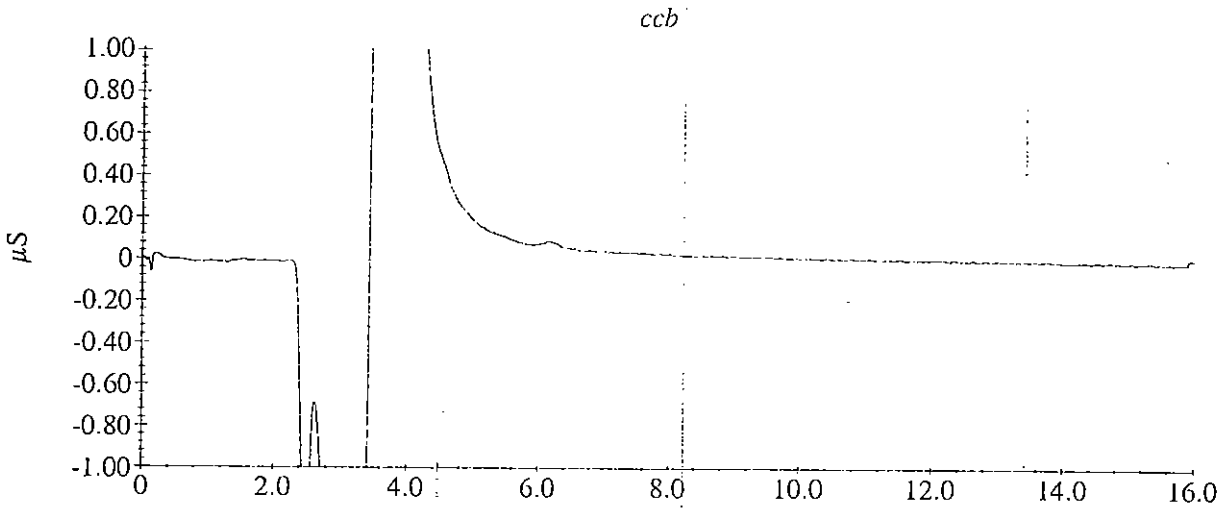
APCL Perchlorate Analysis Report

Sample Name : ccb
Data File Name : C:\DATA\03W4044K\W4044 CCB_015.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/12/2003 1:43:17 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



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

Conductance (120.1) Worksheet

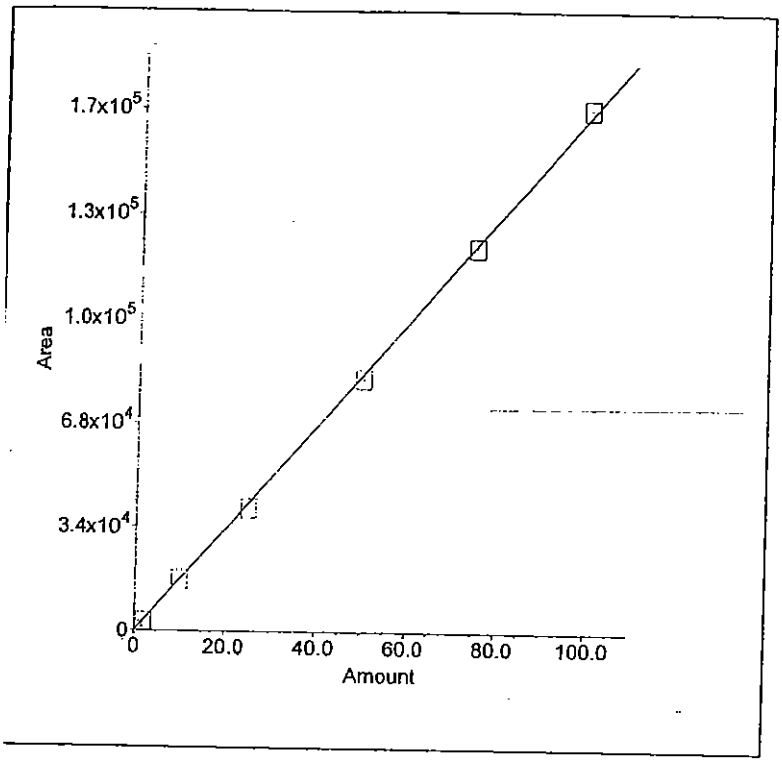
Batch # for reference Matrix: W Test Date: 8/12/03 Analyst: [illegible]

Cell Constant _____ Calibration STD: 0.0100M KCl SOP: G-45

#	Sample ID	Treatment $V/X=f_0$	Dilution $V_f/V_i=f_1$	Temperature T, °C	$C_{25}=C_T f_1/[1-0.0191(25-T)]$ C_T, μmhos/cm	C_{25}, μmhos/cm	$\rho=1/C_{25}$ MΩ cm	Note & Anomaly
Cal.	Lot #:	–	–	25°C				C_{25}=1,413±20 (Carefusion) for CW_4
MB		/ =	/ =					
1	4572-1	/ =	/ =			8/12/03 ~~470~~	450	
2	-2	/ =	/ =			8/12/03 ~~460~~	38.0	
3	-3	/ =	/ =			460		
4	-4	/ =	/ =			420		
5	-5	/ =	/ =			365		
6	-6	/ =	/ =			422		
7	-7	/ =	/ =			323		
8	-8	/ =	/ =			937		
9	-9	/ =	/ =			448		
10	-10	/ =	/ =			464		
11		/ =	/ =					
12		/ =	/ =					
13		/ =	/ =					
14		/ =	/ =					
15		/ =	/ =					
16		/ =	/ =					
17		/ =	/ =					
18		/ =	/ =					
19		/ =	/ =					
20		/ =	/ =					
Dup.		/ =	/ =					

Method:C:\PEAKNET\METHOD\E314-011.MET Updated:03/13/2003 10:39:48 AM Total:1

1. Component:perchlorate
Standard:External Fit Type:Linear
Origin:Force Calibration:Area
r^2=0.999492
Amt=0.0005893*Resp+0



Calibration : 7 points , 0, 2, 10, 25, 50, 75, 100 ppb

Analyst C. W
Date 03/12/03
Instrument IC-1c

2550

APCL Perchlorate Analysis Report

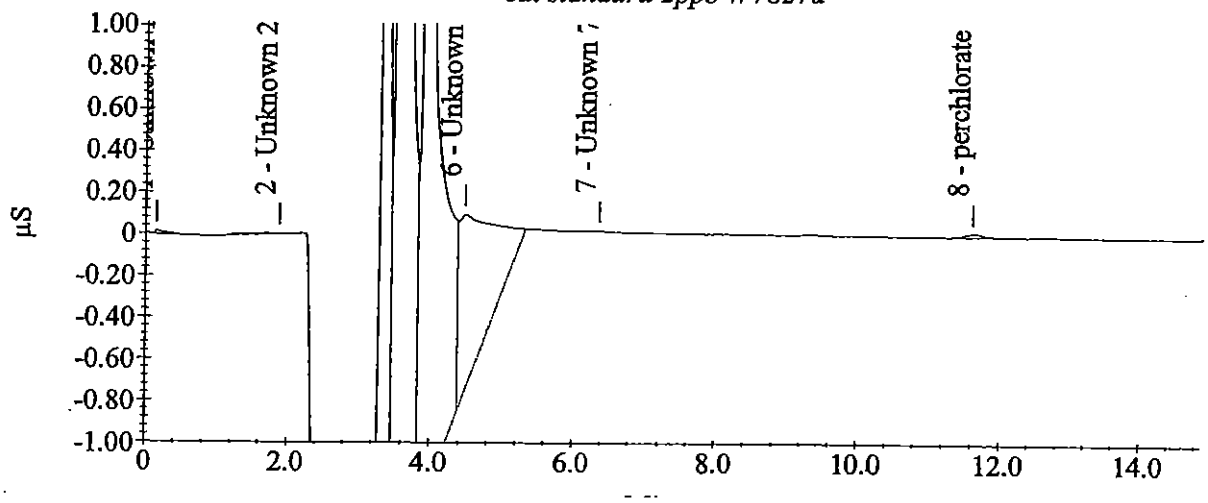
Sample Name : cal standard 2ppb W7827a
Data File Name : C:\DATA\E314-011\std-2pb_002.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 6:13:12 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.62	1.92	2910	164

cal standard 2ppb W7827a



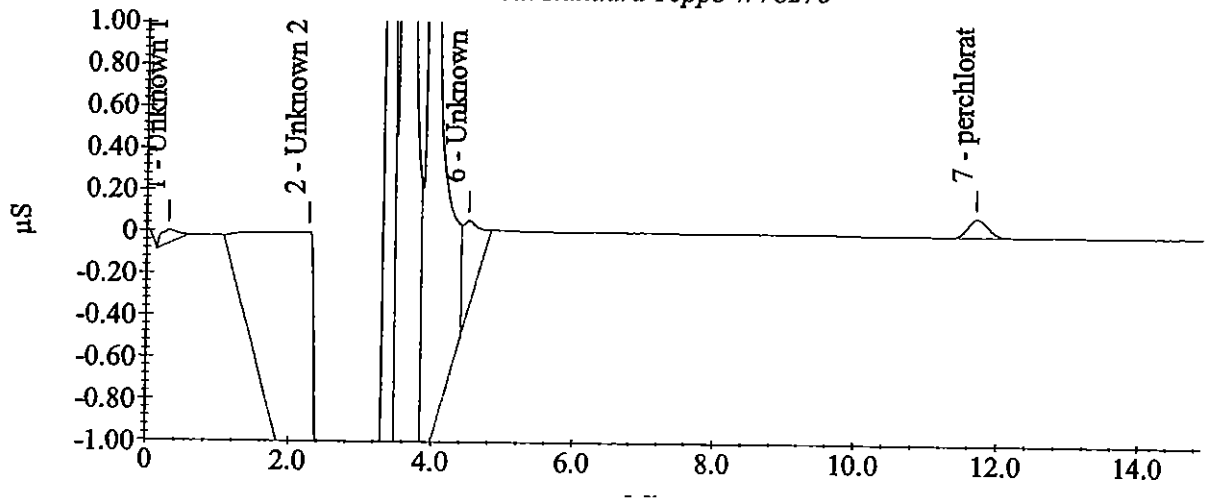
APCL Perchlorate Analysis Report

Sample Name : cal standard 10ppb W7827c
Data File Name : C:\DATA\E314-011\std-10pb_004.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 6:48:21 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
7	perchlorate	11.70	11.16	16917	879



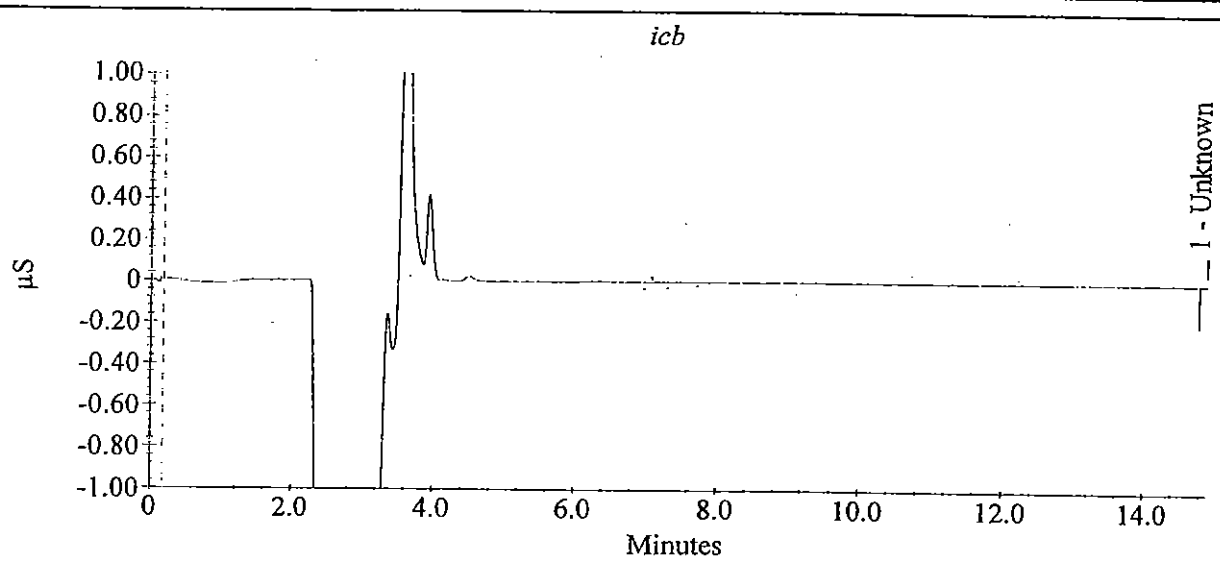
APCL Perchlorate Analysis Report

Sample Name : icb
Data File Name : C:\DATA\E314-011\ICB_010.DXD

Method File Name : c:\PeakNet\method\E314-011.met
Date Time Collected : 03/12/2003 8:33:51 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

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



APCL Perchlorate Analysis Report

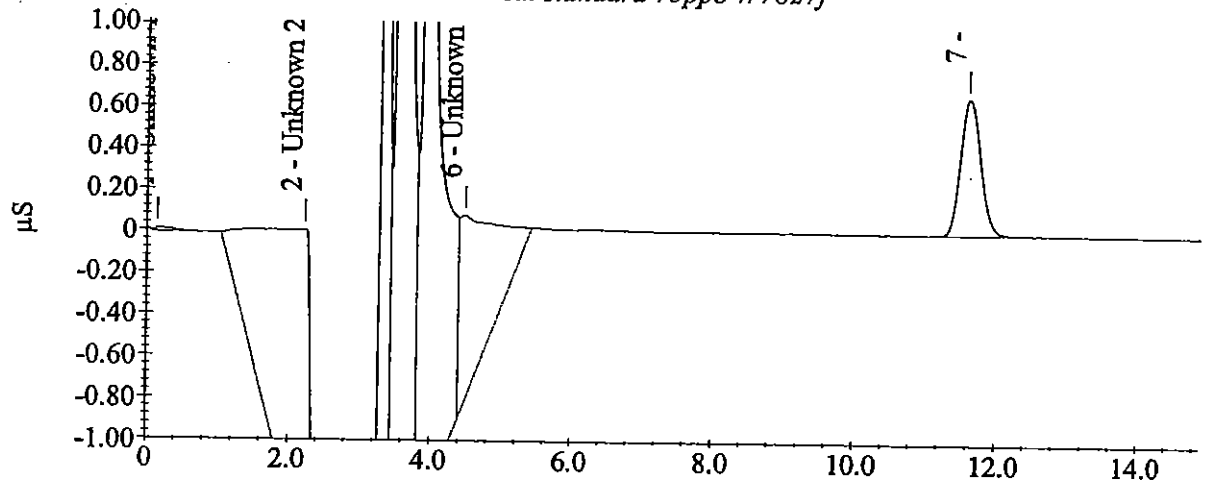
Sample Name : cal standard 75ppb W7827f
Data File Name : C:\DATA\E314-011\std-75pb_007.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 7:41:05 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
7	perchlorate	11.62	83.23	126224	6553

cal standard 75ppb W7827f



APCL Perchlorate Analysis Report

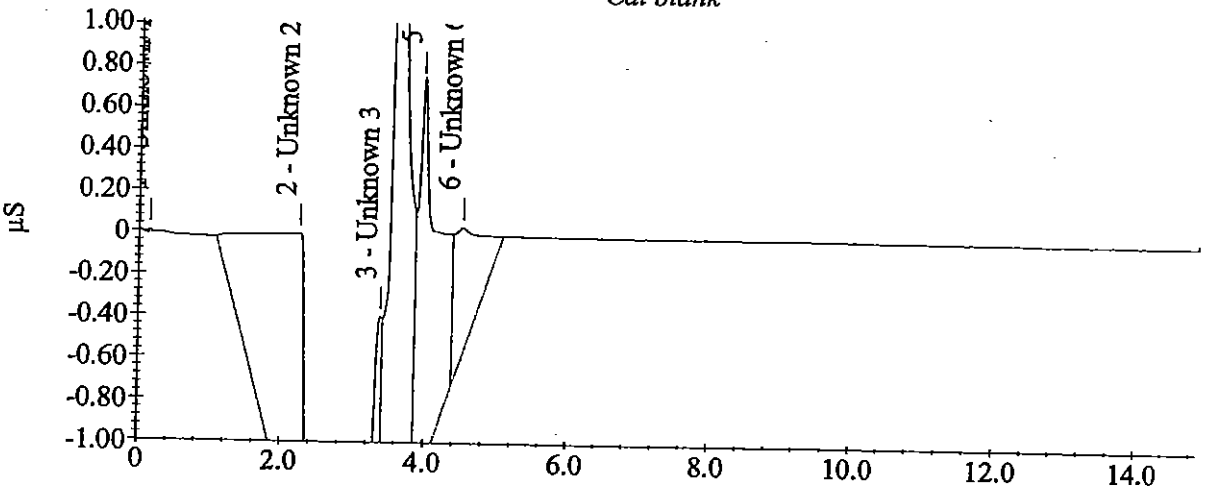
Sample Name : Cal blank
Data File Name : C:\data\E314-011\Mb_001.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 03/12/2003 5:55:39 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

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

Cal blank



APCL Perchlorate Analysis Report

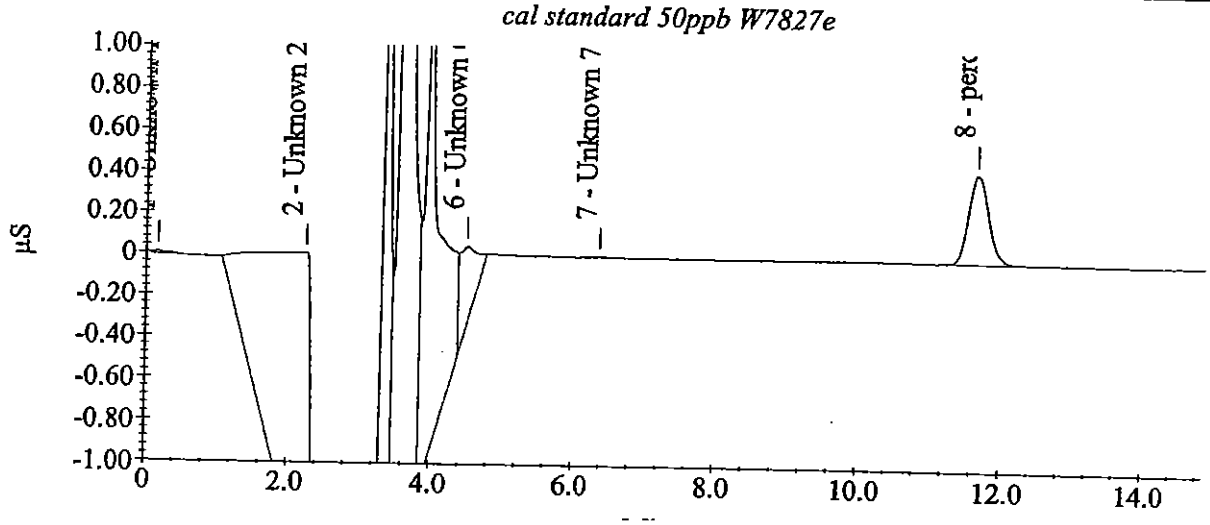
Sample Name : cal standard 50ppb W7827e
Data File Name : C:\DATA\E314-011\std-50pb_006.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 7:23:30 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.67	54.89	83240	4320

cal standard 50ppb W7827e



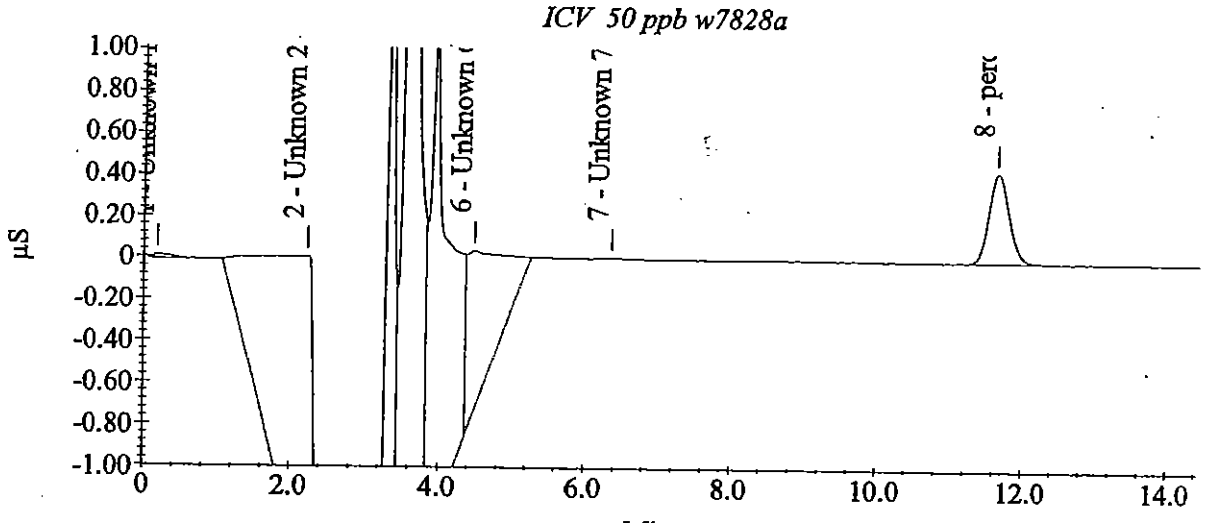
APCL Perchlorate Analysis Report

Sample Name : ICV 50 ppb w7828a
Data File Name : C:\DATA\E314-011\icv-50pb_009.DXD

Method File Name : C:\PEAKNET\METHOD\E314-011.met
Date Time Collected : 03/12/2003 8:16:15 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.65	49.49	83990	4321



APCL Perchlorate Analysis Report

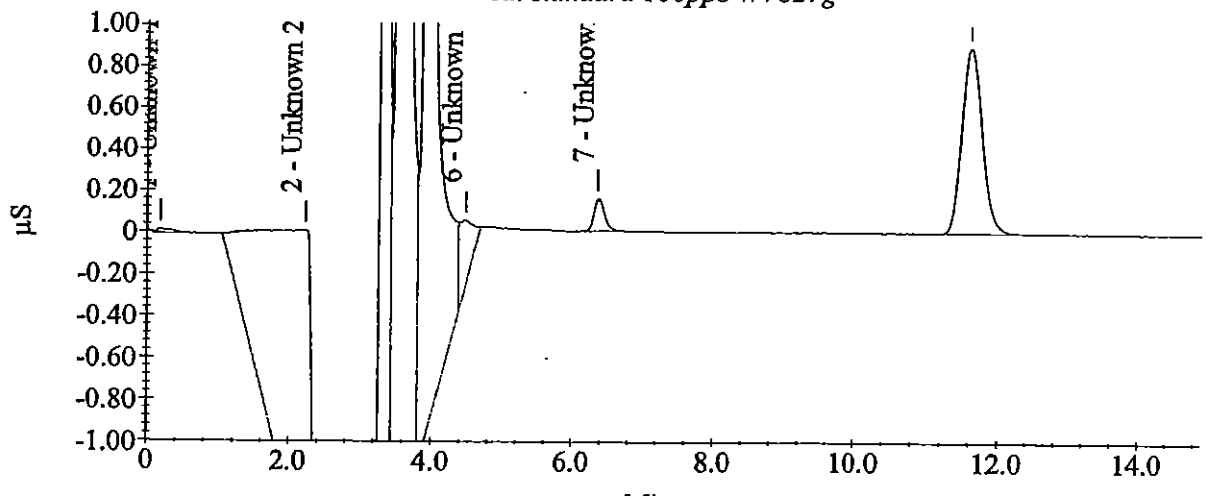
Sample Name : cal standard 100ppb W7827g
Data File Name : C:\DATA\E314-011\std-100pb_008.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 7:58:39 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.62	113.21	171686	892[illegible]

cal standard 100ppb W7827g



APCL Perchlorate Analysis Report

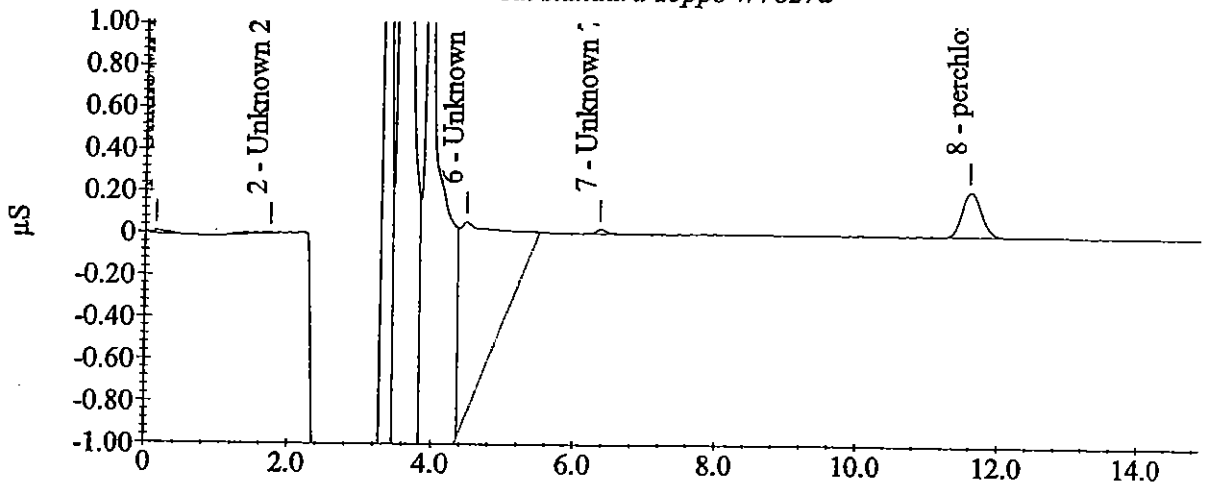
Sample Name : cal standard 25ppb W7827d
Data File Name : C:\DATA\E314-011\std-25pb_005.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 7:05:54 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.60	26.84	40702	2125

cal standard 25ppb W7827d



Line	Sample	Sample Type	Level	Method	Data File	Volume	Dilution
1	Cal blank	Sample		e314-011.met	c:\data\e314-011\mb_001.dxd	1	1
2	cal standard 2ppb W7827a	Sample		e314-011.met	c:\data\e314-011\std-2pb_002.dxd	1	1
3	cal standard 4ppb W7827b	Sample		e314-011.met	c:\data\e314-011\std-4pb_003.dxd	1	1
4	cal standard 10ppb W7827c	Sample		e314-011.met	c:\data\e314-011\std-10pb_004.dxd	1	1
5	cal standard 25ppb W7827d	Sample		e314-011.met	c:\data\e314-011\std-25pb_005.dxd	1	1
6	cal standard 50ppb W7827e	Sample		e314-011.met	c:\data\e314-011\std-50pb_006.dxd	1	1
7	cal standard 75ppb W7827f	Sample		e314-011.met	c:\data\e314-011\std-75pb_007.dxd	1	1
8	cal standard 100ppb W7827g	Sample		e314-011.met	c:\data\e314-011\std-100pb_008.dxd	1	1
9	ICV 50 ppb w7828a	Sample		e314-011.met	c:\data\e314-011\icv-50pb_009.dxd	1	1
10	icb	Sample		e314-011.met	c:\data\e314-011\icb_010.dxd	1	1
11	anion 100pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-100_011.dxd	1	1
12	anion 200pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-200_012.dxd	1	1
13	anion 300pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-300_013.dxd	1	1
14	anion 400pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-400_014.dxd	1	1
15	anion 500pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-500_015.dxd	1	1
16	anion 600pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-600_016.dxd	1	1
17	anion 800pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-800_017.dxd	1	1
18	anion 1000pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-1000_018.dxd	1	1
19	anion 400pm each 2pb	Sample		e314-011.met	c:\data\e314-011\ipc-2pb_019.dxd	1	1
20	anion 400pm each 4pb	Sample		e314-011.met	c:\data\e314-011\ipc-4pb_020.dxd	1	1
21	anion 400pm each 25pb	Sample		e314-011.met	c:\data\e314-011\ipc-25pb_021.dxd	1	1
22	ICV 50 ppb	Sample		e314-011.met	c:\data\e314-011\ccv-50pb	1	1
23	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-02_023.dxd	1	1
24	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-03_024.dxd	1	1
25	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-04	1	1
26	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-05	1	1
27	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-06	1	1
28	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-07	1	1
29	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-08	1	1
30	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
31	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
32	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
33	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
34	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
35	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
36	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
37	MCT anion 800pm each, 25pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-25pb	1	1
38	MCT anion 800pm each, 25pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-25pb	1	1
39	MCT anion 800pm each, 4pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-4pb	1	1
40	MCT anion 800pm each, 4pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-4pb	1	1
41	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s01	1	5
42	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s02	1	5
43	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s03	1	5
44	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s04	1	5
45	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s05	1	5
46	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s06	1	5
47	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s07	1	5
48	standard 25ppb W7827d	Sample		e314-011.met	c:\data\e314-011\std-25pb	1	1
49	anion 100pm each,4pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-100-4pb	1	1
50	anion 200pm each ,4pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-200-4pb	1	1
51	anion 300pm each ,4pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-300-4pb	1	1
52	anion 100pm each,2pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-100-2pb	1	1
53	anion 200pm each,2pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-200-2pb	1	1
54	anion 300pm each,2pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-300-2pb	1	1
55	1982-01 B S.C 4450us/cm	Sample		e314-011.met	c:\data\e314-011\1982-01	1	1
56	1982-01 B S.C 4450us/cm	Sample		e314-011.met	c:\data\e314-011\1982-01	1	2
57	1982-02 f=10	Sample		e314-011.met	c:\data\e314-011\1982-02_057.dxd	1	10
58		Sample		aastopcl.met		1	1

Line	Weight	Int. Std.	Comment
1	1	1	
2	1	1	
3	1	1	
4	1	1	
5	1	1	
6	1	1	
7	1	1	
8	1	1	
9	1	1	
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62	1	1	
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66	1	1	
67	1	1	
68	1	1	

Default Method Path: C:\PEAKNET\METHOD
Default Data Path: C:\DATA\03W1286K
Comment:
Remark:

Condition information:

. Column

Separator column: AS16 4mm

Guard column: AS16 4mm

. Eluent : NaOH 38mM

. Flow rate: 1.2mL/min

. Suppressor: ASRS-ULTRA 4mm

.Detector: CD20

.Analyst: Charles Wu and Wei Wang

.Date: 03 / 12 / 2003

.Instrument: IC-K DX-500 Dionex

APCL

Applied Physics & Chemistry Laboratory

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

Sep 03, 2003

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

Dear Brad,

This package contains samples in our Service ID 03-4509 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: Brad Shojaee
22632 Golden Spring Dr Ste 270
Diamond Bar CA 91765
Tel: (909)396-7662 Fax: (909)396-1455

Service ID #: 801-034509
Collected by: L. Williamson
Collected on: 08/06/03

Received: 08/06/03
Extracted: N/A
Tested: 08/06-11/03
Reported: 08/15/03

Sample Description: Water from MW-23,14.
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-4-3-Q03 03-04509-1	ER-5-8-6-03 03-04509-2	MW-23-1 03-04509-3	MW-23-2 03-04509-4
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	2.3J	<4	2.4J	4.7

Component Analyzed	Method	Unit	PQL	Analysis Result MW-23-3 03-04509-5	MW-14-1 03-04509-7	MW-14-2 03-04509-8	MW-14-3 03-04509-9
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	2.0J	3.8J	5.4	3.0J

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-4-3-Q03 03-04509-1	ER-5-8-6-03 03-04509-2	MW-23-1 03-04509-3	MW-23-2 03-04509-4
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
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	<0.5
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	<0.5	<0.5	0.4J	0.5J
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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-4-3-Q03 03-04509-1	ER-5-8-6-03 03-04509-2	MW-23-1 03-04509-3	MW-23-2 03-04509-4
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	0.8	0.5J	<0.5	0.6
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<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	<0.5	<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	1.5	0.6
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	0.3J	0.6
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-23-3 03-04509-5	MW-23-4 03-04509-6	MW-14-1 03-04509-7	MW-14-2 03-04509-8
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
BROMOBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
BROMOFORM	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
BROMOMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
N-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
2-BUTANONE	524.2	μg/L	10	<10	-	<10	<10
CARBON TETRACHLORIDE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
CHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
CHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
CHLOROFORM	524.2	μg/L	0.5	<0.5	-	0.3J	0.4J
CHLOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
4-CHLOROTOLUENE	524.2	μg/L	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
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	0.3J
1,2-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
ETHYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5

Applied P & Ch Laboratory
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Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-23-3 03-04509-5	MW-23-4 03-04509-6	MW-14-1 03-04509-7	MW-14-2 03-04509-8
ISOPROPYLBENZENE (CUMENE)	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
METHYLENE CHLORIDE	524.2	μg/L	0.5	<0.5	-	0.5J	0.4J
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	-	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	-	<10	<10
NAPHTHALENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
N-PROPYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
STYRENE	524.2	μg/L	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
1,1,2,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
TETRACHLOROETHENE	524.2	μg/L	0.5	<0.5	-	0.5J	0.5J
TOLUENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	<0.5	-	3.7	1.0
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
VINYL CHLORIDE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
O-XYLENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5
M/P-XYLENE	524.2	μg/L	0.5	<0.5	-	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-3 03-04509-9	MW-14-4 03-04509-10	TB-5-8-6-03 03-04509-11
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	-

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-3 03-04509-9	MW-14-4 03-04509-10	TB-5-8-6-03 03-04509-11
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
2-BUTANONE	524.2	µg/L	10	<10	-	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	-	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	-	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	-	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	-	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	-	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	-	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-3 03-04509-9	MW-14-4 03-04509-10	TB-5-8-6-03 03-04509-11
P-ISOPROPYLTOLUENE	524.2	μg/L	0.5	<0.5	-	<0.5
METHYLENE CHLORIDE	524.2	μg/L	0.5	0.3J	-	1.6
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	-	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	-	<10
NAPHTHALENE	524.2	μg/L	0.5	<0.5	-	<0.5
N-PROPYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
STYRENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
TETRACHLOROETHENE	524.2	μg/L	0.5	<0.5	-	<0.5
TOLUENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2,3-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2,4-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1,1-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1,2-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	<0.5	-	<0.5
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2,3-TRICHLOROPROPANE	524.2	μg/L	0.5	<0.5	-	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
VINYL CHLORIDE	524.2	μg/L	0.5	<0.5	-	<0.5
O-XYLENE	524.2	μg/L	0.5	<0.5	-	<0.5
M/P-XYLENE	524.2	μg/L	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: 03-4509

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

Case Narrative

Project: JPL/MW-23,14./04-4428.10

For GEOFON, Inc.

APCL Service No: 03-4509

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-23-4	03-04509-6
MW-23-3	03-04509-5
MW-23-2	03-04509-4
MW-23-1	03-04509-3
TB-5-8-6-03	03-04509-11
ER-5-8-6-03	03-04509-2
MW-14-4	03-04509-10
MW-14-3	03-04509-9
MW-14-2	03-04509-8
MW-14-1	03-04509-7
DUPE-4-3-Q03	03-04509-1

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196 (Chromium (VI)),
314.0 (Perchlorate, low level),

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

None

"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-23 0048

GEOFON's LAB COORDINATOR: Brad Shojaee	LAB COORDINATOR'S PHONE: (909) 396-7662	LAB COORDINATOR'S FAX: (909) 396-1455	LABORATORY SERVICE ID: —	LABORATORY CONTACT: Kenny Chan	MAIL REPORT (COMPANY NAME): GEOFON, INC.
PROJECT NAME: JPL GW Mon-3Q03	PROJECT LOCATION: MW-23 (N. of Bl 233)	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 590-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Tony Ford
PROJECT CONTACT: J. Robinson	PROJECT PHONE NUMBER: (818) 295 7886	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	Analyses: 524.2 (VOCs)	314.0 (Perchlorate)	7196 (Hex Chrome)	200.8 (Total Chrome)					Comments
1	MW-23-4	H_2O	8/6/03	0726	HCl HNO3 NONE	3 4 1	III	NORMAL			X	X					
2	MW-23-3	↓	↓	0748	↓	↓	↓	↓	X	X	X	X					
3	MW-23-2	↓	↓	0809	↓	↓	↓	↓	X	X	X	X					
4	MW-23-1	↓	↓	0829	↓	↓	↓	↓	X	X	X	X					
5	TB-5-8-6-03	↓	↓	—	HCl	2	↓	↓	X								
6	FB-5-8-6-03	↓	↓	0741	HCl HNO3 NONE	5	↓	↓	X	X	X	X					
7																	
8																	
9																	
10																	

8.6.03

4509

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]	8/6/03	0704	
[signature]	[signature]	8/6/03	1531	
[signature]	[signature]	8/6/03	1655	

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

GEOFON INCORPORATED

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CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

MW-24 0049

GEOFON'S LAB COORDINATOR	LAB COORDINATOR'S PHONE	LAB COORDINATOR'S FAX	LABORATORY SERVICE ID	LABORATORY CONTACT	MAIL REPORT (COMPANY NAME)
Brad Shojaee	(909) 396-7662	(909) 396-1455	–	Kenny Chan	GEOFON, INC.

PROJECT NAME	PROJECT LOCATION	PROJECT NUMBER	LABORATORY PHONE	LABORATORY FAX	RECIPIENT NAME
JPL GW MON-3Q03	MW-24 (E. of Security Bldg)	04-4428.10x2603	(909) 590-1828	(909) 590-1498	Tony Ford

PROJECT CONTACT	PROJECT PHONE NUMBER	PROJECT FAX	LABORATORY ADDRESS	ADDRESS
J. Robinson	(714) 295 7886	(909) 396 1455	13760 Magnolia	22632 Golden Springs Dr #270

PROJECT ADDRESS	CITY, STATE AND ZIPCODE	CLIENT	CITY, STATE AND ZIPCODE	CITY, STATE AND ZIPCODE
4800 Oak Grove Dr.	Pasadena, CA.	US NAVY SWDIV	Chino, CA. 91710	Diamond Bar, CA. 91765

PROJECT MANAGER	PROJECT MANAGER'S PHONE	PROJECT MANAGER'S FAX
Asrar Faheem	(909) 396-7662	(909) 396-1455

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T	524.2 (VOCs)		314.0 (Perchlorate)	7196 (Hex Chrome)	200.8 (Total Chrome)				Comments
1	MW-24-4	H_2O	8/6/03	0926	HCl HNO3 NONE	3141	III	NORMAL			X	X					
2	MW-24-3	↓	↓	0950	↓	↓	↓	↓	X	X	X	X					
3	MW-24-2	↓	↓	1041	↓	↓	↓	↓	X	X	X	X					MS/MSD
4	MW-24-1	↓	↓	1123	↓	↓	↓	↓	X	X	X	X					
5	~~Dupe~~-4-3-Q03	↓	↓	1018	↓	↓	IV	↓	X	X	X	X					
6																	
7																	
8						9	—										
9							8.6.03										
10																	

4509

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	[illegible]	8/6/03	0906	
[illegible]	Richard Strauss	8/6/03	1531	
Richard Strauss	[illegible]	8/6/03	1655	

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: 4509 **Client Name/Project:** Geotn / JPL

1. Sample Arrival

Date/Time Received 8/6/03 1655 Date/Time Opened 8/6/03 1655 By (name): Kenneth

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

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By:
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold ____ # Received 11
☑ 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 3.9

(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] Printed: 6 Aug 2003 7:34 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

03-04509 (0470_ 161) (2202777_ 161)

08/06/03

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:	*08/06/03 1655*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*3.9 °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-23-4	CR VI	03-04509-6	W	P		500	1	G	080603	N	0	7	☐
2	MW-23-3	VOC	03-04509-5-α	W	V	C	40	3	G	080603	N	0	7	☐
	MW-23-3	CRVI/Perch	03-04509-5-β	W	P		500	1	G	080603	N	0	7	☐
3	MW-23-2	VOC	03-04509-4-α	W	V	C	40	3	G	080603	N	0	7	☐
	MW-23-2	CRVI/Perch	03-04509-4-β	W	P		500	1	G	080603	N	0	7	☐
4	MW-23-1	VOC	03-04509-3-α	W	V	C	40	3	G	080603	N	0	7	☐
	MW-23-1	CRVI/Perch	03-04509-3-β	W	P		500	1	G	080603	N	0	7	☐
5	TB-5-8-6-03	VOC	03-04509-11	W	V	C	40	2	G	080603	N	0	7	☐
6	ER-5-8-6-03	VOC	03-04509-2-α	W	V	C	40	3	G	080603	N	0	7	☐
	ER-5-8-6-03	CRVI/Perch	03-04509-2-β	W	P		500	1	G	080603	N	0	7	☐
7	MW-24-4	CRVI	03-04509-10	W	P		500	1	G	080603	N	0	7	☐
8	MW-24-3	VOC	03-04509-9-α	W	V	C	40	3	G	080603	N	0	7	☐
	MW-24-3	CRVI/Perch	03-04509-9-β	W	P		500	1	G	080603	N	0	7	☐
9	MW-24-2	VOC	03-04509-8-α	W	V	C	40	6	G	080603	N	0	7	☐
	MW-24-2	CRVI/Perch	03-04509-8-β	W	P		500	2	G	080603	N	0	7	☐
10	MW-24-1	VOC	03-04509-7-α	W	V	C	40	3	G	080603	N	0	7	☐
	MW-24-1	CRVI/Perch	03-04509-7-β	W	P		500	1	G	080603	N	0	7	☐
11	DUPE-4-3-Q03	VOC	03-04509-1-α	W	V	C	40	3	G	080603	N	0	7	☐
	DUPE-4-3-Q03	CRVI/Perch	03-04509-1-β	W	P		500	1	G	080603	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

Level C Data Package Deliverables

Volatile Organics

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	08/08/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03G3619-MB-01	Received Date:	08/08/2003
Sample ID:	**03G3619-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/08/03	Anal. Date:	08/08/03
Batch No:	03G3619	Prep. No:	–	Anal. Time:	13:25
Data File Name:	G3619K01	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	U
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	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	110
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	106
4	TOLUENE-D8	2037-26-5	73-129	97
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	97
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	96
3	FLUOROBENZENE	462-06-6	50-200	93
# 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 524.2

2208

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619K01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 13:25 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 18:03 2003
Print Time : Fri Aug 08 18:03 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	7.65	7.63	0.003	96	70	705.734	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	577.919	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	302.850	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	373.079	21.21	21.2	106.06%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	313.697	22.02	22.0	110.11%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1411.260	19.38	19.4	96.88%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	477.673	19.07	19.1	95.35%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
95	95	Tert butyl alcoho	4.52	4.47	0.007	59	57	0.605	24.80	24.8	100	#

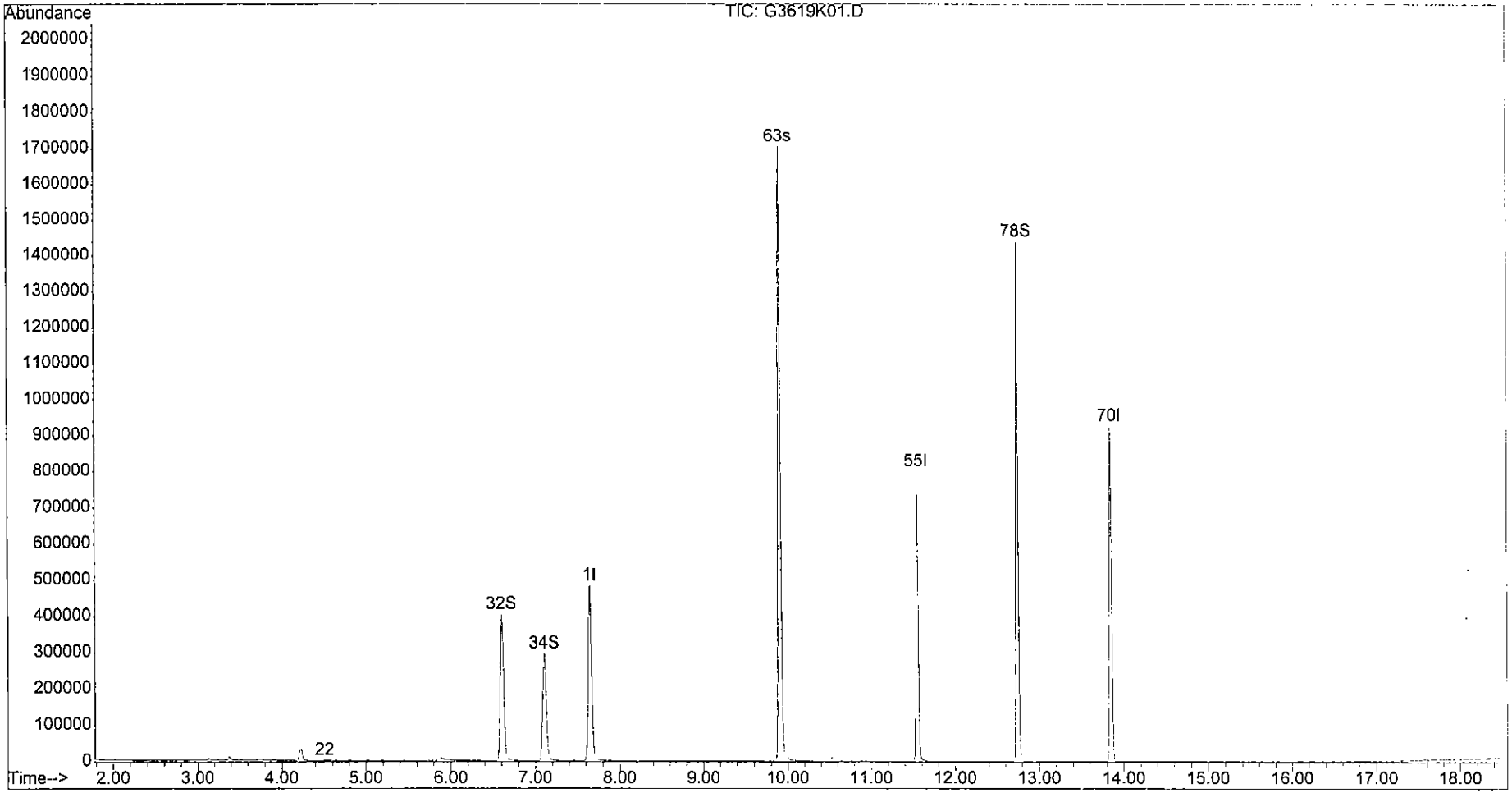
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

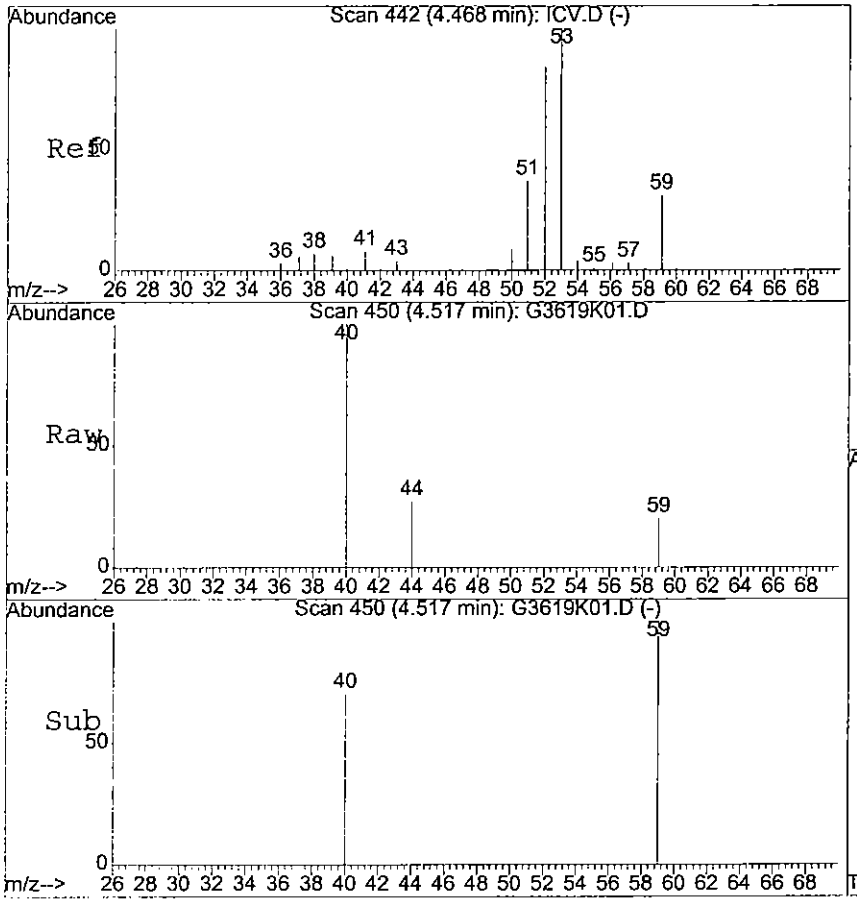
Quantitation Report: **Applied P &Ch Lab** EPA 524.2

2209

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619K01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 13:25 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 18:03 2003
Print Time : Fri Aug 08 18:03 2003
Miscleneous :

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

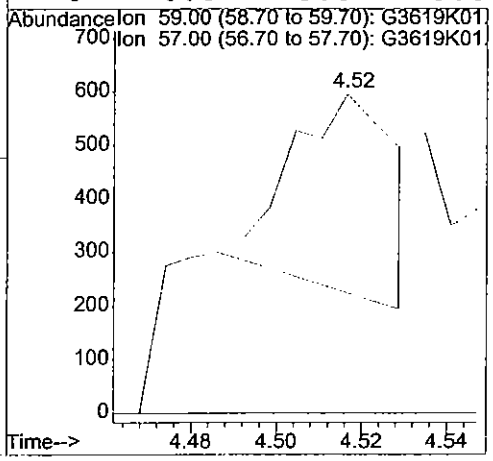




#22
95 Tert butyl alcoholx10
Concen: 24.80 ppb
RT: 4.52 min Scan# 450
Delta R.T. 0.05 min
Lab File: G3619K01.D
Acq: 8 Aug 2003 1:25 pm

Tgt Ion:59 Resp: 605

Ion	Ratio	Lower	Upper
59	100		
57	0.0	0.0	0.0
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:	08/11/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03G3659-MB-01	Received Date:	08/11/2003
Sample ID:	**03G3659-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/11/03	Anal. Date:	08/11/03
Batch No:	03G3659	Prep. No:	–	Anal. Time:	13:18
Data File Name:	G3659K01	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	U
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	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	111
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	108
4	TOLUENE-D8	2037-26-5	73-129	96
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	98
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	96
3	FLUOROBENZENE	462-06-6	50-200	89
# 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:	08/06/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03-4509-1	Received Date:	08/06/2003
Sample ID:	**DUPE-4-3-Q03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/08/03	Anal. Date:	08/08/03
Batch No:	03G3619	Prep. No:	–	Anal. Time:	14:45
Data File Name:	4509-01	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	0.8	
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	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	109
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	107
4	TOLUENE-D8	2037-26-5	73-129	98
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	95
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	94
3	FLUOROBENZENE	462-06-6	50-200	91
# 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 524.2

2215

Data Filename: C:\MSDCHEM\1\DATA\03G3619\4509-01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 14:45 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 11:19 2003
Print Time : Mon Aug 11 11:19 2003
Miscleneous :

Sample : f=1 dup
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	7.65	7.63	0.003	96	70	695.150	10.00		0.02	
47	47	Chlorobezene-d5	11.55	11.54	0.000	117	82	564.515	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	297.211	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	370.743	21.40	21.4	107.00%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	303.922	21.66	21.7	108.30%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1393.967	19.59	19.6	97.97%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	471.476	19.18	19.2	95.90%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
94	94	Isopropyl Alcohol	3.77	4.01	-0.032	45	43	0.694	5.83	~~5.8~~	~~100~~	#
18	18	methylene chlorid	4.22	4.19	0.004	84	49	35.913	0.82	0.8	100	
95	95	Tert butyl alcoho	4.41	4.47	-0.008	59	57	1.208	25.45	~~25.5~~	~~100~~	#
92	92	Nitro Methane(x10	5.88	5.80	0.010	61	46	2.586	6.70	~~6.7~~	~~48~~	#
<<< I2 : ISTD ID = 47 >>>												
54	54	MIBK	9.90	9.76	0.012	43	58	4.153	0.51	~~0.5~~	~~1~~	#

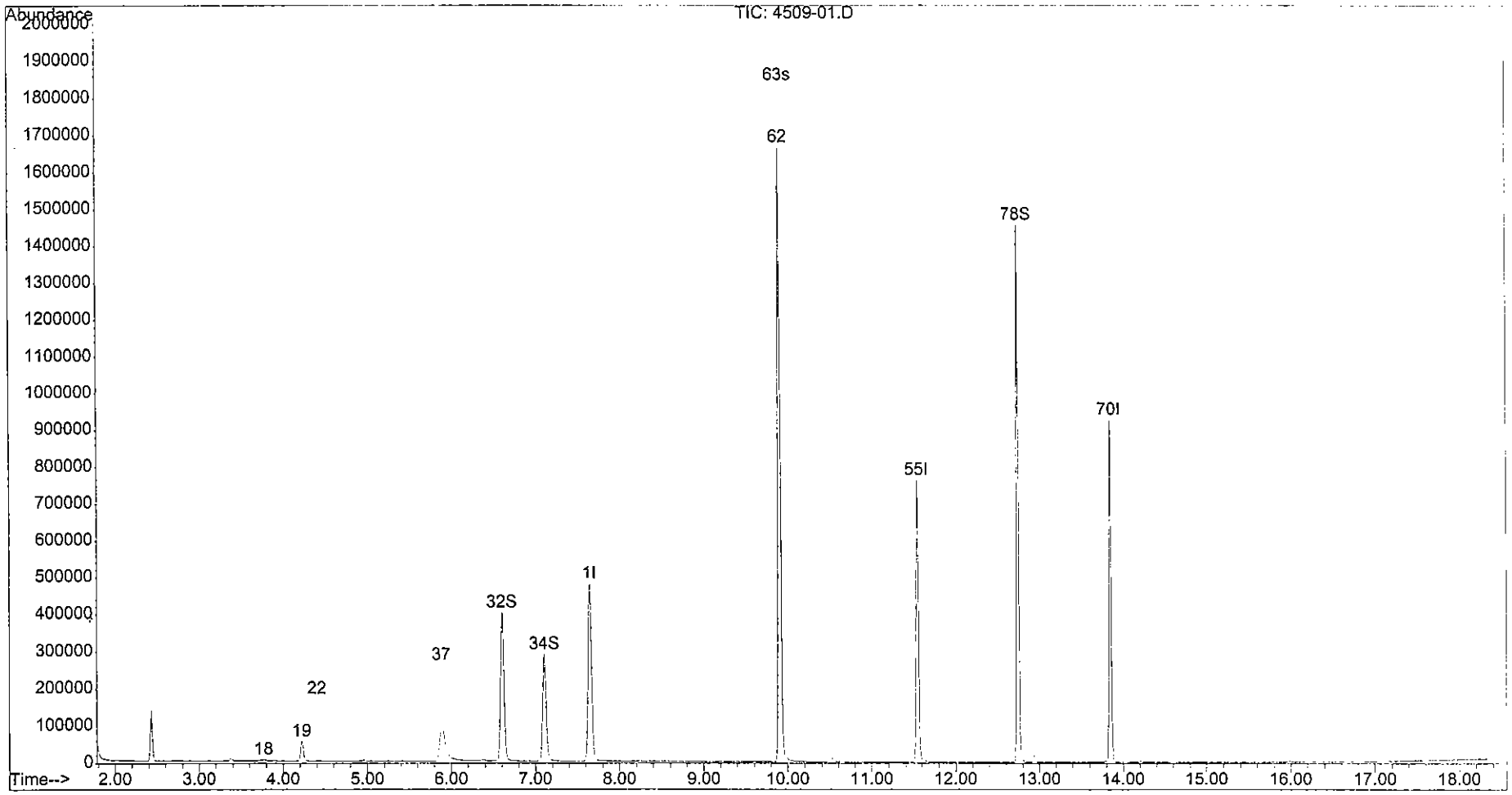
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

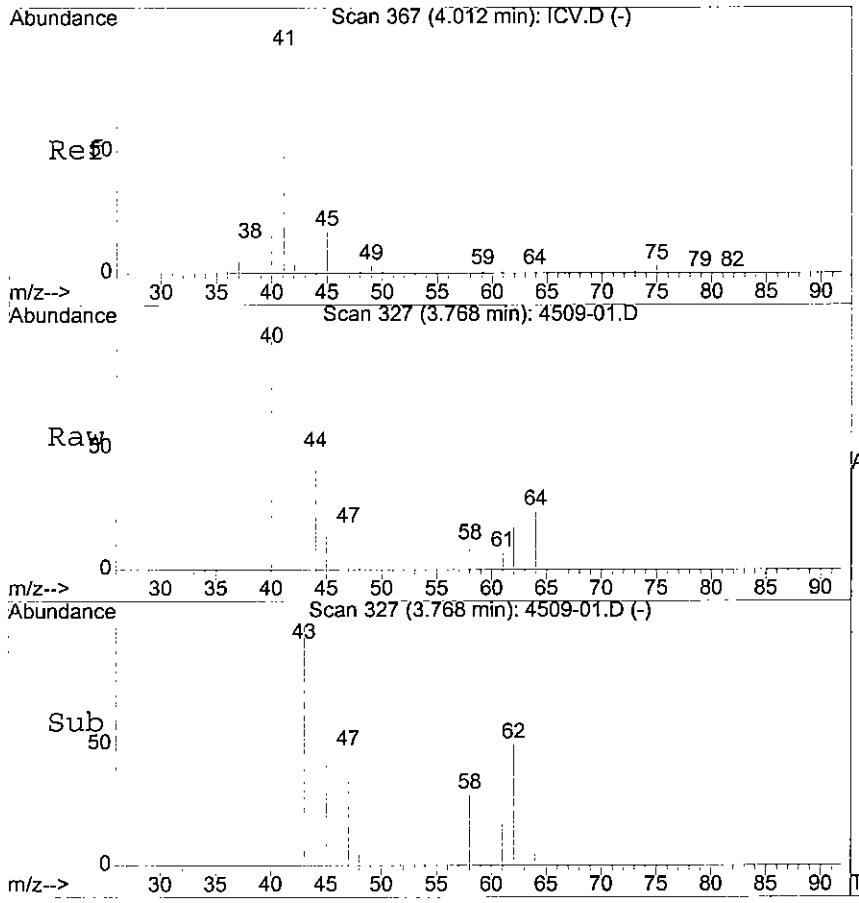
Quantitation Report: **Applied P &Ch Lab** EPA 524.2

2216

Data Filename: C:\MSDCHEM\1\DATA\03G3619\4509-01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 14:45 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 11:19 2003
Print Time : Mon Aug 11 11:19 2003
Miscleneous :

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

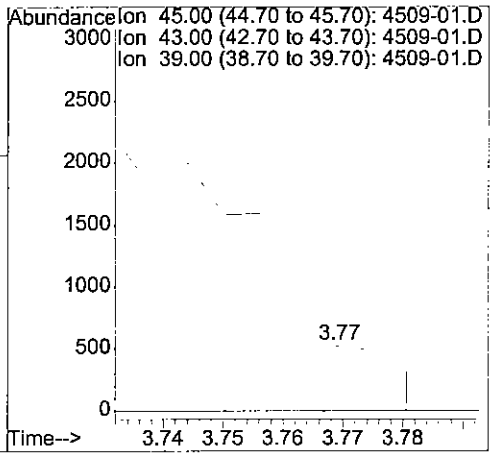


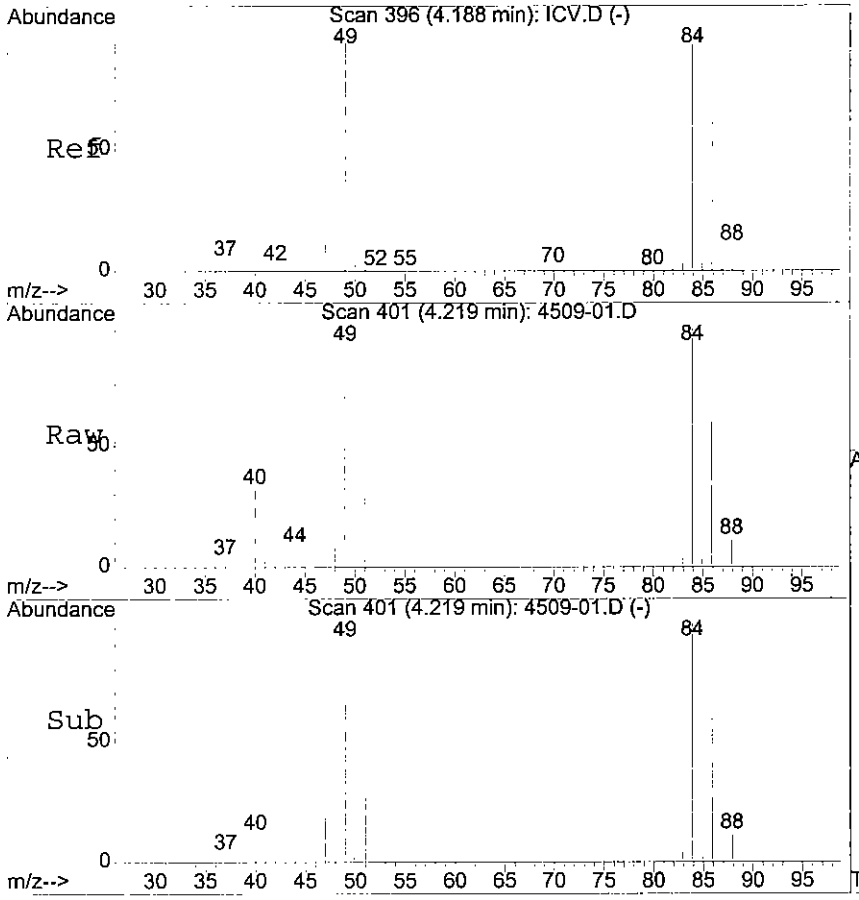


#18
94 Isopropyl Alcoholx10
Concen: 5.83 ppb
RT: 3.77 min Scan# 327
Delta R.T. -0.24 min
Lab File: 4509-01.D
Acq: 8 Aug 2003 2:45 pm

Tgt Ion:45 Resp: 694

Ion	Ratio	Lower	Upper
45	100		
43	1193.4	0.0	0.0#
39	0.0	0.0	0.0
0	0.0	0.0	0.0

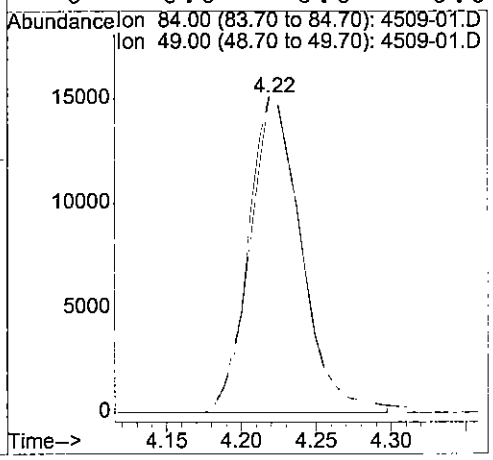


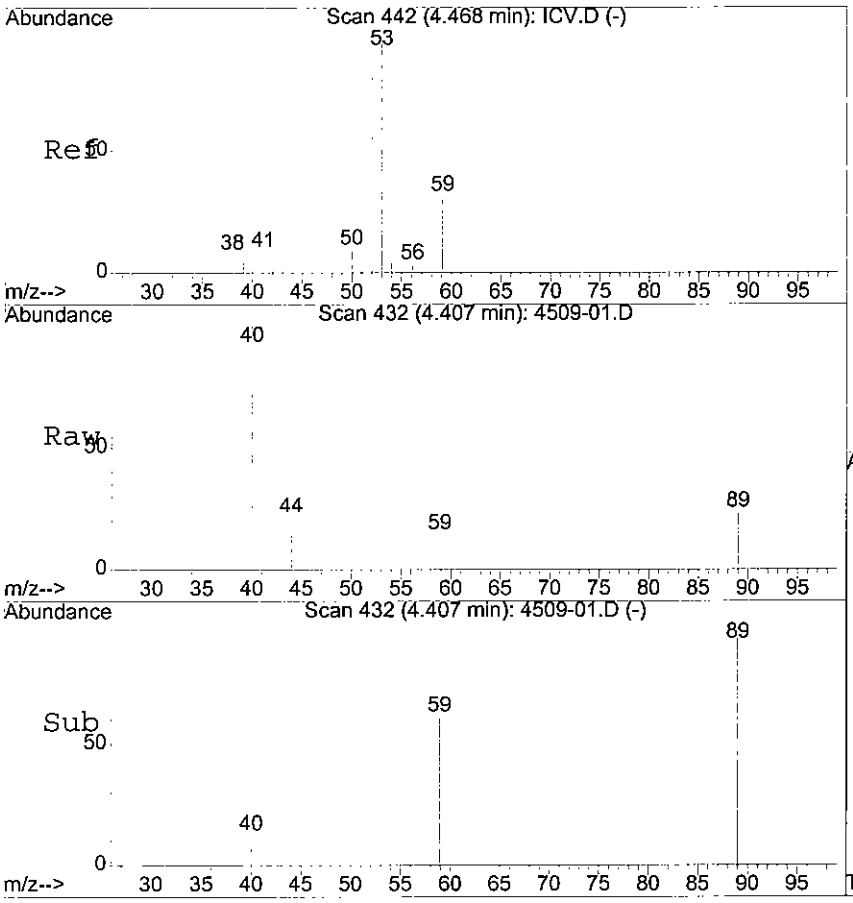


#19
18 methylene chloride
Concen: 0.82 ppb
RT: 4.22 min Scan# 401
Delta R.T. 0.03 min
Lab File: 4509-01.D
Acq: 8 Aug 2003 2:45 pm

Tgt Ion:84 Resp: 35913

Ion	Ratio	Lower	Upper
84	100		
49	100.8	80.4	120.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

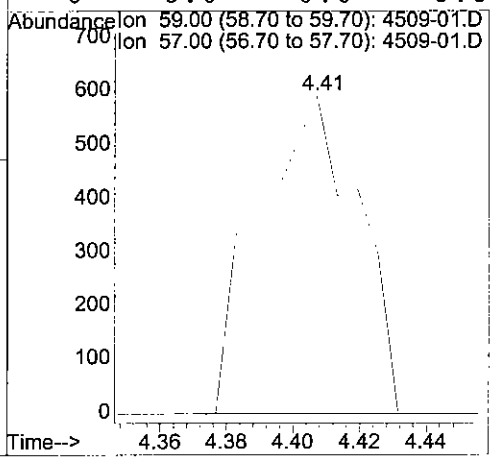


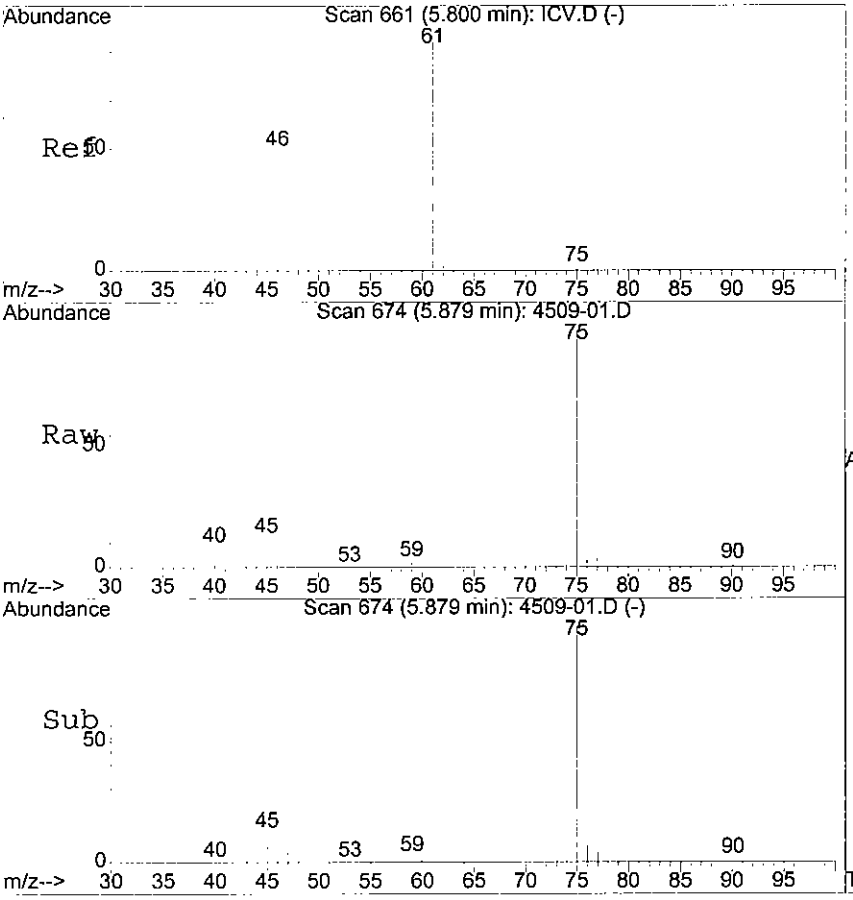


#22
95 Tert butyl alcoholx10
Concen: 25.45 ppb
RT: 4.41 min Scan# 432
Delta R.T. -0.06 min
Lab File: 4509-01.D
Acq: 8 Aug 2003 2:45 pm

Tgt Ion:59 Resp: 1208

Ion	Ratio	Lower	Upper
59	100		
57	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

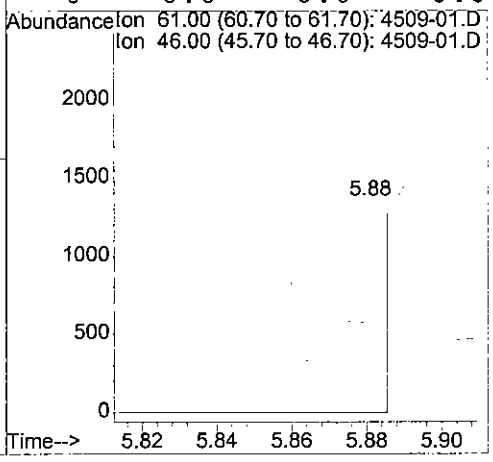


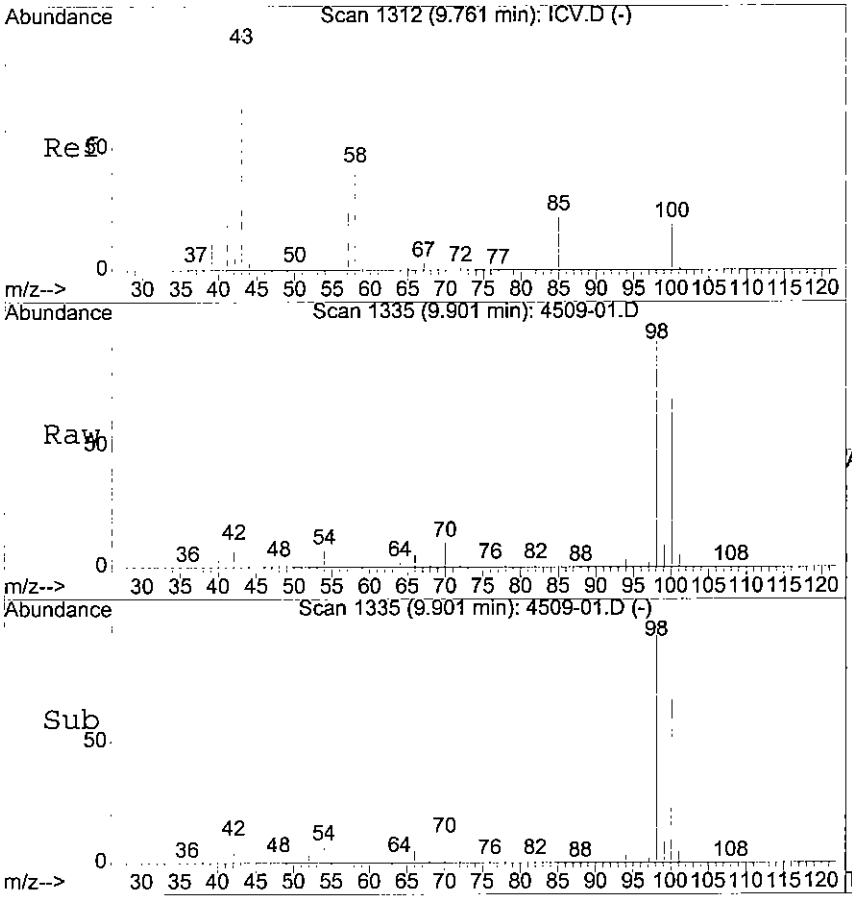


#37
92 Nitro Methane(x10)
Concen: 6.70 ppb
RT: 5.88 min Scan# 674
Delta R.T. 0.08 min
Lab File: 4509-01.D
Acq: 8 Aug 2003 2:45 pm

Tgt Ion:61 Resp: 2586

Ion	Ratio	Lower	Upper
61	100		
46	25.7	48.0	88.0#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

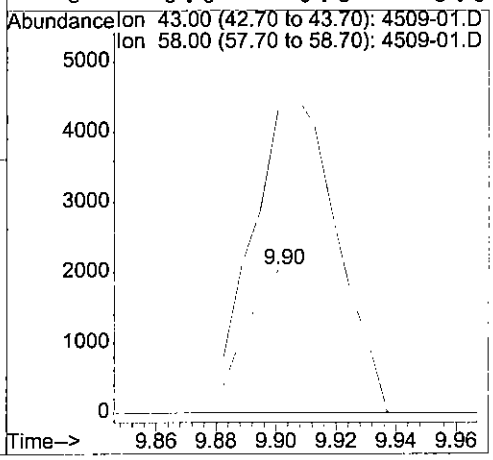




#62
54 MIBK
Concen: 0.51 ppb
RT: 9.90 min Scan# 1335
Delta R.T. 0.14 min
Lab File: 4509-01.D
Acq: 8 Aug 2003 2:45 pm

Tgt Ion:43 Resp: 4153

Ion	Ratio	Lower	Upper
43	100		
58	212.6	20.1	60.1#
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:	08/06/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03-4509-2	Received Date:	08/06/2003
Sample ID:	**ER-5-8-6-03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/08/03	Anal. Date:	08/08/03
Batch No:	03G3619	Prep. No:	–	Anal. Time:	15:12
Data File Name:	4509-02	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	<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	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	113
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	107
4	TOLUENE-D8	2037-26-5	73-129	98
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	95
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	95
3	FLUOROBENZENE	462-06-6	50-200	92
# 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:	08/06/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03-4509-3	Received Date:	08/06/2003
Sample ID:	**MW-23-1**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/08/03	Anal. Date:	08/08/03
Batch No:	03G3619	Prep. No:	–	Anal. Time:	15:38
Data File Name:	4509-03	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	0.4	J
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	
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	U
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	1.5	
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	0.3	J
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	95
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	114
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	108
4	TOLUENE-D8	2037-26-5	73-129	98
# 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	94
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

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Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	08/06/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03-4509-4	Received Date:	08/06/2003
Sample ID:	**MW-23-2**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/08/03	Anal. Date:	08/08/03
Batch No:	03G3619	Prep. No:	–	Anal. Time:	16:05
Data File Name:	4509-04	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	<0.5	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	J
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	0.6	
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	0.6	
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	0.6	
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	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	113
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	109
4	TOLUENE-D8	2037-26-5	73-129	97
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	95
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	94
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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	08/06/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03-4509-5	Received Date:	08/06/2003
Sample ID:	**MW-23-3**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/08/03	Anal. Date:	08/08/03
Batch No:	03G3619	Prep. No:	–	Anal. Time:	16:32
Data File Name:	4509-05	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	<0.5	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	U
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	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	114
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	109
4	TOLUENE-D8	2037-26-5	73-129	97
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	95
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	93
3	FLUOROBENZENE	462-06-6	50-200	89
# 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:	08/06/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03-4509-7	Received Date:	08/06/2003
Sample ID:	**MW-14-1**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/08/03	Anal. Date:	08/08/03
Batch No:	03G3619	Prep. No:	–	Anal. Time:	16:58
Data File Name:	4509-07	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	<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	0.3	J
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	<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	J
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	3.7	
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	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	112
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	110
4	TOLUENE-D8	2037-26-5	73-129	98
# 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	93
3	FLUOROBENZENE	462-06-6	50-200	89
# 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:	08/06/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03-4509-8	Received Date:	08/06/2003
Sample ID:	**MW-14-2**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/11/03	Anal. Date:	08/11/03
Batch No:	03G3659	Prep. No:	–	Anal. Time:	14:38
Data File Name:	4509-08	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	<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	0.4	J
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	0.3	J
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	<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	J
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	1.0	
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	95
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	113
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	110
4	TOLUENE-D8	2037-26-5	73-129	96
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	96
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	97
3	FLUOROBENZENE	462-06-6	50-200	87
# 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:	08/06/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03-4509-9	Received Date:	08/06/2003
Sample ID:	**MW-14-3**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/08/03	Anal. Date:	08/08/03
Batch No:	03G3619	Prep. No:	–	Anal. Time:	17:25
Data File Name:	4509-09	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	0.3	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	<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	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	113
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	109
4	TOLUENE-D8	2037-26-5	73-129	97
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	95
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	94
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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	08/06/2003
Project ID:	JPL	Service ID:	34509	Collected by:	
		Lab Sample ID:	03-4509-11	Received Date:	08/06/2003
Sample ID:	**TB-5-8-6-03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	08/08/03	Anal. Date:	08/08/03
Batch No:	03G3619	Prep. No:	–	Anal. Time:	13:52
Data File Name:	4509-11	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	1.6	
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	94
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	107
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	106
4	TOLUENE-D8	2037-26-5	73-129	98
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	96
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	96
3	FLUOROBENZENE	462-06-6	50-200	92
# 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:	034509
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G3619		

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	S3 % #	S4 % #	TOT OUT
1	03G3619-LCS-01	03G3619-LCS-01	95	98	99	97	0
2	MW-4-2MS	03-4455-4MS	100	90	97	102	0
3	MW-4-2MSD	03-4455-4MSD	96	95	98	96	0
4	03G3619-MB-01	03G3619-MB-01	96	110	106	97	0
5	TB-5-8-6-03	03-4509-11	94	107	106	98	0
6	DUPE-4-3-Q03	03-4509-1	96	109	107	98	0
7	ER-5-8-6-03	03-4509-2	96	113	107	98	0
8	MW-23-1	03-4509-3	95	114	108	98	0
9	MW-23-2	03-4509-4	96	113	109	97	0
10	MW-23-3	03-4509-5	96	114	109	97	0
11	MW-14-1	03-4509-7	96	112	110	98	0
12	MW-14-3	03-4509-9	96	113	109	97	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-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:		Service ID:	034509
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G3659		

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	S3 % #	S4 % #	TOT OUT
1	03G3659-LCS-01	03G3659-LCS-01	95	96	98	96	0
2	MW-14-2MS	03-4509-8MS	94	97	98	95	0
3	MW-14-2MSD	03-4509-8MSD	98	94	96	95	0
4	03G3659-MB-01	03G3659-MB-01	95	110	108	96	0
5	MW-14-2	03-4509-8	94	112	110	96	0
6							
7							
8							
9							
10							
11							
12							
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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:	34509
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G3619		
LCS Filename:	G3619L01	Date Analyzed:	080803	Time Analyzed:	11:12
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	19.1	96	65-120
CHLOROBENZENE	μg/L	20	0	20.7	104	65-134
1,1-DICHLOROETHENE	μg/L	20	0	19.7	99	65-127
TOLUENE	μg/L	20	0	19.5	98	65-134
TRICHLOROETHENE	μg/L	20	0	20.0	100	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 524.2

2239

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619L01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:12 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 17:59 2003
Print Time : Fri Aug 08 17:59 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	7.65	7.63	0.003	96	70	789.769	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	614.802	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	323.815	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	387.934	19.71	19.7	98.55%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	312.099	19.58	19.6	97.89%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1509.660	19.48	19.5	97.42%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	510.142	19.05	19.0	95.24%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	370.296	18.68	18.7	98	m
4	4	Chloromethane	2.11	2.07	0.005	50	52	267.447	15.87	15.9	99	
2	2	F114	2.03	2.00	0.005	85	135	214.699	20.71	20.7	62	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	359.514	18.78	18.8	98	
6	6	bromomethane	2.61	2.58	0.004	94	96	151.489	16.47	16.5	99	
7	7	chloroethane	2.73	2.70	0.004	64	66	215.105	18.88	18.9	100	
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	574.359	20.25	20.3	100	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	654.664	188.94	188.9	89	?
9	9	acrolein X10	3.51	3.48	0.005	56	55	403.289	215.44	215.4	0	m
11	11	acetone X10	3.71	3.69	0.003	43	58	487.120	266.54	266.5	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	925.664	109.30	109.3	91	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	445.018	19.66	19.7	98	?
14	14	Iodomethane	3.81	3.78	0.004	142	127	214.704	10.73	10.7	96	
15	15	F-113	3.65	3.62	0.005	101	151	345.622	22.25	22.3	90	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	636.925	180.40	180.4	97	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	1101.934	19.15	19.1	99	
94	94	Isopropyl Alcohol	4.04	4.01	0.004	45	43	96.268	194.01	194.0	100	m
18	18	methylene chlorid	4.22	4.19	0.005	84	49	388.025	19.37	19.4	99	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	411.911	19.31	19.3	92	?

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

Quantitation Report: **Applied P &Ch Lab** EPA 524.2

2240

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619L01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:12 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 17:59 2003
Print Time : Fri Aug 08 17:59 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	4.56	0.004	73	57	695.456	19.59	19.6	96	?
95	95	Tert butyl alcoho	4.49	4.47	0.003	59	57	183.127	196.04	196.0	100	m
94	94	allyl chloride	4.07	4.04	0.004	41	76	654.664	21.07	21.1	85	#?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	636.800	18.60	18.6	98	
97	97	propionitrile	6.02	5.99	0.003	54	51	25.532	19.27	19.3	100	#?
22	22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	417.494	19.41	19.4	94	?
23	23	22-Dichloropropan	5.92	5.89	0.003	77	97	556.157	25.86	25.9	98	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	194.395	18.64	18.6	99	
25	25	chloroform	6.37	6.35	0.002	83	85	665.755	20.64	20.6	97	
26	26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	239.033	92.16	92.2	95	
98	98	Diisopropyl ether	5.24	5.22	0.003	45	87	997.844	18.93	18.9	99	
99	99	ETBE	5.74	5.72	0.003	59	87	831.204	20.63	20.6	98	
30	30	12-dichloroethane	7.22	7.20	0.003	64	62	116.535	20.94	20.9	96	?
32	32	vinyl acetate X5	5.20	5.17	0.004	43	86	2509.521	101.84	101.8	99	
92	92	Nitro Methane(x10	5.82	5.80	0.002	61	46	91.129	207.78	207.8	78	
33	33	2-butanoneMEK X10	5.94	5.92	0.002	43	72	715.560	214.79	214.8	98	?
93	93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	326.487	37.87	37.9	90	#?
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	628.526	19.75	19.8	99	
35	35	11-Di-Cl-propene	6.90	6.88	0.002	75	110	510.377	21.23	21.2	91	?
36	36	benzene	7.21	7.19	0.003	78	52	1526.845	19.05	19.0	99	?
37	37	CCl4	6.91	6.89	0.003	117	119	601.989	20.52	20.5	100	?
100	100	Isobutyl alcohol	7.16	7.39	-0.030	43	42	68.048	186.78	186.8	94	m
38	38	thiophene	7.53	7.51	0.002	84	58	794.728	19.94	19.9	98	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	338.409	18.87	18.9	99	
40	40	trichloroethene	8.24	8.23	0.002	130	132	499.233	19.98	20.0	98	
41	41	dibromomethane	8.73	8.71	0.002	174	172	214.943	18.89	18.9	100	
101	101	TAME	7.41	7.39	0.002	73	43	729.401	20.88	20.9	98	
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	480.229	20.45	20.4	99	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	171.153	18.72	18.7	91	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	240.572	120.55	120.5	97	
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	542.732	20.82	20.8	95	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	443.326	21.39	21.4	91	

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

Quantitation Report: **Applied P &Ch Lab** EPA 524.2

2241

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619L01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:12 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 17:59 2003
Print Time : Fri Aug 08 17:59 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	271.390	18.29	18.3	95	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	435.416	18.60	18.6	100	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	361.164	19.39	19.4	93	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	368.401	19.77	19.8	99	
52	52	bromoform	12.42	12.41	0.000	173	174	212.192	18.63	18.6	99	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	394.884	18.13	18.1	94	
54	54	MIBK	9.77	9.76	0.000	43	58	169.926	18.98	19.0	93	
56	56	toluene	9.99	9.98	0.000	91	92	1733.755	19.47	19.5	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	574.548	94.54	94.5	95	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	272.731	18.63	18.6	98	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	524.998	19.73	19.7	99	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	1198.414	20.70	20.7	92	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	427.666	18.87	18.9	100	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	223.278	21.14	21.1	94	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	2005.752	19.80	19.8	96	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	3092.281	40.37	40.4	96	
66	66	styrene	12.24	12.23	0.000	104	78	1193.989	20.50	20.5	92	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1588.495	20.67	20.7	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	294.047	17.19	17.2	99	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	91.133	17.80	17.8	98	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	2113.643	21.47	21.5	97	
72	72	bromobenzene	12.89	12.89	0.000	156	158	515.655	19.50	19.5	99	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	56.145	19.28	19.3	87	?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	649.555	21.06	21.1	93	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	556.922	20.44	20.4	100	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	553.853	19.98	20.0	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1805.689	21.31	21.3	98	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	2050.305	21.66	21.7	98	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	1847.931	20.94	20.9	97	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1700.989	21.02	21.0	95	

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Quantitation Report: **Applied P &Ch Lab** EPA 524.2

2242

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619L01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:12 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 17:59 2003
Print Time : Fri Aug 08 17:59 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	13.78	0.000	146	148	1073.076	19.30	19.3	98	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2460.428	21.60	21.6	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	1054.084	19.94	19.9	99	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	144.642	27.00	27.0	75	#
84	84	12-DCB	14.21	14.21	0.000	146	148	938.082	18.95	19.0	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	575.017	20.71	20.7	84	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	64.430	18.48	18.5	95	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	700.781	21.86	21.9	100	
88	88	naphthalene	15.79	15.78	0.000	128	129	1131.005	19.45	19.4	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	398.429	20.53	20.5	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	600.140	20.87	20.9	99	

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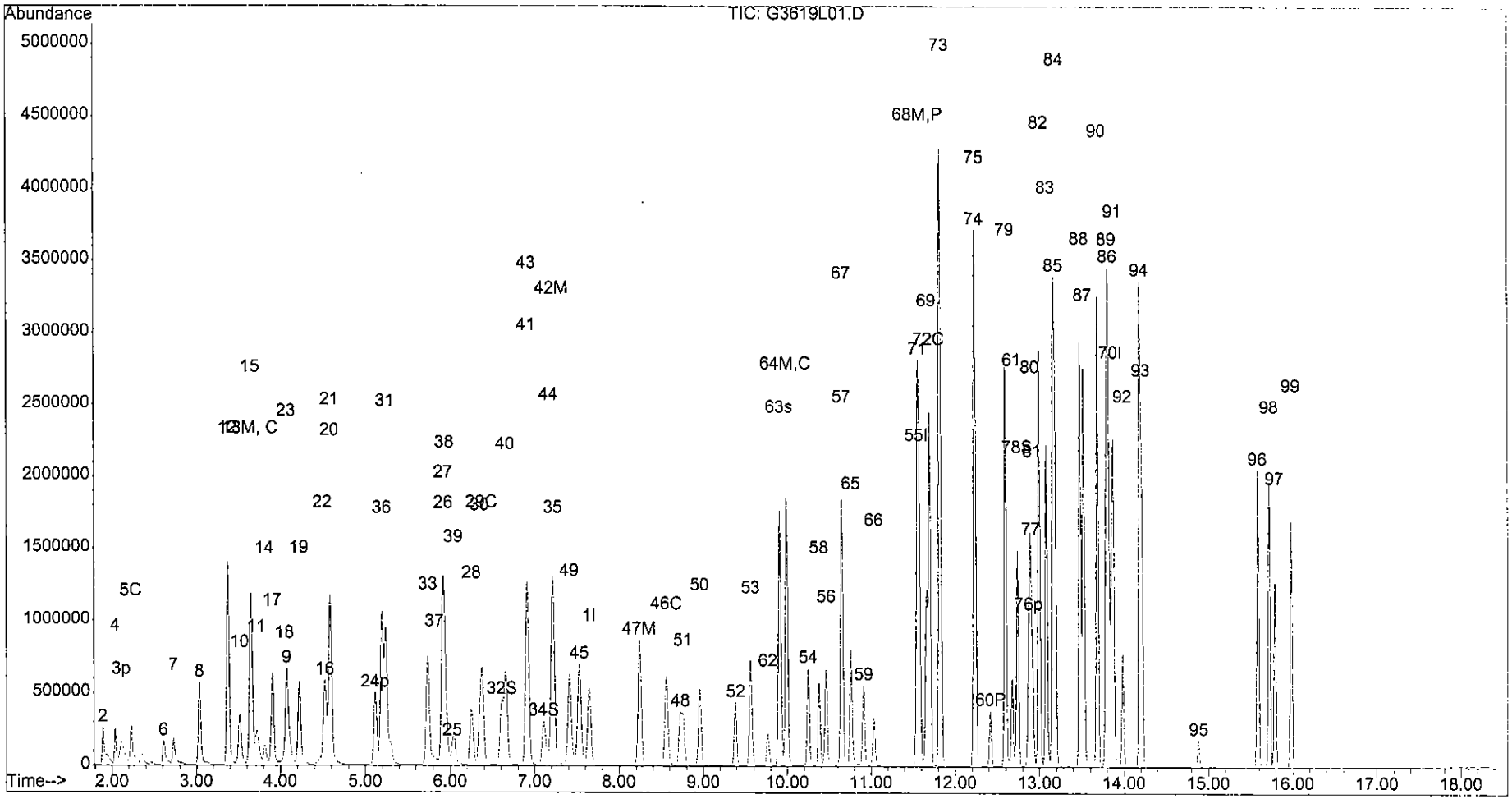
Quantitation Report: **Applied P &Ch Lab** EPA 524.2

2243

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619L01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:12 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 17:59 2003
Print Time : Fri Aug 08 17:59 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:	34509
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G3619		
MS Filename:	G3619M01	Date Analyzed:	080803	Time Analyzed:	11:40
MSD Filename:	G3619N01	Date Analyzed:	080803	Time Analyzed:	12:06
MS Sample No:	**MW-4-2**	Sample Lab ID:	03-4455-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	μg/L	20	0	19.2	96	65-121
CHLOROBENZENE	μg/L	20	0	21.1	106	65-134
1,1-DICHLOROETHENE	μg/L	20	0	20.2	101	65-127
TOLUENE	μg/L	20	0	20.3	102	65-134
TRICHLOROETHENE	μg/L	20	0.7	21.3	103	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	18.8	94	2	28	65-121
CHLOROBENZENE	μg/L	20	20.3	102	4	35	65-134
1,1-DICHLOROETHENE	μg/L	20	19.3	97	4	31	65-127
TOLUENE	μg/L	20	19.3	97	5	35	65-134
TRICHLOROETHENE	μg/L	20	20.4	99	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: _____