Level C Data Package Deliverables

Wet Chemistry

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Wet Analysis Results for Method SM2320B

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	SM2320B
Project ID:	JPL	Service ID:	32964	Collected by:	

Component Name: Bicarbonate

CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-2964-1	DUPE-4-2Q03	Water	04/29/03	04/29/03	05/01/03	03W2665	mg/L	2	112	
03-2964-2	EB-7-4/29/03	Water	04/29/03	04/29/03	05/01/03	03W2665	mg/L	2	<2	U
03-2964-3	MW-24-1	Water	04/29/03	04/29/03	05/01/03	03W2665	mg/L	2	164	
03-2964-4	MW-24-2	Water	04/29/03	04/29/03	05/01/03	03W2665	mg/L	2	124	
03-2964-5	MW-24-3	Water	04/29/03	04/29/03	05/01/03	03W2667	mg/L	2	114	
03-2964-6	MW-24-4	Water	04/29/03	04/29/03	05/01/03	03W2667	mg/L	2	102	
03-2964-7	MW-24-5	Water	04/29/03	04/29/03	05/01/03	03W2667	mg/L	2	166	
03W2665-MB-01	03W2665-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2665	mg/L	2	<2	U
03W2667-MB-01	03W2667-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2667	mg/L	2	<2	U

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

Note: Q - Qualifier.

Qualifier: U - Not Detected or less than MDL

B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method SM2320B

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	SM2320B
Project ID:	JPL	Service ID:	32964	Collected by:	

Component Name: Carbonate

CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-2964-1	DUPE-4-2Q03	Water	04/29/03	04/29/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	10.2	
03-2964-2	EB-7-4/29/03	Water	04/29/03	04/29/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	<2	U
03-2964-3	MW-24-1	Water	04/29/03	04/29/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	<2	U
03-2964-4	MW-24-2	Water	04/29/03	04/29/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	10.2	
03-2964-5	MW-24-3	Water	04/29/03	04/29/03	05/01/03	03W2667	mg-$CaCO_3$/L	2	35.8	
03-2964-6	MW-24-4	Water	04/29/03	04/29/03	05/01/03	03W2667	mg-$CaCO_3$/L	2	23.0	
03-2964-7	MW-24-5	Water	04/29/03	04/29/03	05/01/03	03W2667	mg-$CaCO_3$/L	2	<2	U
03W2665-MB-01	03W2665-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	<2	U
03W2667-MB-01	03W2667-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2667	mg-$CaCO_3$/L	2	<2	U

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

Note: Q - Qualifier.

Qualifier: U - Not Detected or less than MDL

B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 9040B

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	9040B
Project ID:	JPL	Service ID:	32964	Collected by:	

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

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-2964-1	DUPE-4-2Q03	Water	04/29/03	04/29/03	04/29/03	03W2631	pH unit	0.01	8.22	
03-2964-2	EB-7-4/29/03	Water	04/29/03	04/29/03	04/29/03	03W2631	pH unit	0.01	5.77	
03-2964-3	MW-24-1	Water	04/29/03	04/29/03	04/29/03	03W2631	pH unit	0.01	7.90	
03-2964-4	MW-24-2	Water	04/29/03	04/29/03	04/29/03	03W2631	pH unit	0.01	8.40	
03-2964-5	MW-24-3	Water	04/29/03	04/29/03	04/29/03	03W2631	pH unit	0.01	8.89	
03-2964-6	MW-24-4	Water	04/29/03	04/29/03	04/29/03	03W2631	pH unit	0.01	9.01	
03-2964-7	MW-24-5	Water	04/29/03	04/29/03	04/29/03	03W2631	pH unit	0.01	8.04	
03W2631-MB-01	03W2631-MB-01	Water	04/29/03	04/29/03	04/29/03	03W2631	pH unit	0.01	6.85	

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

Applied P & Ch Laboratory

Wet Analysis Results for Method 160.1

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	160.1
Project ID:	JPL	Service ID:	32964	Collected by:	

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

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-2964-1	DUPE-4-2Q03	Water	04/29/03	04/29/03	05/01/03	03W2666	mg/L	10	257	
03-2964-2	EB-7-4/29/03	Water	04/29/03	04/29/03	05/01/03	03W2666	mg/L	10	8.0	B
03-2964-3	MW-24-1	Water	04/29/03	04/29/03	05/01/03	03W2666	mg/L	10	365	
03-2964-4	MW-24-2	Water	04/29/03	04/29/03	05/01/03	03W2666	mg/L	10	257	
03-2964-5	MW-24-3	Water	04/29/03	04/29/03	05/01/03	03W2666	mg/L	10	216	
03-2964-6	MW-24-4	Water	04/29/03	04/29/03	05/01/03	03W2666	mg/L	10	175	
03-2964-7	MW-24-5	Water	04/29/03	04/29/03	05/01/03	03W2666	mg/L	10	227	
03W2666-MB-01	03W2666-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2666	mg/L	10	<10	U

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

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

Applied P & Ch Laboratory

Wet Analysis Results for Method 7196

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	7196
Project ID:	JPL	Service ID:	32964	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
03-2964-1	DUPE-4-2Q03	Water	04/29/03	04/29/03	04/29/03	03W2629	mg/L	0.01	<0.01	U
03-2964-2	EB-7-4/29/03	Water	04/29/03	04/29/03	04/29/03	03W2629	mg/L	0.01	<0.01	U
03-2964-3	MW-24-1	Water	04/29/03	04/29/03	04/29/03	03W2629	mg/L	0.01	<0.01	U
03-2964-4	MW-24-2	Water	04/29/03	04/29/03	04/29/03	03W2629	mg/L	0.01	<0.01	U
03-2964-5	MW-24-3	Water	04/29/03	04/29/03	04/29/03	03W2629	mg/L	0.01	<0.01	U
03-2964-6	MW-24-4	Water	04/29/03	04/29/03	04/29/03	03W2629	mg/L	0.01	<0.01	U
03-2964-7	MW-24-5	Water	04/29/03	04/29/03	04/29/03	03W2629	mg/L	0.01	<0.01	U
03W2629-MB-01	03W2629-MB-01	Water	04/29/03	04/29/03	04/29/03	03W2629	mg/L	0.01	<0.01	U

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

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

Applied P & Ch Laboratory

Wet Analysis Results for Method 314.0

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	314.0
Project ID:	JPL	Service ID:	32964	Collected by:	

Component Name: Perchlorate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-2964-1	DUPE-4-2Q03	Water	04/29/03	04/29/03	04/30/03	03W2612	μg/L	16	199	
03-2964-2	EB-7-4/29/03	Water	04/29/03	04/29/03	04/29/03	03W2612	μg/L	4	<4	U
03-2964-3	MW-24-1	Water	04/29/03	04/29/03	04/30/03	03W2612	μg/L	80	854	
03-2964-4	MW-24-2	Water	04/29/03	04/29/03	04/30/03	03W2612	μg/L	16	195	
03-2964-5	MW-24-3	Water	04/29/03	04/29/03	04/29/03	03W2612	μg/L	4	<4	U
03-2964-6	MW-24-4	Water	04/29/03	04/29/03	05/05/03	03W2719	μg/L	4	<4	U
03-2964-7	MW-24-5	Water	04/29/03	04/29/03	05/05/03	03W2719	μg/L	4	<4	U
03W2612-MB-01	03W2612-MB-01	Water	04/29/03	04/29/03	04/29/03	03W2612	μg/L	4	<4	U
03W2719-MB-01	03W2719-MB-01	Water	05/05/03	05/05/03	05/05/03	03W2719	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.

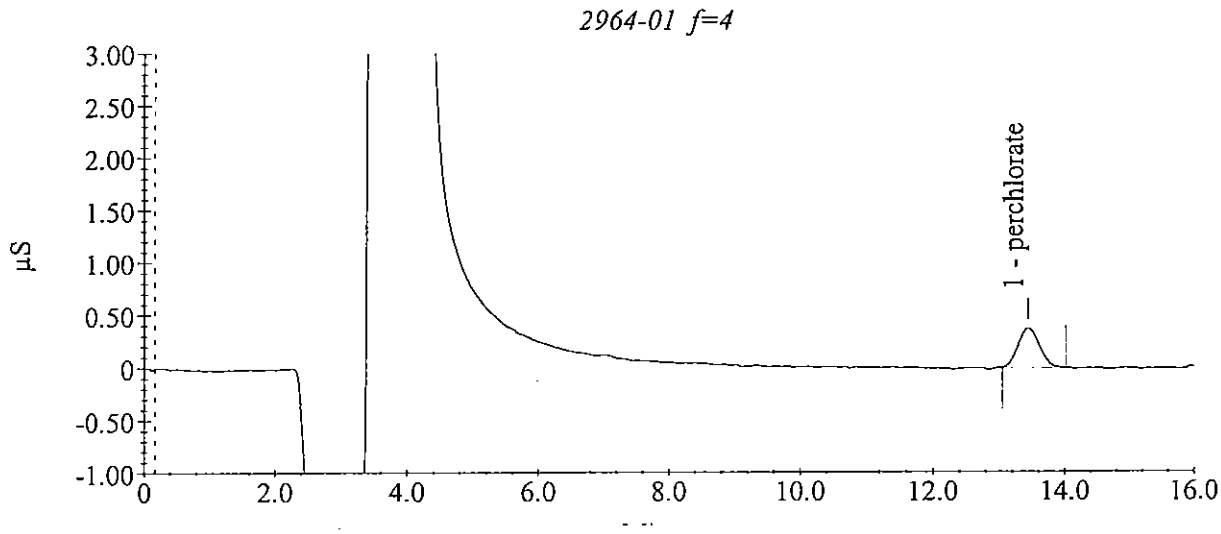
APCL Perchlorate Analysis Report

Sample Name : 2964-01 f=4
Data File Name : C:\DATA\03W2612K\2964-01_041.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/30/2003 9:39:56 AM
System Operator : C.W and W.W
Dilution Factor : 4.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	13.43	198.99	84424.10	3739.50



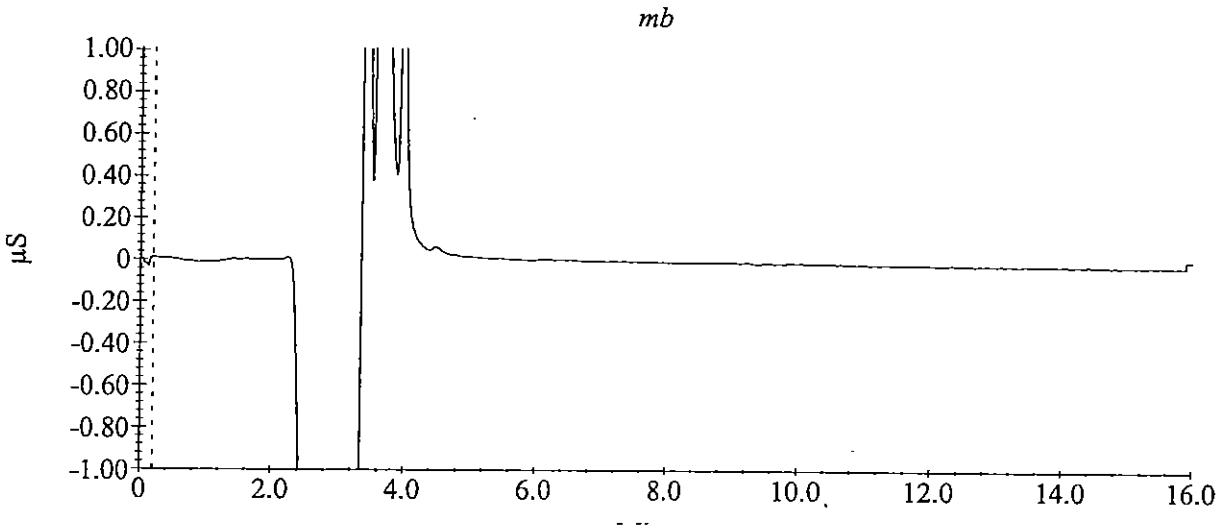
APCL Perchlorate Analysis Report

Sample Name : mb
Data File Name : C:\DATA\03W2612K\W2612K K01_007.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 11:17:11 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



Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 300.0
Project ID: JPL Service ID: 32964 Collected by:

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

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-2964-1	DUPE-4-2Q03	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	1.6	34.3	
03-2964-2	EB-7-4/29/03	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.25	0.26	
03-2964-3	MW-24-1	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	1	37.9	
03-2964-4	MW-24-2	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	1.6	33.8	
03-2964-5	MW-24-3	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.8	19.1	
03-2964-6	MW-24-4	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.4	14.0	
03-2964-7	MW-24-5	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.4	10.3	
03W2610-MB-01	03W2610-MB-01	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.2	<0.2	U

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

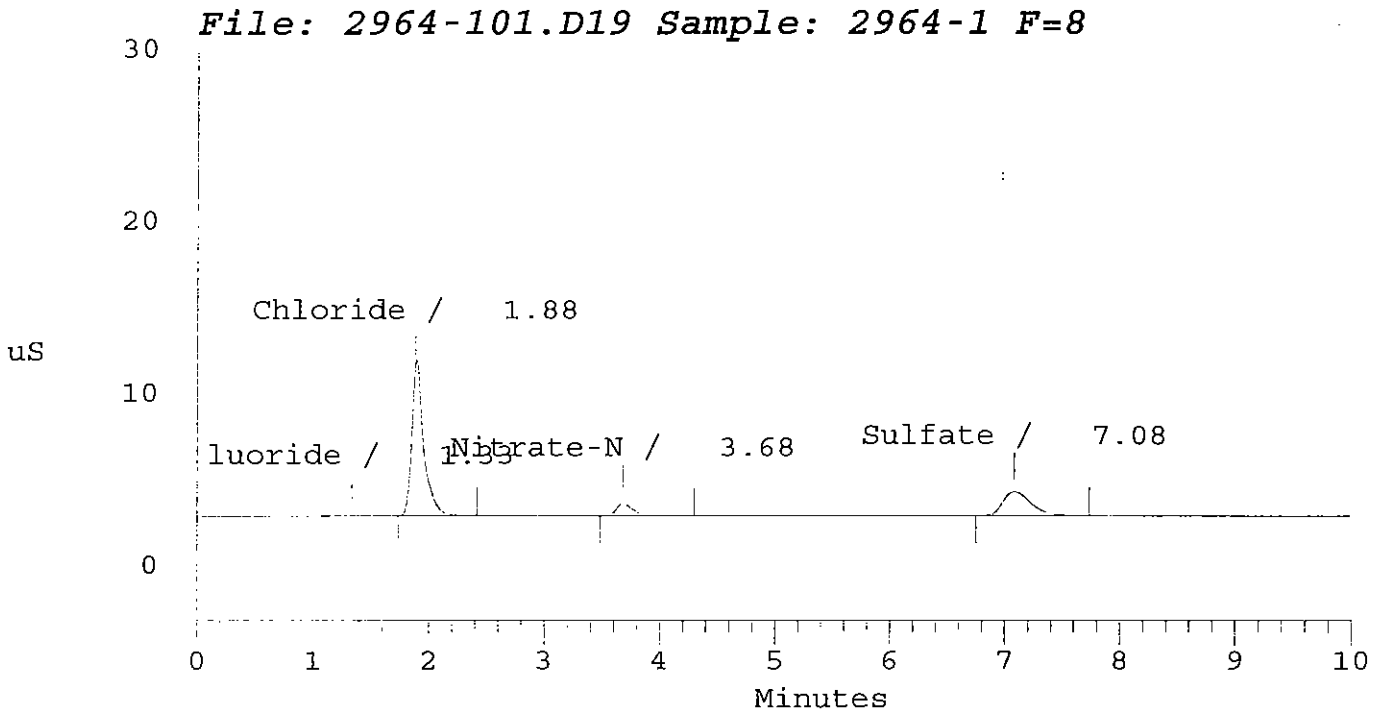
Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

```
==============================================================================
| Sample Name: 2964-1 F=8                      Date: 04/29/2003 18:04:22      |
| Data File  : C:\DX\DATA\03W2610\2964-101.D19                                |
| Method     : C:\DX\METHOD\E300-063.MET                                      |
| ACI Address: 1  System: 1  Inject#: 19                  Detector:COND       |
| Analyst    : David          Column: Dionex AS4A-SC                          |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	8	3000	5Hz	0.00	10.00	1000	

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.33	Fluoride	0.973	8321	89108	2	0.00
2	1.88	Chloride	34.250	288431	2126671	2	0.00
0	0.00	Nitrite-N	0.000	0	0	0	0.00
0	0.00	Bromide	0.000	0	0	0	0.00
3	3.68	Nitrate-N	1.858	23428	235595	1	0.00
0	0.00	Phosphate-P	0.000	0	0	0	0.00
4	7.08	Sulfate	19.901	46164	772106	1	0.00
		Totals	56.983	366344	3223480		



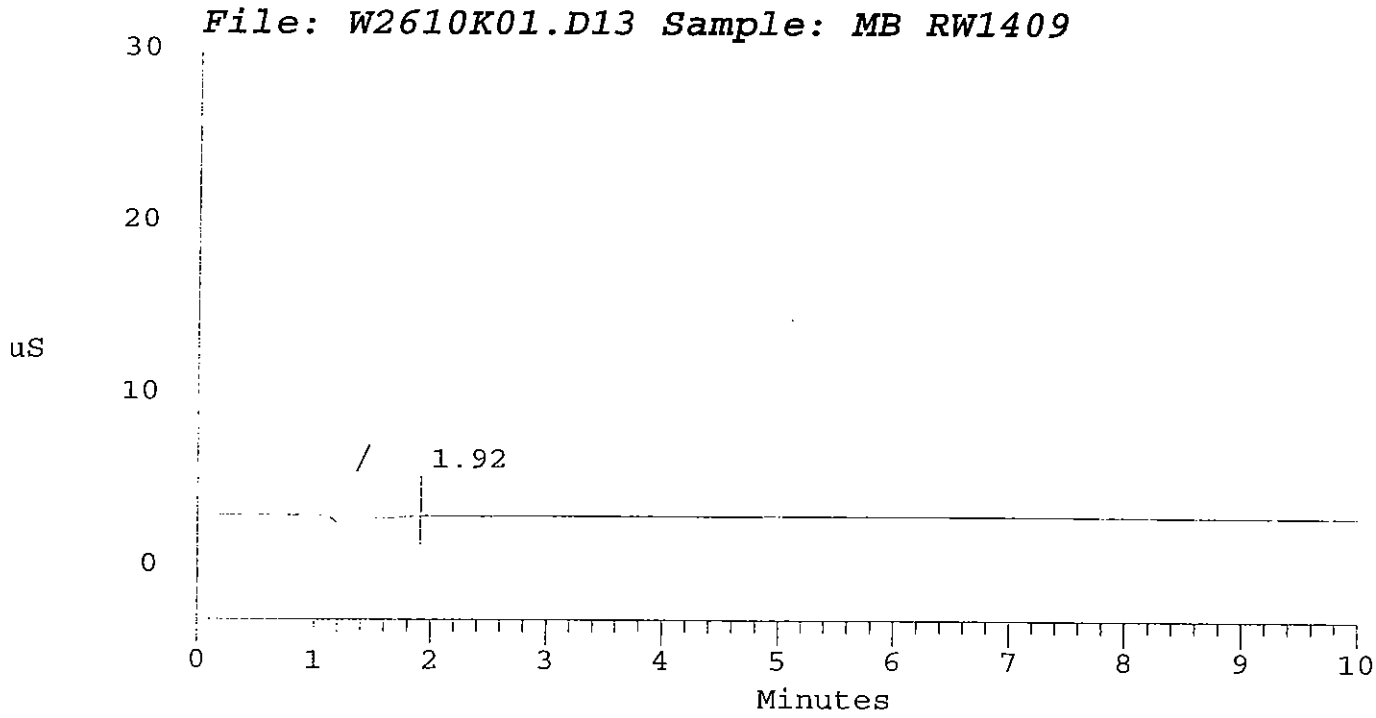
Data Reprocessed On 04/29/2003 14:15:30

Sample Name: MB RW1409	Date: 04/29/2003 14:12:40
Data File : C:\DX\DATA\03W2610\W2610K01.D13	
Method : C:\DX\METHOD\E300-063.MET	
ACI Address: 1 System: 1 Inject#: 13	Detector:COND
Analyst : David Column: Dionex AS4A-SC	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
0	0.00	Fluoride	0.000	0	0	0	0.00
0	0.00	Chloride	0.000	0	0	0	0.00
0	0.00	Nitrite-N	0.000	0	0	0	0.00
0	0.00	Bromide	0.000	0	0	0	0.00
0	0.00	Nitrate-N	0.000	0	0	0	0.00
0	0.00	Phosphate-P	0.000	0	0	0	0.00
0	0.00	Sulfate	0.000	0	0	0	0.00
		Totals	0.000	0	0		



After
4/29/03 DC
reason 5164-

Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	300.0
Project ID:	JPL	Service ID:	32964	Collected by:	

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

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-2964-1	DUPE-4-2Q03	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.32	1.9	
03-2964-2	EB-7-4/29/03	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.05	0.078	
03-2964-3	MW-24-1	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.2	6.2	
03-2964-4	MW-24-2	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.32	1.8	
03-2964-5	MW-24-3	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.16	0.36	
03-2964-6	MW-24-4	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.08	0.14	
03-2964-7	MW-24-5	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.08	1.3	
03W2610-MB-01	03W2610-MB-01	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.04	<0.04	U

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

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

Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 300.0
Project ID: JPL Service ID: 32964 Collected by:

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

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-2964-1	DUPE-4-2Q03	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	4	19.9	
03-2964-2	EB-7-4/29/03	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.63	0.75	
03-2964-3	MW-24-1	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	2.5	42.2	
03-2964-4	MW-24-2	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	4	19.3	
03-2964-5	MW-24-3	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	2	15.8	
03-2964-6	MW-24-4	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	1	7.1	
03-2964-7	MW-24-5	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	1	19.2	
03W2610-MB-01	03W2610-MB-01	Water	04/29/03	04/29/03	04/29/03	03W2610	mg/L	0.5	<0.5	U

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

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

FORM-3

Applied P & Ch Laboratory

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

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2610		
LCS Filename:	-	Date Analyzed:	042903	Time Analyzed:	10:33
LCSD Filename:	-	Date Analyzed:	042903	Time Analyzed:	10:46

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHLORIDE CL^-	mg/L	4.0	0	3.88	97	80-120
NITRATE AS N	mg/L	1.5	0	1.49	99	80-120
SULFATE SO_4^{--}	mg/L	15	0	14.7	98	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHLORIDE CL^-	mg/L	4.0	3.90	98	1	20	80-120
NITRATE AS N	mg/L	1.5	1.50	100	1	20	80-120
SULFATE SO_4^{--}	mg/L	15	14.8	99	1	25	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

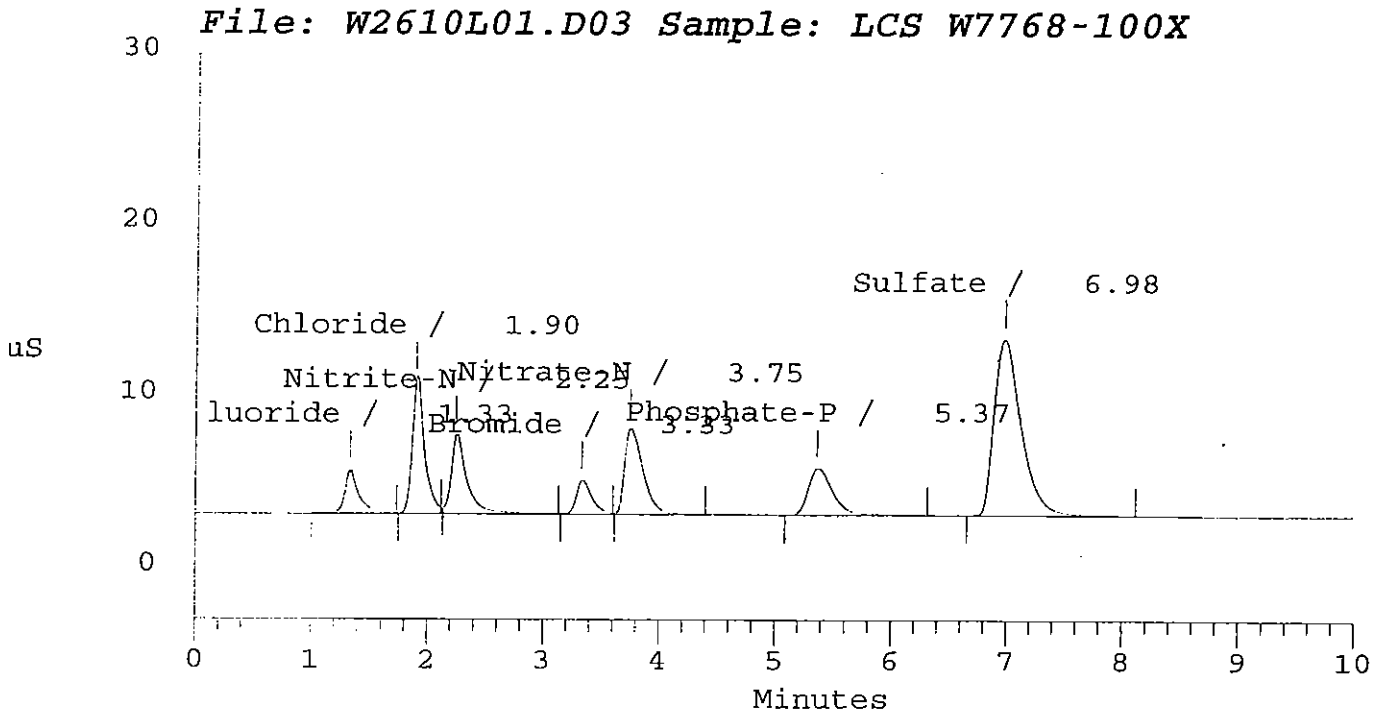
Comments: _____

Sample Name: LCS W7768-100X Date: 04/29/2003 10:33:59
Data File : C:\DX\DATA\03W2610\W2610L01.D03
Method : C:\DX\METHOD\E300-063.MET
ACI Address: 1 System: 1 Inject#: 3 Detector:COND
Analyst : David Column: Dionex AS4A-SC

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.33	Fluoride	1.003	84818	729652	2	0.00
2	1.90	Chloride	3.883	257565	1922745	2	0.00
3	2.25	Nitrite-N	1.467	152210	1478584	2	0.00
4	3.33	Bromide	3.016	65156	614506	2	0.37
5	3.75	Nitrate-N	1.491	166196	1797613	2	0.00
6	5.37	Phosphate-P	2.888	89980	1319865	1	0.00
7	6.98	Sulfate	14.729	341742	5605596	1	0.00
		Totals	28.476	1157668	13468561		

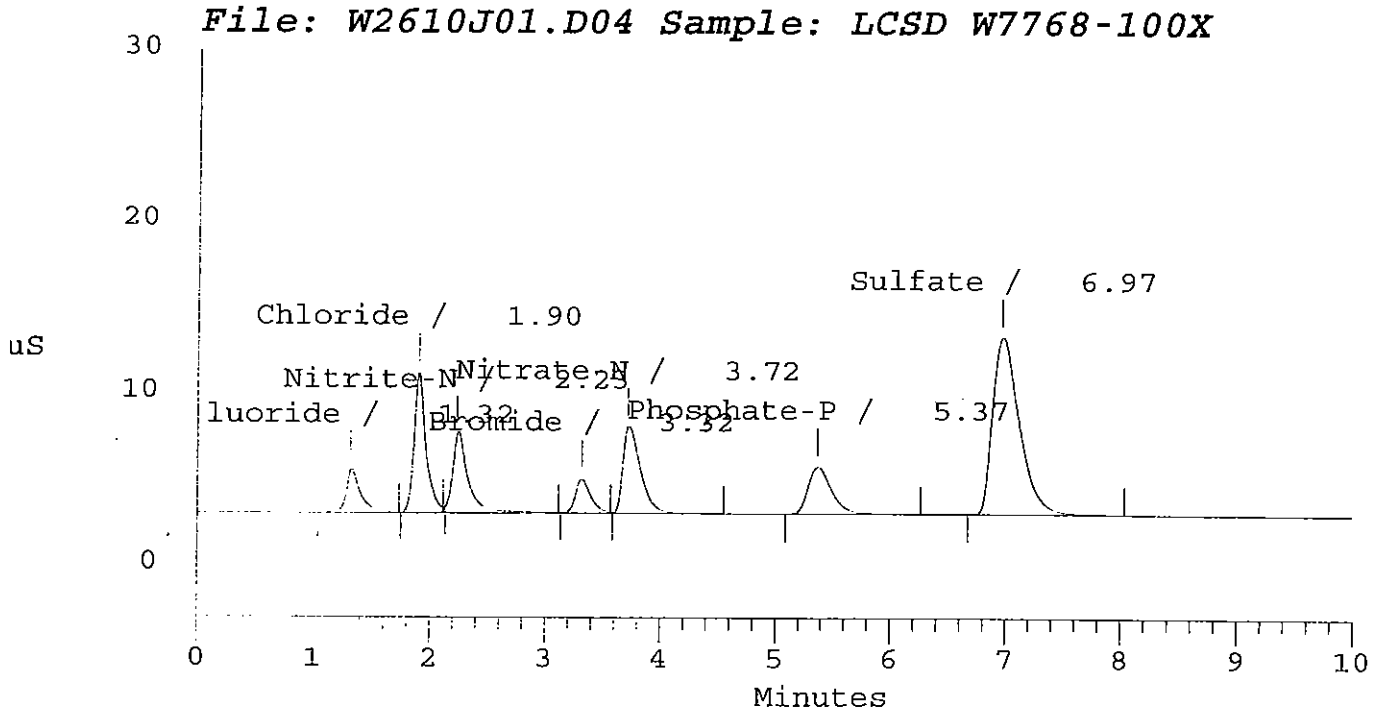


```
==========================================================================
| Sample Name: LCSD W7768-100X                Date: 04/29/2003 10:46:42   |
| Data File  : C:\DX\DATA\03W2610\W2610J01.D04                            |
| Method     : C:\DX\METHOD\E300-063.MET                                  |
| ACI Address: 1  System: 1  Inject#: 4                Detector:COND      |
| Analyst    : David          Column: Dionex AS4A-SC                      |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.32	Fluoride	1.011	81644	735078	2	0.00
2	1.90	Chloride	3.898	271993	1930606	2	0.00
3	2.23	Nitrite-N	1.477	150251	1488298	2	-0.74
4	3.32	Bromide	3.041	66764	619812	2	0.76
5	3.72	Nitrate-N	1.499	167495	1807747	2	0.00
6	5.37	Phosphate-P	2.906	90952	1328447	1	0.00
7	6.97	Sulfate	14.789	341827	5629632	1	0.00
		Totals	28.621	1170926	13539619		



FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 300.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2610		
MS Filename:	-	Date Analyzed:	042903	Time Analyzed:	15:02
MSD Filename:	-	Date Analyzed:	042903	Time Analyzed:	15:14
MS Sample No:	**MW-17-2**	Sample Lab ID:	03-2933-3		

Spiked Components	Unit	Spike Added	Concentration Unspiked	MS	MS Rec% #	QC Limit, % REC
CHLORIDE CL^-	mg/L	16.0	19.6	35.2	98	75-125
NITRATE AS N	mg/L	6.00	2.0	8.18	103	75-125
SULFATE SO_4^{--}	mg/L	60.0	34.7	98.4	106	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	REC
CHLORIDE CL^-	mg/L	16.0	35.2	98	0	20	75-125
NITRATE AS N	mg/L	6.00	8.12	102	1	20	75-125
SULFATE SO_4^{--}	mg/L	60.0	97.4	105	1	25	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

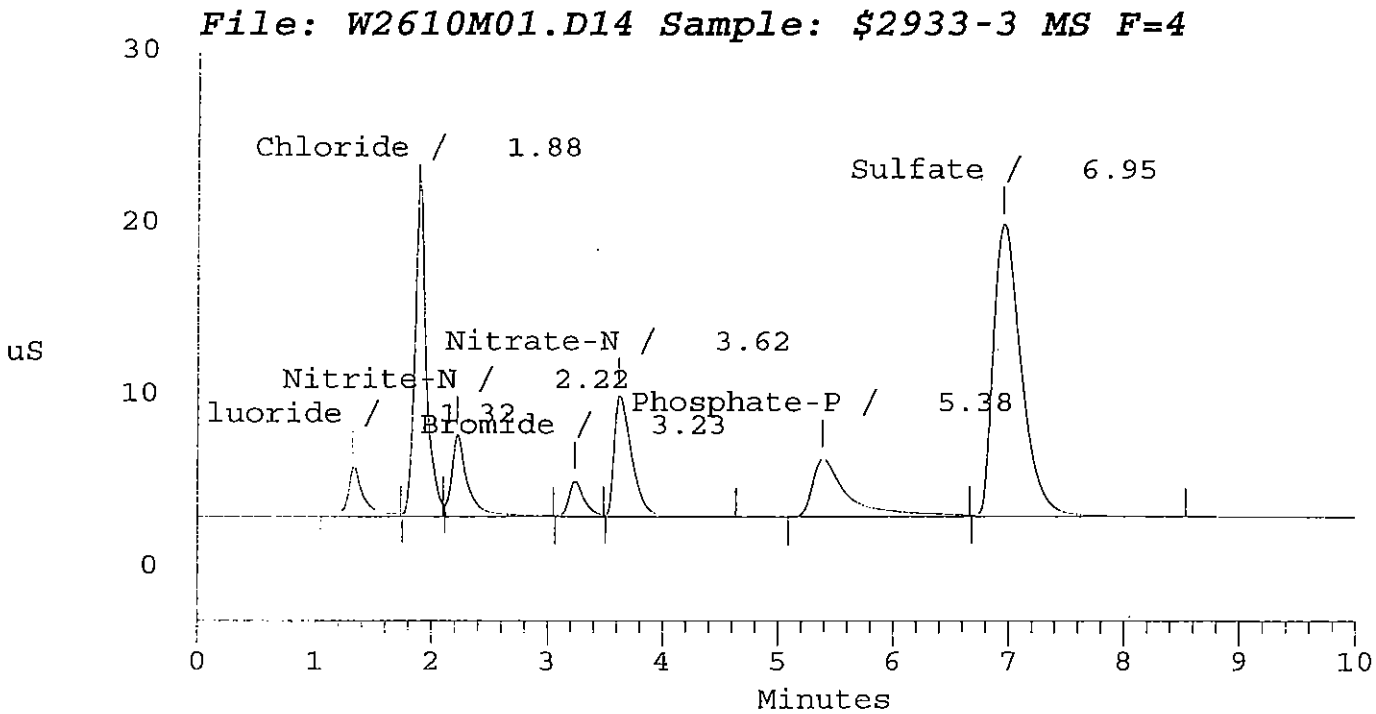
Comments: _____

```
==========================================================================
| Sample Name: $2933-3 MS F=4                  Date: 04/29/2003 15:02:03  |
| Data File  : C:\DX\DATA\03W2610\W2610M01.D14                            |
| Method     : C:\DX\METHOD\E300-063.MET                                  |
| ACI Address: 1  System: 1  Inject#: 14                Detector:COND     |
| Analyst    : David          Column: Dionex AS4A-SC                      |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	4	3000	5Hz	0.00	10.00		1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.32	Fluoride	4.875	89524	886374	2	0.00
2	1.88	Chloride	35.257	606622	4447843	2	0.00
3	2.22	Nitrite-N	6.005	156148	1513475	2	-0.61
4	3.23	Bromide	12.315	68294	627578	2	0.95
5	3.62	Nitrate-N	8.176	230058	2484588	2	0.00
6	5.38	Phosphate-P	20.828	111402	2412571	2	0.00
7	6.95	Sulfate	98.339	563434	9497492	2	0.00
		Totals	185.796	1825483	21869921		

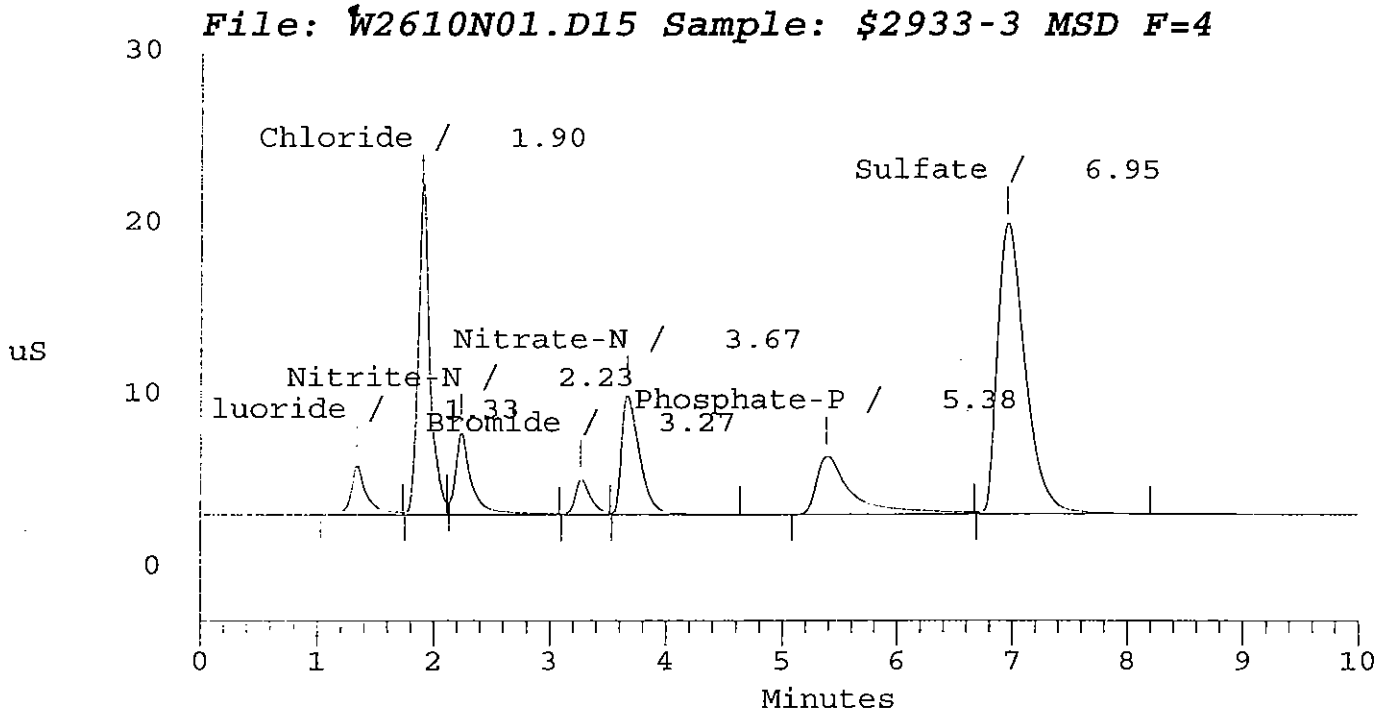


```
==========================================================================
| Sample Name: $2933-3 MSD F=4                Date: 04/29/2003 15:14:46  |
| Data File   : C:\DX\DATA\03W2610\W2610N01.D15                          |
| Method      : C:\DX\METHOD\E300-063.MET                                |
| ACI Address: 1  System: 1  Inject#: 15                Detector:COND    |
| Analyst     : David          Column: Dionex AS4A-SC                    |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	4	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.33	Fluoride	4.870	94070	885369	2	0.00
2	1.90	Chloride	35.285	621461	4451372	2	0.00
3	2.23	Nitrite-N	6.054	155160	1526034	2	-0.74
4	3.27	Bromide	12.308	67148	627202	2	0.60
5	3.67	Nitrate-N	8.119	229569	2466916	2	0.00
6	5.38	Phosphate-P	20.981	111391	2430622	2	0.00
7	6.95	Sulfate	97.386	558836	9403399	2	0.00
		Totals	185.003	1837636	21790914		



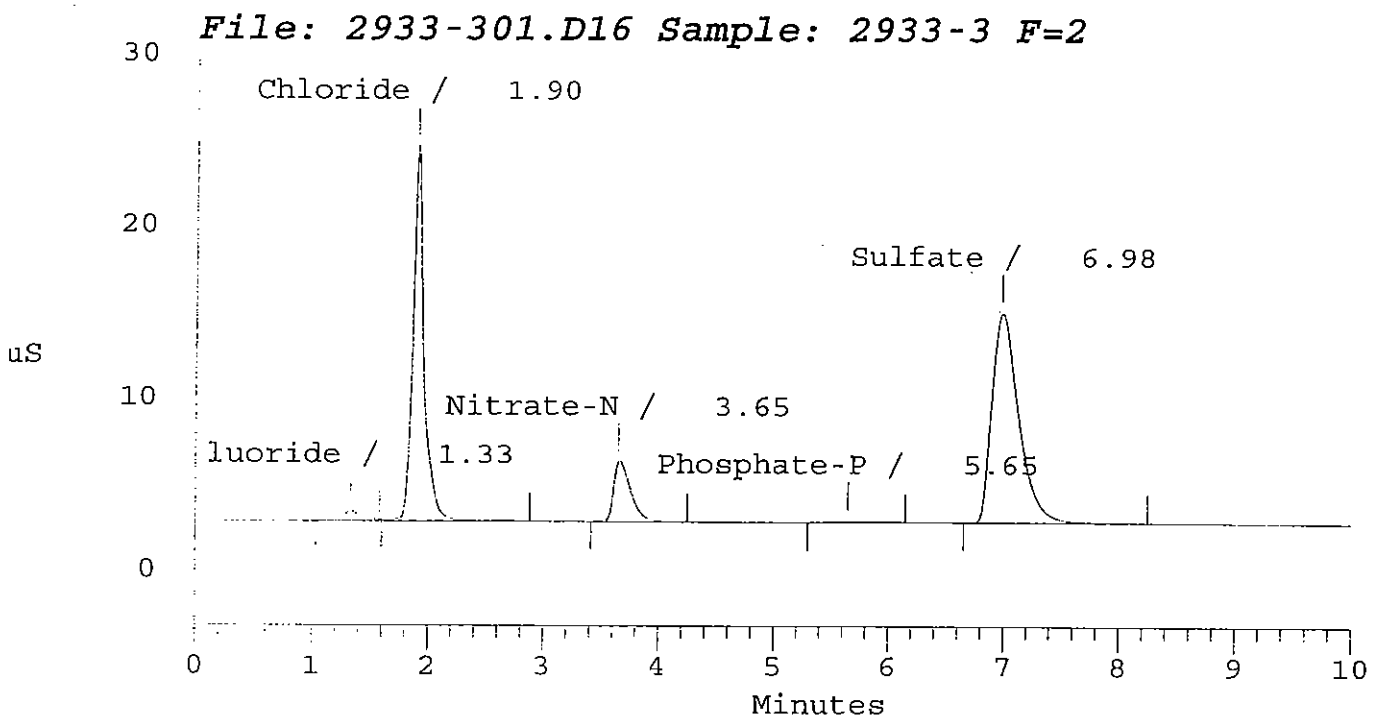
Data Reprocessed On 04/30/2003 08:41:16

Sample Name: 2933-3 F=2	Date: 04/29/2003 15:27:29
Data File : C:\DX\DATA\03W2610\2933-301.D16	
Method : C:\DX\METHOD\E300-063.MET	
ACI Address: 1 System: 1 Inject#: 16	Detector:COND
Analyst : David Column: Dionex AS4A-SC	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	2	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.33	Fluoride	0.685	19782	249693	2	0.00
2	1.90	Chloride	19.642	725037	4963342	2	0.00
0	0.00	Nitrite-N	0.000	0	0	0	0.00
0	0.00	Bromide	0.000	0	0	0	0.00
3	3.65	Nitrate-N	2.008	114259	1193775	1	0.00
4	5.65	Phosphate-P	0.345	1561	40350	1	0.00
5	6.98	Sulfate	34.672	403912	6635261	1	0.00
		Totals	57.353	1264551	13082421		



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:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2612		
LCS Filename:	-	Date Analyzed:	042903	Time Analyzed:	10:20
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	23.4	94	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: _____

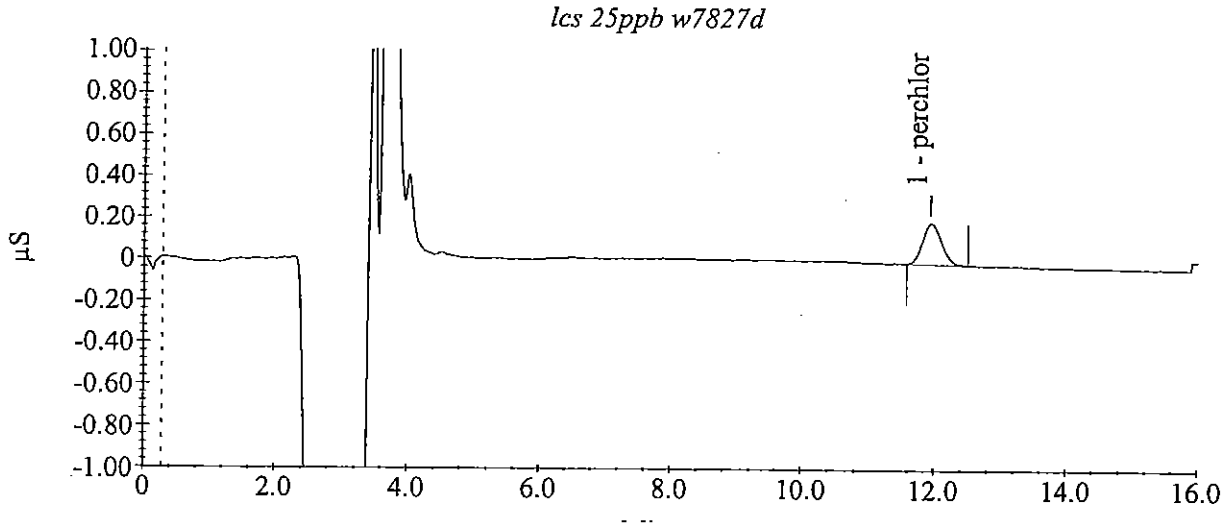
APCL Perchlorate Analysis Report

Sample Name : lcs 25ppb w7827d
Data File Name : C:\DATA\03W2612K\W2612K L01_004.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 10:20:32 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	11.93	23.36	39642.50	1970.50



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:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2612		
MS Filename:	-	Date Analyzed:	042903	Time Analyzed:	14:07
MSD Filename:	-	Date Analyzed:	042903	Time Analyzed:	14:26
MS Sample No:	**MW-17-2**	Sample Lab ID:	03-2933-3		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
PERCHLORATE	μg/L	50.0	4.1	54.6	101	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	54.2	100	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: _____

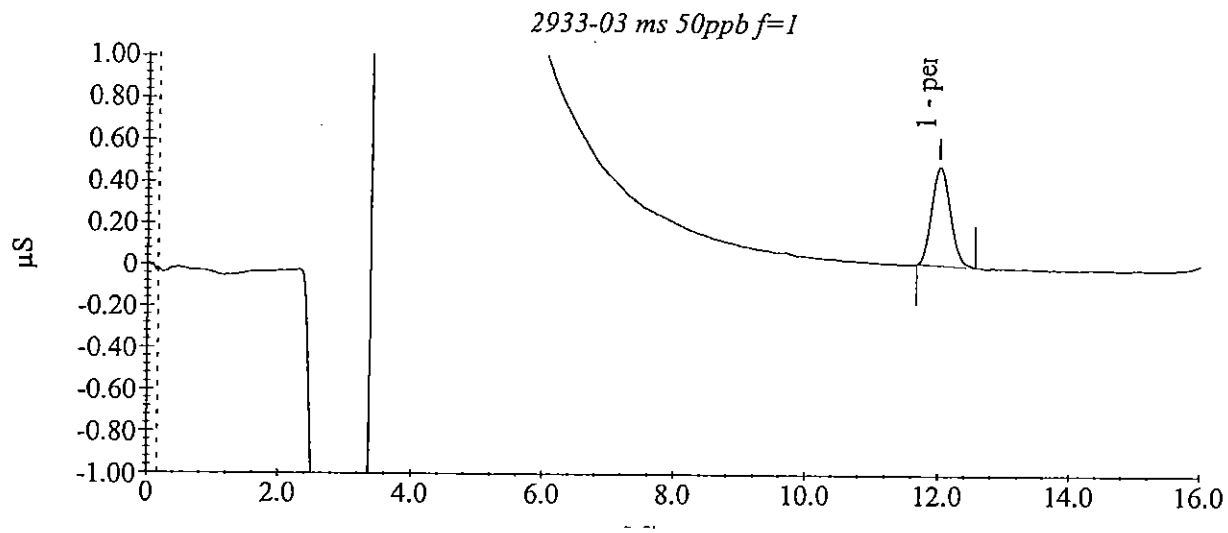
APCL Perchlorate Analysis Report

Sample Name : 2933-03 ms 50ppb f=1
Data File Name : C:\DATA\03W2612K\W2612K M01_016.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 2:07:36 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	12.00	54.58	92620.90	4700.14



Rec 101.04%

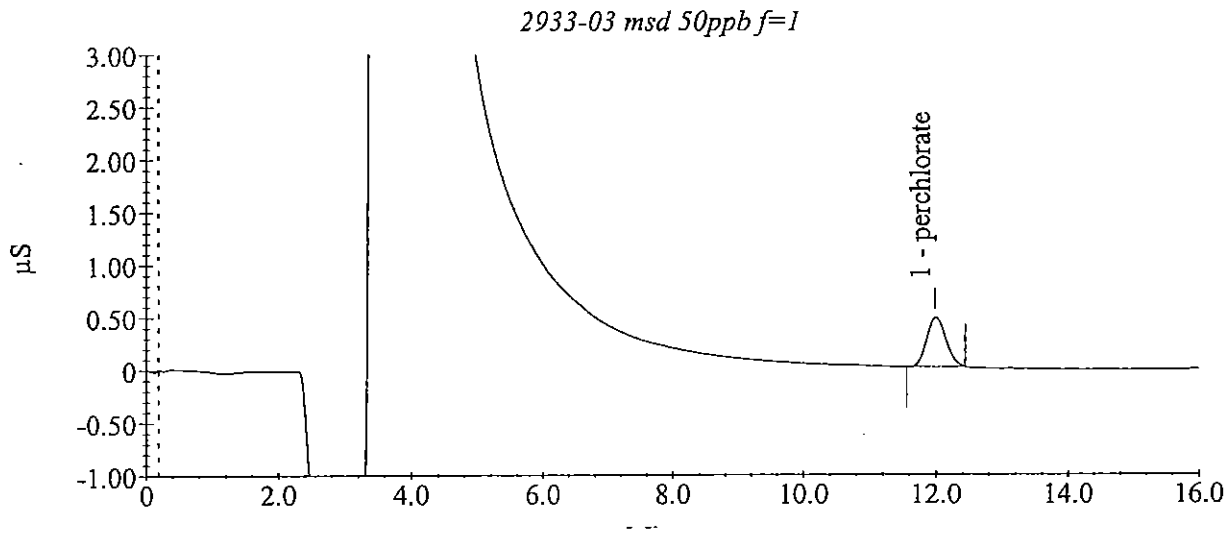
APCL Perchlorate Analysis Report

Sample Name : 2933-03 msd 50ppb f=1
Data File Name : C:\DATA\03W2612K\W2612K N01_017.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 2:26:14 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	11.98	54.19	91970.50	4640.04



Rec 100.26%

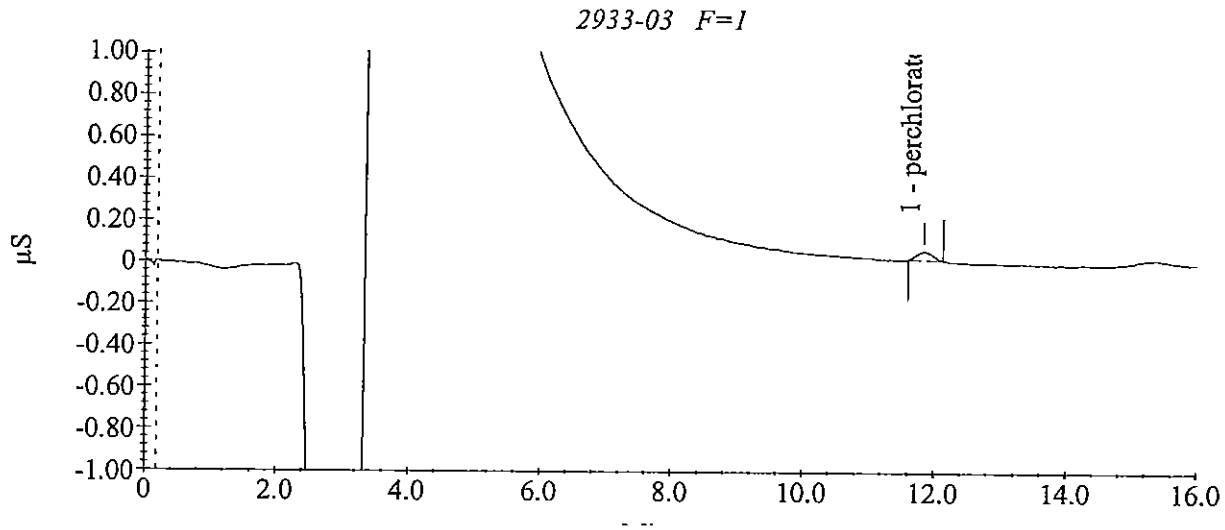
APCL Perchlorate Analysis Report

Sample Name : 2933-03 F=1
Data File Name : C:\DATA\03W2612K\2933-03_011.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 12:32:42 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	11.83	4.06	6894.30	419.66



FORM-3

Applied P & Ch Laboratory

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

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2666		
LCS Filename:	-	Date Analyzed:	050103	Time Analyzed:	16:45
LCSD Filename:	-	Date Analyzed:	050103	Time Analyzed:	16:45

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

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	410	103	2	20	88-108
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 160.1

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2666		
MS Filename:	-	Date Analyzed:	050103	Time Analyzed:	16:45
MSD Filename:	-	Date Analyzed:	050103	Time Analyzed:	16:45
MS Sample No:	**MW-23-5**	Sample Lab ID:	03-2987-6		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	263	664	100	80-119
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	670	102	2	20	80-119
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

FORM-3

Applied P & Ch Laboratory

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

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2629		
LCS Filename:	-	Date Analyzed:	042903	Time Analyzed:	16:05
LCSD Filename:	-	Date Analyzed:	042903	Time Analyzed:	16:05

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.250	100	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	0.256	102	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:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2629		
MS Filename:	-	Date Analyzed:	042903	Time Analyzed:	16:05
MSD Filename:	-	Date Analyzed:	042903	Time Analyzed:	16:05
MS Sample No:	**DUPE-4-2Q03**	Sample Lab ID:	03-2964-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.238	95	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	0.248	99	4	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: _____

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:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2719		
LCS Filename:	-	Date Analyzed:	050503	Time Analyzed:	11:00
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	24.7	99	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:	32964
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2719		
MS Filename:	-	Date Analyzed:	050503	Time Analyzed:	14:44
MSD Filename:	-	Date Analyzed:	050503	Time Analyzed:	15:02
MS Sample No:	**MW-23-5**	Sample Lab ID:	03-2987-6		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
PERCHLORATE	μg/L	50.0	0	54.2	108	75-125
# of Out-of-control					0	

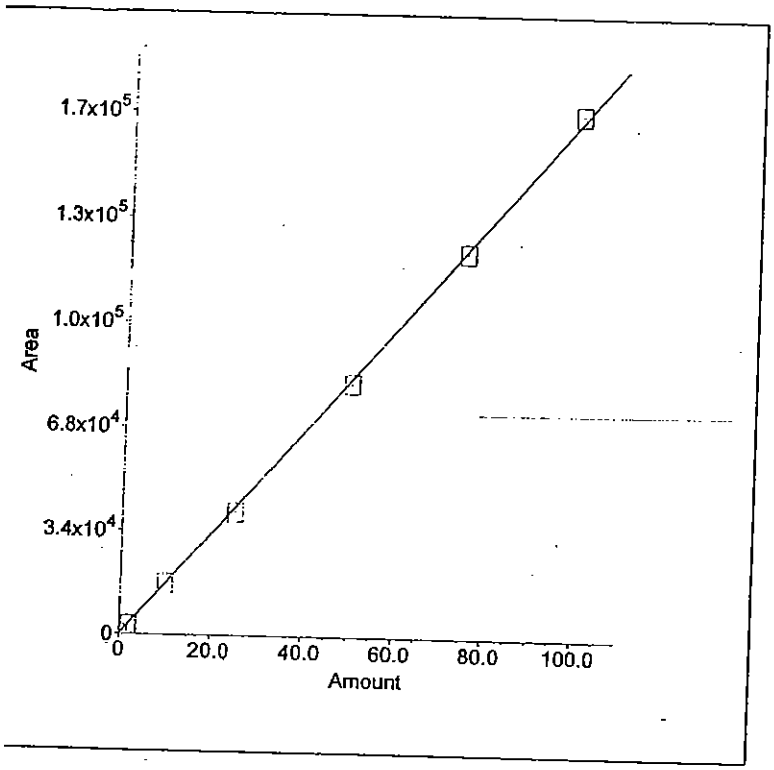
Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PERCHLORATE	μg/L	50.0	56.2	112	4	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

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

DIONEX METHOD PARAMETERS - E300-063.MET

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

System Parameters

System Name: DX-100

Number of Detectors	1
Run Time (minutes)	10.00
Sampling Rate (seconds)	0.20
Detector 1 Type	COND
Detector 1 real time plot scale maximum (uS)	30.000
minimum	-3.000
Detector 1 Output Equivalent to 1 Volt (in uS)	30.00
Detector 1 ACI Analog Input Connection	DET1
Save Data File	Yes

Data File Name: C:\DX\DATA\03W1991\W1991Q01.D10

-- DETECTOR 1 PARAMETERS --

Report Options

Create ASCII Report File	No
Print Report	Yes
Print All Components	Yes
Print Components Found	No
Print Missing Components	No
Print All Peaks	No
Print Unknown Peaks	No
Print Chromatogram	Yes
Autoscale Chromatogram Maximum	No
Autoscale Chromatogram Minimum	No
Fill Peaks with Color	No
Draw Grid Lines on Chromatogram	No
Show Component Fraction Numbers	No
Label with Peak Number	No
Label with Retention Times on Chromatogram	Yes
Label with Component Name	Yes

Format File Name: C:\DX\METHOD\DEFAULT.PRF

Integration Parameters

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

Data Events

Time	Description
0.13	Start peak detection
10.00	Stop peak detection

Calibration Parameters

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

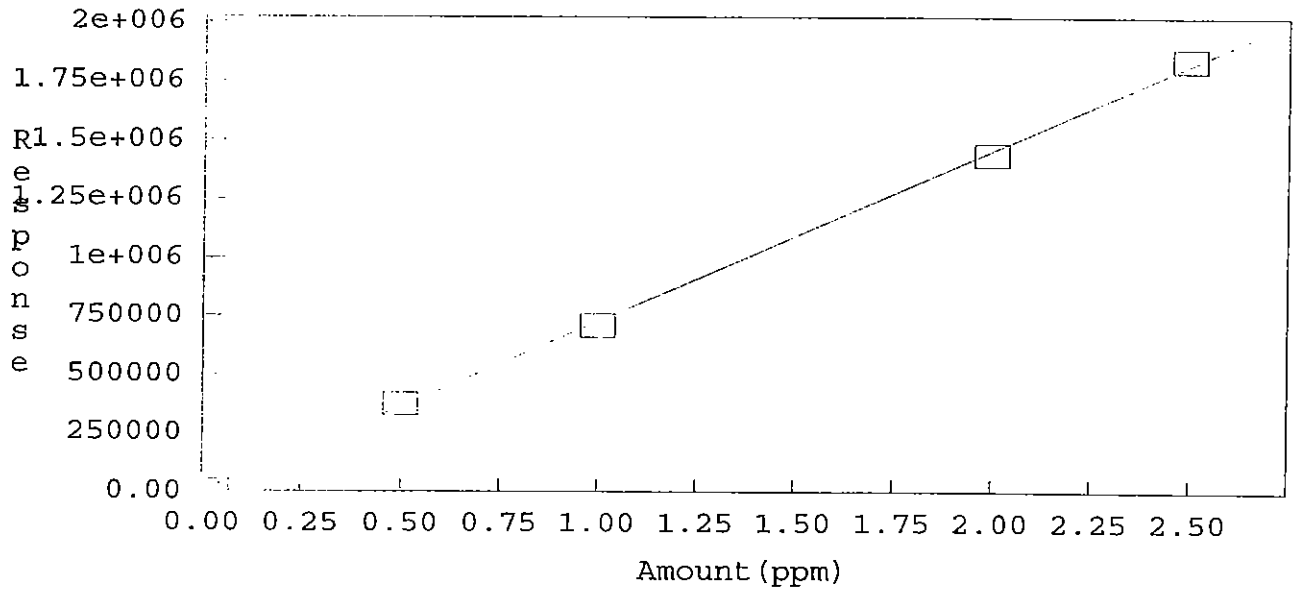
Level	Amount	Area	Height
1	3.76000E-001	129999	6524
2	7.50000E+000	2598757	138579
3	1.50000E+001	5330209	287851
4	3.00000E+001	11507107	615917
5	3.75000E+001	14859049	776426
6	0.00000E+000	0	0

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

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

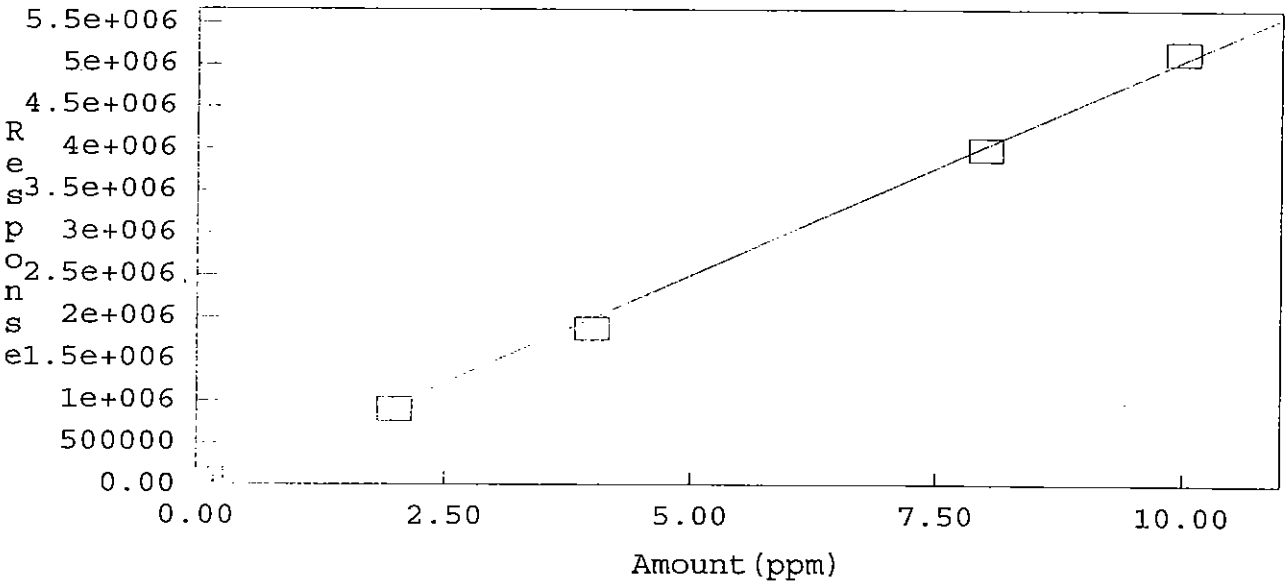
Method: E300-063.MET - Last Updated: 17:42 on Fri, 21 Mar 2003

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



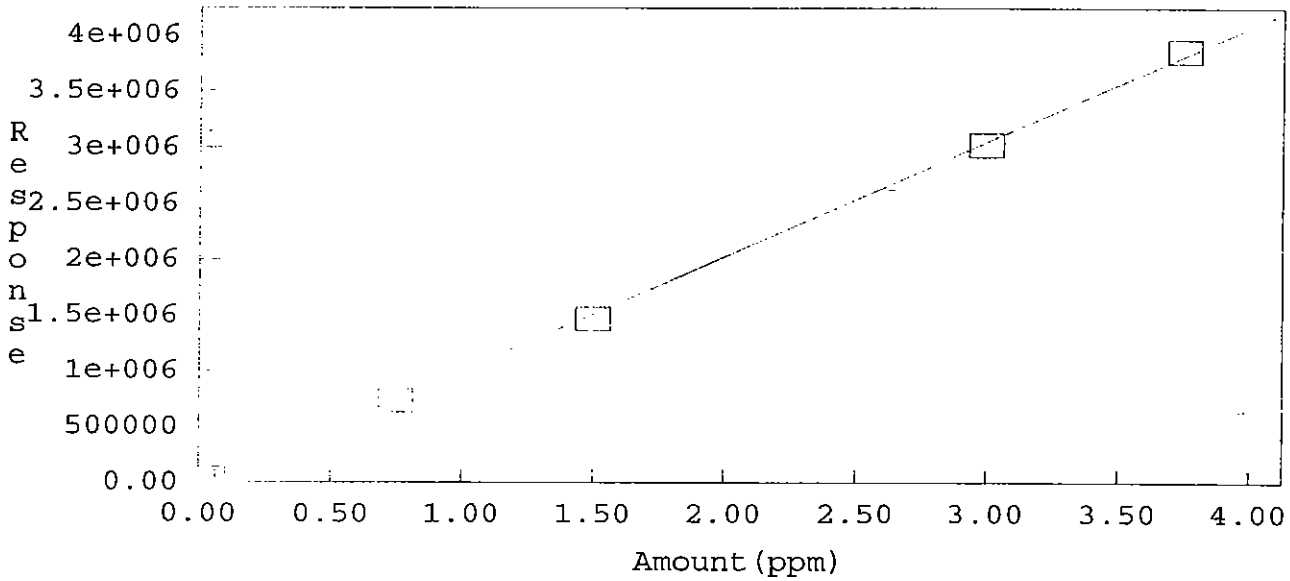
Method: C:\DX\METHOD\E300-063.MET

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



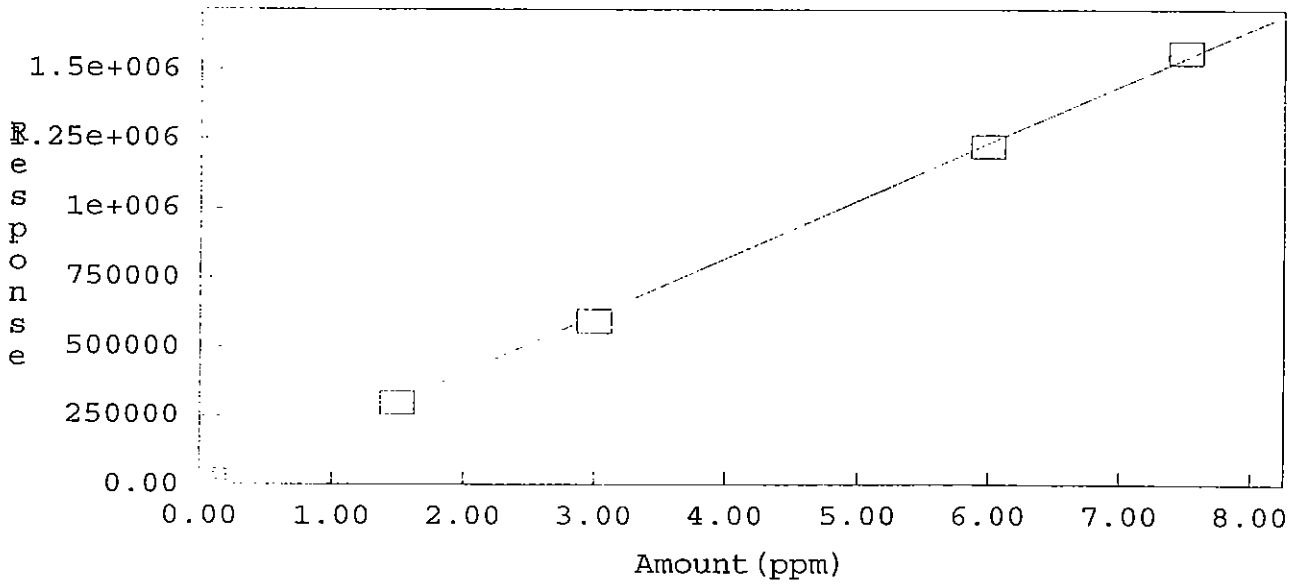
Method: C:\DX\METHOD\E300-063.MET

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



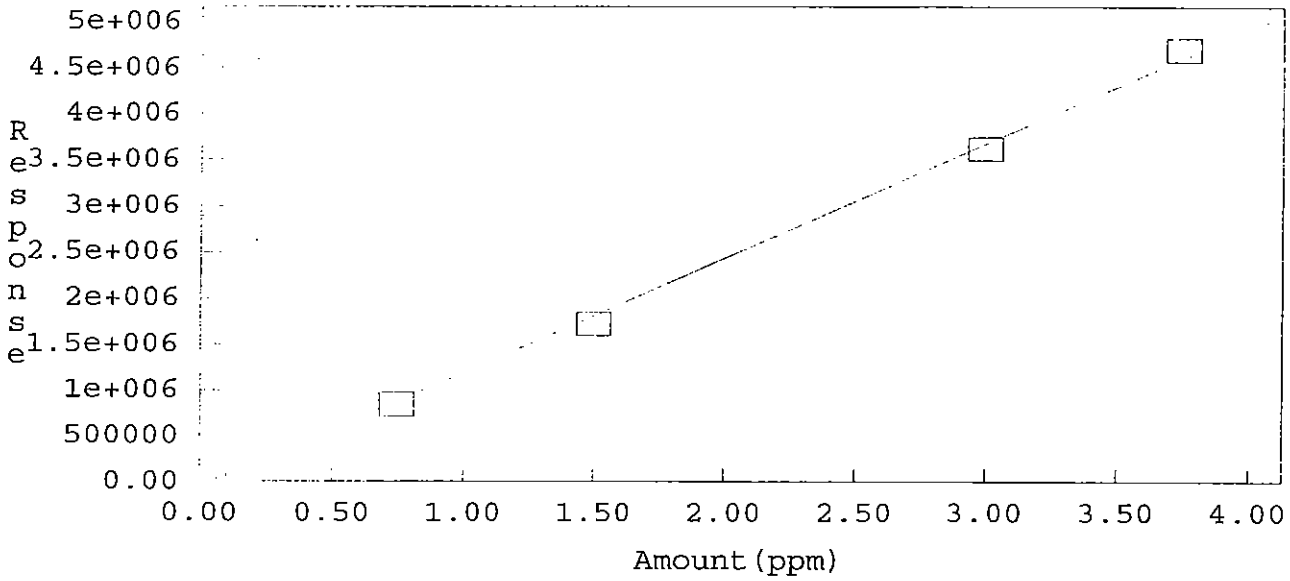
Method: C:\DX\METHOD\E300-063.MET

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



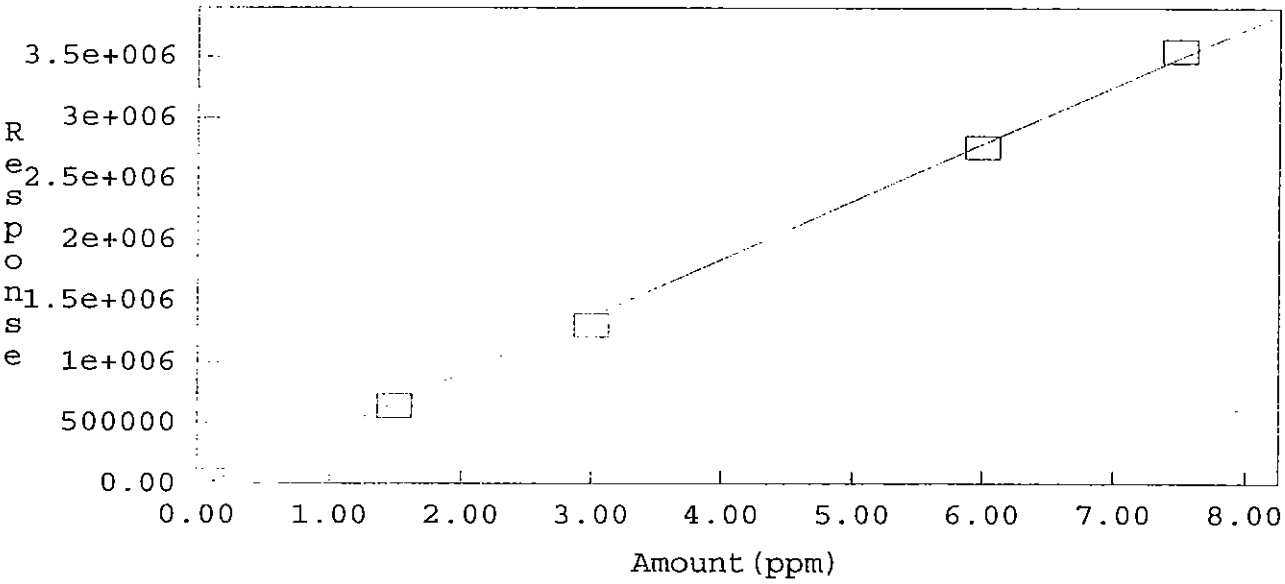
Method: C:\DX\METHOD\E300-063.MET

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



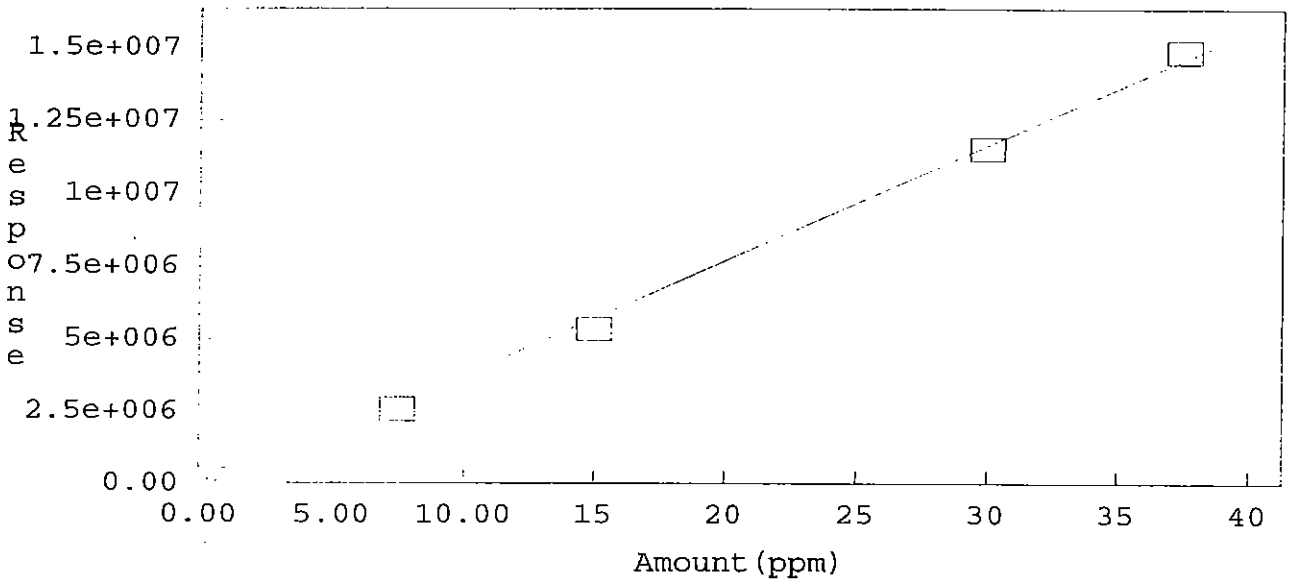
Method: C:\DX\METHOD\E300-063.MET

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



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

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



6A

INITIAL CALIBRATION DATA

Lab Name: Applied P & Ch Lab Contract: 03-2964

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

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

A= 0.000 + 0.836C

A=Absorbance

C=Concentration (mg/L)

r= 0.9997

Wet Chemistry QC Report B
Duplicate Results

Matrix: Water

APCL Service ID: 03-2964

Analysis	Batch ID	Analysis Date	Sample Name	Unit	Result	Duplicate Result	RPD %	RPD Control limit
Bicarbonate	03W2665	05/01/2003	03-2933-02	mg/L	176	175	1	20
Carbonate	03W2665	05/01/2003	03-2933-02	mg-$CaCO_3$/L	ND	ND	NC	20
pH	03W2631	04/29/2003	MW-24-5	pH unit	8.04	8.09	1	20
Bicarbonate	03W2667	05/01/2003	03-2999-01	mg/L	242.7	245.3	1	20
Carbonate	03W2667	05/01/2003	03-2999-01	mg-$CaCO_3$/L	ND	ND	NC	20

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

FORM-7

Applied P & Ch Laboratory

CCV Recovery for Wet Analysis

Client Name: GEOFON, Inc. Contract No.: Lab Code: APCL
Case No: SAS No.: Service ID: 32964
Project ID: JPL Project No.: 04-4428.10

#	Component Name	Method	Batch No.	Unit	Expe-cted	Test Result	Rec. %	Dev. %	Flag	Control Limit, %	Test Date
1	Chloride Cl^-	300.0	03W2610	mg/L	4.0	3.79	95	-5	√	90-110	04/29/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2610	mg/L	1.5	1.45	96	-4	√	90-110	04/29/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2610	mg/L	15	14.3	95	-5	√	90-110	04/29/2003
	Chloride Cl^-	300.0	03W2610	mg/L	4.0	3.91	98	-2	√	90-110	04/29/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2610	mg/L	1.5	1.49	99	-1	√	90-110	04/29/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2610	mg/L	15	15.0	100	0	√	90-110	04/29/2003
	Chloride Cl^-	300.0	03W2610	mg/L	4.0	3.93	98	-2	√	90-110	04/29/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2610	mg/L	1.5	1.52	101	1	√	90-110	04/29/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2610	mg/L	15	14.9	99	-1	√	90-110	04/29/2003
	Chloride Cl^-	300.0	03W2610	mg/L	4.0	3.88	97	-3	√	90-110	04/29/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2610	mg/L	1.5	1.50	100	0	√	90-110	04/29/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2610	mg/L	15	14.7	98	-2	√	90-110	04/29/2003
2	Perchlorate	314.0	03W2612	μg/kg	50	53.1	106	6	√	90-110	04/29/2003
	Perchlorate	314.0	03W2612	μg/kg	50	49.8	100	0	√	90-110	04/29/2003
	Perchlorate	314.0	03W2612	μg/kg	50	50.8	102	2	√	90-110	04/29/2003
	Perchlorate	314.0	03W2612	μg/kg	50	50.6	101	1	√	90-110	04/29/2003
	Perchlorate	314.0	03W2612	μg/kg	50	48.9	98	-2	√	90-110	04/29/2003
	Perchlorate	314.0	03W2612	μg/kg	50	50.9	102	2	√	90-110	04/30/2003
	Perchlorate	314.0	03W2612	μg/kg	50	50.5	101	1	√	90-110	04/30/2003
3	Chromium (VI)	7196	03W2629	mg/L	0.25	0.242	97	-3	√	90-110	04/29/2003
	Chromium (VI)	7196	03W2629	mg/L	0.25	0.242	97	-3	√	90-110	04/29/2003
4	Perchlorate	314.0	03W2719	μg/kg	50	50.6	101	1	√	90-110	05/05/2003
	Perchlorate	314.0	03W2719	μg/kg	50	50.4	101	1	√	90-110	05/05/2003
	Perchlorate	314.0	03W2719	μg/kg	50	50.9	102	2	√	90-110	05/05/2003

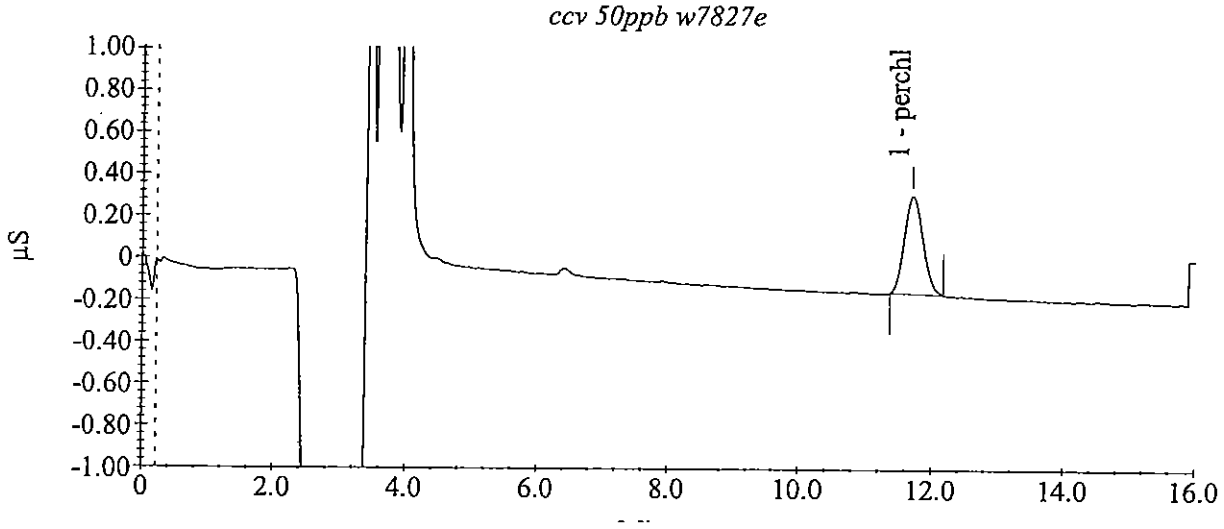
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2612K\W2612K Q01_002.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 9:42:46 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	11.70	53.11	90138.60	4631.29



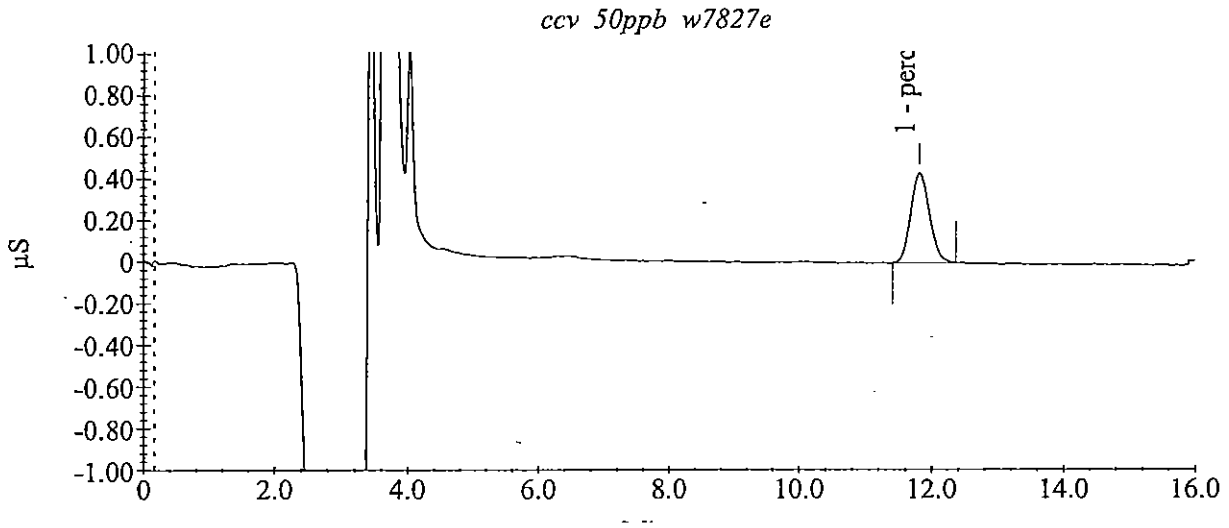
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2612K\W2612K Q02_013.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 1:10:41 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	11.82	49.81	84536.55	4310.57



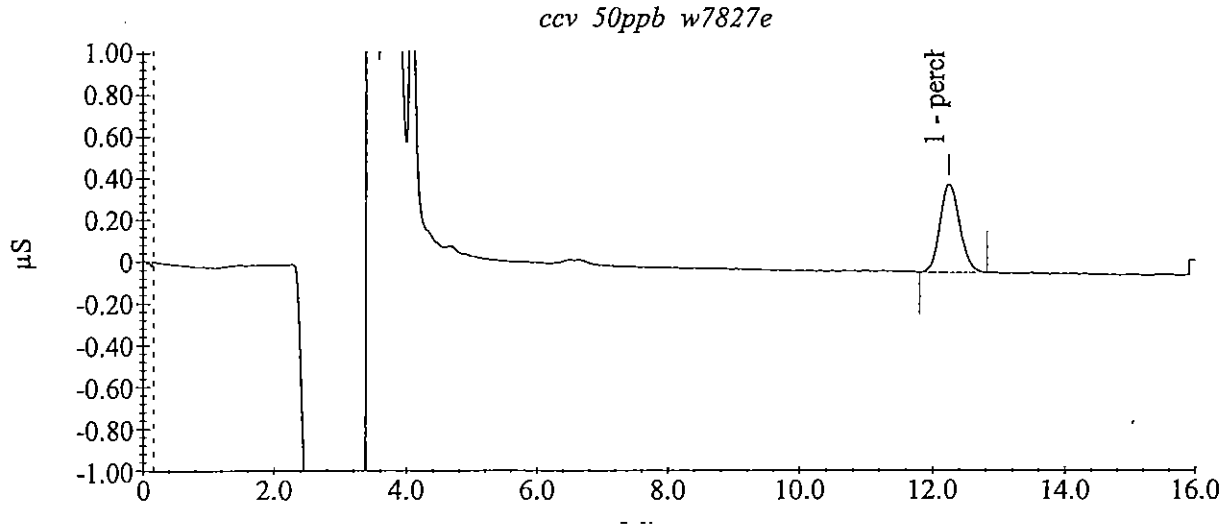
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2612K\W2612K Q03_024.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 4:37:21 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	12.25	50.84	86283.90	4216.00



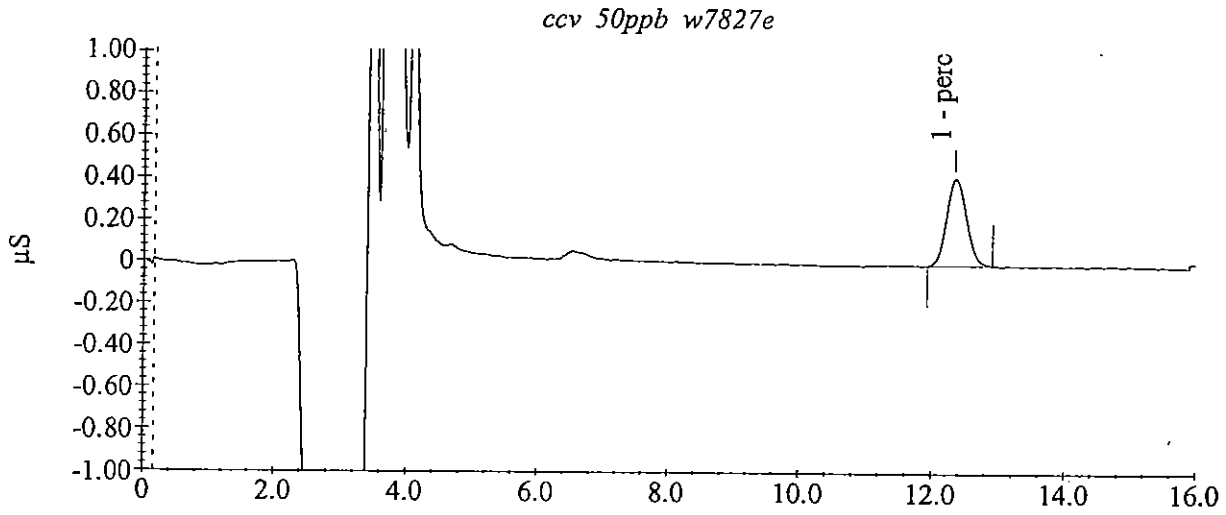
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2612K\W2612K Q04_031.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 6:49:10 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	12.33	50.59	85846.40	4131.54



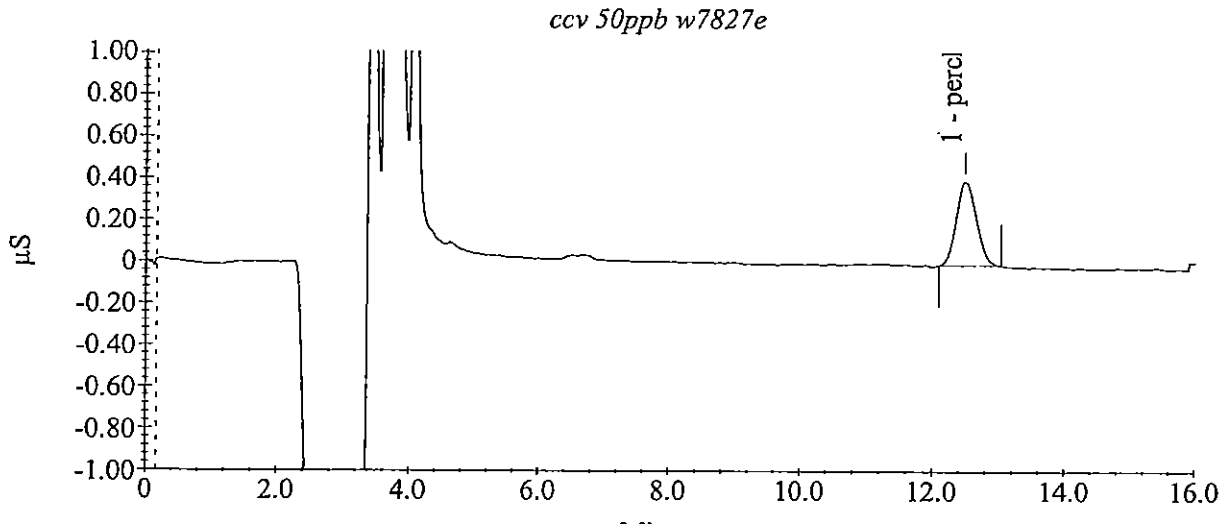
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2612K\W2612K Q05_038.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/29/2003 9:02:00 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	12.48	48.90	82980.80	3984.32



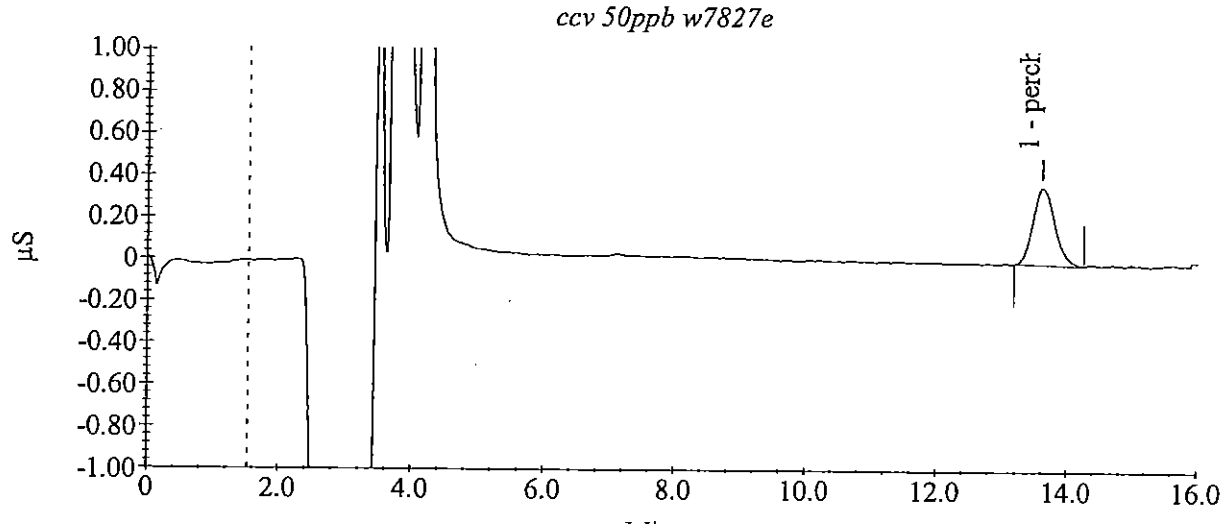
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2612K\W2612K Q06_039.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/30/2003 9:00:07 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	13.60	50.89	86369.90	3671.18



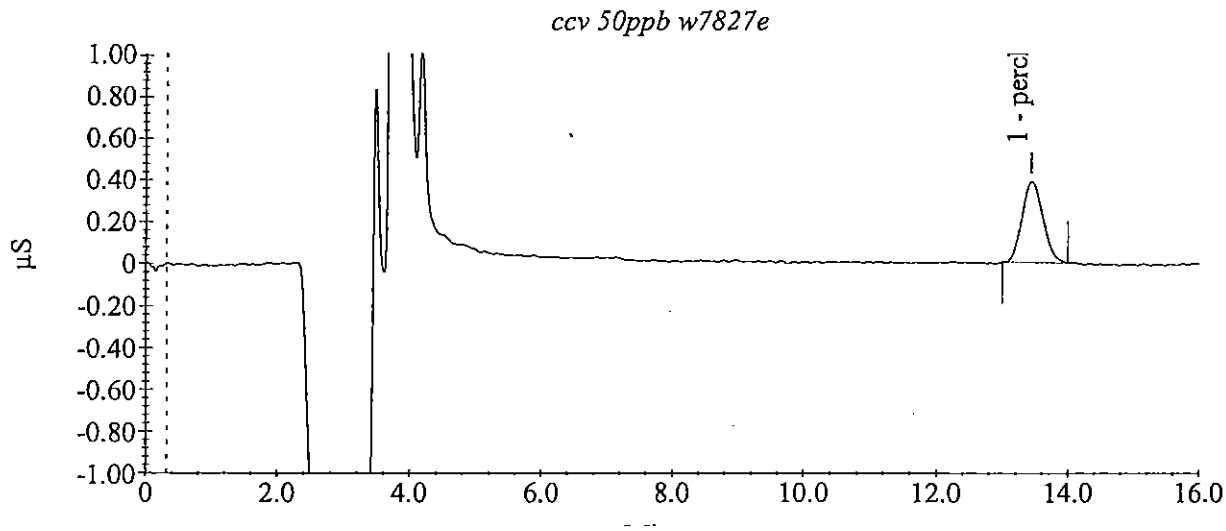
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2612K\W2612K Q07_044.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 04/30/2003 10:41:52 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	13.43	50.53	85758.80	3844.13



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

Conductance (120.1) Worksheet

06

h #for reference Matrix: W

Test Date: 6/30/03 Analyst: WW

Constant _____ Calibration STD: 0.0100M KCl

SOP: G-

	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
MB		/ =	/ =					for cl
1	2933-1	/ =	/ =			21.6		
2	-2	/ =	/ =			437		
3	-3	/ =	/ =			364		
4	-4	/ =	/ =			404		
5	-5	/ =	/ =			302		
6	-6	/ =	/ =			349		
7	2964-1	/ =	/ =			412		
8	-2	/ =	/ =			25.2		
9	-3	/ =	/ =			538		
10	-4	/ =	/ =			364		
11	-5	/ =	/ =			360		
12	-6	/ =	/ =			297		
13	-7	/ =	/ =			401		
14		/ =	/ =					
15		/ =	/ =					
16		/ =	/ =					
17		/ =	/ =					
18		/ =	/ =					
19		/ =	/ =					
20		/ =	/ =					
Dup.		/ =	/ =					

APCL Perchlorate Analysis Report

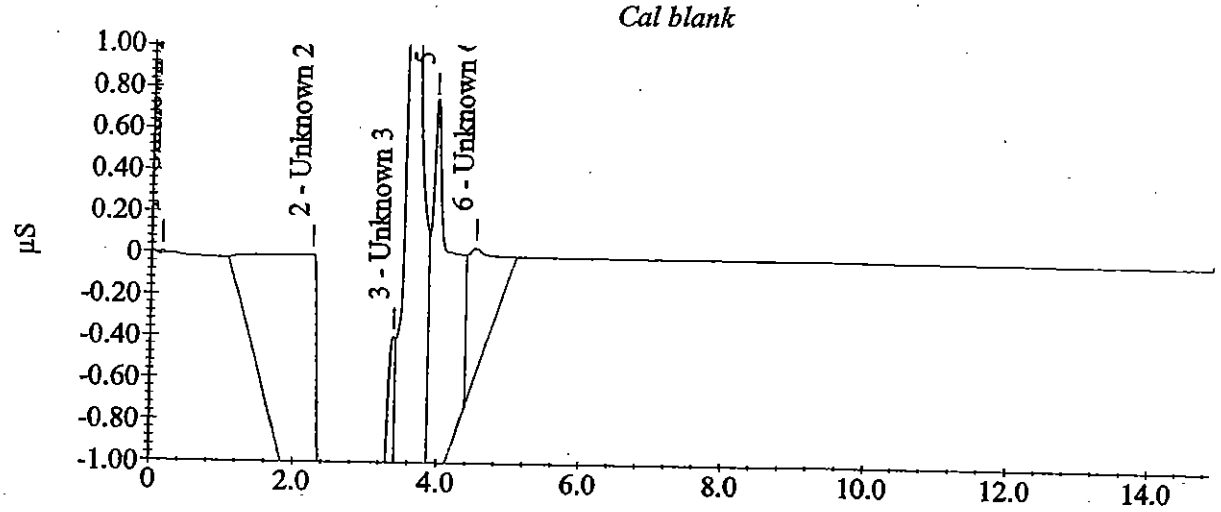
Sample Name : Cal blank
Data File Name : C:\data\E314-011\Mb_001.DXD

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

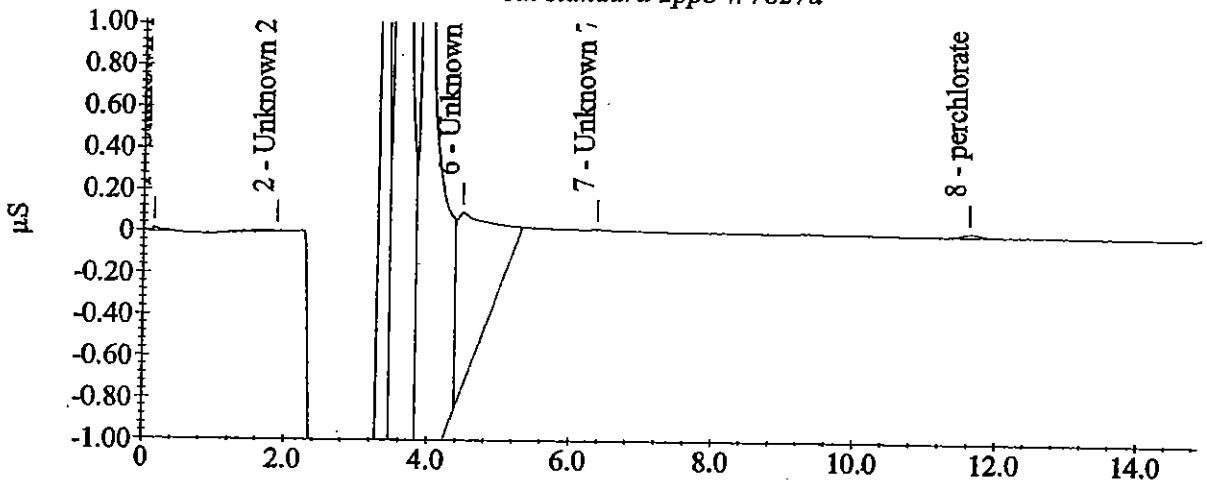
Sample Name : cal standard 2ppb W7827a
Data File Name : C:\DATA\E314-011\std-2pb_002.DXD

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

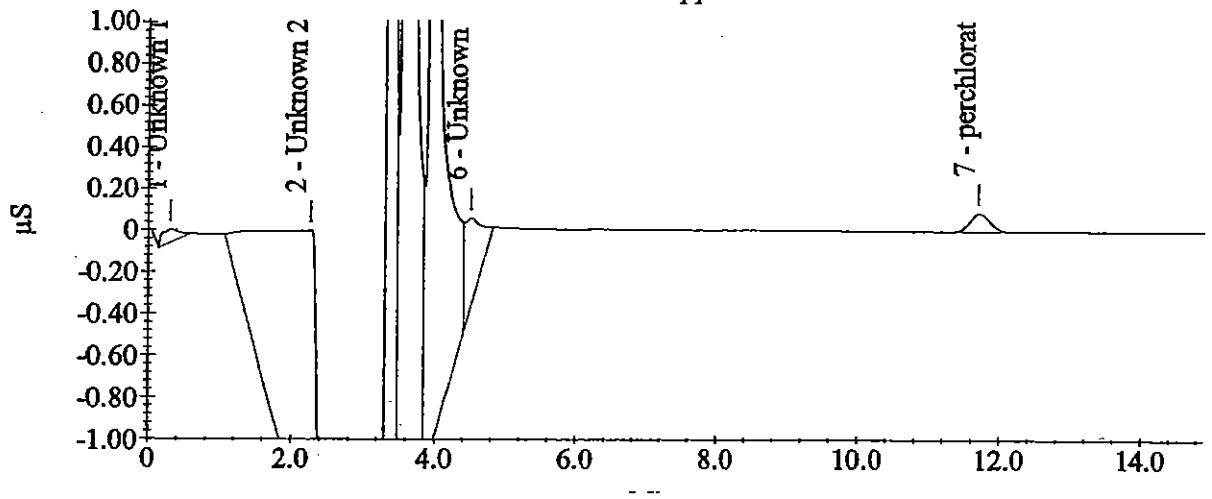
Sample Name : cal standard 10ppb W7827c
Data File Name : C:\DATA\E314-011\std-10pb_004.DXD

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

cal standard 10ppb W7827c



APCL Perchlorate Analysis Report

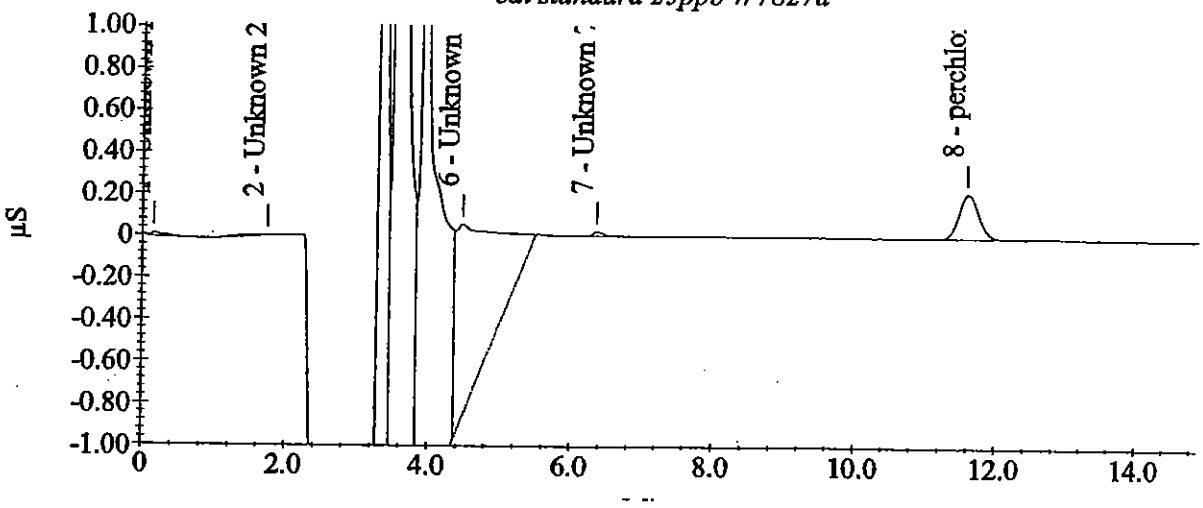
Sample Name : cal standard 25ppb W7827d
Data File Name : C:\DATA\E314-011\std-25pb_005.DXD

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



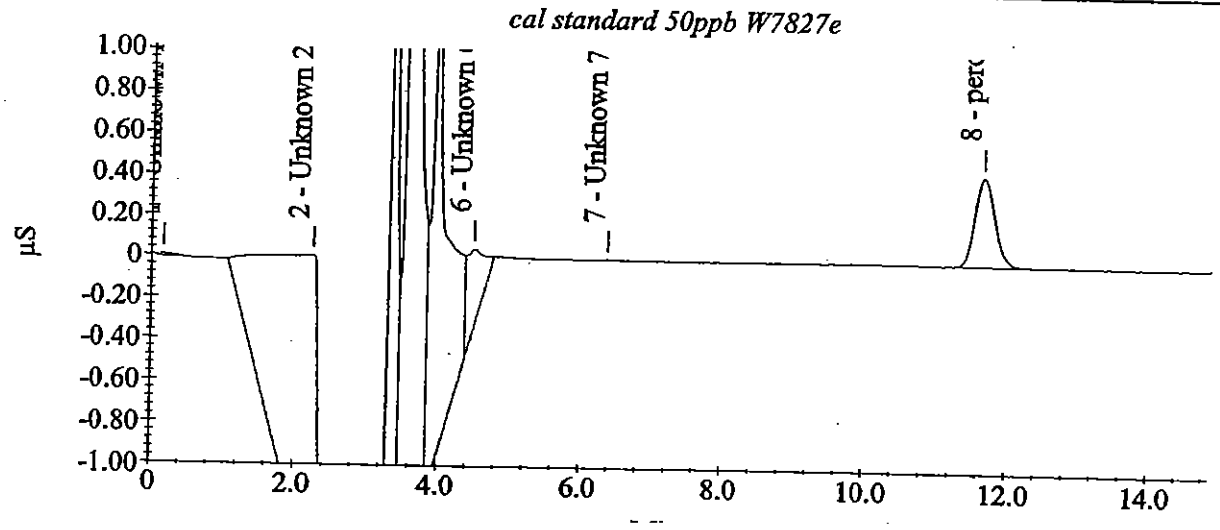
APCL Perchlorate Analysis Report

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



APCL Perchlorate Analysis Report

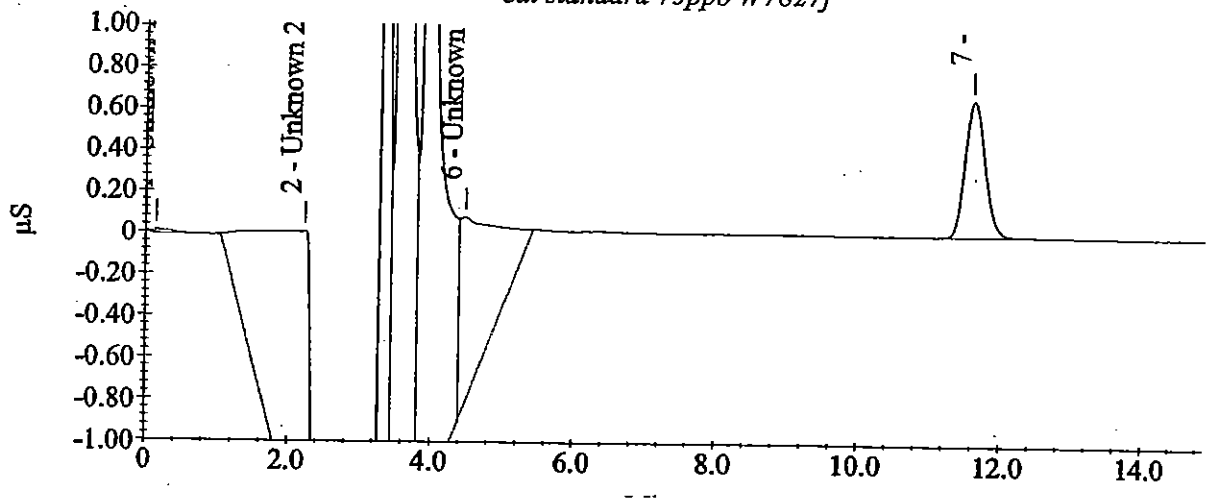
Sample Name : cal standard 75ppb W7827f
Data File Name : C:\DATA\E314-011\std-75pb_007.DXD

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

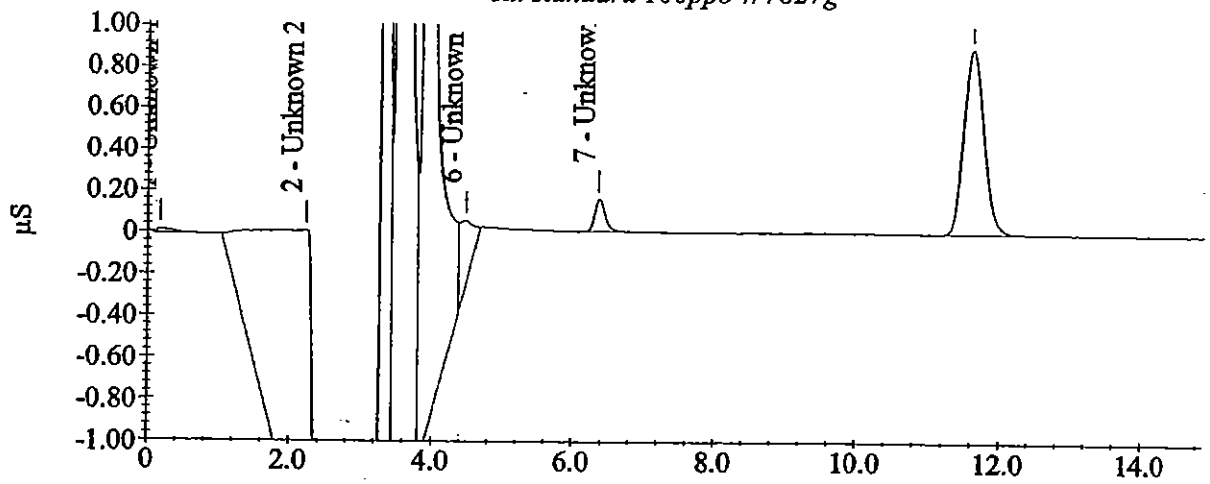
Sample Name : cal standard 100ppb W7827g
Data File Name : C:\DATA\E314-011\std-100pb_008.DXD

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	89273

cal standard 100ppb W7827g



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	
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	
23	1	1	
24	1	1	
25	1	1	
26	1	1	
27	1	1	
28	1	1	
29	1	1	
30	1	1	
31	1	1	
32	1	1	
33	1	1	
34	1	1	
35	1	1	
36	1	1	
37	1	1	
38	1	1	
39	1	1	
40	1	1	
41	1	1	
42	1	1	
43	1	1	
44	1	1	
45	1	1	
46	1	1	
47	1	1	
48	1	1	
49	1	1	
50	1	1	
51	1	1	
52	1	1	
53	1	1	
54	1	1	
55	1	1	
56	1	1	
57	1	1	
58	1	1	

efault Method Path: C:\PEAKNET\METHOD
efault Data Path: C:\DATA\03W1286K
omment:
emark:

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

nstrument: IC-K DX-500 Dionex

e	Sample	Sample Type	Level	Method	Data File	Volume	Dilution
	##03w2612kw ipc 25ppb w7759	Sample		e314-011.met	c:\data\03w2612k\w2612k ipc 25ppb	1	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2612k\w2612k q01	1	1
	ccb	Sample		e314-011.met	c:\data\03w2612k\w2612k ccb01	1	1
	lcs 25ppb w7827d	Sample		e314-011.met	c:\data\03w2612k\w2612k l01	1	1
	LCS 18PPB W7685D	Sample		e314-011.met	c:\data\03w2612k\w2612k j01	1	1
	ICCS 4ppb w7827b	Sample		e314-011.met	c:\data\03w2612k\w2612k iccs 4ppb	1	1
	mb	Sample		e314-011.met	c:\data\03w2612k\w2612k k01	1	1
	2866-05 F=1	Sample		e314-011.met	c:\data\03w2612k\2866-05	1	1
	2866-06 f=1	Sample		e314-011.met	c:\data\03w2612k\2866-06	1	1
	2866-07 F=1	Sample		e314-011.met	c:\data\03w2612k\2866-07	1	1
	2933-03 F=1	Sample		e314-011.met	c:\data\03w2612k\2933-03	1	1
	2933-01 f=1	Sample		e314-011.met	c:\data\03w2612k\2933-01	1	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2612k\w2612k q02	1	1
	ccb	Sample		e314-011.met	c:\data\03w2612k\w2612k k02	1	1
	2933-02 f=1	Sample		e314-011.met	c:\data\03w2612k\2933-02	1	1
	2933-03 ms 50ppb f=1	Sample		e314-011.met	c:\data\03w2612k\w2612k m01	1	1
	2933-03 msd 50ppb f=1	Sample		e314-011.met	c:\data\03w2612k\w2612k n01	1	1
	2933-04 F=1	Sample		e314-011.met	c:\data\03w2612k\2933-04	1	1
	2933-05 F=1	Sample		e314-011.met	c:\data\03w2612k\2933-05	1	1
	2933-06 F=1	Sample		e314-011.met	c:\data\03w2612k\2933-06	1	1
	2881-01 F=1	Sample		e314-011.met	c:\data\03w2612k\2881-01	1	1
	2881-02 F=1	Sample		e314-011.met	c:\data\03w2612k\2881-02	1	1
	2881-03 F=1	Sample		e314-011.met	c:\data\03w2612k\2881-03	1	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2612k\w2612k q03	1	1
	CCB	Sample		e314-011.met	c:\data\03w2612k\w2612k k03	1	1
	2881-04 F=1	Sample		e314-011.met	c:\data\03w2612k\2881-04	1	1
	2881-05 F=1	Sample		e314-011.met	c:\data\03w2612k\2881-05	1	1
	2881-06 F=1	Sample		e314-011.met	c:\data\03w2612k\2881-06	1	1
	2866-06 md f=2	Sample		e314-011.met	c:\data\03w2612k\w2612k d01	1	2
	2933-04 f=2	Sample		e314-011.met	c:\data\03w2612k\2933-04a	1	2
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2612k\w2612k q04	1	1
	ccb	Sample		e314-011.met	c:\data\03w2612k\w2612k k04	1	1
	2964-01 f=1	Sample		e314-011.met	c:\data\03w2612k\2964-01	1	1
	2964-02 f=1	Sample		e314-011.met	c:\data\03w2612k\2964-02	1	1
	2964-03 f=1	Sample		e314-011.met	c:\data\03w2612k\2964-03	1	1
	2964-04 f=1	Sample		e314-011.met	c:\data\03w2612k\2964-04	1	1
	2964-05 f=1	Sample		e314-011.met	c:\data\03w2612k\2964-05	1	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2612k\w2612k q05	1	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2612k\w2612k q06	1	1
	ccb	Sample		e314-011.met	c:\data\03w2612k\w2612k k05	1	1
	2964-01 f=4	Sample		e314-011.met	c:\data\03w2612k\2964-01	1	4
	2964-04 f=4	Sample		e314-011.met	c:\data\03w2612k\2964-04	1	4
	2964-03 f=20	Sample		e314-011.met	c:\data\03w2612k\2964-03	1	20
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2612k\w2612k q07	1	1
		Sample		aastopcl.met		1	1

Analyst Wei Wang

Date 4/29-30/03

Instrument IC-K

5216

ie	Weight	Int. Std.	Comment
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	

ault Method Path: C:\PEAKNET\METHOD
ault Data Path: C:\DATA\03W2531K
nment:

5217

ie	Sample	Sample Type	Level	Method	Data File	Volume	Dilution
	##03w2719kw ipc 25ppb w7759	Sample		e314-011.met	c:\data\03w2719k\w2719k ipc 25ppb	1	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2719k\w2719k q01	1	1
	ccb	Sample		e314-011.met	c:\data\03w2719k\w2719k ccb01	1	1
	lcs 25ppb w7827d	Sample		e314-011.met	c:\data\03w2719k\w2719k l01	1	1
	LCS 18PPB W7685D	Sample		e314-011.met	c:\data\03w2719k\w2719k j01	1	1
	ICCS 4ppb w7827b	Sample		e314-011.met	c:\data\03w2719k\w2719k iccs 4ppb	1	1
	mb	Sample		e314-011.met	c:\data\03w2719k\w2719k k01	1	1
	2964-06 F=1	Sample		e314-011.met	c:\data\03w2719k\2964-06	1	1
	2964-07 f=1	Sample		e314-011.met	c:\data\03w2719k\2964-07	1	1
	3000-04 F=1	Sample		e314-011.met	c:\data\03w2719k\3000-04	1	1
	2987-01 F=1	Sample		e314-011.met	c:\data\03w2719k\2987-01	1	1
	2987-06 f=1	Sample		e314-011.met	c:\data\03w2719k\2987-06	1	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2719k\w2719k q02	1	1
	ccb	Sample		e314-011.met	c:\data\03w2719k\w2719k k02	1	1
	2987-02 f=1	Sample		e314-011.met	c:\data\03w2719k\2987-02	1	1
	2987-06 ms 50ppb f=1	Sample		e314-011.met	c:\data\03w2719k\w2719k m01	1	1
	2987-06 msd 50ppb f=1	Sample		e314-011.met	c:\data\03w2719k\w2719k n01	1	1
	2987-03 F=1	Sample		e314-011.met	c:\data\03w2719k\2987-03	1	1
	2987-04 F=1	Sample		e314-011.met	c:\data\03w2719k\2987-04	1	1
	2987-05 F=1	Sample		e314-011.met	c:\data\03w2719k\2987-05	1	1
	3015-01 F=1	Sample		e314-011.met	c:\data\03w2719k\3015-01	1	1
	3015-02 F=1	Sample		e314-011.met	c:\data\03w2719k\3015-02	1	1
	3015-03 F=1	Sample		e314-011.met	c:\data\03w2719k\3015-03	1	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2719k\w2719k q03	1	1
	CCB	Sample		e314-011.met	c:\data\03w2719k\w2719k k03	1	1
	3015-04 F=1	Sample		e314-011.met	c:\data\03w2719k\3015-04	1	1
	3015-05 F=1	Sample		e314-011.met	c:\data\03w2719k\3015-05	1	1
	3015-06 F=1	Sample		e314-011.met	c:\data\03w2719k\3015-06	1	1
	3015-07 f=1	Sample		e314-011.met	c:\data\03w2719k\3015-07	1	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2719k\w2719k q04	1	1
		Sample		aastopcl.met		1	1

Analyst Wei Wang

Date 5/5/03

Instrument IC-K

5218

…ne	Weight	Int. Std.	Comment
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	
	1	1	

…fault Method Path: C:\PEAKNET\METHOD
…fault Data Path: C:\DATA\03W2531K
…mment:

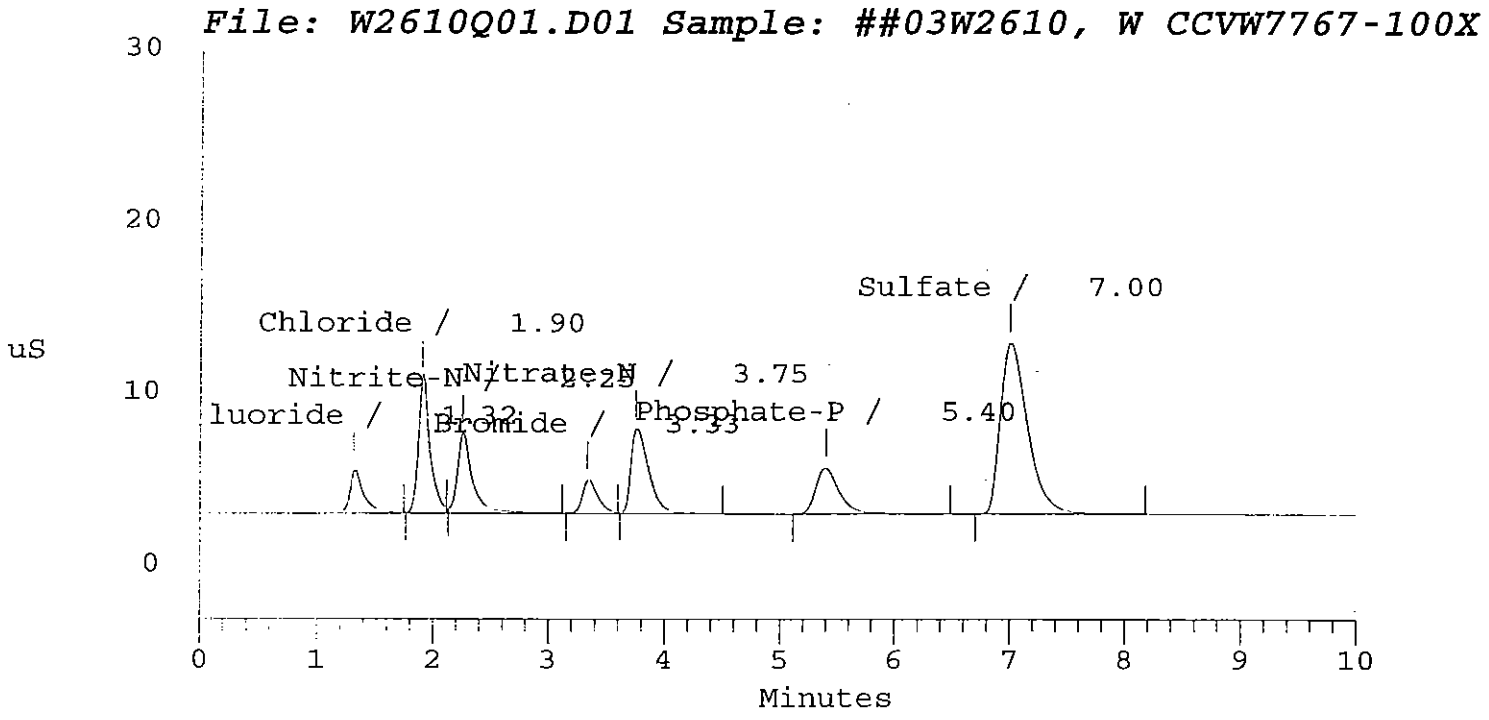
5219

```
==========================================================================
| Sample Name: ##03W2610, W CCVW7767-100X     Date: 04/29/2003 09:30:07   |
| Data File  : C:\DX\DATA\03W2610\W2610Q01.D01                            |
| Method     : C:\DX\METHOD\E300-063.MET                                  |
| ACI Address: 1  System: 1  Inject#: 1                  Detector:COND    |
| Analyst    : David          Column: Dionex AS4A-SC                      |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.32	Fluoride	0.980	79764	712859	2	0.00
2	1.90	Chloride	3.790	259383	1875133	2	0.00
3	2.25	Nitrite-N	1.445	152284	1456288	2	0.00
4	3.33	Bromide	2.952	63720	601253	2	0.37
5	3.75	Nitrate-N	1.447	162001	1743286	2	0.00
6	5.40	Phosphate-P	2.858	88318	1305904	2	0.00
7	7.00	Sulfate	14.297	330088	5435258	2	0.00
		Totals	27.770	1135558	13129980		

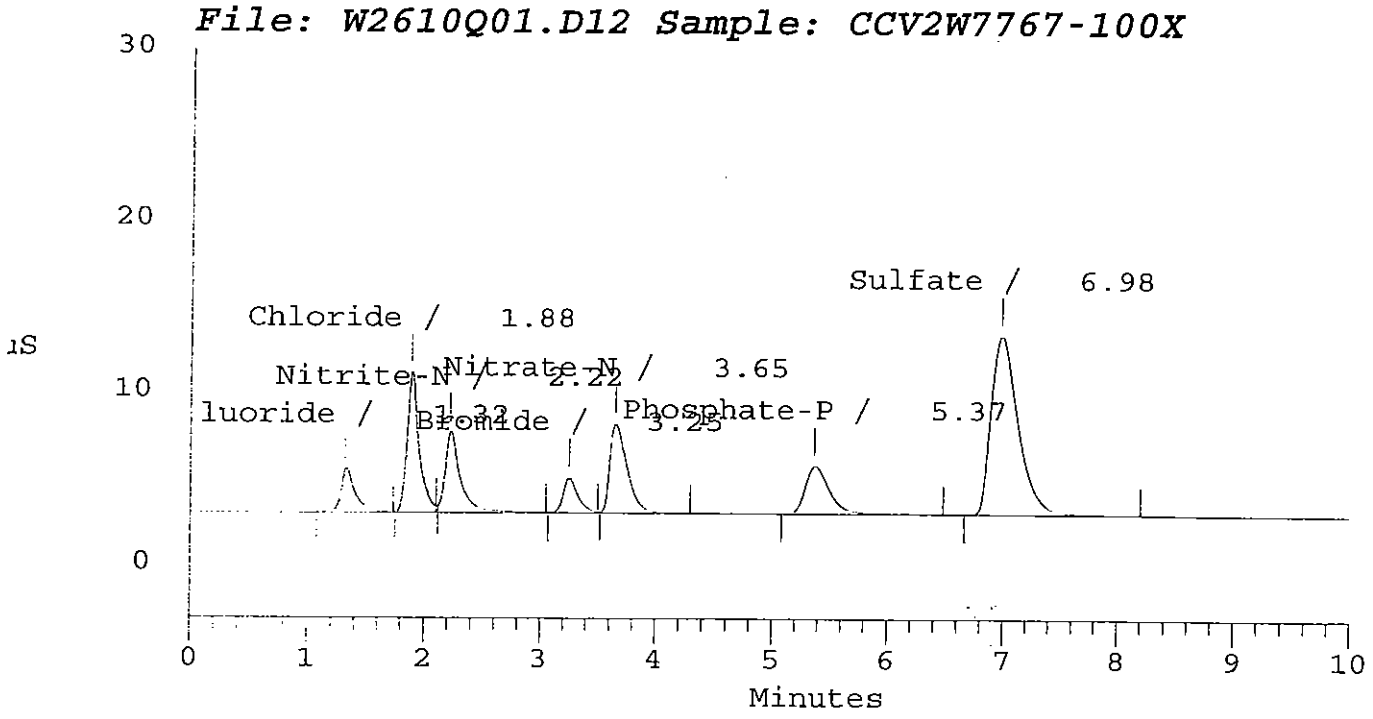


Sample Name: CCV2W7767-100X	Date: 04/29/2003 13:49:29
Data File : C:\DX\DATA\03W2610\W2610Q01.D12	
Method : C:\DX\METHOD\E300-063.MET	
ACI Address: 1 System: 1 Inject#: 12	Detector:COND
Analyst : David Column: Dionex AS4A-SC	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.32	Fluoride	1.002	81465	728507	2	0.00
2	1.88	Chloride	3.906	268843	1934663	2	0.00
3	2.22	Nitrite-N	1.456	154890	1467377	2	-0.61
4	3.25	Bromide	2.984	67764	607910	2	0.54
5	3.65	Nitrate-N	1.486	172988	1791930	2	0.00
6	5.37	Phosphate-P	2.996	91319	1370528	2	0.00
7	6.98	Sulfate	14.960	345653	5696975	2	0.00
		Totals	28.789	1182921	13597891		

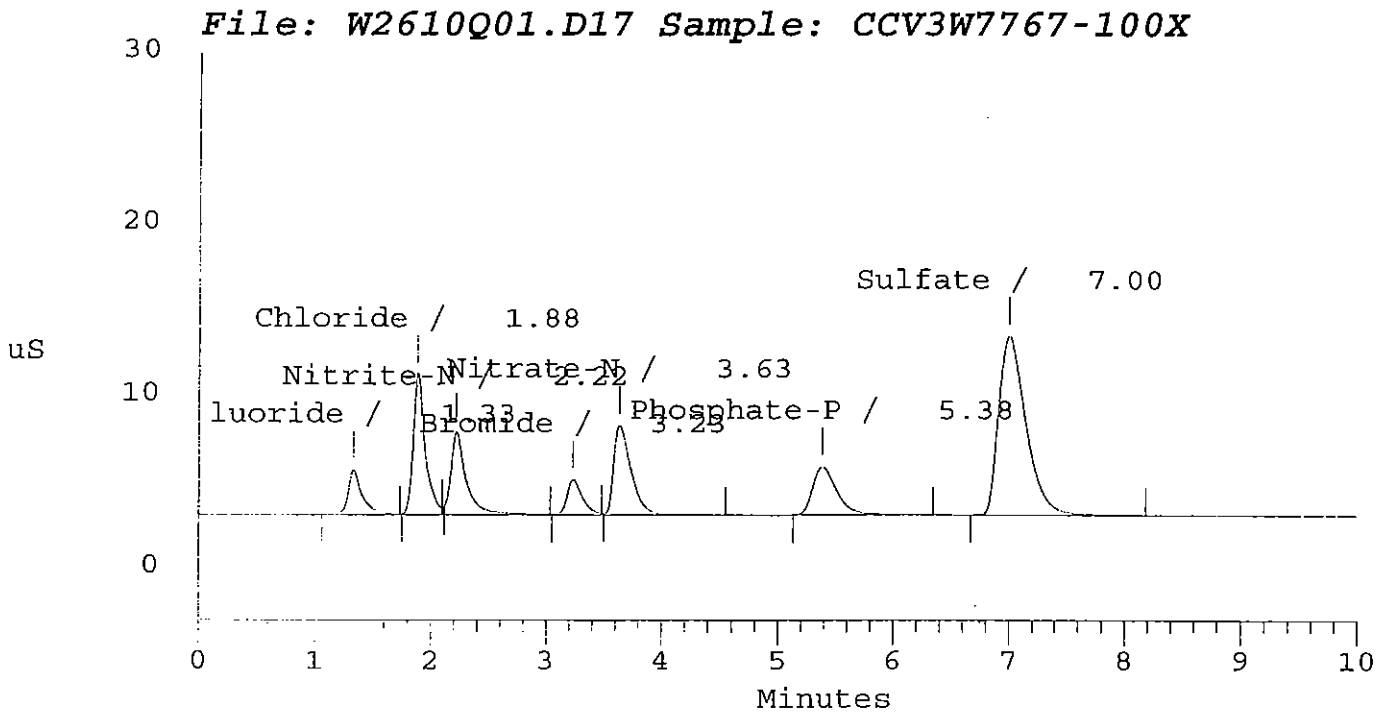


```
==========================================================================
| Sample Name: CCV3W7767-100X                    Date: 04/29/2003 16:01:30 |
| Data File  : C:\DX\DATA\03W2610\W2610Q01.D17                             |
| Method     : C:\DX\METHOD\E300-063.MET                                   |
| ACI Address: 1  System: 1  Inject#: 17                  Detector:COND    |
| Analyst    : David          Column: Dionex AS4A-SC                       |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.33	Fluoride	1.012	86492	735892	2	0.00
2	1.88	Chloride	3.933	270398	1948536	2	0.00
3	2.22	Nitrite-N	1.499	159309	1511458	2	-0.61
4	3.23	Bromide	3.071	67992	625967	2	0.48
5	3.63	Nitrate-N	1.515	173773	1827406	2	0.00
6	5.38	Phosphate-P	3.015	93298	1379498	1	0.00
7	7.00	Sulfate	14.917	345567	5680129	1	0.00
		Totals	28.962	1196829	13708886		

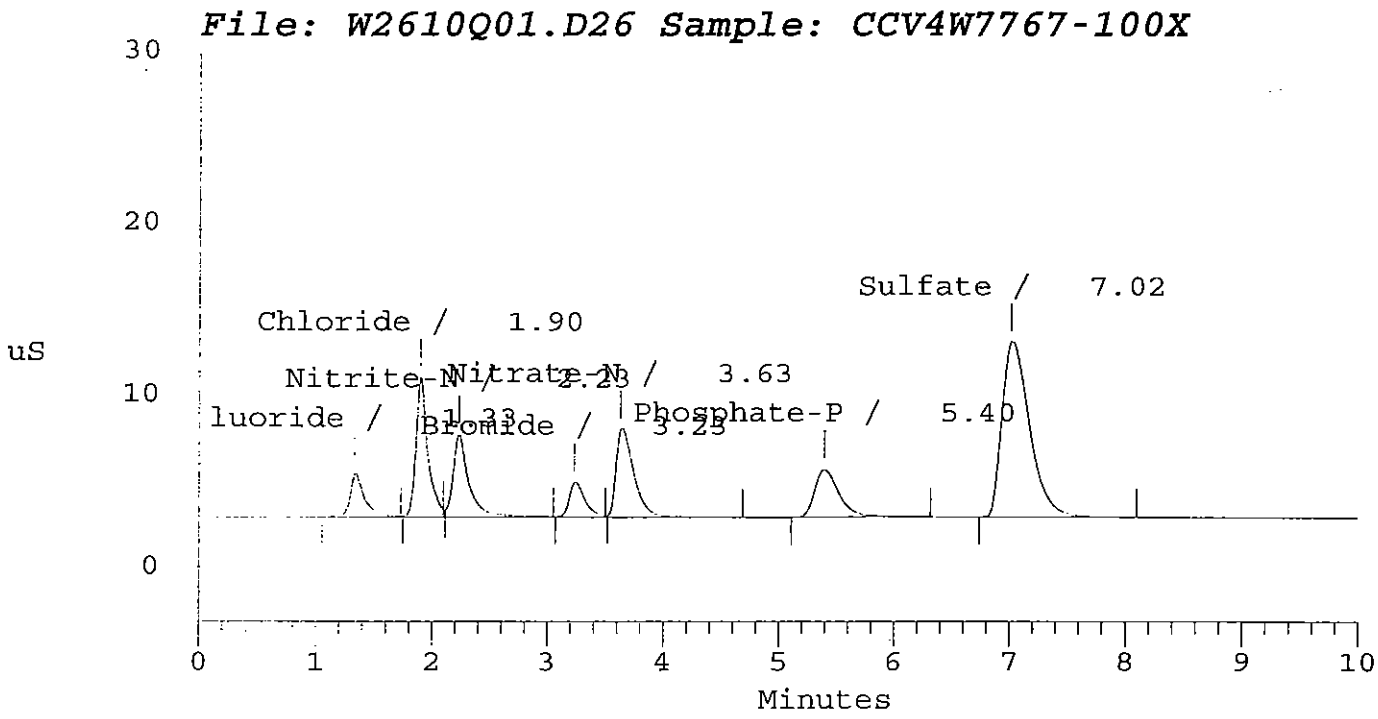


```
==========================================================================
| Sample Name: CCV4W7767-100X                    Date: 04/29/2003 19:33:22 |
| Data File  : C:\DX\DATA\03W2610\W2610Q01.D26                             |
| Method     : C:\DX\METHOD\E300-063.MET                                   |
| ACI Address: 1  System: 1  Inject#: 26                  Detector:COND    |
| Analyst    : David          Column: Dionex AS4A-SC                       |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00	1000	

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.33	Fluoride	1.003	81591	729902	2	0.00
2	1.90	Chloride	3.882	268243	1922353	2	0.00
3	2.23	Nitrite-N	1.492	158165	1503780	2	-0.74
4	3.23	Bromide	3.078	66048	627394	2	0.48
5	3.63	Nitrate-N	1.500	167940	1809582	2	0.00
6	5.40	Phosphate-P	2.936	91082	1342398	1	0.00
7	7.02	Sulfate	14.684	336373	5587915	1	0.00
		Totals	28.575	1169442	13523324		

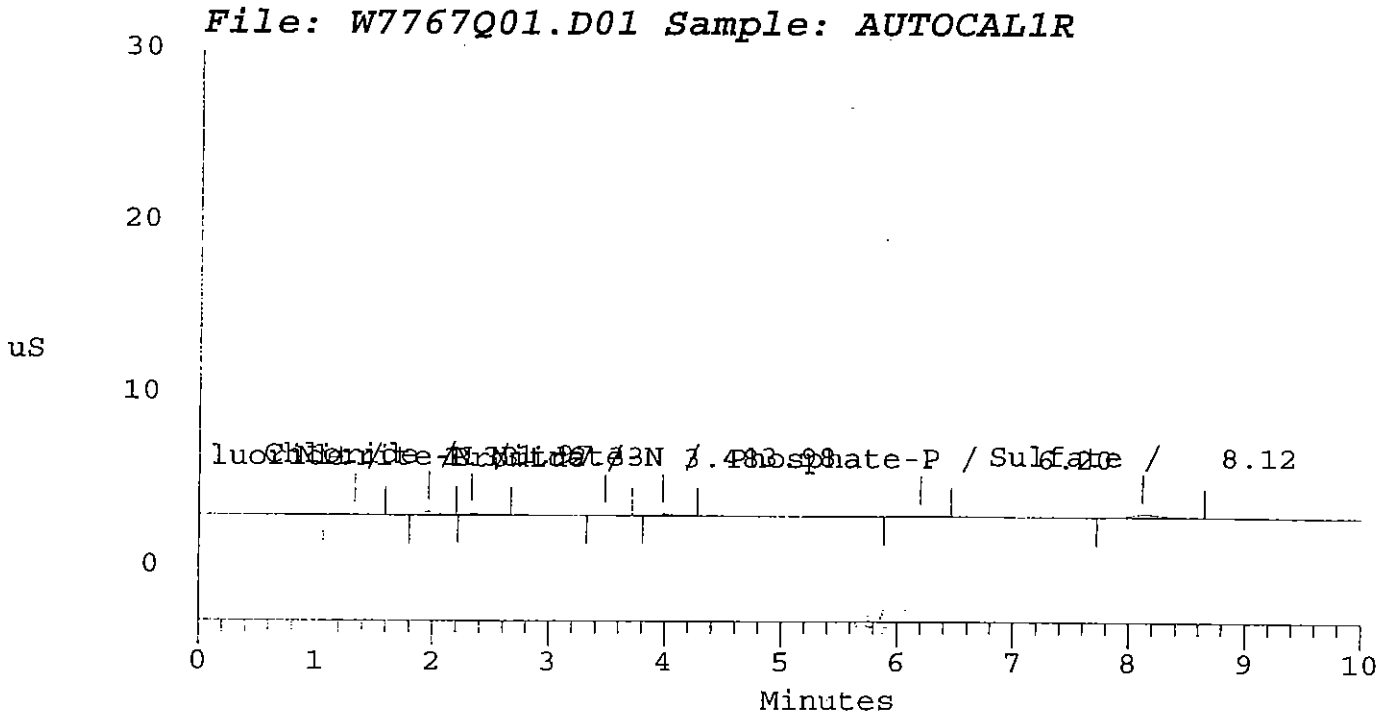


Sample Name: AUTOCAL1R	Date: 03/21/2003 16:23:08
Data File : C:\DX\DATA\E300-063\W7767Q01.D01	
Method : C:\DX\METHOD\E300-063.MET	
ACI Address: 1 System: 1 Inject#: 1	Detector:COND
Analyst : David	Column: Dionex AS4A-SC

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.33	Fluoride	0.025	2732	28534	1	0.00
2	1.97	Chloride	0.100	7044	51206	2	0.00
3	2.33	Nitrite-N	0.038	3582	30884	2	-3.33
4	3.48	Bromide	0.075	1488	13830	1	-1.47
5	3.98	Nitrate-N	0.038	3802	40157	1	0.00
6	6.20	Phosphate-P	0.075	1450	24783	1	0.00
7	8.12	Sulfate	0.376	6524	129999	1	0.00
		Totals	0.726	26621	319393		

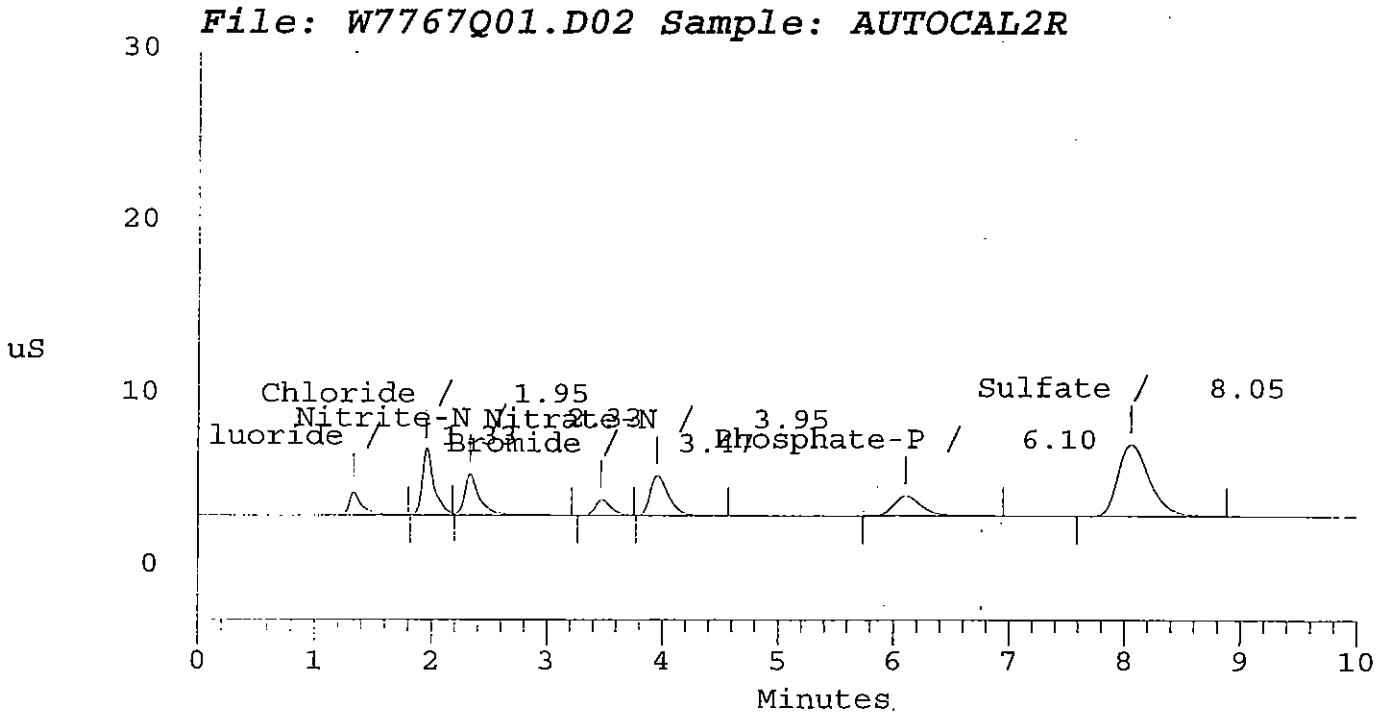


```
==========================================================================
| Sample Name: AUTOCAL2R                        Date: 03/21/2003 16:35:53  |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D02                            |
| Method     : C:\DX\METHOD\E300-063.MET                                   |
| ACI Address: 1  System: 1  Inject#: 2                   Detector:COND    |
| Analyst    : David          Column: Dionex AS4A-SC                       |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00	1000	

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.33	Fluoride	0.500	44629	373164	2	0.00
2	1.95	Chloride	2.000	126181	909455	2	0.00
3	2.33	Nitrite-N	0.750	79701	734006	2	0.85
4	3.47	Bromide	1.500	30100	298206	2	0.36
5	3.95	Nitrate-N	0.750	77129	849179	2	0.00
6	6.10	Phosphate-P	1.500	38579	642376	1	0.00
7	8.05	Sulfate	7.500	138579	2598757	1	0.00
		Totals	14.500	534896	6405142		

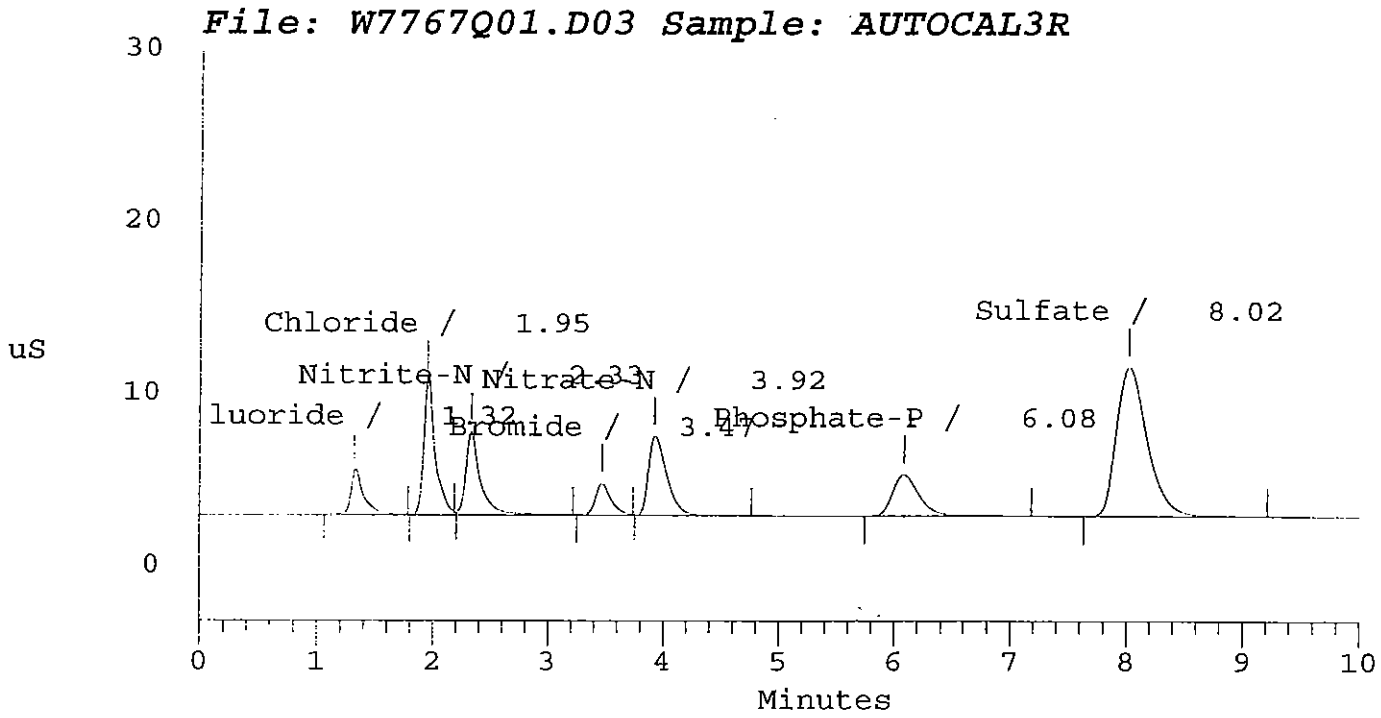


```
==========================================================================
| Sample Name: AUTOCAL3R                      Date: 03/21/2003 16:48:37   |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D03                           |
| Method     : C:\DX\METHOD\E300-063.MET                                  |
| ACI Address: 1  System: 1  Inject#: 3                  Detector:COND    |
| Analyst    : David          Column: Dionex AS4A-SC                      |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00	1000	

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.32	Fluoride	1.000	82595	707646	2	0.00
2	1.95	Chloride	4.000	261681	1856586	2	0.00
3	2.33	Nitrite-N	1.500	162005	1468106	2	0.00
4	3.47	Bromide	3.000	61776	591234	2	0.85
5	3.92	Nitrate-N	1.500	152776	1713421	2	0.00
6	6.08	Phosphate-P	3.000	79971	1301126	1	0.00
7	8.02	Sulfate	15.000	287851	5330209	1	0.00
		Totals	29.000	1088657	12968327		

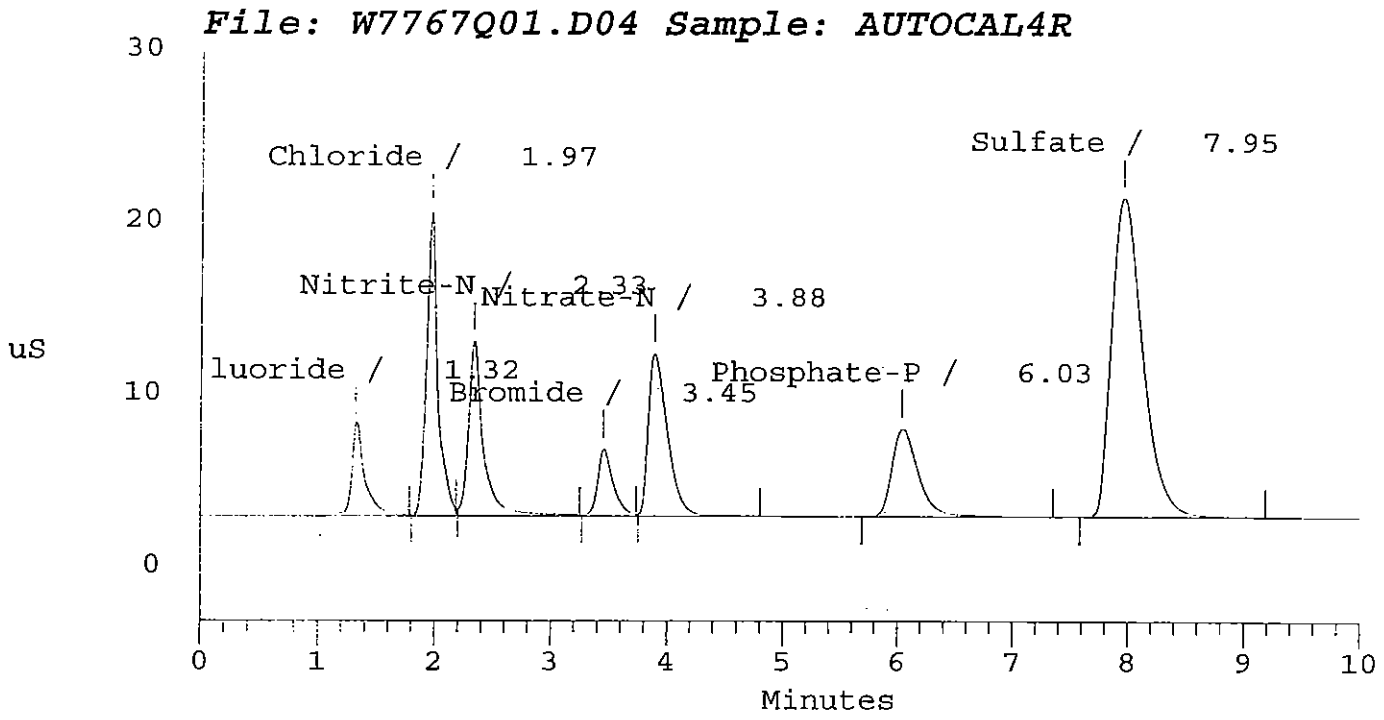


```
==============================================================================
| Sample Name: AUTOCAL4R                        Date: 03/21/2003 17:01:21      |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D04                                |
| Method     : C:\DX\METHOD\E300-063.MET                                       |
| ACI Address: 1  System: 1  Inject#: 4                    Detector:COND       |
| Analyst    : David          Column: Dionex AS4A-SC                           |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00	1000	

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.32	Fluoride	2.000	173007	1435865	2	0.00
2	1.97	Chloride	8.000	585791	3987563	2	0.00
3	2.33	Nitrite-N	3.000	336616	3021523	2	-0.85
4	3.45	Bromide	6.000	128845	1219933	2	0.37
5	3.88	Nitrate-N	3.000	313707	3610927	2	0.00
6	6.03	Phosphate-P	6.000	168994	2756481	2	0.00
7	7.95	Sulfate	30.000	615917	11507107	2	0.00
		Totals	58.000	2322876	27539399		

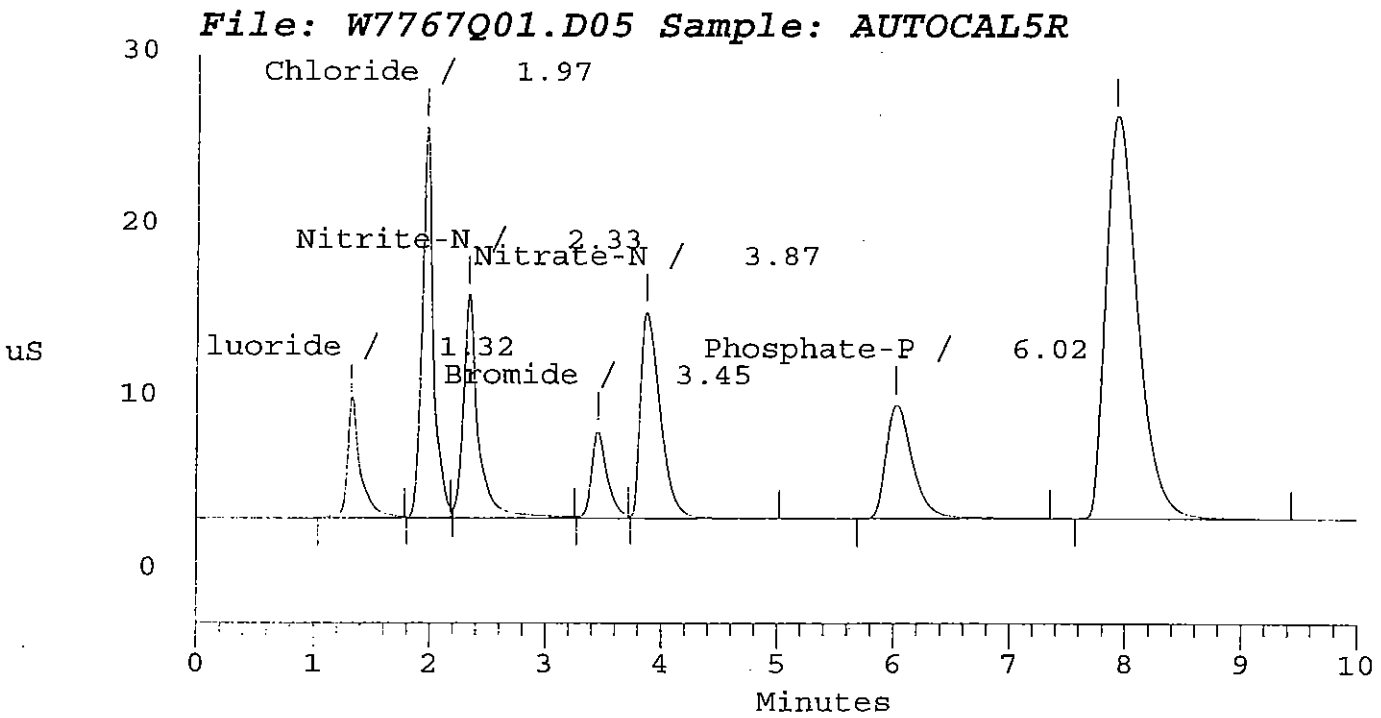


```
==========================================================================
| Sample Name: AUTOCAL5R                        Date: 03/21/2003 17:14:05  |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D05                            |
| Method     : C:\DX\METHOD\E300-063.MET                                   |
| ACI Address: 1  System: 1  Inject#: 5                   Detector:COND    |
| Analyst    : David          Column: Dionex AS4A-SC                       |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.32	Fluoride	2.500	220914	1837162	2	0.00
2	1.97	Chloride	10.000	754321	5142155	2	0.00
3	2.33	Nitrite-N	3.750	429219	3856614	2	0.00
4	3.45	Bromide	7.500	166594	1559887	2	0.43
5	3.87	Nitrate-N	3.750	396441	4688990	2	0.00
6	6.02	Phosphate-P	7.500	217521	3546397	2	0.00
7	7.92	Sulfate	37.500	776426	14859049	2	0.00
		Totals	72.500	2961435	35490255		



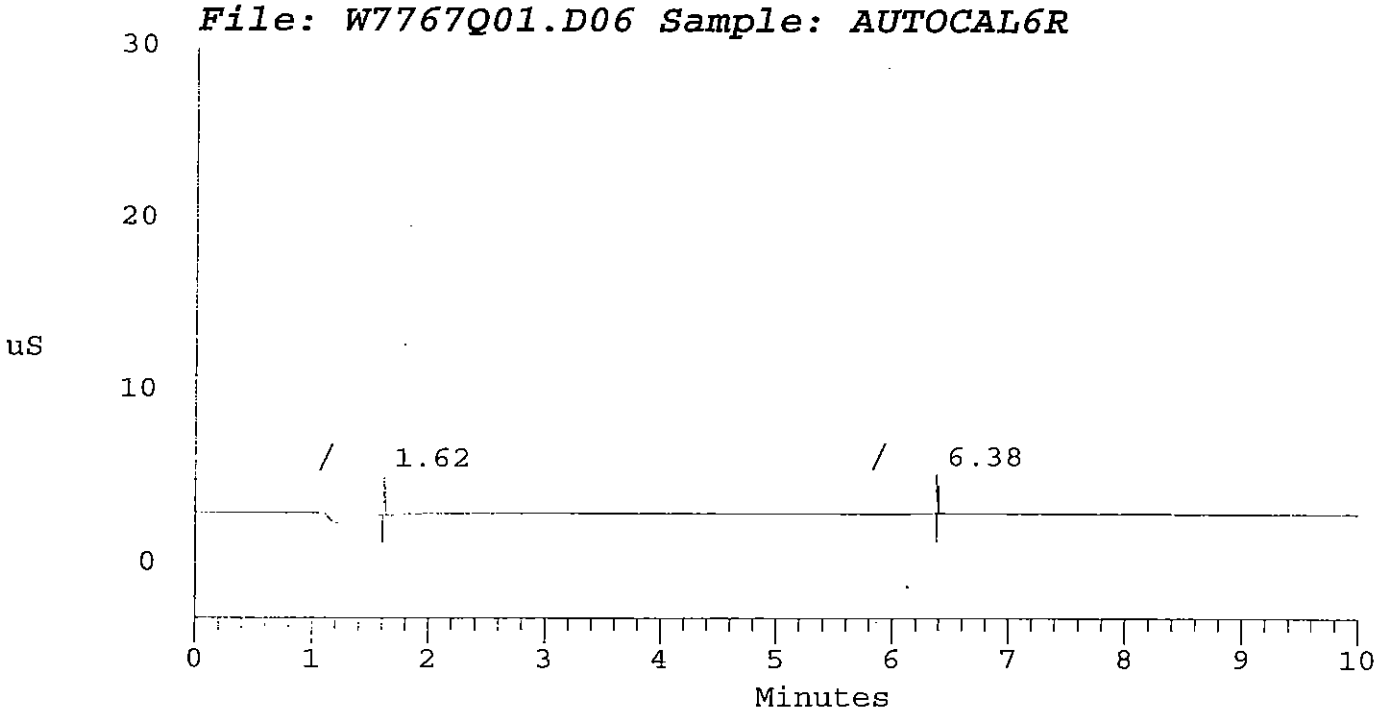
Data Reprocessed On 03/21/2003 17:39:26

Sample Name: AUTOCAL6R	Date: 03/21/2003 17:37:58
Data File : C:\DX\DATA\E300-063\W7767Q01.D06	
Method : C:\DX\METHOD\E300-063.MET	
ACI Address: 1 System: 1 Inject#: 6	Detector:COND
Analyst : David Column: Dionex AS4A-SC	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
0	0.00	Fluoride	0.000	0	0	0	0.00
0	0.00	Chloride	0.000	0	0	0	0.00
0	0.00	Nitrite-N	0.000	0	0	0	0.00
0	0.00	Bromide	0.000	0	0	0	0.00
0	0.00	Nitrate-N	0.000	0	0	0	0.00
0	0.00	Phosphate-P	0.000	0	0	0	0.00
0	0.00	Sulfate	0.000	0	0	0	0.00
		Totals	0.000	0	0		



After
3/21/03
5229
Reason: 3.3

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

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

Comment:

Analyst DL

Date 3/21/03

Instrument J

DIONEX SCHEDULE - C:\DX\SCHEDULE\03W2610.SCH

Inj#	Sample Name	Method	Data File	Vol.	Dil.	Int.Std.
1	##03W2610, W CCVW77	..\E300-063	..\W2610Q01.D01	1	1	1
2	MB RW1409	..\E300-063	..\W2610K11.D02	1	1	1
3	LCS W7768-100X	..\E300-063	..\W2610L01.D03	1	1	1
4	LCSD W7768-100X	..\E300-063	..\W2610J01.D04	1	1	1
5	2933-2 F=2	..\E300-063	..\2933-201.D05	1	2	1
6	2933-3 F=2	..\E300-063	..\2933-301.D06	1	2	1
7	2933-4 F=2	..\E300-063	..\2933-401.D07	1	2	1
8	2933-5 F=2	..\E300-063	..\2933-501.D08	1	2	1
9	2933-6 F=2	..\E300-063	..\2933-601.D09	1	2	1
10	2936-1 F=200	..\E300-063	..\2936-101.D10	1	200	1
11	2933-1 F=1.25	..\E300-063	..\2933-101.D11	1	1.25	1
12	CCV2W7767-100X	..\E300-063	..\W2610Q01.D12	1	1	1
13	MB RW1409	..\E300-063	..\W2610K01.D13	1	1	1
14	$2933-3 MS F=4	..\E300-063	..\W2610M01.D14	1	4	1
15	$2933-3 MSD F=4	..\E300-063	..\W2610N01.D15	1	4	1
16	2933-3 F=2	..\E300-063	..\2933-301.D16	1	2	1
17	CCV3W7767-100X	..\E300-063	..\W2610Q01.D17	1	1	1
18	MB RW1409	..\E300-063	..\W2610K11.D18	1	1	1
19	2964-1 F=8	..\E300-063	..\2964-101.D19	1	8	1
20	2964-3 F=5	..\E300-063	..\2964-301.D20	1	5	1
21	2964-4 F=8	..\E300-063	..\2964-401.D21	1	8	1
22	2964-5 F=4	..\E300-063	..\2964-501.D22	1	4	1
23	2964-6 F=2	..\E300-063	..\2964-601.D23	1	2	1
24	2964-7 F=2	..\E300-063	..\2964-701.D24	1	2	1
25	2964-2 F=1.25	..\E300-063	..\2964-201.D25	1	1.25	1
26	CCV4W7767-100X	..\E300-063	..\W2610Q01.D26	1	1	1
27		..\STOP.MET		1	1	1

Comment:
LCS/LCSD LOT # W7768
MS/MSD LOT # W7767
ELUENT LOT # W7868
ANALYTICAL METHOD 9056/E300 MATRIX W

Analyst Dr
Date 4/29/03
Instrument I

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

Chromium (VI) (7196) Worksheet

Batch # 03W2629 Matrix: W

[Holding Time: 24 hours!!]

Test Date: 4/29/05 Analyst: [illegible]

Test Time: 16:05 SOP: G-22

Lot #: 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 [$\bar{RF}$]=	Cal. Code:
STD-2	W-	× / = mg/L			Average $\bar{RF}$=	
STD-3	W-	× / = mg/L			C.C.= 0.9917 (≥ 0.995)	
STD-4	W-	× / = mg/L			RSD= % (≤ 15%)	
STD-5	W-	× / = mg/L			Ref. page	
STD-6	W-	× / = mg/L			A = 0.000 + 0.836	

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-7853	Expected Conc.:	×	/ =0.25 mg/L	0.202	0.242 mg/L	REC. %	90-110 %
Method Blank	Bl. Lot: T1116		/X_0 = 1	95.0/ =	0.000	mg/L	0.000 ppm	
LCS1	Bl. Lot: "		/X_0 = 1	95.0/ =	0.209	mg/L	0.250 ppm	
Sample-1	2964-1		/X_0 =	95.0/ =	0.002	mg/L	0.002 ppm	
MS on S-1	1		/X_0 =	95.0/ =	0.199	mg/L	0.238 ppm	
MSD on S-1	1		/X_0 =	95.0/ =	0.207	mg/L	0.248 ppm	
Sample 2	2		/X_0 =	95.0/ =	0.002	mg/L	0.002 ppm	
Sample 3	3		/X_0 =	95.0/ =	0.004	mg/L	0.005 ppm	
Sample 4	4		/X_0 =	95.0/ =	0.002	mg/L	0.002 ppm	
Sample 5	5		/X_0 =	95.0/ =	0.001	mg/L	0.001 ppm	
Sample 6	6		/X_0 =	95.0/ =	0.001	mg/L	0.001 ppm	
Sample 7	7		/X_0 =	95.0/ =	0.001	mg/L	0.001 ppm	
Sample 8			/X_0 =	95.0/ =		mg/L	ppm	
Sample 9			/X_0 =	95.0/ =		mg/L	ppm	
Sample 10			/X_0 =	95.0/ =		mg/L	ppm	
Blank	Lot:		/X_0 =	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot: T1116		/X_0 = 1	95.0/ =	0.214	mg/L	0.256 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/ =	0.202	0.242 mg/L	ppm	

[illegible] 4/29/05

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-7759	× / = 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

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

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

Chromium (VI) (7196) Worksheet

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

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

Calibration	STD Lot #	$C_{std} \times V_{std}/V_f = C_i$	A_i	$RF_i = A_i/C_i$	Calibration results	Note
STD-1	W-7191	× / =0.000mg/L	0.000		Least Square [RF]=	Cal. Code:
STD-2	W-	× / =0.012mg/L	0.006		Average $\bar{RF}$=	A=0.000+0.836C
STD-3	W-	× / =0.050mg/L	0.041		C.C.=0.9917 (≥ 0.995)	
STD-4	W-	× / =0.125mg/L	0.109		RSD= % (≤ 15%)	
STD-5	W-	× / =0.250mg/L	0.214		Ref. page	
STD-6	W-	× / =0.500mg/L	0.415		A=0.003+BN 1/29/03	

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0=f_1$	Treat. Ratio $V/X=f_2$	540 nm A	Concentration $C'=A/\bar{RF}$	C (Sample) $C=f_1 f_2 C'$	Anomaly Note
CCV	Lot: W-7076.	Expected Conc.:	×	/ =0.25 mg/L	0.216	0.258 mg/L	REC. %	90-110 %
Method Blank	Bl. Lot: T1115		$/X_0$ = 1	95.0/ =	0.000	mg/L	0.00 ppm	
LCS1	Bl. Lot: "		$/X_0$ =	95.0/ =	0.204	mg/L	0.244 ppm	
Sample-1	1369-1		$/X_0$ =	95.0/ =	0.000	mg/L	0.00 ppm	
MS on S-1	6		$/X_0$ =	95.0/ =	0.223	mg/L	0.266 ppm	
MSD on S-1	6		$/X_0$ =	95.0/ =	0.230	mg/L	0.275 ppm	
Sample 2	2		$/X_0$ =	95.0/ =	0.004	mg/L	0.005 ppm	
Sample 3	3		$/X_0$ =	95.0/ =	0.002	mg/L	0.002 ppm	
Sample 4	4		$/X_0$ =	95.0/ =	0.001	mg/L	0.001 ppm	
Sample 5	5		$/X_0$ =	95.0/ =	0.002	mg/L	0.002 ppm	
Sample 6	6		$/X_0$ =	95.0/ =	0.004	mg/L	0.005 ppm	
Sample 7	-		$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 8			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 9			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 10			$/X_0$ =	95.0/ =		mg/L	ppm	
Blank	Lot:		$/X_0$ =	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot: T1115		$/X_0$ = 1	95.0/ =	0.210	mg/L	0.251 ppm	
Sample 11			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 12			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 13			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 14			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 15			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 16			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 17			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 18			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 19			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 20			$/X_0$ =	95.0/ =		mg/L	ppm	
MTX Dup.	closing 0.25mg/L		$/X_0$ =	95.0/ =	0.204	mg/L	0.248 ppm	

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

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

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

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

Batch # D302665 Matrix: W Titrant H_2SO_4 Lot # W7900 Concentration (C) 0.0255 N; Test Date: 1/1/03 Analyst: DL SOP: G-51

#	Sample ID	Dilution $V_f/V_i=f_1$	Smpl Amnt V_i mL	H_2SO_4 (mL) by Phnln S_A	E_A	A	H_2SO_4 (mL) by MR-BCG S_B	E_B	B	Phnln-Alk., P	Tot. Alk., T (in unit of mgCaCO$_3$/L)	OH^-	CO_3^{2-}	HCO_3^-	Note & Anomaly
1	MB: 7116	1 =	100			0			0		0	0	0	0	
2	LCS	1 =	100						7.90		100.9				
3	LCSD	1 =	100						8.00		102.2				
4	2933-1	1 =	50.0			0			0		0	0	0	0	
5	-2	1 =	50.0			0			6.90		176.3	0	0	176.3	
6	-3	1 =	50.0			0			6.40		163.5	0	0	163.5	
7	-4	1 =	50.0			0			6.55		167.4	0	0	167.4	
8	-5	1 =	50.0			0			5.35		136.7	0	0	136.7	
9	-6	1 =	50.0			0			6.10		155.9	0	0	155.9	
10	3015-1	1 =	50.0			0			7.10		181.4	0	0	181.4	
11	-2	1 =	50.0			0			0		0	0	0	0	
12	-3	1 =	50.0			0			7.90		201.8	0	0	201.8	
13	-4	1 =	50.0			0			7.30		186.5	0	0	186.5	
14	-5	1 =	50.0			0			5.60		143.1	0	0	143.1	
15	-6	1 =	50.0			0.10			5.10	2.6	132.9	0	5.2	127.7	
16	-7	1 =	50.0			0.80			4.25	20.4	~~39.4~~ 39.1	0	40.8	88.3	
17	2999 2964-1	1 =	50.0			0.20			4.60	5.1	122.6	0	10.2	112.4	
18	2964-2	1 =	50.0			0			0		0	0	0	0	
19	-3	1 =	50.0			0			6.40		163.5	0	0	163.5	
20	-4	1 =	50.0			0.2			4.65	5.1	123.9	0	10.2	113.7	
Dup.	2933-2	1 =	50.0			0			6.85		175.0	0	0	175.0	

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

Calculation:

$A=S_A-E_A$

$B=S_B-E_B$

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

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

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

Using blue pen. Correcting by red pen.

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

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

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

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

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

Batch # 03W2667 Matrix: W Titrant H_2SO_4 Lot # W7900 Concentration (C) 0.0255N; Test Date: 5/1/03 Analyst: DZ SOP: G-51

#	Sample ID	Dilution $V_f/V_i=f_1$	Smpl Amnt V, mL	H_2SO_4 (mL) by Phnln S_A	E_A	A	H_2SO_4 (mL) by MR-BCG S_B	E_B	B	Phnln-Alk., P	Tot. Alk., T (in unit of mgCaCO$_3$/L)	OH^-	CO_3^{2-}	HCO_3^-	Note & Anomaly
1	MB: TM5	1 =	100			0			0		0	0	0	0	
2	LCS	1 =	100						7.80		99.6				
3	LCSD	1 =	100						7.95		101.6				
4	2999-1	1 =	50.0			0			9.50		242.7	0	0	242.7	
5	-2	1 =	50.0			0			12.10		309.2	0	0	309.2	
6	-3	1 =	50.0			0			9.75		249.1	0	0	249.1	
7	-4	1 =	50.0			0			0		0	0	0	0	
8	-5	1 =	50.0			0			0		0	0	0	0	
9	2987-1	1 =	50.0			0			0		0	0	0	0	
10	-2	1 =	50.0			0			9.50		242.7	0	0	242.7	
11	-3	1 =	50.0			0			8.40		214.6	0	0	214.6	
12	-4	1 =	50.0			0			5.70		145.6	0	0	145.6	
13	-5	1 =	50.0			0.10			5.00	2.6	130.3	0	5.2	125.1	
14	-6	1 =	50.0			1.80			5.55	46.0	187.8	0	92	95.8	
15	~~-7~~	1 =													
16	2964-5	1 =	50.0			0.70			5.15	17.9	149.5	0	35.8	113.7	
17	-6	1 =	50.0			0.45			4.45	11.5	125.2	0	23.0	102.2	
18	-7	1 =	50.0			0			6.50		166.1	0	0	166.1	
19		1 =													
20		1 =													
Dup.	2999-1	1 =	50.0			0			9.60		245.3	0	0	245.3	

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

Calculation:

$A=S_A-E_A$

$B=S_B-E_B$

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

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

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

Using blue pen. Correcting by red pen.

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

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

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

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

pH (150.1/9045B) Worksheet

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

Batch # 03W2599 Analysis Date: 4,28,03
Starting Time: 16:22 Ending Time: ___:___
Matrix ☒ Aqueous ☐ Soil

Standard	4.00	7.00	10.00
Lot #		2120	030659-24
Temperature °C		24.2	24.2
pH Reading		7.01	10.02
T-corrected pH		7.00	10.01
Control Limit	±0.05 pH unit		

#	Sample ID	Pre-treat	pH	Note
MB	T1116		6.87	
1	2940-2		7.58	
2	2933-1		6.54	
3	-2		7.44	
4	-3		7.97	
5	-4		8.08	
6	-5		8.01	
7	-6		8.17	
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Dup.	2940-2		7.58	

Batch # 03W2631 Analysis Date: 4,29,03
Starting Time: 16:10 Ending Time: ___:___
Matrix ☒ Aqueous ☐ Soil

Standard	4.00	7.00	10.00
Lot #		2120	030659-24
Temperature °C		24.0	24.0
pH Reading		6.99	10.00
T-corrected pH		7.00	10.01
Control Limit	±0.05 pH unit		

#	Sample ID	Pre-treat	pH	Note
MB	T1116		6.85	
1	2959-2		8.61	
2	2961-2		8.10	
3	2964-1		8.22	
4	-2		7.77	
5	-3		7.90	
6	-4		8.40	
7	-5		8.89	
8	-6		9.01	
9	-7		8.04	
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Dup.	2964-7		8.09	

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

Solid Analysis (160.1, 160.2, 160.3) Worksheet

Batch # 03W2666 Matrix W Method: 160.1 Balance No. _____ Date: 5/1/03 Analyst: DL

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

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

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

Other method (specify):

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

#	Analysis Type	Sample ID (STD Lot #)	Treatment Ratio $V_f/X=f_1$	Volume V, mL	W_1 g	W_2 1st, g	W_2 2nd, g	$\Delta W = W_2 - W_1$, g	Results (ppm)	Note
1	Blank	T116	1 =	100	112.3025	112.3027	112.3026	0.0001	1	K
2	LCS	T116	1 =	100	115.2350	115.2751	115.2752	0.0402	402	J
3	Sample-1	2946-1	1 =	100	116.5183	116.5522	116.5521	0.0339	339	101
4	MS on S-1	2987-6	1 =	100	114.1420	114.2085	114.2084	0.0664	664	C3
5	MSD on S-1	↓ -6	1 =	100	116.9510	117.0182	117.0180	0.0670	670	W
6	Sample-2	2987-1	1 =	100	111.2815	111.2820	111.2821	0.0006	6	S
7	Sample-3	-2	1 =	100	115.8749	115.9510	115.9512	0.0763	763	CK
8	Sample-4	-3	1 =	100	114.3735	114.4341	114.4341	0.0606	606	H
9	Sample-5	-4	1 =	100	121.3225	121.3508	121.3509	0.0284	284	I
10	Sample-6	-5	1 =	100	105.3168	105.3389	105.3388	0.0220	220	12
11	Sample-7	-6	1 =	100	103.9472	103.9736	103.9735	0.0263	263	14
12	Sample-8	2964-1	1 =	100	111.7941	111.8199	111.8198	0.0257	257	R
13	Sample-9	-2	1 =	100	107.7155	107.7162	107.7163	0.0008	8	O
14	Sample-10	-3	1 =	100	115.1335	115.1702	115.1700	0.0365	365	10
15	LCSD	T116	1 =	100	105.3654	105.4063	105.4064	0.0410	410	W1
16	Sample-11	2964-4	1 =	100	99.0815	99.1073	99.1072	0.0257	257	12
17	Sample-12	-5	1 =	100	103.5333	103.5549	103.5548	0.0216	216	76
18	Sample-13	-6	1 =	100	116.6555	116.6727	116.6726	0.0171	171	25
19	Sample-14	-7	1 =	100	105.9035	105.9263	105.9262	0.0227	227	19
20	Sample-15	~~2987-1~~	1 =		~~111.1112~~					~~G~~
21	Sample-16	-2	1 =							
22	Sample-17	-3	1 =							
23	Sample-18	-4	1 =							
24	Sample-19	-5	1 =							
25	Sample-20		1 =							
26	Mix Dup.		1 =							

5/1/03 DL

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL)/X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
MS	W- 7618	× 1 = 402 ppm	%	85-115 %/80-120 %
MSD	W- ↓	× 1 = ↓ ppm	%	.. ..
LCS	W- 7619	× 1 = ppm	%	90-110 %/85-115 %
LCSD	W- ↓	× 1 = ppm	%	.. ..

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

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

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

Control limits are subjected to change. The updated values are given in the latest version of APCL Technical Handbook Vol. 2

Applied P & Ch Laboratory
[illegible] Chino, CA [illegible]
Tel: (909) 590-1828 Fax: (909) 590-1498

Balance Daily Calibration Worksheet

Weight Set S/N: 12006

Calib. Date	Lab Balance: Balance #	Lab Balance: 1 g ±0.05g	Lab Balance: 10 g ±0.1g	Lab Balance: 200 g ±0.5g	Lab Balance: Note (C)	Digital Balance: Balance #	Digital Balance: 1 g ±0.02g	Digital Balance: 10 g ±0.05g	Digital Balance: 200 g ±0.10g	Digital Balance: Note (D) (C) (AR)	Analytical Balance: Balance #	Analytical Balance: 1 g ±0.0002g	Analytical Balance: 10 g ±0.0005g	Analytical Balance: 200 g ±0.0010g	Analytical Balance: Note (D) (C) (AR)	Calib. by
4/25/03	A-01	not	in	use	✓	B-01	1.00	10.00	200.00	✓✓✓	C-01	1.0000	10.0001	200.0002	✓✓✓	✓ 1/2
	~~A-02~~					B-05	0.99	9.99	199.99	✓✓✓	C-02	1.0000	10.0000	200.0001	✓✓✓	
	A-03	1.00	10.00	200.01	✓	B-06	1.00	10.00	200.01	✓✓✓	C-					
	A-04					B-07	1.00	9.99	199.99	✓✓✓	C-					
	A-		4/25/03			B-			4/25/03		C-		4/25/03			
	A-					B-					C-					
4/28/03	A-01	not	in	use	✓	B-01	1.00	10.00	200.00	✓✓✓	C-01	1.0000	10.0001	200.0001	✓✓✓	1/2
	~~A-02~~					B-05	1.00	9.99	199.99	✓✓✓	C-02	1.0000	10.0000	200.0000	✓✓✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	10.00	200.00	✓✓✓	C-					
	A-04					B-07	1.00	9.99	199.99	✓✓✓	C-					
	A-		4/28/03			B-			4/28/03		C-		4/28/03			
	A-					B-					C-					
4/29/03	A-01	not	in	use	✓	B-01	1.00	10.01	200.00	✓✓✓	C-01	1.0000	10.0001	200.0001	✓✓✓	1/2
	~~A-02~~					B-05	1.00	9.99	199.99	✓✓✓	C-02	1.0000	10.0000	200.0000	✓✓✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	10.00	200.00	✓✓✓	C-					
	A-04					B-07	1.00	9.99	199.99	✓✓✓	C-					
	A-		4/29/03			B-			4/29/03		C-		4/29/03			
	A-					B-					C-					
4/30/03	A-01	not	in	use	✓	B-01	1.00	10.01	200.00	✓✓✓	C-01	1.0000	10.0000	200.0001	✓✓✓	1/2
	~~A-02~~					B-05	1.00	9.99	199.99	✓✓✓	C-02	1.0000	10.0000	200.0000	✓✓✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	10.00	200.00	✓✓✓	C-					
	A-04					B-07	1.00	9.99	199.99	✓✓✓	C-					
	A-		4/30/03			B-			4/30/03		C-		4/30/03			
	A-					B-					C-					

Notation: (C) – Cleanliness; (D) – Display; (AR) – Auto Rezeroing.

APCL form 4-213, March 30, 1995, Ver. 4.0 No pencil. Use blue pen for record. Use red pen for correction.

[illegible] BAL-CAL-ROOT.TEX 1-Page-File: BAL-CAL1.TEX

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

Balance Daily Calibration Worksheet

069 5239

Weight Set S/N: 12006

Calib. Date	Lab Balance Balance #	Lab Balance 1 g ±0.05g	Lab Balance 10 g ±0.1g	Lab Balance 200 g ±0.5g	Lab Balance Note (C)	Digital Balance Balance #	Digital Balance 1 g ±0.02g	Digital Balance 10 g ±0.05g	Digital Balance 200 g ±0.10g	Digital Balance Note (D) (C) (AR)	Analytical Balance Balance #	Analytical Balance 1 g ±0.0002g	Analytical Balance 10 g ±0.0005g	Analytical Balance 200 g ±0.0010g	Analytical Balance Note (D) (C) (AR)	Calib. by
5/1/03	A-01	not	in	use	✓	B-01	1.00	10.01	200.00	✓ ✓ ✓	C-01	1.0000	10.0000	200.0000	✓ ✓ ✓	L/L
	~~A-02~~					B-05	1.00	10.00	200.00	✓ ✓ ✓	C-02	1.0000	9.9999	200.0000	✓ ✓ ✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	10.01	200.00	✓ ✓ ✓	C-					
	A-04					B-07	1.00	9.99	199.99	✓ ✓ ✓	C-					
	A-		5/1/03			B-			5/1/03		C-		5/1/03			
	A-					B-		5/1/03			C-					
5/2/03	A-01	not	in	use	✓	B-01	1.00	10.00	200.00	✓ ✓ ✓	C-01	1.0000	10.0001	200.0000	✓ ✓ ✓	L/L
	~~A-02~~					B-05	1.00	10.01	200.00	✓ ✓ ✓	C-02	1.0000	9.9999	200.0001	✓ ✓ ✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	9.99	200.00	✓ ✓ ✓	C-					
	A-04					B-07	1.00	10.00	200.00	✓ ✓ ✓	C-					
	A-		5/2/03			B-					C-		5/2/03			
	A-					B-		5/2/03			C-					
5/5/03	A-01	not	in	use	✓	B-01	1.00	10.00	200.00	✓ ✓ ✓	C-01	1.0000	10.0001	200.0000	✓ ✓ ✓	L/L
	~~A-02~~					B-05	1.00	10.01	200.00	✓ ✓ ✓	C-02	1.0001	10.0000	200.0001	✓ ✓ ✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	9.99	200.00	✓ ✓ ✓	C-					
	A-04					B-07	1.00	10.00	200.00	✓ ✓ ✓	C-					
	A-		5/5/03			B-			5/5/03		C-		5/5/03			
	A-					B-		5/5/03			C-					
5/6/03	A-01	not	in	use	✓	B-01	1.00	10.00	200.00	✓ ✓ ✓	C-01	1.0000	10.0000	200.0000	✓ ✓ ✓	L/L
	~~A-02~~					B-05	1.00	10.01	200.01	✓ ✓ ✓	C-02	1.0001	10.0001	200.0001	✓ ✓ ✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	9.99	200.00	✓ ✓ ✓	C-					
	A-04					B-07	1.00	10.00	200.00	✓ ✓ ✓	C-					
	A-		5/6/03			B-			5/6/03		C-		5/6/03			
	A-					B-		5/6/03			C-					

Notation: (C) – Cleanliness; (D) – Display; (AR) – Auto Rezeroing.

APCL form 4-213, March 30, 1995. Ver. 4.0 No pencil. Use blue pen for record. Use red pen for correction.

File: [CUST.DOC.LAB]BAL_CAL.TEX · Root-File: BAL_CAL_ROOT.TEX 1-Page-File: BAL_CAL1.TEX

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

APCL Analytical Report

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

Service ID #: 801-033484
Collected by:
Collected on: 05/08-30/03

Received: 05/08/03
Extracted: N/A
Tested: N/A
Reported: 07/07/03

Sample Description: Water
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-7-2Q03 03-03484-1	EB-12-5/8/03 03-03484-2	EB-13-5/13/03 03-03484-3	MW-1 03-03484-4
CHROMIUM [a]							
LEAD [a]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-5 03-03484-5	MW-6 03-03484-6	MW-7 03-03484-7	MW-8 03-03484-8
CHROMIUM [a]							
LEAD [a]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-9 03-03484-9	MW-10 03-03484-10	MW-13 03-03484-11	MW-15 03-03484-12
CHROMIUM [a]							
LEAD [a]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-16 03-03484-13	MW-18-1 03-03484-14	MW-18-2 03-03484-15	MW-18-3 03-03484-16
CHROMIUM [a]							
LEAD [a]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-18-4 03-03484-17	MW-18-5 03-03484-18	MW-22-1 03-03484-19	MW-22-2 03-03484-20
CHROMIUM [a]							
LEAD [a]							

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-22-3 03-03484-21	MW-22-4 03-03484-22	MW-22-5 03-03484-23
CHROMIUM [a]						
LEAD [a]						

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

[a] Subcontracted to Advanced Technology Laboratories Inc. See attached.

Respectfully submitted,

Dominic Lau
Laboratory 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-22 0031

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-2003	PROJECT LOCATION: MW-22 (N. of B/180)	PROJECT NUMBER: 04-442810	LABORATORY PHONE: (909) 590-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Leo W. Williamson
PROJECT CONTACT: Leo W. Williamson	PROJECT PHONE NUMBER: (714) 920-8729	PROJECT FAX: (909) 396-1455	LABORATORY ADDRESS: 13760 Magnolia Ave		ADDRESS: 22632 Golden Springs Dr. #270
PROJECT ADDRESS: 4800 Oak Grove Dr.	CITY, STATE AND ZIPCODE: Pasadena, CA.	CLIENT: US NAVY SWDIV	CITY, STATE AND ZIPCODE: Chino CA. 91710		CITY, STATE AND ZIPCODE: Diamond Bar, CA. 91765
PROJECT MANAGER: Asrar Faheem	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T.	Analyses: 524.2 (VOCs)	200.7 & 200.9 (Minerals)	7196 (Hex. Chrome)	SM 2320B (Carb. Bicarb.)	300.0 (Cl/SO4/NO3)	314.0 (Perchlorate)	160.1 (TDS) + 9040B (pH)	200.8 (Cr+Pb)	Comments
1	MW-22-5	H_2O	5/8/03	800	HCl NONE HNO_3	3+1 1+1	III	NORMAL	X	X	X	X	X	X	X	X	MINERALS: Na/K/Ca/As/Mg/Fe
2	MW-22-4	↓	↓	840	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
3	MW-22-3	↓	↓	925	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
4	MW-22-2	↓	↓	1000	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
5	MW-22-1	↓	↓	1105	↓	↓	↓	↓	X	X	X	X	X	X	X	X	MS/MSD
6																	
7	TB-12-5/8/03	H_2O	—	—	HCl	2	III	NORMAL	X								
8	EB-12-5/8/03	↓	5/8/03	850	HCl NONE HNO_3	3+1 1+1	↓	↓	X	X	X	X	X	X	X	X	
9																	
10																	

3184

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	S. Bhakta	5-8-03	12:05	
S. Bhakta	[illegible]	5/8/03	1330	

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

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-18 0032

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-2Q03	MW-18 (Altadena & Florizita)	04-4428.10	(909) 590-1828	(909) 590-1498	Leo W. Williamson

PROJECT CONTACT	PROJECT PHONE NUMBER	PROJECT FAX	LABORATORY ADDRESS	ADDRESS
Leo W. Williamson	(714) 920-8729	(909) 396-1455	13760 Magnolia Ave.	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 SUPPLY	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)	200.7 & 200.9 (Minerals)	7196 (Hex Chrome)	SM 2320B (Carb. Bicarb.)	300.0 (Cl/SO4/NO3)	314.0 (Perchlorate)	160.1 (TDS) + 9040 (pH)	200.8 (Cr + Pb)	Comments
1	MW-18-5	H_2O	5/13/03	810	HCl NONE HNO_3	3+1+1+1	III	NORMAL	X	X	X	X	X	X	X	X	MINERALS: Na/K/Ca/As/Mg/Fe
2	MW-18-4	↓	↓	925	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
3	MW-18-3	↓	↓	1010	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
4	MW-18-2	↓	↓	1050	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
5	MW-18-1	↓	↓	1130	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
6																	
7	EB-13-5/13/03	H_2O	5/13/03	1020	HCl NONE HNO_3	3+1+1+1	III	NORMAL	X	X	X	X	X	X	X	X	
8	TB-13-5/13/03	↓	—	—	HCl	2	↓	↓	X								
9	DUPE-7-[redacted]2Q03	↓	5/13/03	—	HCl NONE HNO_3	3+1+1+1	IV	↓	X	X	X	X	X	X	X	X	
10																	

3484

SAMPLES COLLECTED BY: Leo W. Williamson

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Leo W. Williamson	[signature]	5/13/03	1528	

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

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

SHALLOW WELLS 0034

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: SPL GW MON-2Q03	PROJECT LOCATION: MW-13/ MW-16	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 590-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Leo W. Williamson
PROJECT CONTACT: Leo W. Williamson	PROJECT PHONE NUMBER: (714) 920-8729	PROJECT FAX: (909) 396-1455	LABORATORY ADDRESS: 13760 Magnolia Ave		ADDRESS: 22632 Golden Springs Dr. #270
PROJECT ADDRESS: 4800 Oak Grove Dr.	CITY, STATE AND ZIPCODE: Pasadena, CA.	CLIENT: US NAVY, SWDIV	CITY, STATE AND ZIPCODE: Chino, CA. 91710		CITY, STATE AND ZIPCODE: Diamond Bar, CA. 91765
PROJECT MANAGER: Asra Faheem	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T	524.2 (VOCs)	200.7 & 200.9 (Minerals)	7196 (Hex Chrome)	SM2320B (Carb. Bicarb.)	300.0 (Cl/SO4/NO3)	340.0 (Perchlorate)	160.1 (TDS) + 9040B (pH)	200.8 (Cr+Pb)	Comments
1	MW-13	H_2O	5/27/03	830	HCl NONE HNO_3	3+1+ 1+1	III	NORMAL	X	X	X	X	X	X	X	X	MINERALS: Na/K/Ca/As/Mg/Fe
2	MW-16	↓	↓	1050	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
3																	
4	TB-14-5/27/03	H_2O	5/27/03	—	HCl	2	III	NORMAL	X								
5																	
6																	
7																	
8																	
9																	
10																	

3181

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	S. Muhlstein	5-27-03	12:45	
S. Muhlstein	[illegible]	5/27/03	1330	

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

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

SHALLOW WELLS

0036

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: JPL GW MON-2Q03	PROJECT LOCATION: MW-5/MW-8	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 590-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Leo W. Williamson
PROJECT CONTACT: Leo W. Williamson	PROJECT PHONE NUMBER: (714) 920-8729	PROJECT FAX: (909) 396-1455	LABORATORY ADDRESS: 13760 Magnolia Ave		ADDRESS: 22632 Golden Springs Dr. #270
PROJECT ADDRESS: 4900 Oak Grove Dr.	CITY, STATE AND ZIPCODE: Pasadena, CA.	CLIENT: US NAVY SWDIV	CITY, STATE AND ZIPCODE: Chino, CA 91710		CITY, STATE AND ZIPCODE: Diamond Bar, CA. 91765
PROJECT MANAGER: Asrar Faheem	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	524.2 (VOCs)	200.7 & 200.9 (Minerals)	7196 (Hex. Chrome)	SM2320B (Carb./Bicarb)	300.0 (Cl/SO4/NO3)	314.0 (Perchlorate)	6010 (TDS)+9040B (pH)	200.8 (Cr+Pb)	Comments
1	MW-5	H_2O	5/28/03	830	HCl NONE NHO_3	3+1+ 1+1	III	NORMAL	X	X	X	X	X	X	X	X	MINERALS: Na/K/Ca/As/Mg/Fe
2	MW-8	↓	↓	1115	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
3																	
4																	
5	TB-15-5/28/03	H_2O	5/28/03	—	HCl	2	III	NORMAL	X								
6																	
7																	
8																	
9																	
10																	

3484

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	S. Burkhalter	5-29-03	12:40	
S. Burkhalter	[illegible]	5/28/03	1530	

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

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

SHALLOW WELLS 0038

GEOFON 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): ~~Leo W. W~~ GEOFON, INC
PROJECT NAME: JPL GW MON-2003	PROJECT LOCATION: MW-6/MW-7/MW-	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 590-1928	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Leo W. Williamson
PROJECT CONTACT: Leo W. Williamson	PROJECT PHONE NUMBER: (714) 920-9729	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, SW DIV	CITY, STATE AND ZIPCODE: Chino, CA. 91710		CITY, STATE AND ZIPCODE: Diamond Bar, CA. 91765
PROJECT MANAGER: Asiar Faheem	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T	524.2 (VOCs)	200.7 & 200.9 (Minerals)	7196 (Hex. Chrome)	SM 2320B (Carb. Alk.)	300.0 (Cl/SO4/NO3)	314.0 (Perchlorates)	160.0 (TDS) + 9040B (pH)	200.8 (Cr + Pb)	Comments
1	MW-6	H_2O	5/29/03	1025	HCl NONE HNO_3	3+1+ 1+1	III	NORMAL	X	X	X	X	X	X	X	X	MINERALS: Na/K/Ca/As/Mg/Fe MS/MSD
2	MW-7	↓	↓	1220	↓	↓	↓	↓	X	X	X	X	X	X	X	X	MS/MSD
3	MW-15	↓	↓	1315	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
4																	
5	TB-16-5/29/03	H_2O	5/29/03	—	HCl	2	III	NORMAL	X								
6																	
7																	
8																	
9																	
10																	

3484

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	S. Muhlath	5-29-03	14:00	
S. Muhlath	[illegible]	5/29/03	1710	

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

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

SHALLOW WELLS 0040

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-2003	PROJECT LOCATION: MW-10/MW-9/MW-1	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 590-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Leo W. Williamson
PROJECT CONTACT: Leo W. Williamson	PROJECT PHONE NUMBER: (714) 920-8729	PROJECT FAX: (909) 396-7455	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: Asgar Fakeam	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	524.2 (VOCs)	200.7 & 200.9 (Metals)	7196 (Hex Chrome)	SM 2320B (Carb/Bicarb)	300.0 (Cl/SO4/NO3)	314.0 (Perchlorate)	160.1 (TDS)	200.8 (Cr+Pb)	Comments
1	MW-10	H_2O	5/30/03	735	HCl NONE HNO_3	3+1+1+1	III	NORMAL	X	X	X	X	X	X	X	X	
2	MW-1	↓	↓	950	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
3	MW-9	↓	↓	1150	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
4																	
5	TB-17 - 5/30/03	H_2O	5/30/03	—	HCl	2	~~III~~	NORMAL	X								
6																	
7																	
8																	
9																	
10																	

3484

SAMPLES COLLECTED BY: Leo W. Williamson

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT

SAMPLE'S CONDITION UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME
Leo W. Williamson	G. Bachlatt	5-30-03	12:50
G. Bachlatt	[illegible]	5/30/03	2:30

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: 3484 **Client Name/Project:** Geotn JPL

1. Sample Arrival

Date/Time Received 5/8/03 1330 Date/Time Opened 5/8/03 1330 By (name): Kenny Chan

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

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By:
☐ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold # Received 6
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: ☑ #Samples OK?
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs):

3. Shipping Container/Cooler

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

Temp °C 4.0

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

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12

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

5. Holding-time Requirements

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

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number:
Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels: ☑ Unique ID? ☑ Date/Time ☐ Preserved?

7. Turn Around Time

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

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: [signature] Date: 8 May 2003 Time: 7:41 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 Receiving Checklist

APCL ServiceID: 3484 **Client Name/Project:** Geofon

1. Sample Arrival

Date/Time Received 5/13/03 1528 Date/Time Opened 5/13/03 1600 By (name): Kenny Chan

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

2. Chain-of-Custody (CoC)

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

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 3.0 ____ ____ ____ ____ ____
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12
If Not, pH = ____ Preserved by: ☐ Client ☐ APCL ☐ Third Party ____

5. Holding-time Requirements

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

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: ____
Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels: ☑ Unique ID? ☑ Date/Time ☐ Preserved?

7. Turn Around Time

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

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: [signature] Date: 13 May 2003 Time: 7:46 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]amprcl.tex.

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

Sample Receiving Checklist

APCL ServiceID: 3484 **Client Name/Project:** Geosen / JPL

1. Sample Arrival

Date/Time Received 5/27/03 1330 Date/Time Opened 5/27/03 1330 By (name): Kenny Chan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Scott B.

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By: ____
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold ____ # Received 3
☑ 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 3.8 ____ ____ ____ ____ ____

(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: Kenny Chan Date: 27 May 2003 Time: 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 Receiving Checklist

APCL ServiceID: 3484 **Client Name/Project:** Geofon / JPL

1. Sample Arrival

Date/Time Received 5/28/03 1500 Date/Time Opened 5/28/03 1530 By (name): Kenny Chan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Scott B.

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☑ Client has Copy? ☐ Signed, dated? By:
☑ Project ID? ☐ Analyses Clear? ☐ Hold Samples? #on Hold ____ # Received 3
☑ 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: [illegible] Date: 28 May 2003 Time: 7:39 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 Receiving Checklist

APCL ServiceID: 3484 **Client Name/Project:** Geolon

1. Sample Arrival

Date/Time Received 5/29/03 1710 Date/Time Opened 5/29/03 1710 By (name): Henry Chan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Scott B.

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By:
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold ____ # Received 4
☑ 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 3.8

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

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12

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

5. Holding-time Requirements

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

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: ____
Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels: ☑ Unique ID? ☑ Date/Time ☐ Preserved?

7. Turn Around Time

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

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: [signature] Date: 29 May 2003 Time: 7:40 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]amprcl.tex.

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

Sample Receiving Checklist

APCL ServiceID: 3484 **Client Name/Project:** Geotor/JPL

1. Sample Arrival

Date/Time Received 5/30/03 230 Date/Time Opened 5/30/03 230 By (name): Henry Chen

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Scott B.

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☑ Client has Copy? ☐ Signed, dated? By: ____
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold ____ # Received 4
☑ 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 3.6 ____ ____ ____ ____ ____

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

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12

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

5. Holding-time Requirements

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

6. Sample Container Condition

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

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

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

7. Turn Around Time

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

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: [signature] Date: 30 May 2003 Time: 7:38 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

03-03484 (0470_ 154) (2202777_ 154)

06/02/03

Part 1: General Information

☐	Company Information	Name:	*GEOFON, Inc.*
		Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
☐	Project Information	Project Description:	*JPL*
		Project #:	*04-4428.10*
☐	Billing Information	P.O. #:	
		Bill Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
		Lab Project ID:	
		Client Database #:	*3*
☐	Receiving Information	Who Received Sample?	*Kenny Chan*
		Receiving Date/Time:	*05/08/03 1330*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*4.0 °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-22-5	Metal	03-03484-23	W	P	N	500	1	G	050803	N	0	7	☐
2	MW-22-4	Metal	03-03484-22	W	P	N	500	1	G	050803	N	0	7	☐
3	MW-22-3	Metal	03-03484-21	W	P	N	500	1	G	050803	N	0	7	☐
4	MW-22-2	Metal	03-03484-20	W	P	N	500	1	G	050803	N	0	7	☐
5	MW-22-1	Metal	03-03484-19	W	P	N	500	2	G	050803	N	0	7	☐
6	EB-12-5/8/03	Metal	03-03484-2	W	P	N	500	1	G	050803	N	0	7	☐
7	MW-18-5	Metal	03-03484-18	W	P	N	500	1	G	051303	N	0	7	☐
8	MW-18-4	Metal	03-03484-17	W	P	N	500	1	G	051303	N	0	7	☐
9	MW-18-3	Metal	03-03484-16	W	P	N	500	1	G	051303	N	0	7	☐
10	MW-18-2	Metal	03-03484-15	W	P	N	500	1	G	051303	N	0	7	☐
11	MW-18-1	Metal	03-03484-14	W	P	N	500	1	G	051303	N	0	7	☐
12	EB-13-5/13/03	Metal	03-03484-3	W	P	N	500	1	G	051303	N	0	7	☐
13	DUPE-7-2Q03	Metal	03-03484-1	W	P	N	500	1	G	051303	N	0	7	☐
14	MW-13	Metal	03-03484-11	W	P	N	500	1	G	052703	N	0	7	☐
15	MW-16	Metal	03-03484-13	W	P	N	500	1	G	052703	N	0	7	☐
16	MW-5	Metal	03-03484-5	W	P	N	500	1	G	052803	N	0	7	☐
17	MW-8	Metal	03-03484-8	W	P	N	500	1	G	052803	N	0	7	☐
18	MW-6	Metal	03-03484-6	W	P	N	500	2	G	052903	N	0	7	☐
19	MW-7	Metal	03-03484-7	W	P	N	500	2	G	052903	N	0	7	☐
20	MW-15	Metal	03-03484-12	W	P	N	500	1	G	052903	N	0	7	☐
21	MW-10	Metal	03-03484-10	W	P	N	500	1	G	053003	N	0	7	☐
22	MW-1	Metal	03-03484-4	W	P	N	500	1	G	053003	N	0	7	☐
23	MW-9	Metal	03-03484-9	W	P	N	500	1	G	053003	N	0	7	☐

Part 3: Analysis Information

Test Items: ☐ *200.7/6010B* Chromium, Cr, by ICP

☐ *200.7/6010B* Lead, Pb, by ICP

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	CR	PB	
1	MW-22-5	Metal	03-03484-23	W	X	X	☐
2	MW-22-4	Metal	03-03484-22	W	X	X	☐
3	MW-22-3	Metal	03-03484-21	W	X	X	☐
4	MW-22-2	Metal	03-03484-20	W	X	X	☐
5	MW-22-1	Metal	03-03484-19	W	X	X	☐
6	EB-12-5/8/03	Metal	03-03484-2	W	X	X	☐
7	MW-18-5	Metal	03-03484-18	W	X	X	☐
8	MW-18-4	Metal	03-03484-17	W	X	X	☐
9	MW-18-3	Metal	03-03484-16	W	X	X	☐
10	MW-18-2	Metal	03-03484-15	W	X	X	☐
11	MW-18-1	Metal	03-03484-14	W	X	X	☐

12	EB-13-5/13/03	Metal	03-03484-3	W	X	X	☐
13	DUPE-7-2Q03	Metal	03-03484-1	W	X	X	☐
14	MW-13	Metal	03-03484-11	W	X	X	☐
15	MW-16	Metal	03-03484-13	W	X	X	☐
16	MW-5	Metal	03-03484-5	W	X	X	☐
17	MW-8	Metal	03-03484-8	W	X	X	☐
18	MW-6	Metal	03-03484-6	W	X	X	☐
19	MW-7	Metal	03-03484-7	W	X	X	☐
20	MW-15	Metal	03-03484-12	W	X	X	☐
21	MW-10	Metal	03-03484-10	W	X	X	☐
22	MW-1	Metal	03-03484-4	W	X	X	☐
23	MW-9	Metal	03-03484-9	W	X	X	☐

☐ Client"s Requirement: **RUN MS/MSD ON SAMPLE** #6, 7, 19

Login By En-Yu Paul Kou

Check By ok