Level C Data Package Deliverables

Wet Chemistry

Applied P & Ch Laboratory

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Wet Analysis Results for Method SM2320B

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	SM2320B
Project ID:	JPL	Service ID:	33015	Collected by:	

Component Name: Bicarbonate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3015-1	DUPE-5-2Q03	Water	05/01/03	05/01/03	05/01/03	03W2665	mg/L	2	181	
03-3015-2	EB-9-5/1/03	Water	05/01/03	05/01/03	05/01/03	03W2665	mg/L	2	<2	U
03-3015-3	MW-3-1	Water	05/01/03	05/01/03	05/01/03	03W2665	mg/L	2	202	
03-3015-4	MW-3-2	Water	05/01/03	05/01/03	05/01/03	03W2665	mg/L	2	187	
03-3015-5	MW-3-3	Water	05/01/03	05/01/03	05/01/03	03W2665	mg/L	2	143	
03-3015-6	MW-3-4	Water	05/01/03	05/01/03	05/01/03	03W2665	mg/L	2	128	
03-3015-7	MW-3-5	Water	05/01/03	05/01/03	05/01/03	03W2665	mg/L	2	88.3	
03W2665-MB-01	03W2665-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2665	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:	33015	Collected by:	

Component Name: Carbonate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3015-1	DUPE-5-2Q03	Water	05/01/03	05/01/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	<2	U
03-3015-2	EB-9-5/1/03	Water	05/01/03	05/01/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	<2	U
03-3015-3	MW-3-1	Water	05/01/03	05/01/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	<2	U
03-3015-4	MW-3-2	Water	05/01/03	05/01/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	<2	U
03-3015-5	MW-3-3	Water	05/01/03	05/01/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	<2	U
03-3015-6	MW-3-4	Water	05/01/03	05/01/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	5.2	
03-3015-7	MW-3-5	Water	05/01/03	05/01/03	05/01/03	03W2665	mg-$CaCO_3$/L	2	40.8	
03W2665-MB-01	03W2665-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2665	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.

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Wet Analysis Results for Method 9040

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	9040
Project ID:	JPL	Service ID:	33015	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
03-3015-1	DUPE-5-2Q03	Water	05/01/03	05/01/03	05/01/03	03W2661	pH unit	0.01	7.55	
03-3015-2	EB-9-5/1/03	Water	05/01/03	05/01/03	05/01/03	03W2661	pH unit	0.01	6.98	
03-3015-3	MW-3-1	Water	05/01/03	05/01/03	05/01/03	03W2661	pH unit	0.01	7.72	
03-3015-4	MW-3-2	Water	05/01/03	05/01/03	05/01/03	03W2661	pH unit	0.01	8.05	
03-3015-5	MW-3-3	Water	05/01/03	05/01/03	05/01/03	03W2661	pH unit	0.01	8.00	
03-3015-6	MW-3-4	Water	05/01/03	05/01/03	05/01/03	03W2661	pH unit	0.01	8.66	
03-3015-7	MW-3-5	Water	05/01/03	05/01/03	05/01/03	03W2661	pH unit	0.01	9.64	
03W2661-MB-01	03W2661-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2661	pH unit	0.01	6.89	

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

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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:	33015	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
03-3015-1	DUPE-5-2Q03	Water	05/01/03	05/01/03	05/05/03	03W2722	mg/L	10	249	
03-3015-2	EB-9-5/1/03	Water	05/01/03	05/01/03	05/05/03	03W2722	mg/L	10	9.0	B
03-3015-3	MW-3-1	Water	05/01/03	05/01/03	05/05/03	03W2722	mg/L	10	350	
03-3015-4	MW-3-2	Water	05/01/03	05/01/03	05/05/03	03W2722	mg/L	10	278	
03-3015-5	MW-3-3	Water	05/01/03	05/01/03	05/05/03	03W2722	mg/L	10	249	
03-3015-6	MW-3-4	Water	05/01/03	05/01/03	05/05/03	03W2722	mg/L	10	200	
03-3015-7	MW-3-5	Water	05/01/03	05/01/03	05/05/03	03W2722	mg/L	10	259	
03W2722-MB-01	03W2722-MB-01	Water	05/05/03	05/05/03	05/05/03	03W2722	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.

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Wet Analysis Results for Method 7196

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	7196
Project ID:	JPL	Service ID:	33015	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
03-3015-1	DUPE-5-2Q03	Water	05/01/03	05/01/03	05/01/03	03W2664	mg/L	0.01	<0.01	U
03-3015-2	EB-9-5/1/03	Water	05/01/03	05/01/03	05/01/03	03W2664	mg/L	0.01	<0.01	U
03-3015-3	MW-3-1	Water	05/01/03	05/01/03	05/01/03	03W2664	mg/L	0.01	<0.01	U
03-3015-4	MW-3-2	Water	05/01/03	05/01/03	05/01/03	03W2664	mg/L	0.01	<0.01	U
03-3015-5	MW-3-3	Water	05/01/03	05/01/03	05/01/03	03W2664	mg/L	0.01	<0.01	U
03-3015-6	MW-3-4	Water	05/01/03	05/01/03	05/01/03	03W2664	mg/L	0.01	<0.01	U
03-3015-7	MW-3-5	Water	05/01/03	05/01/03	05/01/03	03W2664	mg/L	0.01	<0.01	U
03W2664-MB-01	03W2664-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2664	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.

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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:	33015	Collected by:	

Component Name: Perchlorate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3015-1	DUPE-5-2Q03	Water	05/01/03	05/01/03	05/05/03	03W2719	μg/L	4	5.8	
03-3015-2	EB-9-5/1/03	Water	05/01/03	05/01/03	05/05/03	03W2719	μg/L	4	<4	U
03-3015-3	MW-3-1	Water	05/01/03	05/01/03	05/05/03	03W2719	μg/L	4	<4	U
03-3015-4	MW-3-2	Water	05/01/03	05/01/03	05/05/03	03W2719	μg/L	4	4.2	
03-3015-5	MW-3-3	Water	05/01/03	05/01/03	05/05/03	03W2719	μg/L	4	<4	U
03-3015-6	MW-3-4	Water	05/01/03	05/01/03	05/05/03	03W2719	μg/L	4	<4	U
03-3015-7	MW-3-5	Water	05/01/03	05/01/03	05/05/03	03W2719	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.

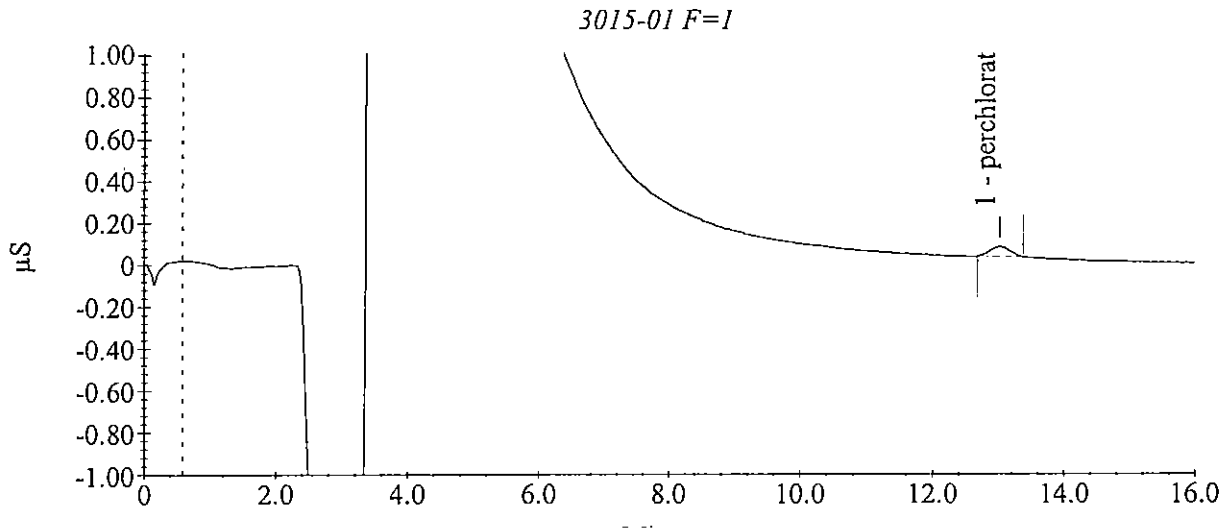
APCL Perchlorate Analysis Report

Sample Name : 3015-01 F=1
Data File Name : C:\DATA\03W2719K\3015-01_021.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 4:17:02 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	13.02	5.83	9885.45	486.57



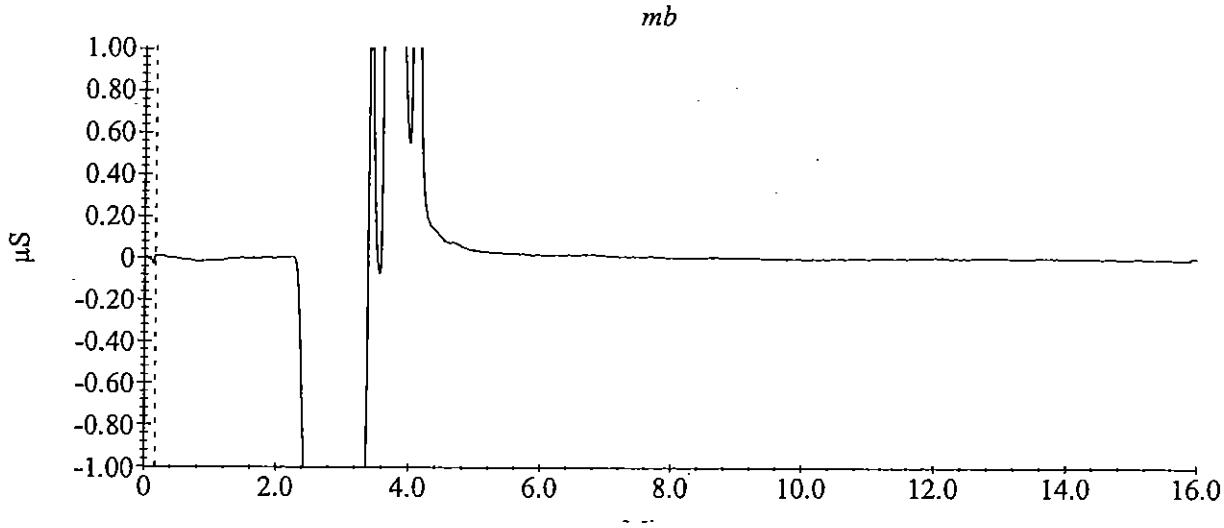
APCL Perchlorate Analysis Report

Sample Name : mb
Data File Name : C:\DATA\03W2719K\W2719K K01_007.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 11:56:55 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



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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:	33015	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
03-3015-1	DUPE-5-2Q03	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.8	14.9	
03-3015-2	EB-9-5/1/03	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.25	0.19	B
03-3015-3	MW-3-1	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.8	19.4	
03-3015-4	MW-3-2	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.8	14.2	
03-3015-5	MW-3-3	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	1.6	36.8	
03-3015-6	MW-3-4	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.4	11.5	
03-3015-7	MW-3-5	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.4	9.1	
03W2658-MB-01	03W2658-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.2	<0.2	U

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

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

Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	300.0
Project ID:	JPL	Service ID:	33015	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
03-3015-1	DUPE-5-2Q03	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.16	1.2	
03-3015-2	EB-9-5/1/03	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.05	0.068	
03-3015-3	MW-3-1	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.16	1.6	
03-3015-4	MW-3-2	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.16	1.2	
03-3015-5	MW-3-3	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.32	<0.32	U
03-3015-6	MW-3-4	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.08	0.17	
03-3015-7	MW-3-5	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.08	0.11	
03W2658-MB-01	03W2658-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2658	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:	33015	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
03-3015-1	DUPE-5-2Q03	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	2	37.5	
03-3015-2	EB-9-5/1/03	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.63	<0.63	U
03-3015-3	MW-3-1	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	2	49.9	
03-3015-4	MW-3-2	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	2	35.7	
03-3015-5	MW-3-3	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	4	40.9	
03-3015-6	MW-3-4	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	1	11.0	
03-3015-7	MW-3-5	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	1	9.5	
03W2658-MB-01	03W2658-MB-01	Water	05/01/03	05/01/03	05/01/03	03W2658	mg/L	0.5	<0.5	U

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

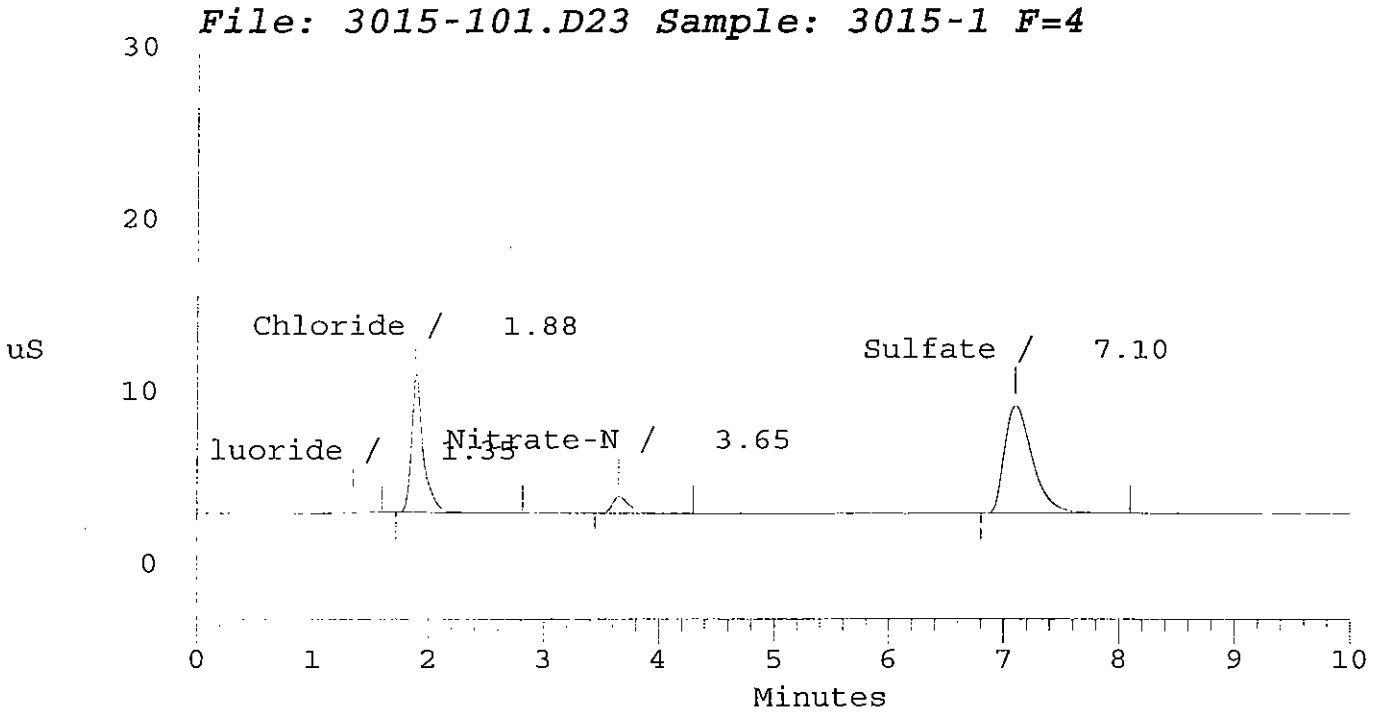
Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

```
==========================================================================
| Sample Name: 3015-1 F=4                      Date: 05/01/2003 16:35:21  |
| Data File  : C:\DX\DATA\03W2658\3015-101.D23                            |
| Method     : C:\DX\METHOD\E300-063.MET                                  |
| ACI Address: 1  System: 1  Inject#: 23                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	1.35	Fluoride	0.660	11515	120633	1	0.00
2	1.88	Chloride	14.878	249546	1838978	1	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	1.242	32966	332880	1	0.00
0	0.00	Phosphate-P	0.000	0	0	0	0.00
4	7.10	Sulfate	37.470	207580	3488751	1	0.00
		Totals	54.251	501607	5781242		



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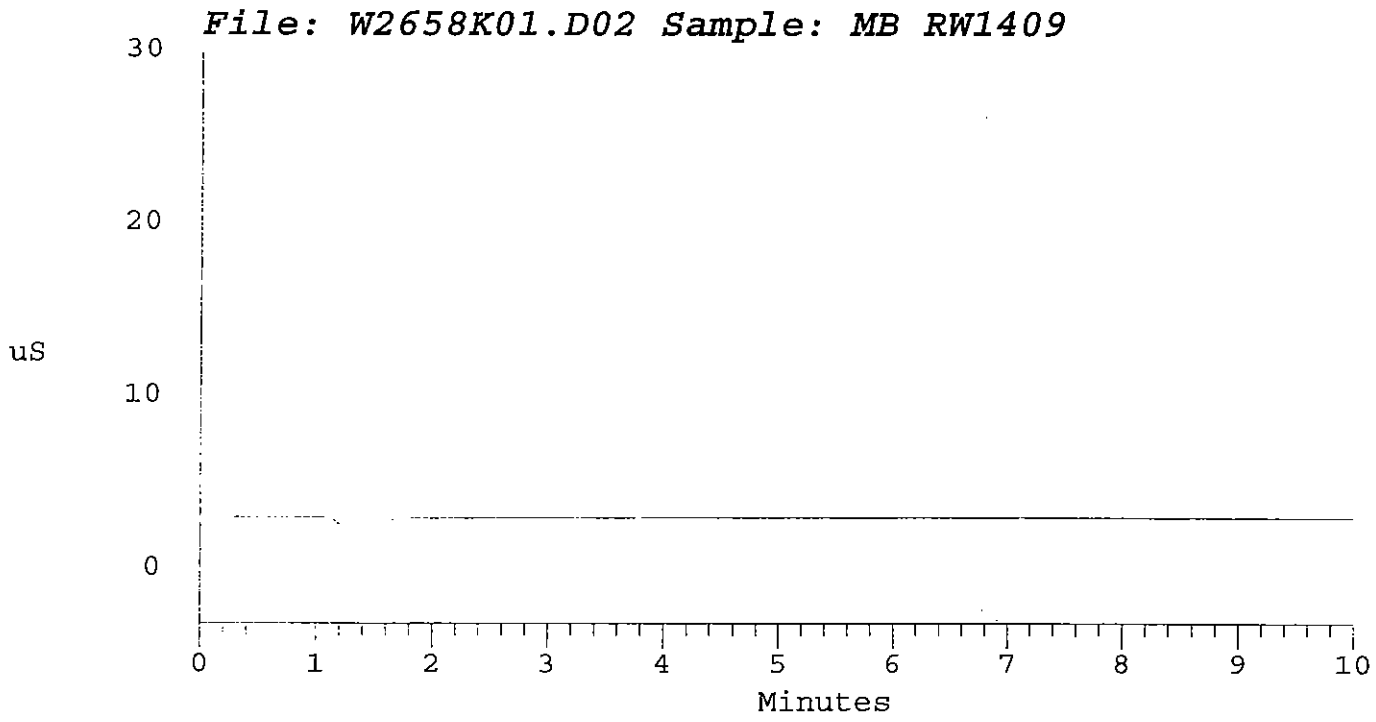
==================================================================================
| Sample Name: MB RW1409                          Date: 05/01/2003 10:53:53      |
| Data File  : C:\DX\DATA\03W2658\W2658K01.D02                                   |
| Method     : C:\DX\METHOD\E300-063.MET                                         |
| 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
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		



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:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2658		
LCS Filename:	-	Date Analyzed:	050103	Time Analyzed:	11:09
LCSD Filename:	-	Date Analyzed:	050103	Time Analyzed:	11:39

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHLORIDE CL^-	mg/L	4.0	0	3.96	99	80-120
NITRATE AS N	mg/L	1.5	0	1.52	101	80-120
SULFATE SO_4^{--}	mg/L	15	0	15.0	100	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHLORIDE CL^-	mg/L	4.0	3.94	99	0	20	80-120
NITRATE AS N	mg/L	1.5	1.53	102	1	20	80-120
SULFATE SO_4^{--}	mg/L	15	15.1	101	1	25	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

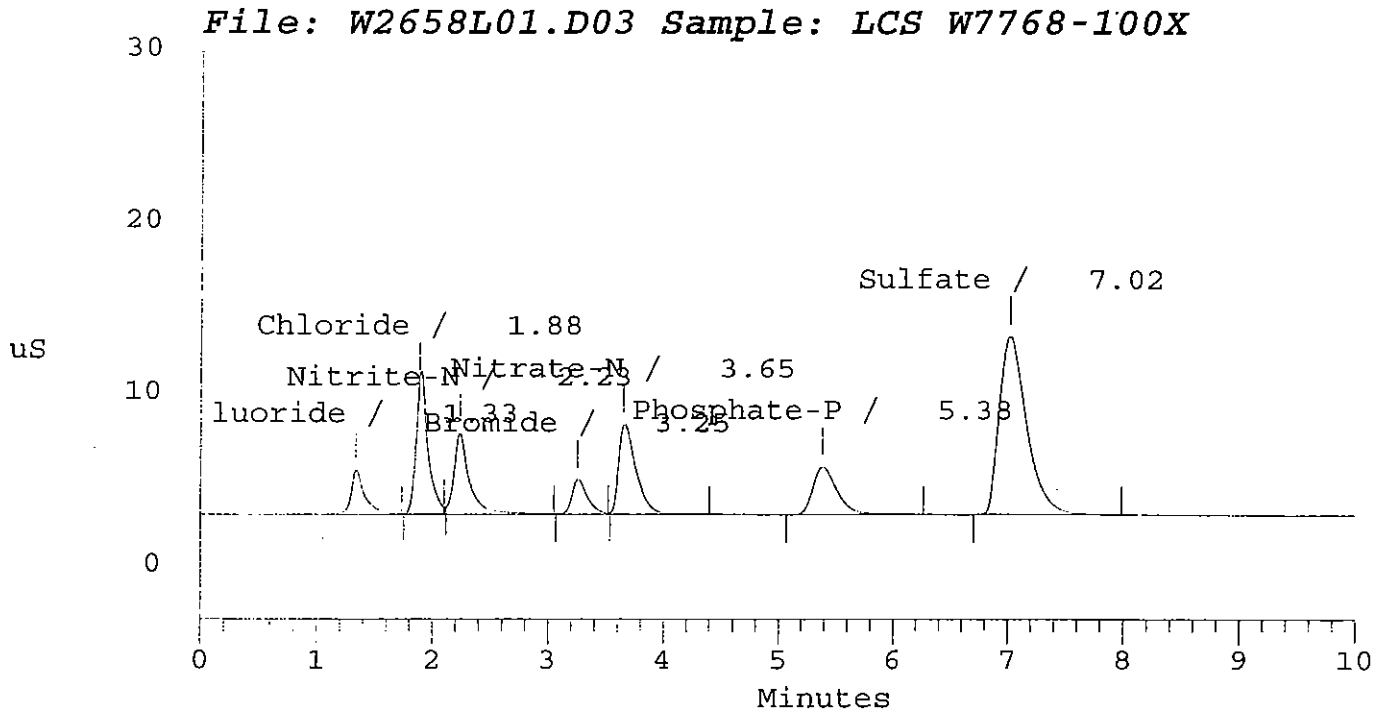
Comments: _____

Sample Name: LCS W7768-100X	Date: 05/01/2003 11:09:06
Data File : C:\DX\DATA\03W2658\W2658L01.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	1.005	85972	730988	2	0.00
2	1.88	Chloride	3.957	256977	1960777	2	0.00
3	2.23	Nitrite-N	1.473	157406	1484023	2	0.14
4	3.25	Bromide	3.081	67617	627960	2	0.54
5	3.65	Nitrate-N	1.519	173104	1832590	2	0.00
6	5.38	Phosphate-P	2.976	92631	1361103	1	0.00
7	7.02	Sulfate	15.043	346222	5729613	1	0.00
		Totals	29.052	1179929	13727053		

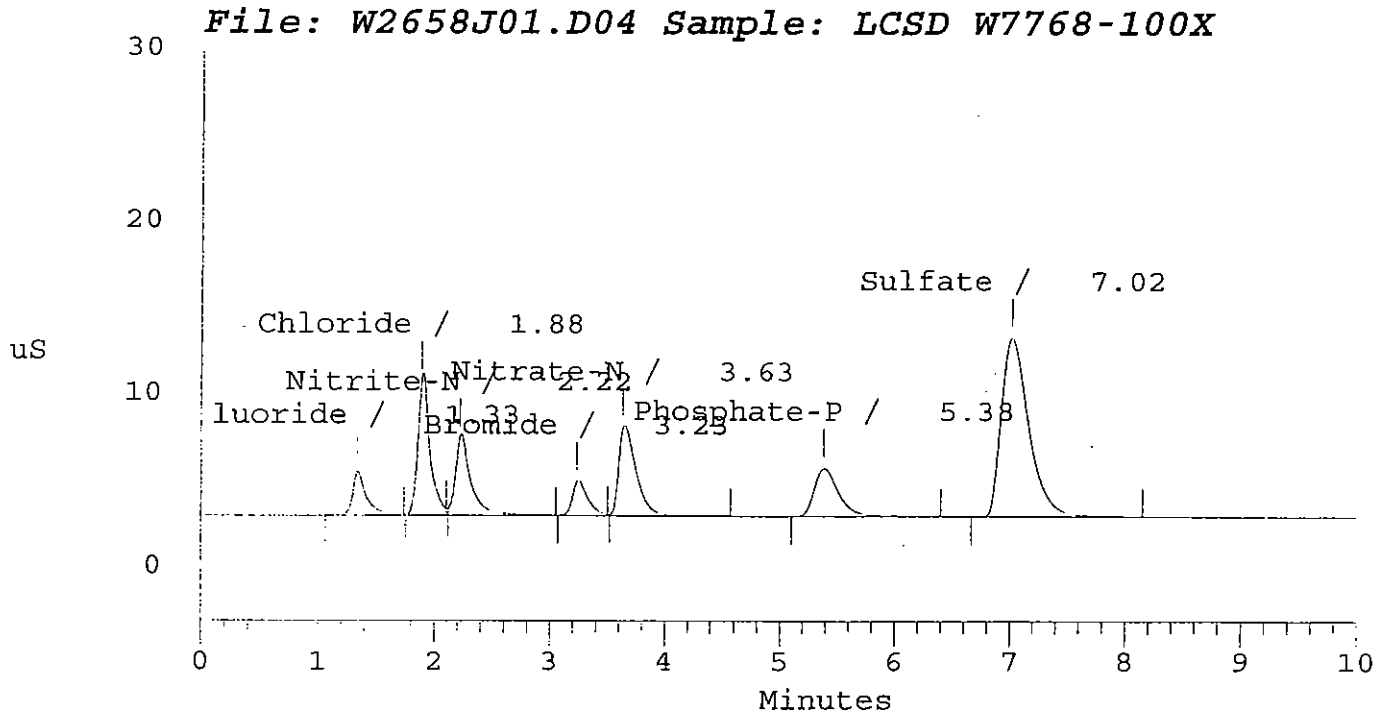


Sample Name: LCSD W7768-100X	Date: 05/01/2003 11:39:05
Data File : C:\DX\DATA\03W2658\W2658J01.D04	
Method : C:\DX\METHOD\E300-063.MET	
ACI Address: 1 System: 1 Inject#: 4	Detector:COND
Analyst : David	Column: Dionex AS4A-SC

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	1.33	Fluoride	0.999	85657	726536	2	0.00
2	1.88	Chloride	3.937	260473	1950505	2	0.00
3	2.22	Nitrite-N	1.478	150139	1489536	2	-0.61
4	3.23	Bromide	3.105	66113	632935	2	0.48
5	3.63	Nitrate-N	1.525	169735	1840255	2	0.00
6	5.38	Phosphate-P	2.999	92786	1372208	1	0.00
7	7.02	Sulfate	15.080	344524	5744342	1	0.00
		Totals	29.123	1169426	13756318		



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:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2658		
MS Filename:	-	Date Analyzed:	050103	Time Analyzed:	14:30
MSD Filename:	-	Date Analyzed:	050103	Time Analyzed:	14:43
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
CHLORIDE CL^-	mg/L	20.0	14.5	34.7	101	75-125
NITRATE AS N	mg/L	7.50	0.14	7.51	98	75-125
SULFATE SO_4^{--}	mg/L	75.0	2.2	74.8	97	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHLORIDE CL^-	mg/L	20.0	34.6	101	0	20	75-125
NITRATE AS N	mg/L	7.50	7.49	98	0	20	75-125
SULFATE SO_4^{--}	mg/L	75.0	74.3	96	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

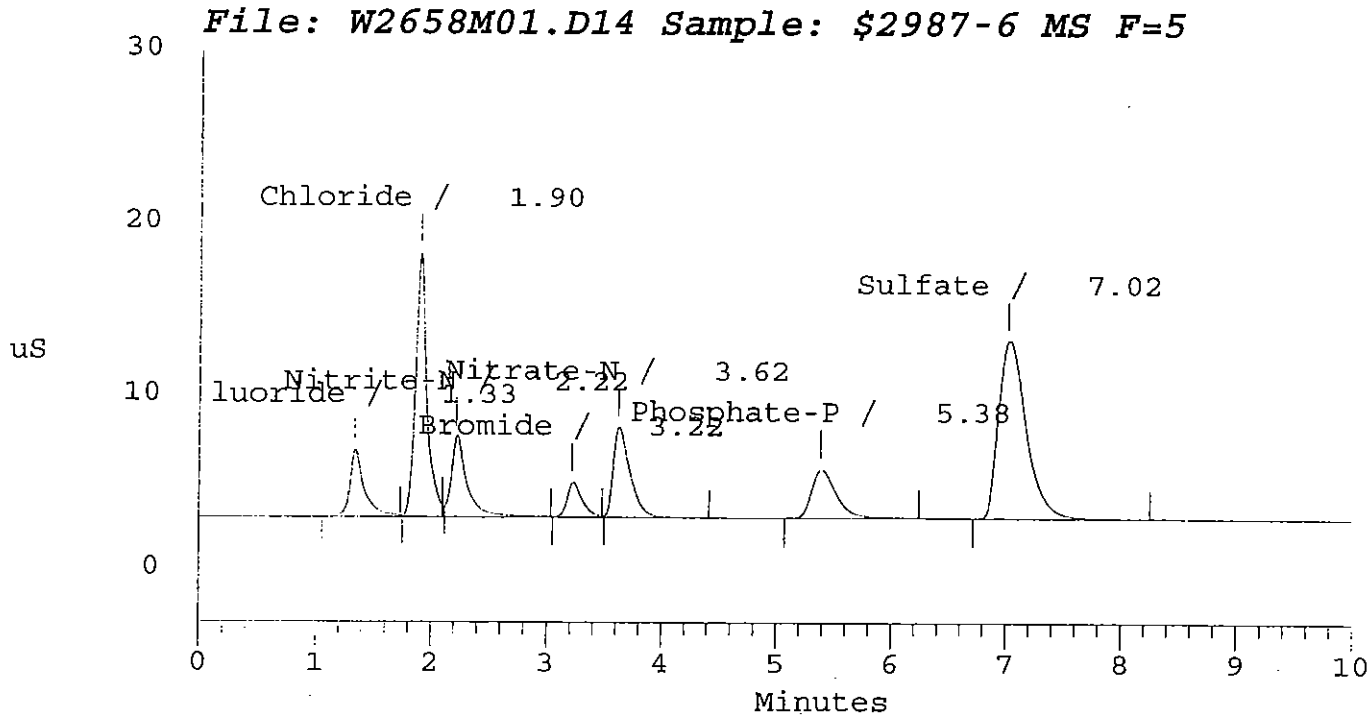
Comments: _____

```
==========================================================================
| Sample Name: $2987-6 MS F=5                    Date: 05/01/2003 14:30:47 |
| Data File   : C:\DX\DATA\03W2658\W2658M01.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	5	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	7.823	127237	1137678	2	0.00
2	1.90	Chloride	34.744	506808	3492577	2	0.00
3	2.22	Nitrite-N	7.483	152337	1508539	2	-1.48
4	3.22	Bromide	15.273	66227	622575	2	0.42
5	3.62	Nitrate-N	7.512	171838	1812333	2	0.00
6	5.38	Phosphate-P	15.482	93367	1418041	1	0.00
7	7.02	Sulfate	74.821	339637	5698613	1	0.00
		Totals	163.137	1457451	15690357		

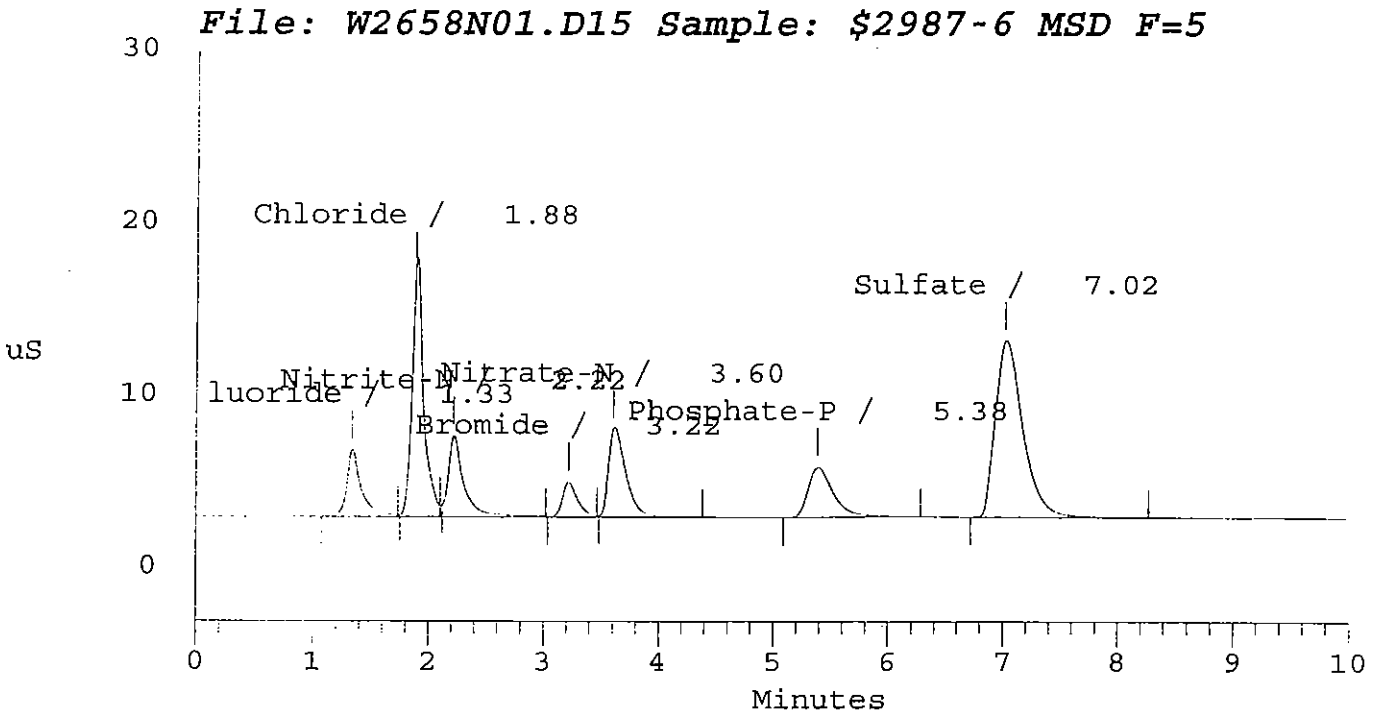


```
==========================================================================
| Sample Name: $2987-6 MSD F=5                Date: 05/01/2003 14:43:30   |
| Data File   : C:\DX\DATA\03W2658\W2658N01.D15                           |
| Method      : C:\DX\METHOD\E300-063.MET                                 |
| 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	5	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	7.821	128858	1137368	2	0.00
2	1.88	Chloride	34.639	474759	3481867	2	0.00
3	2.22	Nitrite-N	7.417	155629	1495100	2	-0.61
4	3.22	Bromide	15.159	67838	617849	2	0.89
5	3.60	Nitrate-N	7.493	168919	1807674	2	0.00
6	5.38	Phosphate-P	16.275	95996	1492801	1	0.00
7	7.02	Sulfate	74.291	339133	5656764	1	0.00
		Totals	163.095	1431132	15689422		



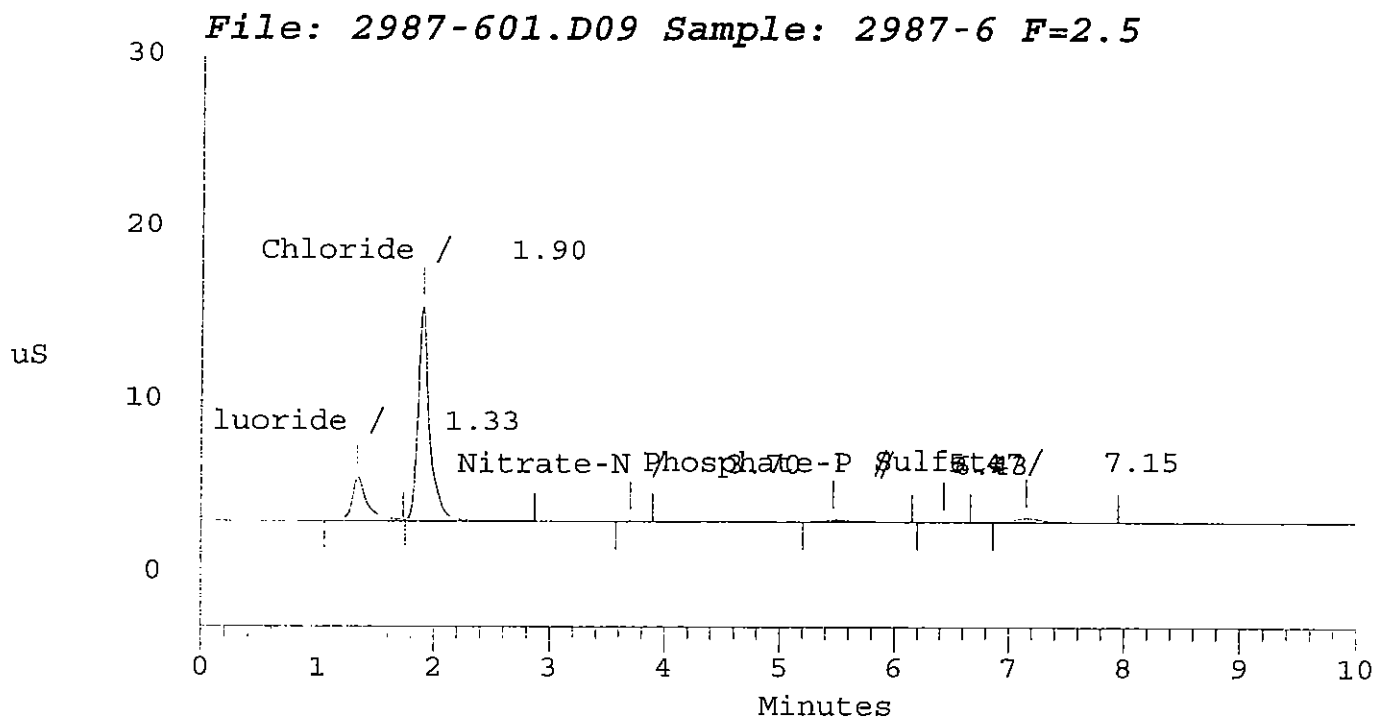
Data Reprocessed On 05/02/2003 16:11:28

Sample Name: 2987-6 F=2.5	Date: 05/01/2003 13:01:18
Data File : C:\DX\DATA\03W2658\2987-601.D09	
Method : C:\DX\METHOD\E300-063.MET	
ACI Address: 1 System: 1 Inject#: 9	Detector:COND
Analyst : David	Column: Dionex AS4A-SC

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2.5	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	2.673	83569	777626	2	0.00
2	1.90	Chloride	14.498	412554	2903959	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	3.70	Nitrate-N	0.135	1640	14318	1	0.00
4	5.47	Phosphate-P	0.677	4309	86663	2	0.00
6	7.15	Sulfate	2.204	7795	137859	1	0.00
		Totals	20.187	509867	3920426		



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:	33015
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: _____

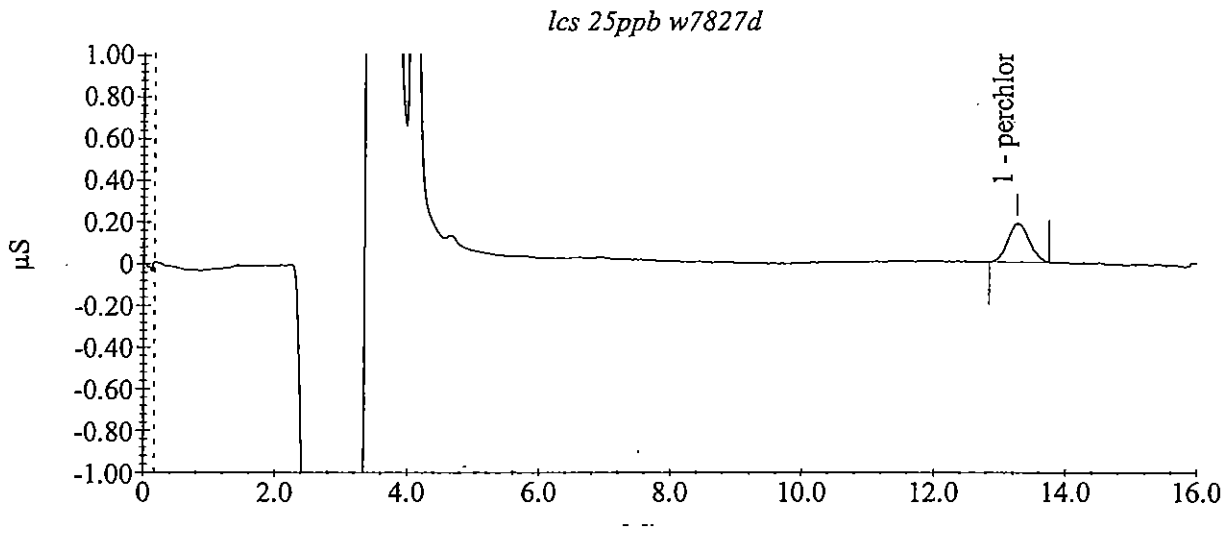
APCL Perchlorate Analysis Report

Sample Name : lcs 25ppb w7827d
Data File Name : C:\DATA\03W2719K\W2719K L01_004.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 11:00:24 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	13.25	24.71	41942.60	1833.80



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:	33015
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	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	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: _____

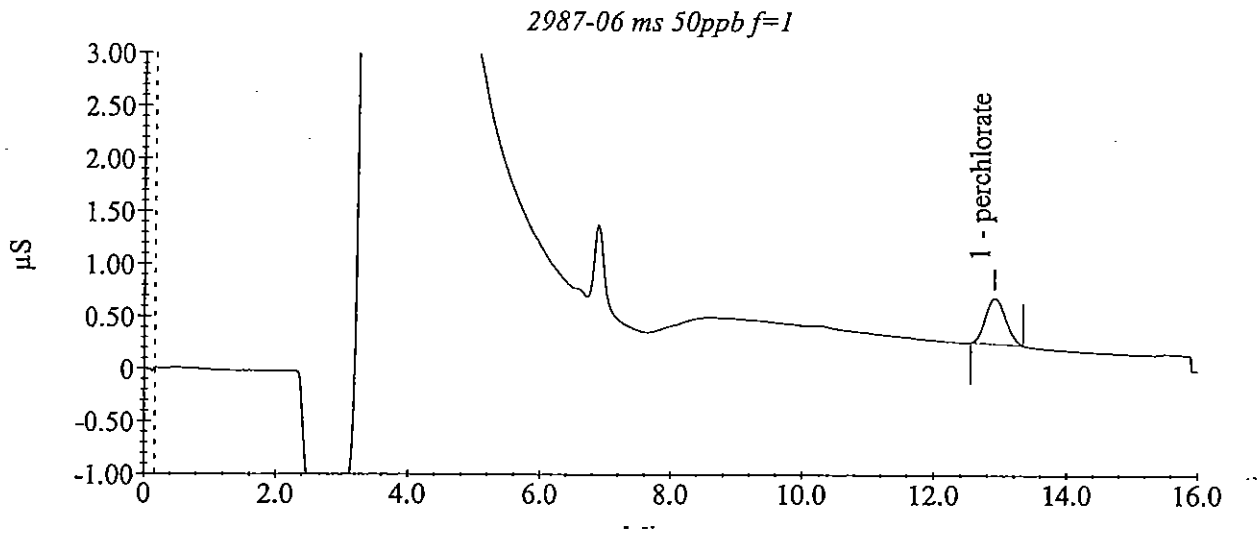
APCL Perchlorate Analysis Report

Sample Name : 2987-06 ms 50ppb f=1
Data File Name : C:\DATA\03W2719K\W2719K M01_016.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 2:44:12 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	12.90	54.21	91993.65	4354.98



Rec 108.42%

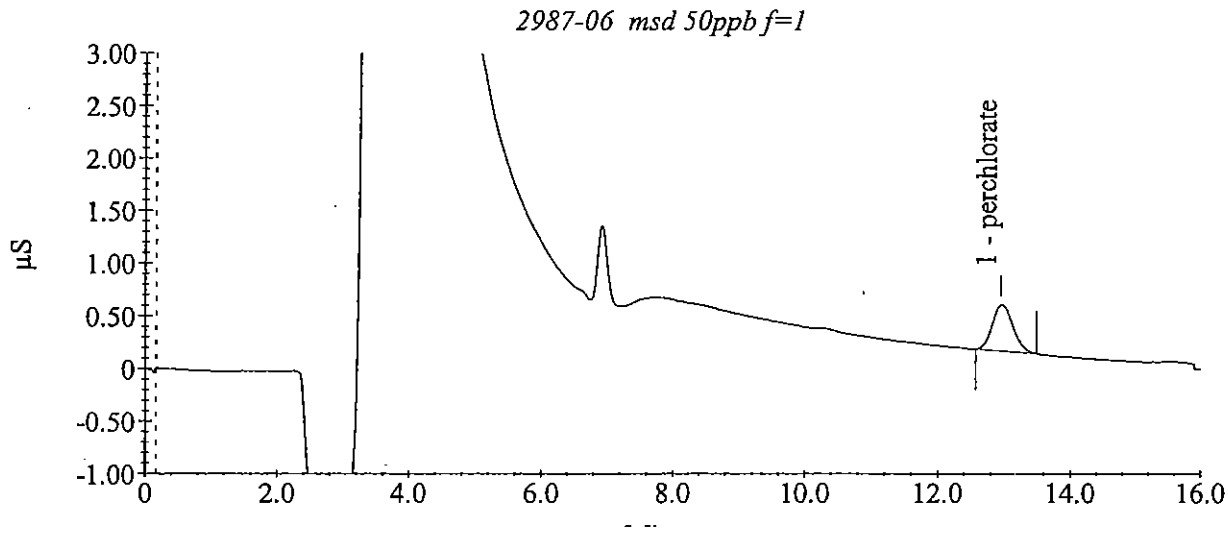
APCL Perchlorate Analysis Report

Sample Name : 2987-06 msd 50ppb f=1
Data File Name : C:\DATA\03W2719K\W2719K N01_017.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 3:02:54 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	12.95	56.18	95347.00	4363.97



Rec 112.36%

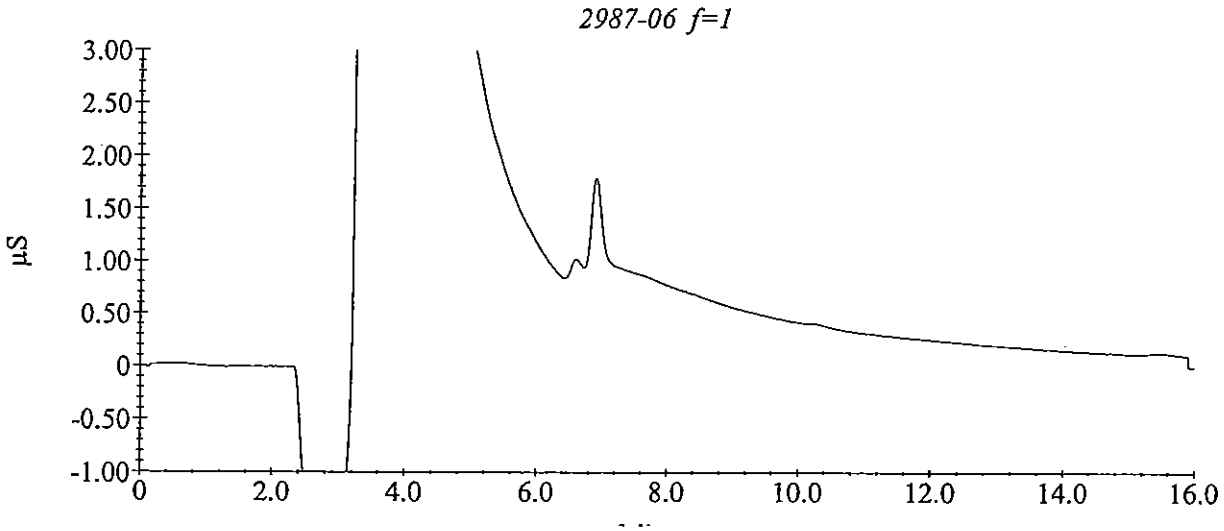
APCL Perchlorate Analysis Report

Sample Name : 2987-06 f=1
Data File Name : C:\DATA\03W2719K\2987-06_012.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 1:29:52 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



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:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2722		
LCS Filename:	-	Date Analyzed:	050503	Time Analyzed:	14:56
LCSD Filename:	-	Date Analyzed:	050503	Time Analyzed:	14:56

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	0	390	98	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	398	100	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:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2722		
MS Filename:	-	Date Analyzed:	050503	Time Analyzed:	14:56
MSD Filename:	-	Date Analyzed:	050503	Time Analyzed:	14:56
MS Sample No:	**CENTRAL-050403-704**	Sample Lab ID:	03-3065-2		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	1240	1590	88	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	1600	90	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:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2664		
LCS Filename:	-	Date Analyzed:	050103	Time Analyzed:	15:19
LCSD Filename:	-	Date Analyzed:	050103	Time Analyzed:	15:19

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.222	89	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	0.227	91	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:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2664		
MS Filename:	-	Date Analyzed:	050103	Time Analyzed:	15:19
MSD Filename:	-	Date Analyzed:	050103	Time Analyzed:	15:19
MS Sample No:	**DUPE-5-2Q03**	Sample Lab ID:	03-3015-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.219	88	78-115
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0.217	87	1	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: _____

Wet Chemistry QC Report B
Duplicate Results

Matrix: Water

APCL Service ID: 03-3015

Analysis	Batch ID	Analysis Date	Sample Name	Unit	Result	Duplicate Result	RPD %	RPD Control limit
Bicarbonate	03W2665	05/01/2003	03-2933-2	mg/L	176	175	1	20
Carbonate	03W2665	05/01/2003	03-2933-2	mg-$CaCO_3$/L	ND	ND	NC	20
pH	03W2661	05/01/2003	DUPE-5-2Q03	pH unit	7.55	7.59	1	20

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

6A

INITIAL CALIBRATION DATA

Lab Name: Applied P & Ch Lab Contract: _____

Analysis: TRPH Calibration Date: 04/08/2003

Concentration (mg/L)	0	10	50	100	200	400
Absorbance	0.000	0.015	0.069	0.131	0.272	0.410

A=0.003 + 0.00129C

A=Absorbance

C=Concentration (mg/L)

r= 0.999

6A

INITIAL CALIBRATION DATA

Lab Name: Applied P & Ch Lab Contract: _____

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

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

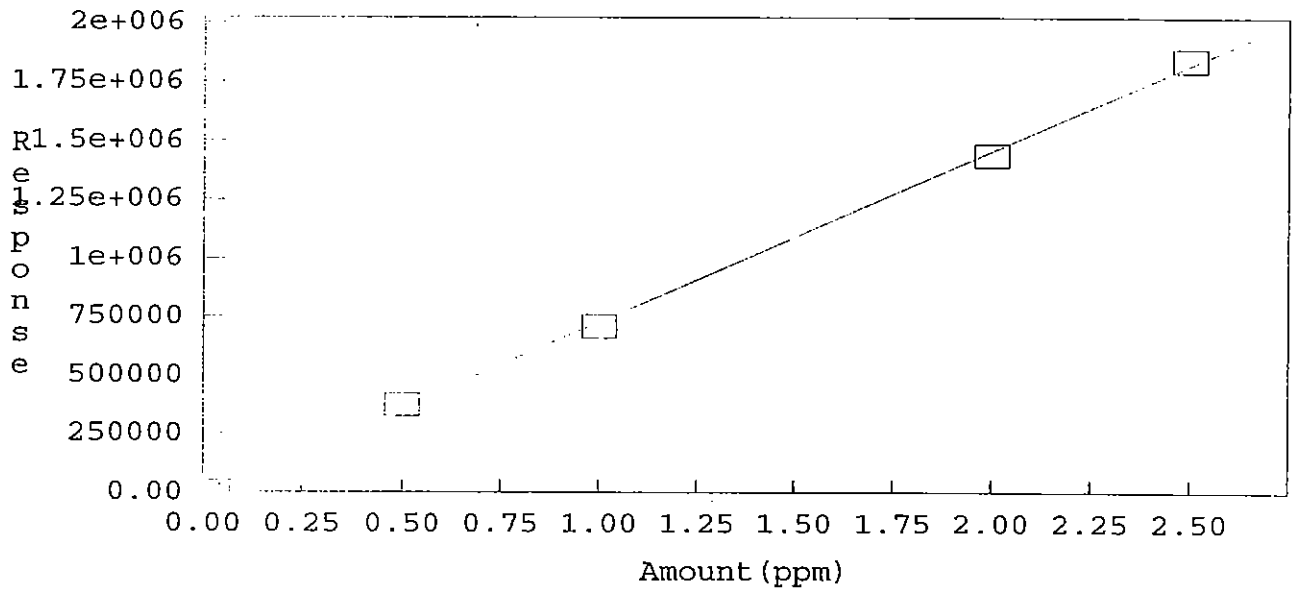
Level	Amount	Area	Height
1	3.76000E-001	129999	6524
2	7.50000E+000	2598757	138579
3	1.50000E+001	5330209	287851
4	3.00000E+001	11507107	615917
5	3.75000E+001	14859049	776426
6	0.00000E+000	0	0

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

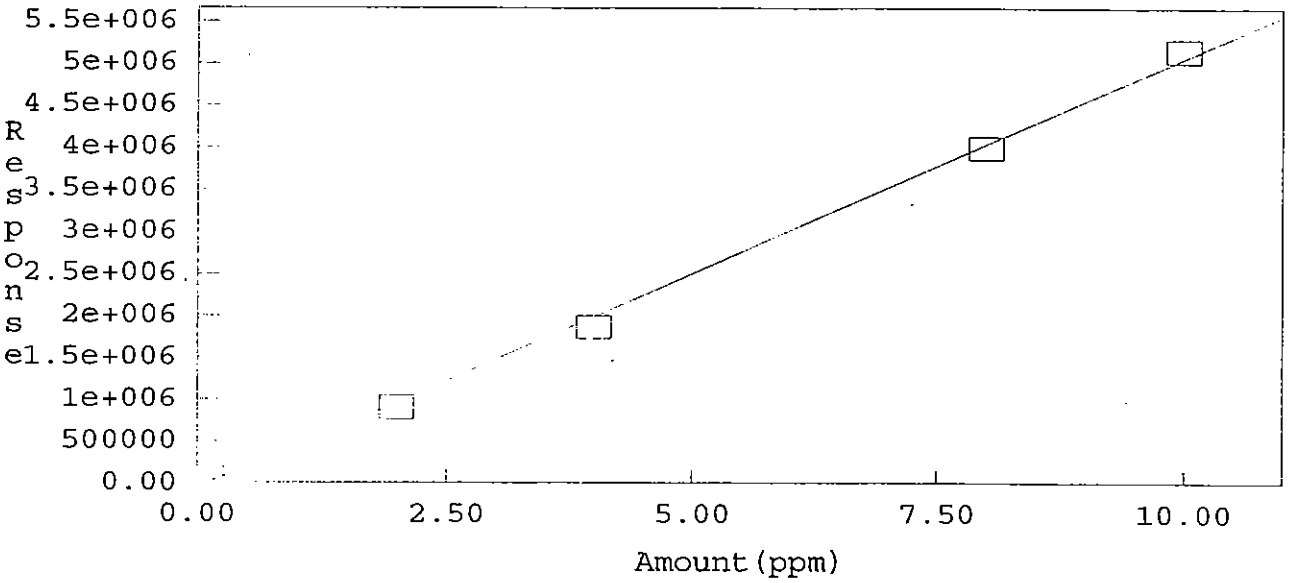
Method: E300-063.MET - Last Updated: 17:42 on Fri, 21 Mar 2003

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



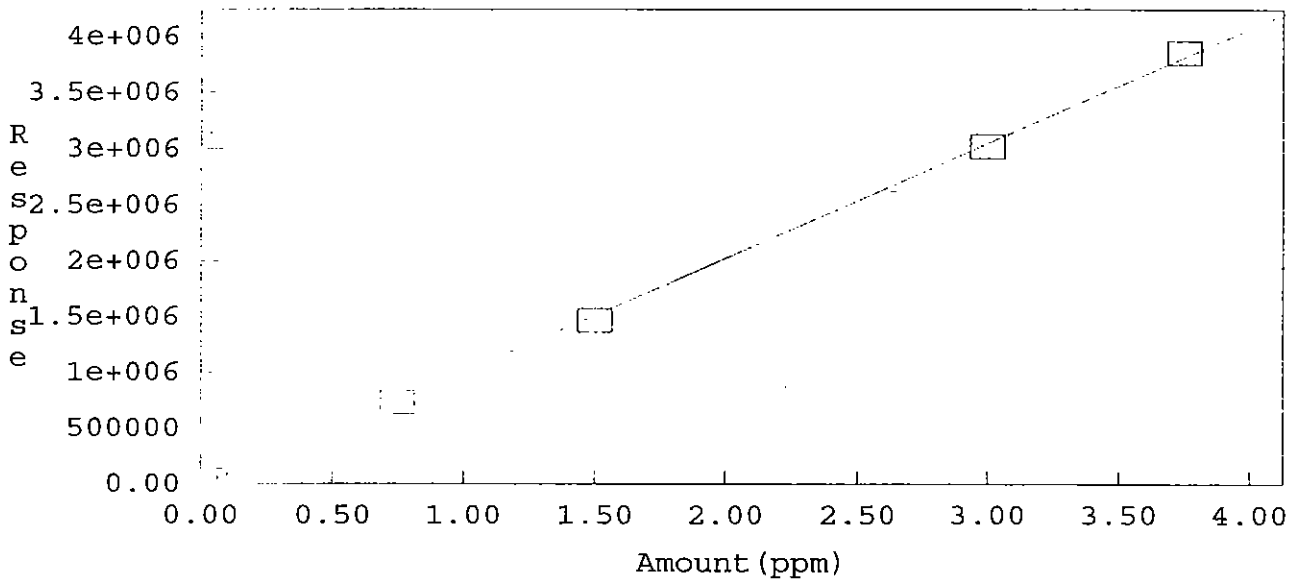
Method: C:\DX\METHOD\E300-063.MET

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



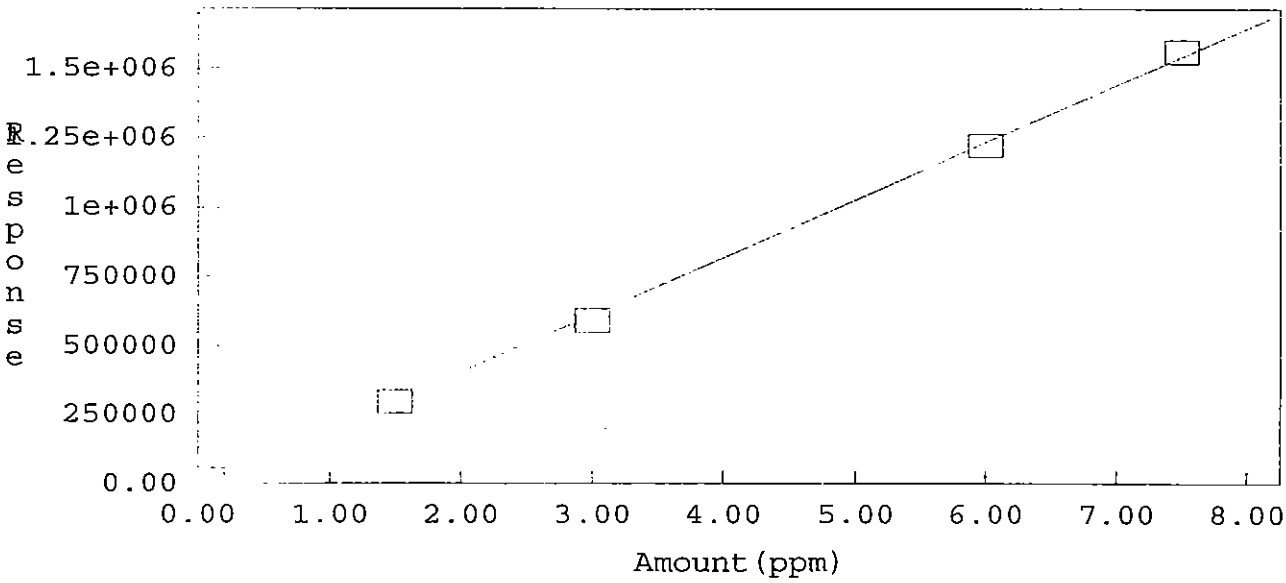
Method: C:\DX\METHOD\E300-063.MET

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



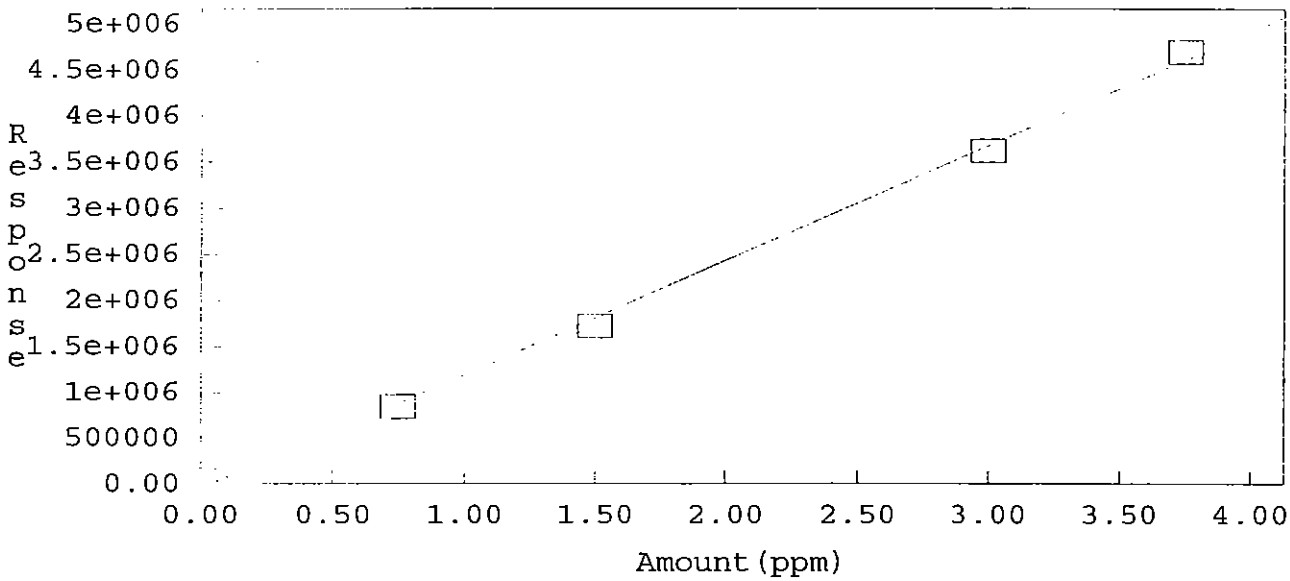
Method: C:\DX\METHOD\E300-063.MET

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



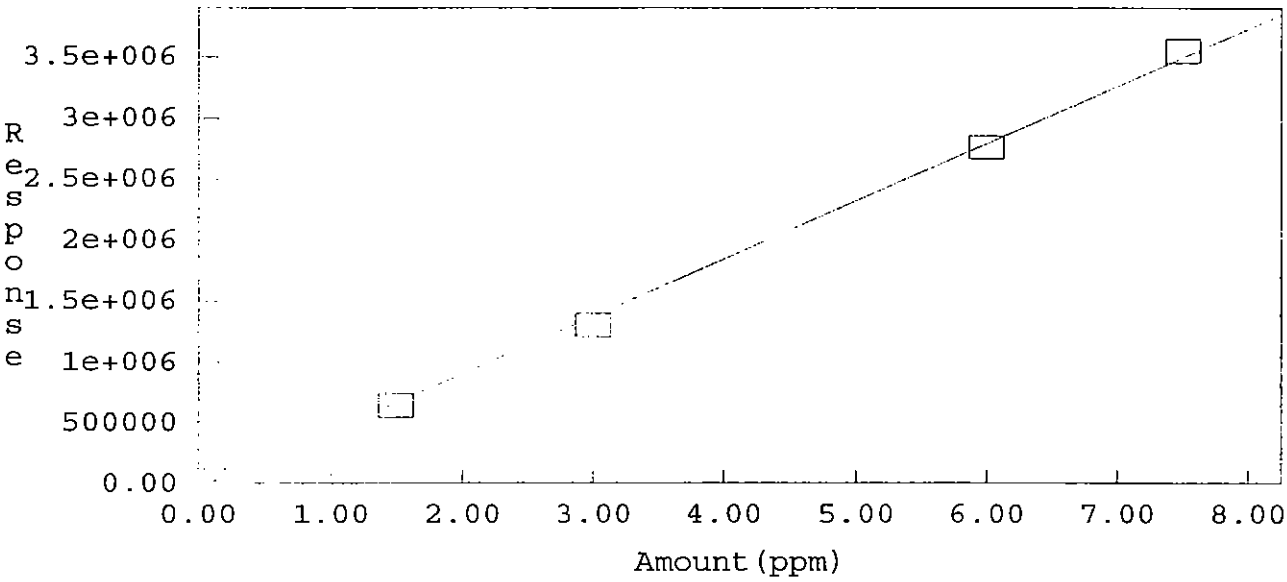
Method: C:\DX\METHOD\E300-063.MET

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



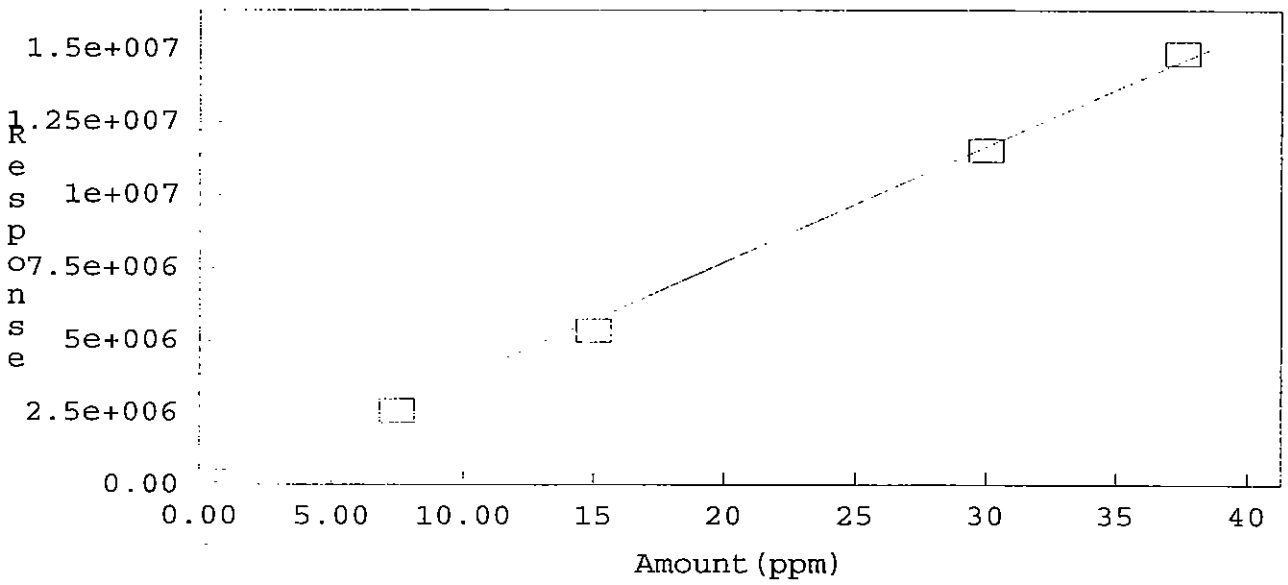
Method: C:\DX\METHOD\E300-063.MET

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

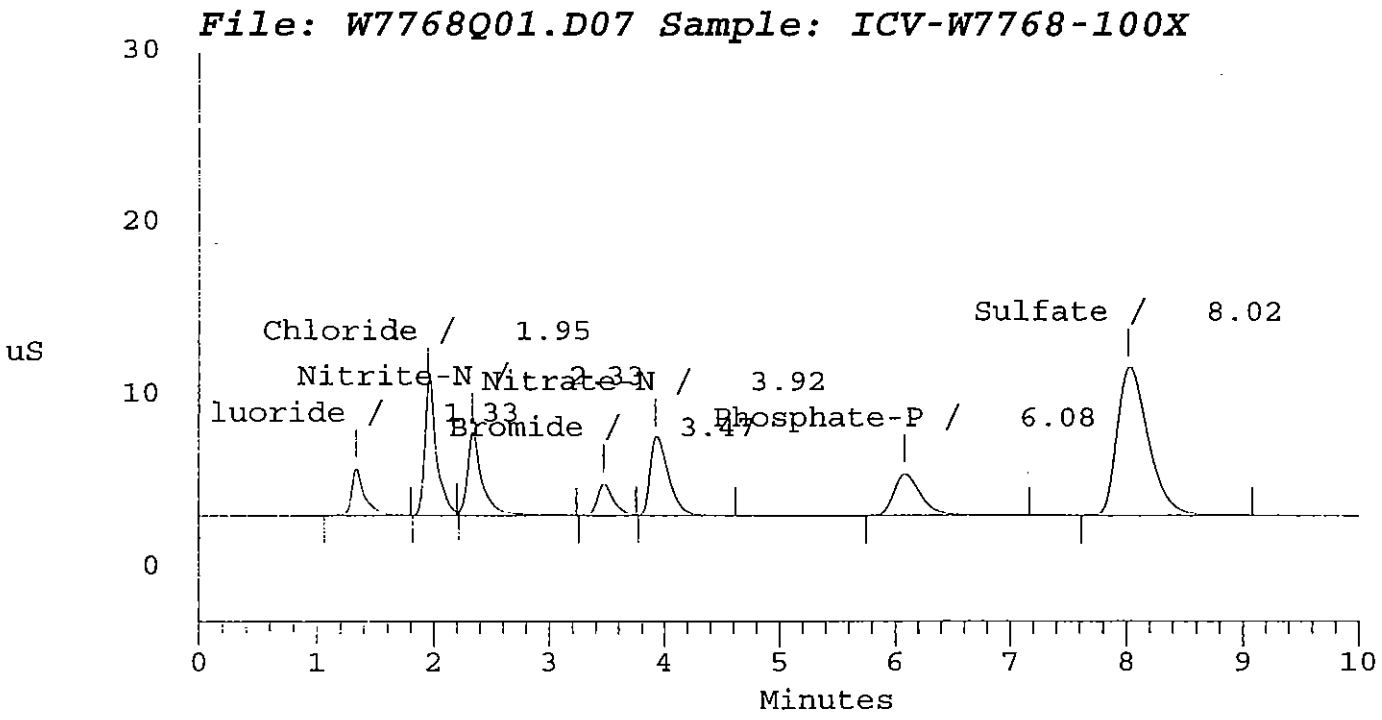


```
==========================================================================
| Sample Name: ICV-W7768-100X                  Date: 03/21/2003 17:56:33  |
| Data File  : C:\DX\DATA\e300-063\W7768Q01.D07                          |
| Method     : C:\DX\METHOD\E300-063.MET                                 |
| ACI Address: 1  System: 1  Inject#: 7                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	0.999	89896	726672	2	0.00
2	1.95	Chloride	3.767	248158	1863483	2	0.00
3	2.33	Nitrite-N	1.445	160603	1455681	2	1.17
4	3.47	Bromide	2.881	61007	586729	2	-0.71
5	3.92	Nitrate-N	1.410	149958	1697030	2	0.00
6	6.08	Phosphate-P	2.852	79916	1302965	1	0.00
7	8.02	Sulfate	13.993	285121	5314983	1	0.00
		Totals	27.347	1074659	12947545		

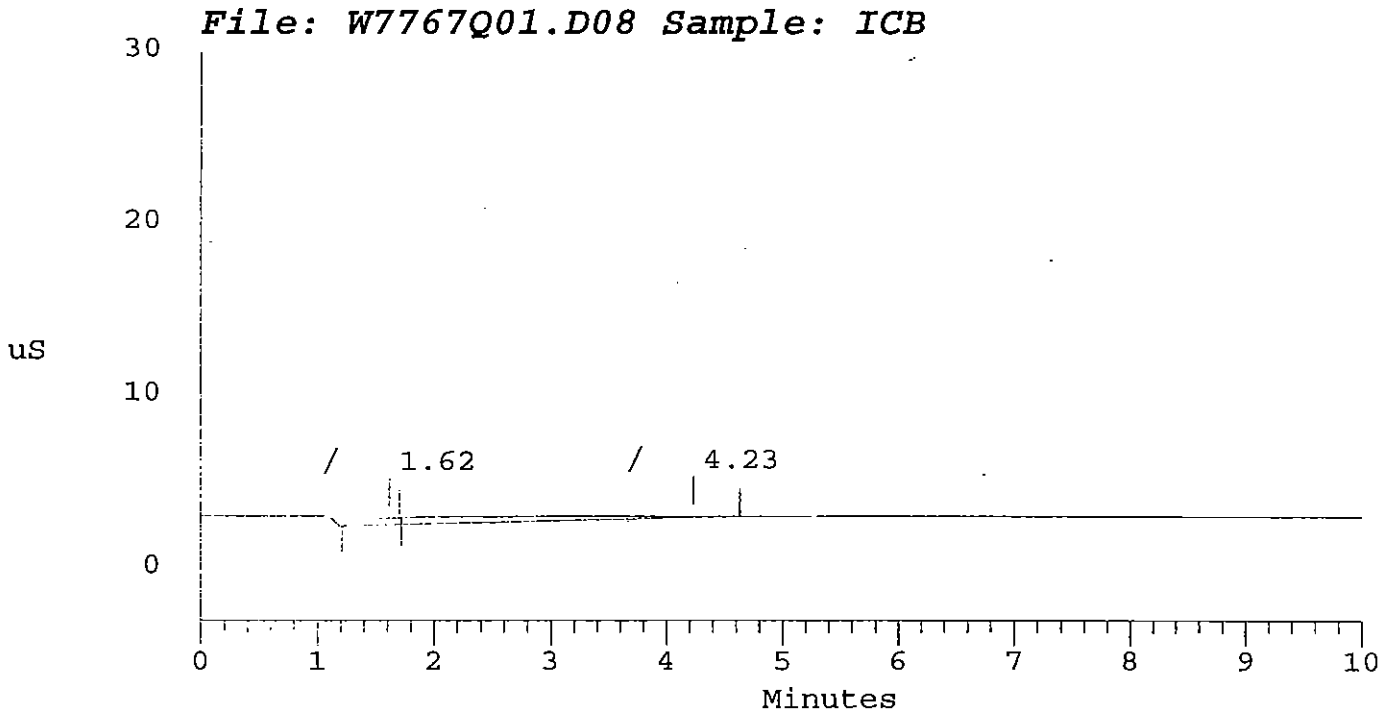


```
==============================================================================
| Sample Name: ICB                              Date: 03/21/2003 18:21:00      |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D08                                |
| Method     : C:\DX\METHOD\E300-063.MET                                       |
| ACI Address: 1  System: 1  Inject#: 8                   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		

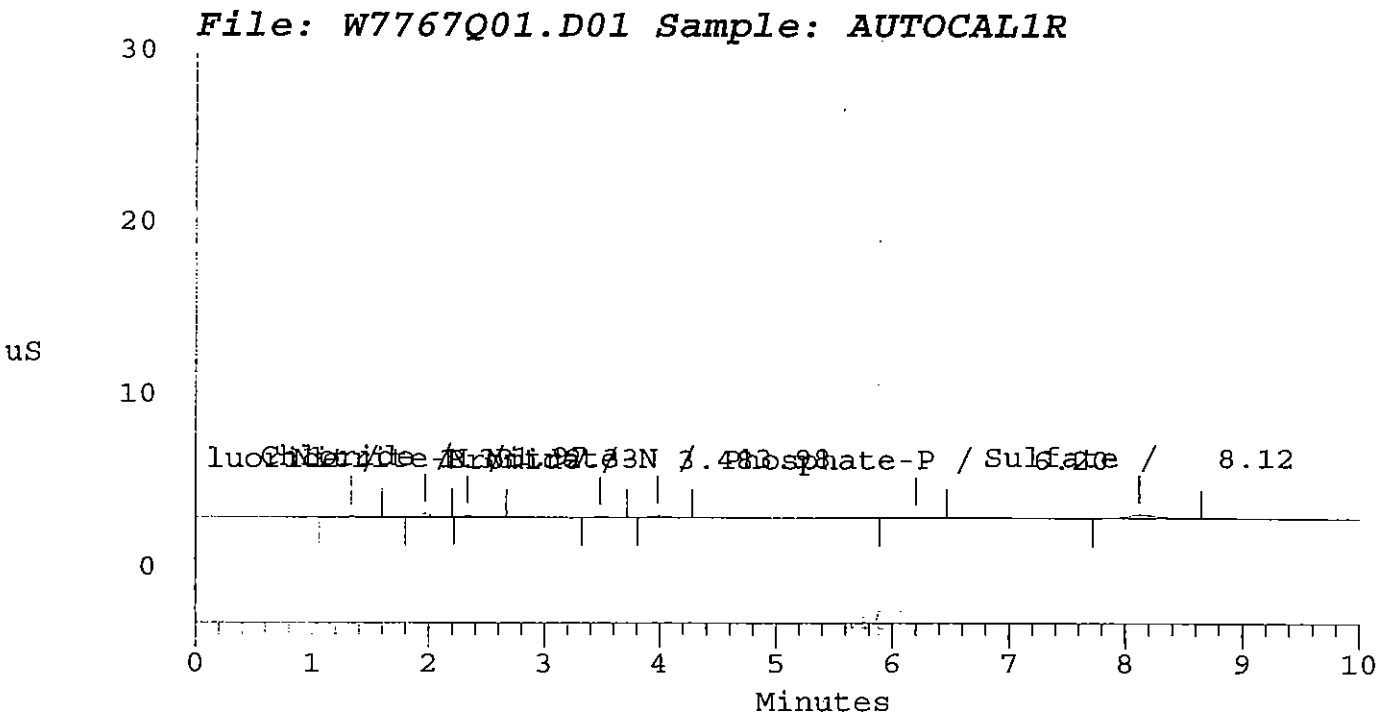


```
==========================================================================
| Sample Name: AUTOCAL1R                        Date: 03/21/2003 16:23:08  |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D01                            |
| Method     : C:\DX\METHOD\E300-063.MET                                   |
| 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		

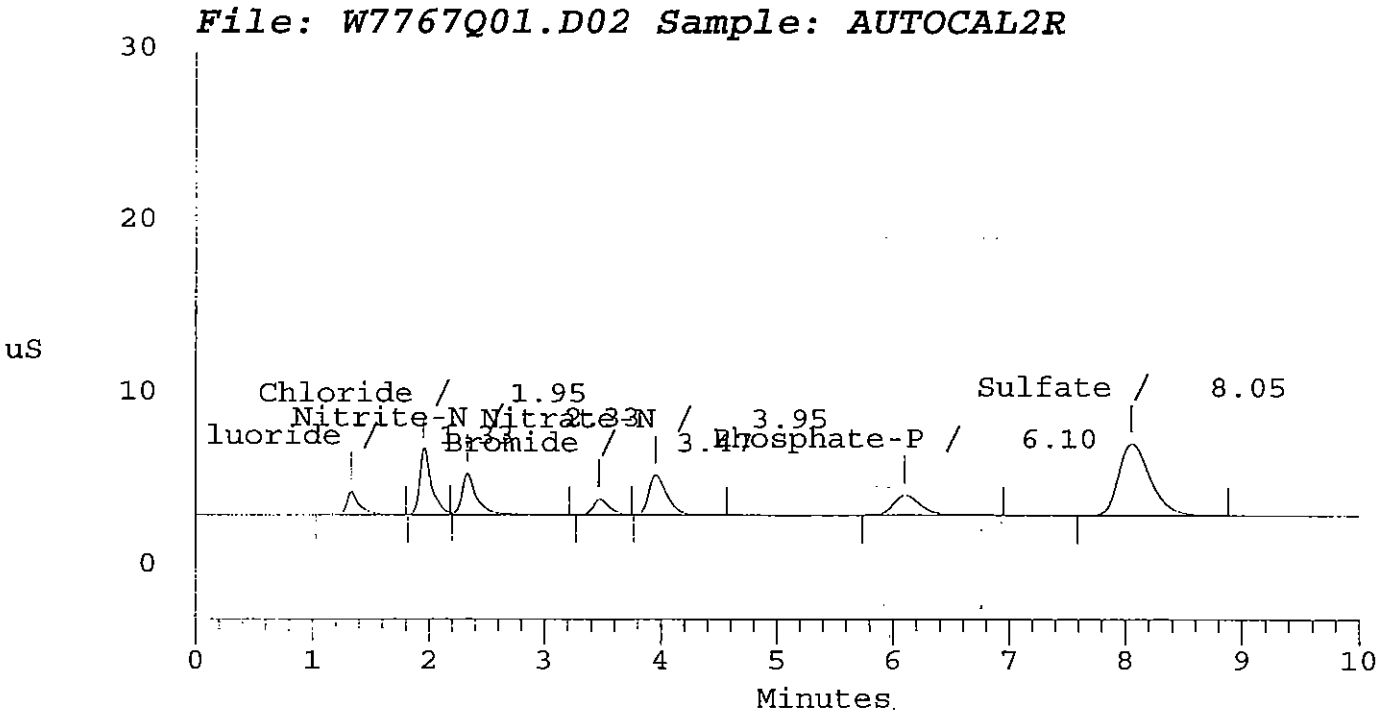


```
==========================================================================
| Sample Name: AUTOCAL2R                        Date: 03/21/2003 16:35:53  |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D02                            |
| Method     : C:\DX\METHOD\E300-063.MET                                   |
| 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		

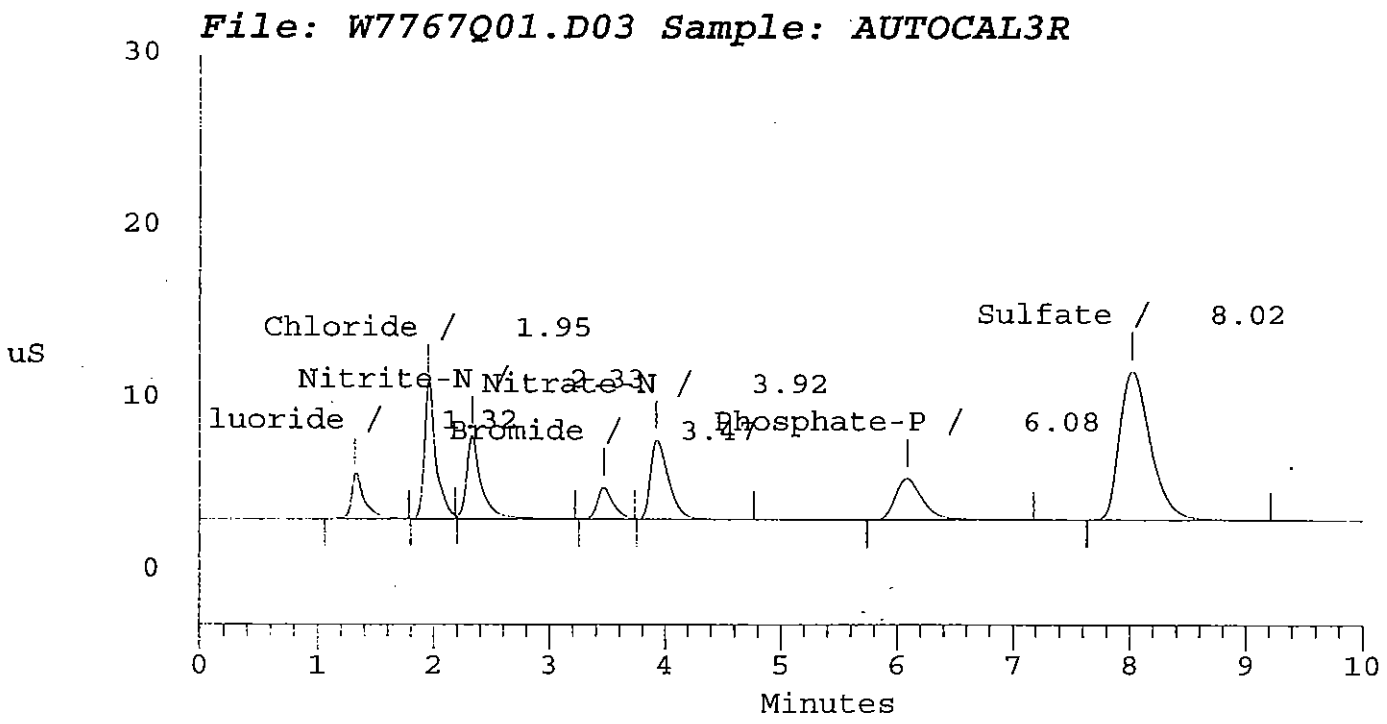


```
==========================================================================
| Sample Name: AUTOCAL3R                        Date: 03/21/2003 16:48:37 |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D03                           |
| Method     : C:\DX\METHOD\E300-063.MET                                  |
| 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		

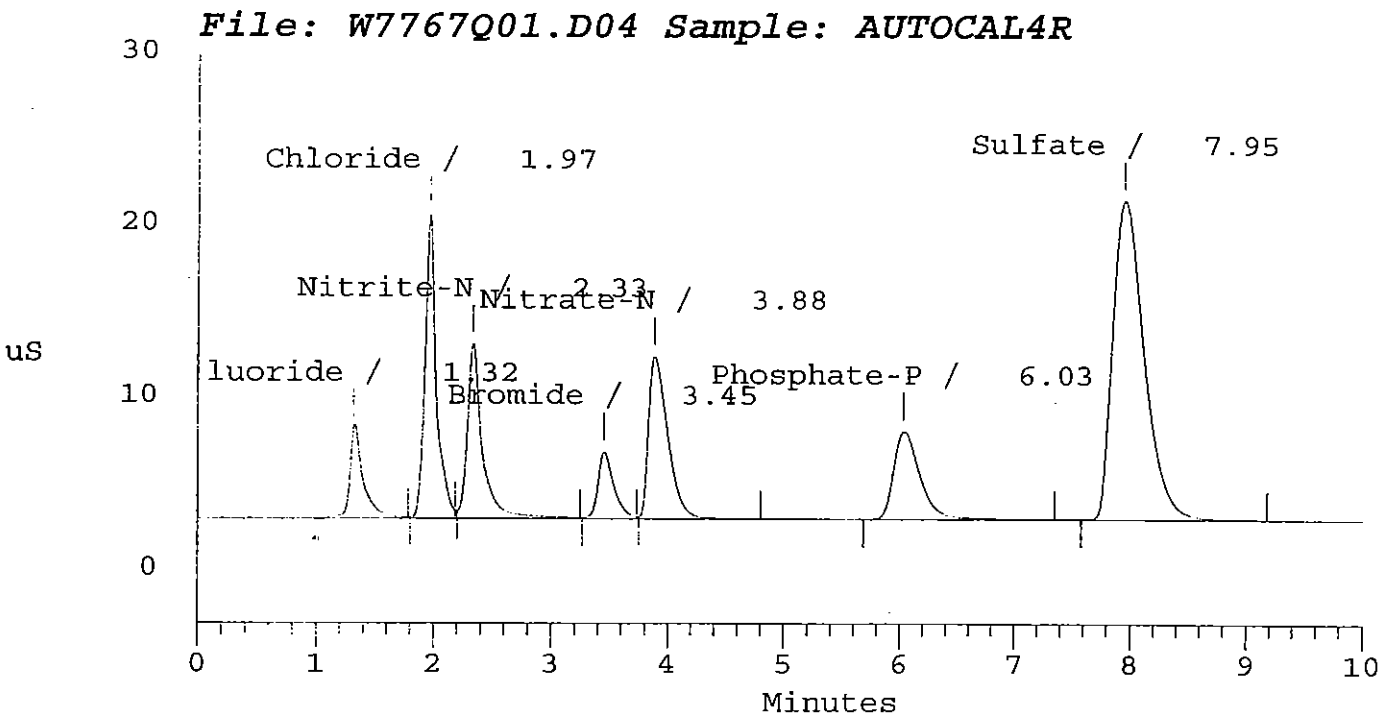


```
==========================================================================
| Sample Name: AUTOCAL4R                      Date: 03/21/2003 17:01:21   |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D04                           |
| Method     : C:\DX\METHOD\E300-063.MET                                  |
| 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		

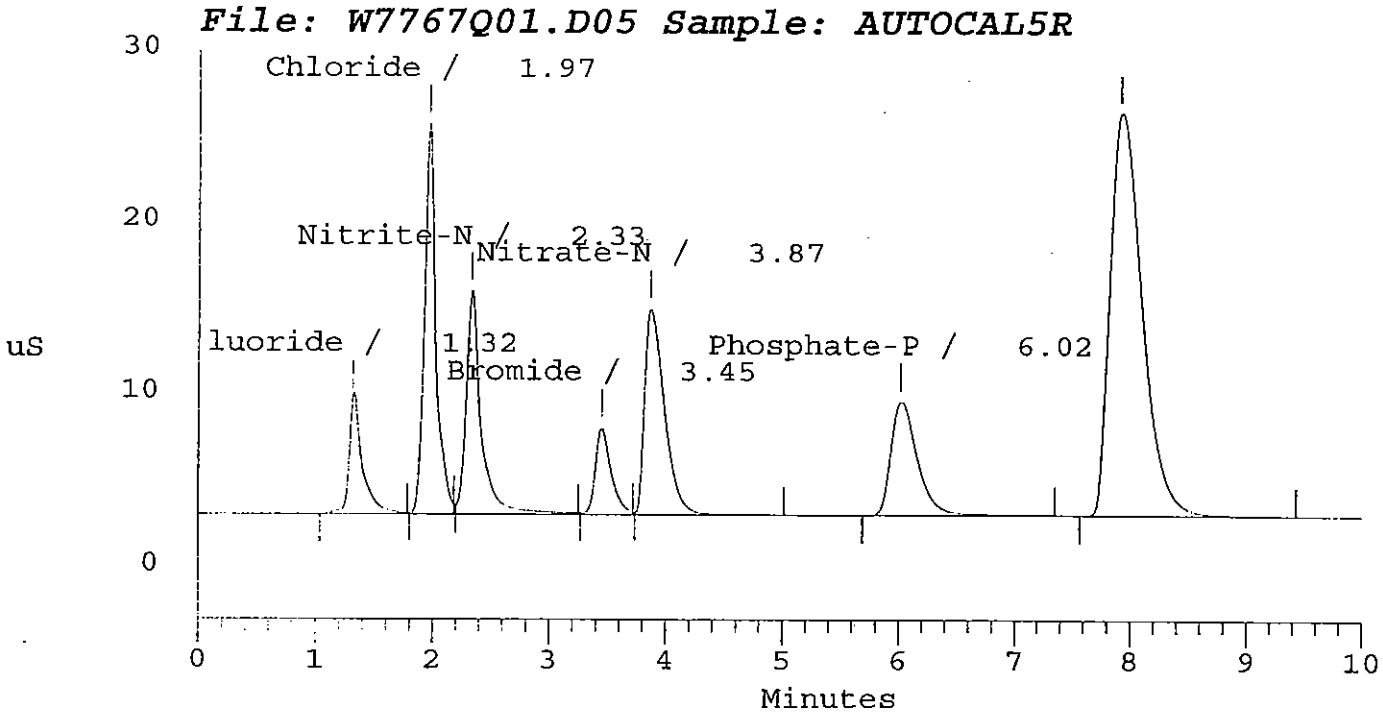


Sample Name: AUTOCAL5R	Date: 03/21/2003 17:14:05
Data File : C:\DX\DATA\E300-063\W7767Q01.D05	
Method : C:\DX\METHOD\E300-063.MET	
ACI Address: 1 System: 1 Inject#: 5	Detector:COND
Analyst : David	Column: Dionex AS4A-SC

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		



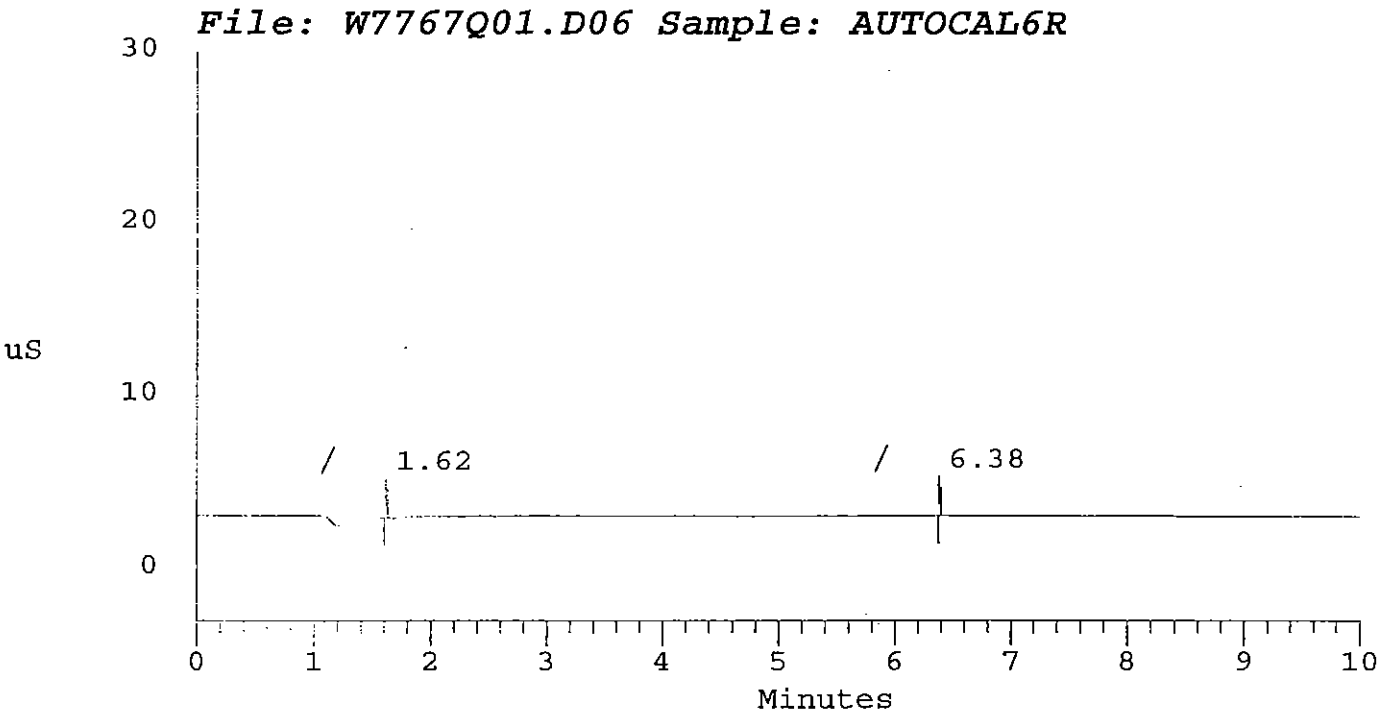
Data Reprocessed On 03/21/2003 17:39:26

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		



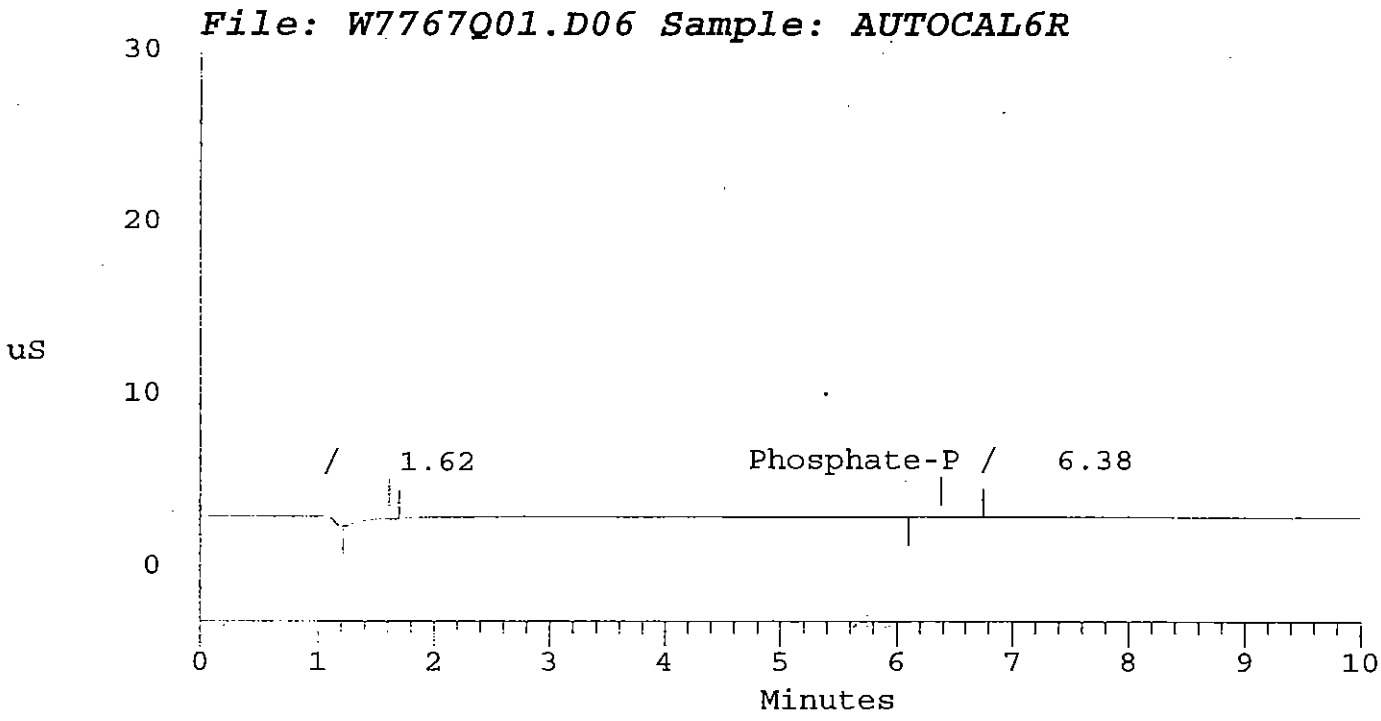
After
3/25/03
Version 3.2

```
==============================================================================
| 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 **********

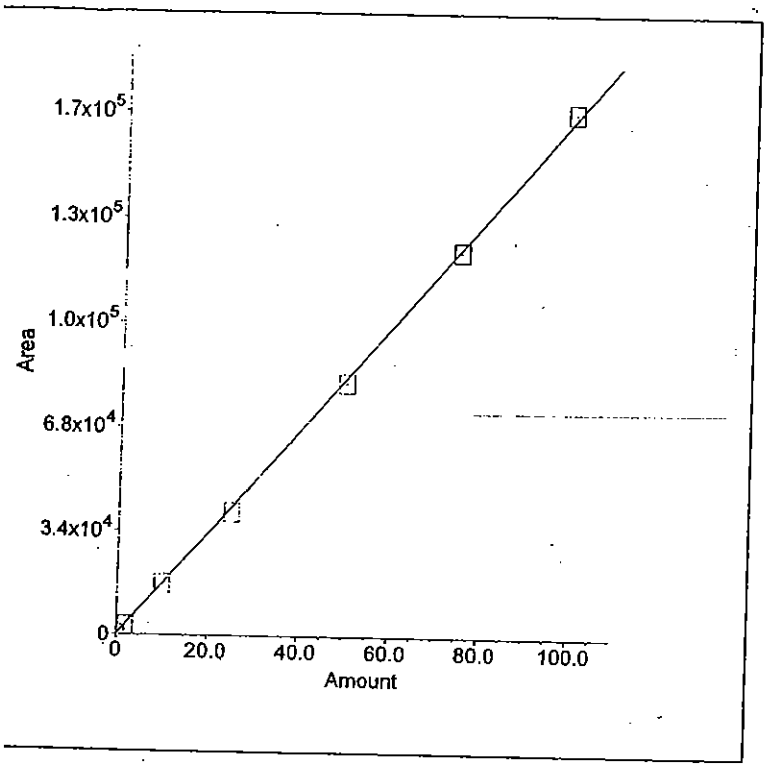
Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
0	0.00	Fluoride	0.000	0	0	0	0.00
0	0.00	Chloride	0.000	0	0	0	0.00
0	0.00	Nitrite-N	0.000	0	0	0	0.00
0	0.00	Bromide	0.000	0	0	0	0.00
0	0.00	Nitrate-N	0.000	0	0	0	0.00
2	6.38	Phosphate-P	0.000	582	11752	1	0.00
0	0.00	Sulfate	0.000	0	0	0	0.00
		Totals	0.000	582	11752		



Before

5584

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

APCL Perchlorate Analysis Report

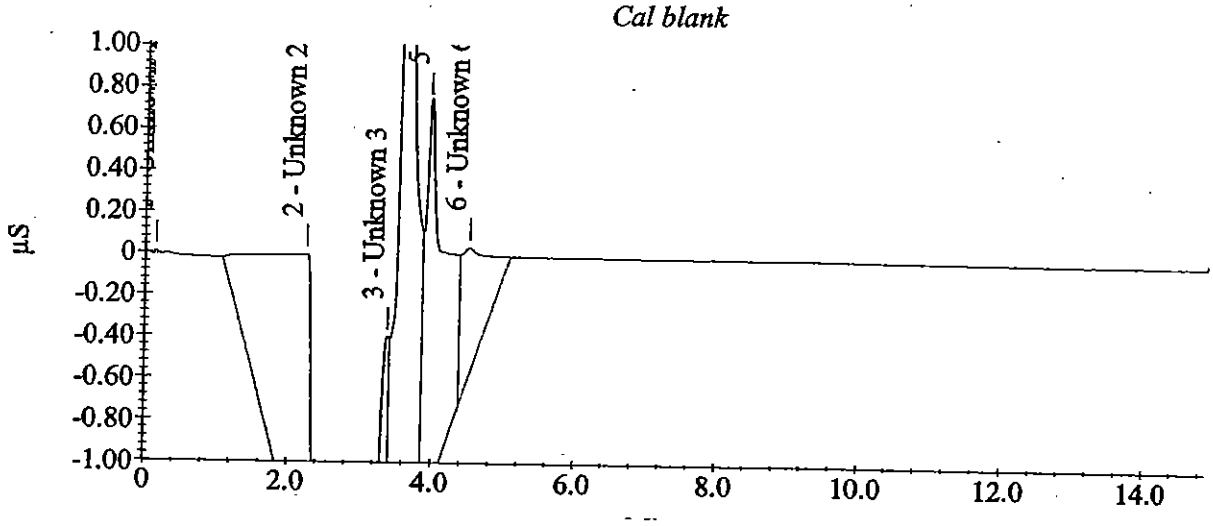
Sample Name : Cal blank
Data File Name : C:\data\E314-011\Mb_001.DXD

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

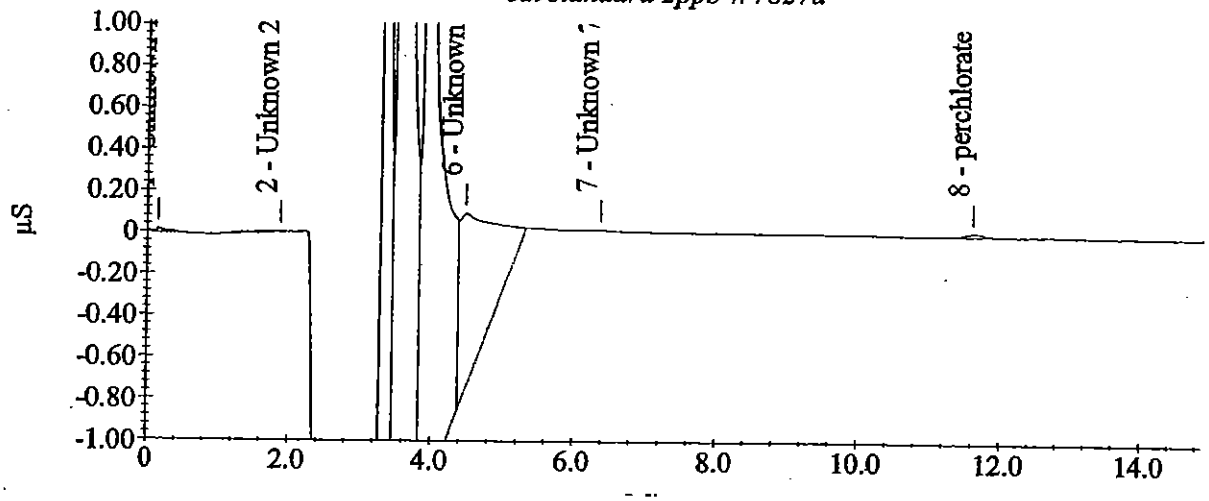
Sample Name : cal standard 2ppb W7827a
Data File Name : C:\DATA\E314-011\std-2pb_002.DXD

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

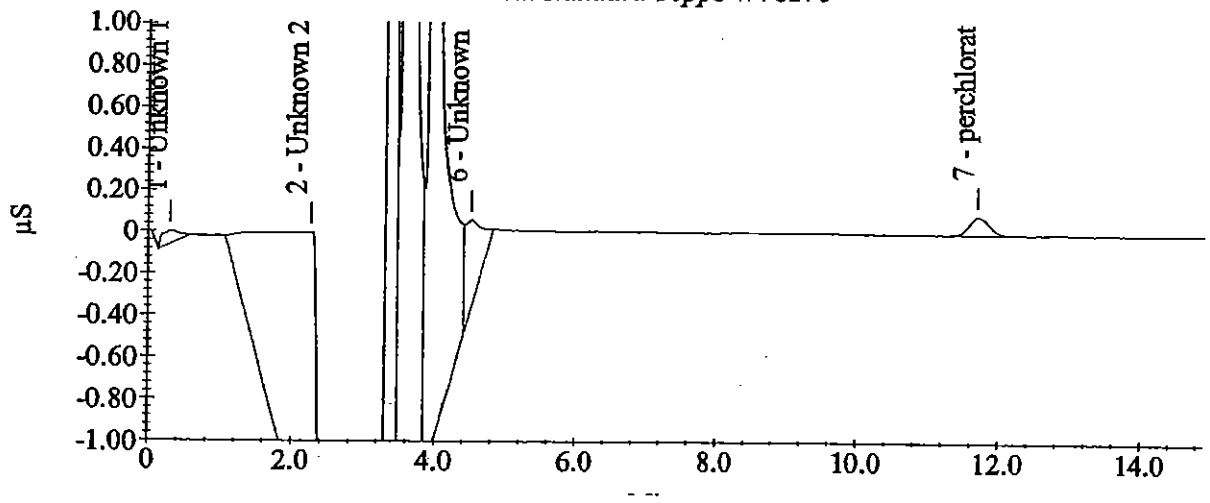
Sample Name : cal standard 10ppb W7827c
Data File Name : C:\DATA\E314-011\std-10pb_004.DXD

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

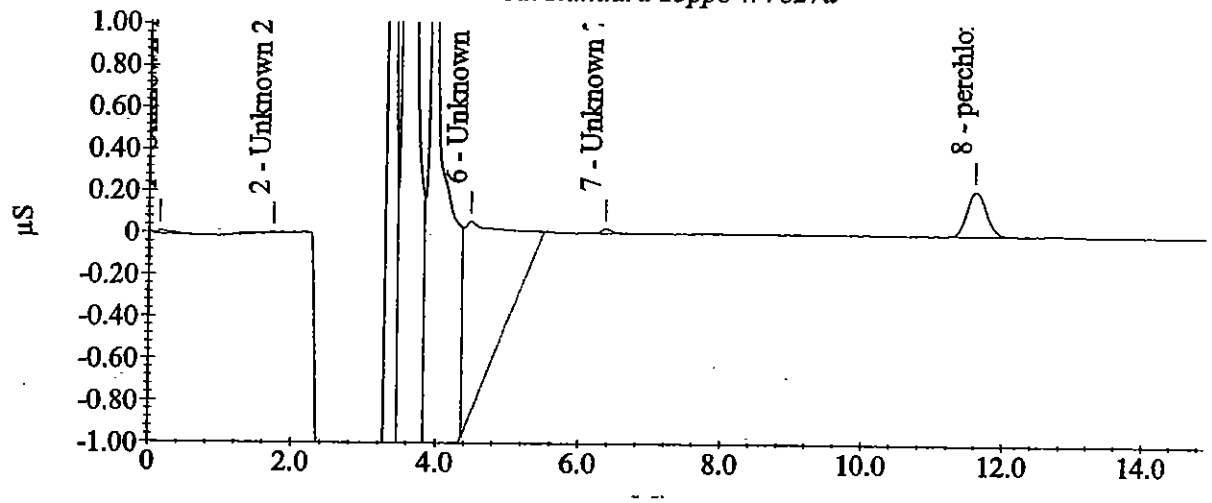
Sample Name : cal standard 25ppb W7827d
Data File Name : C:\DATA\E314-011\std-25pb_005.DXD

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

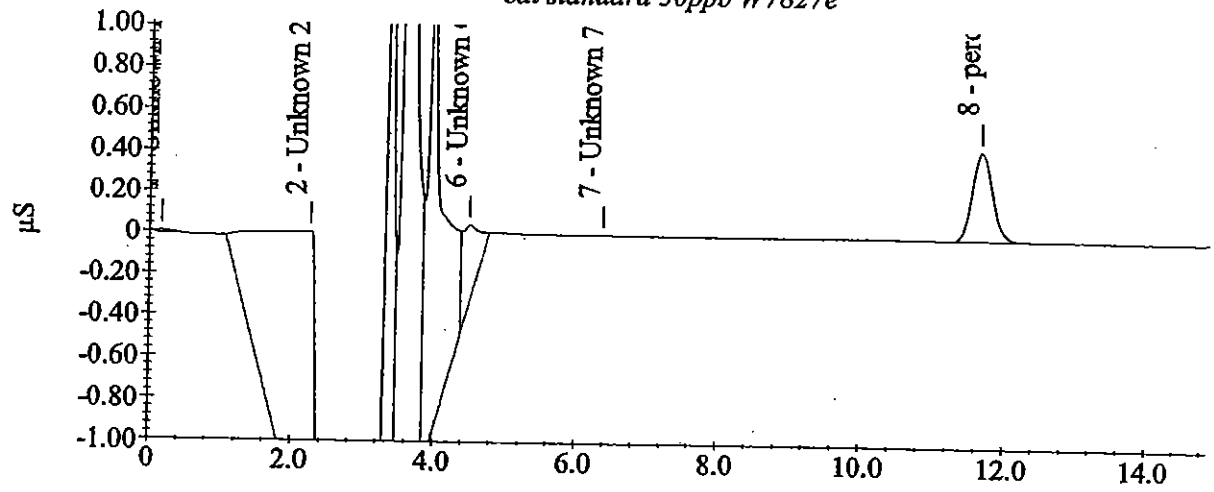
Sample Name : cal standard 50ppb W7827e
Data File Name : C:\DATA\E314-011\std-50pb_006.DXD

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

cal standard 50ppb W7827e



APCL Perchlorate Analysis Report

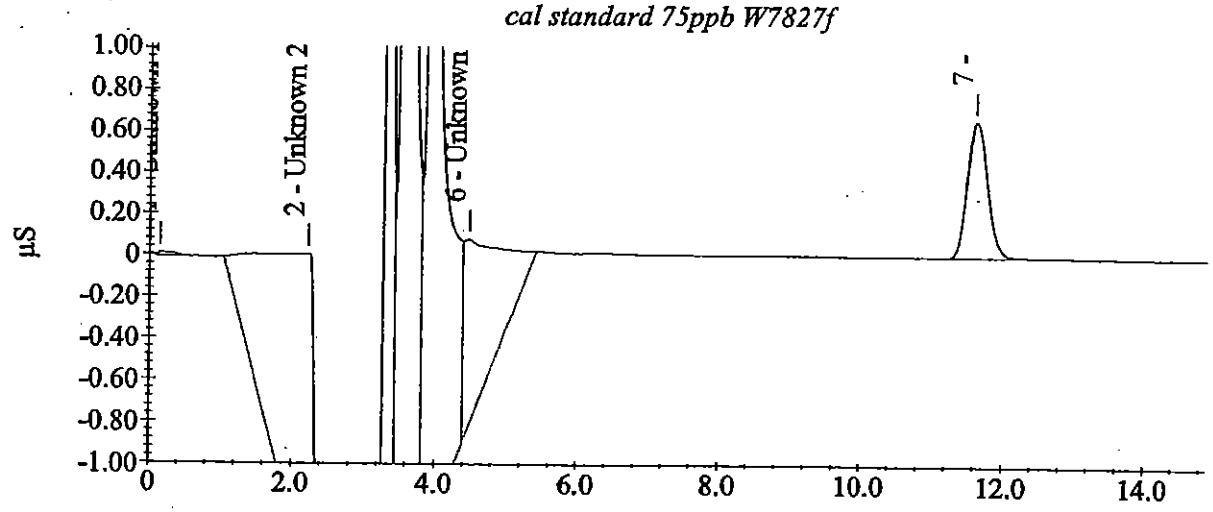
Sample Name : cal standard 75ppb W7827f
Data File Name : C:\DATA\E314-011\std-75pb_007.DXD

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

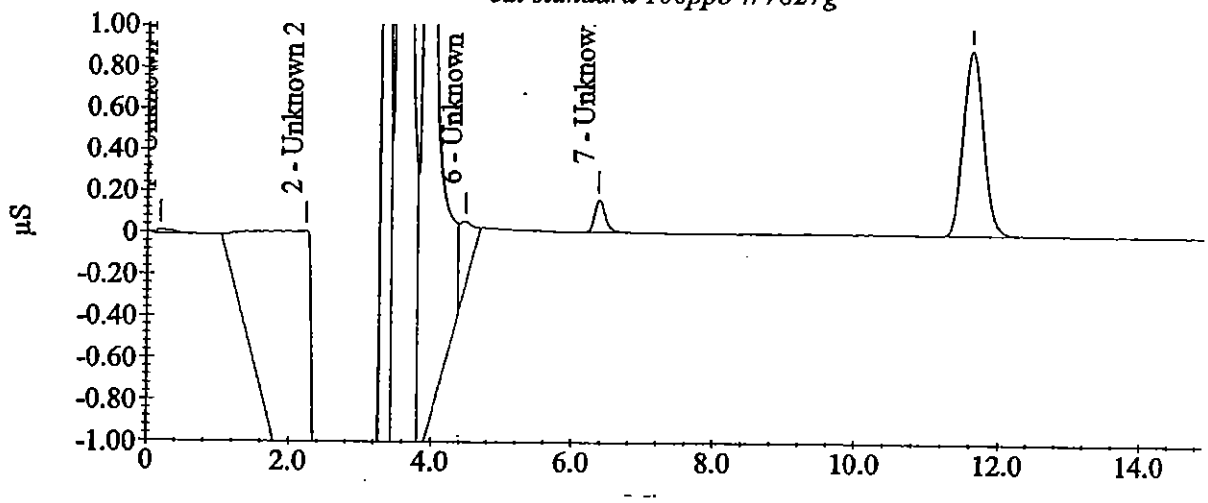
Sample Name : cal standard 100ppb W7827g
Data File Name : C:\DATA\E314-011\std-100pb_008.DXD

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	892[illegible]

cal standard 100ppb W7827g



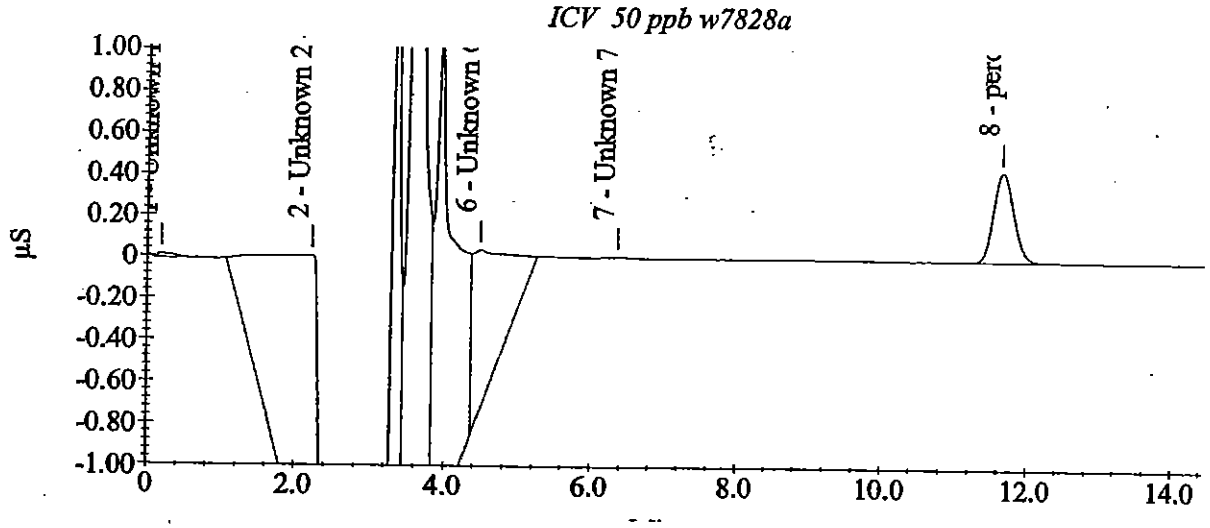
APCL Perchlorate Analysis Report

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

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

Peak Information : All Components

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



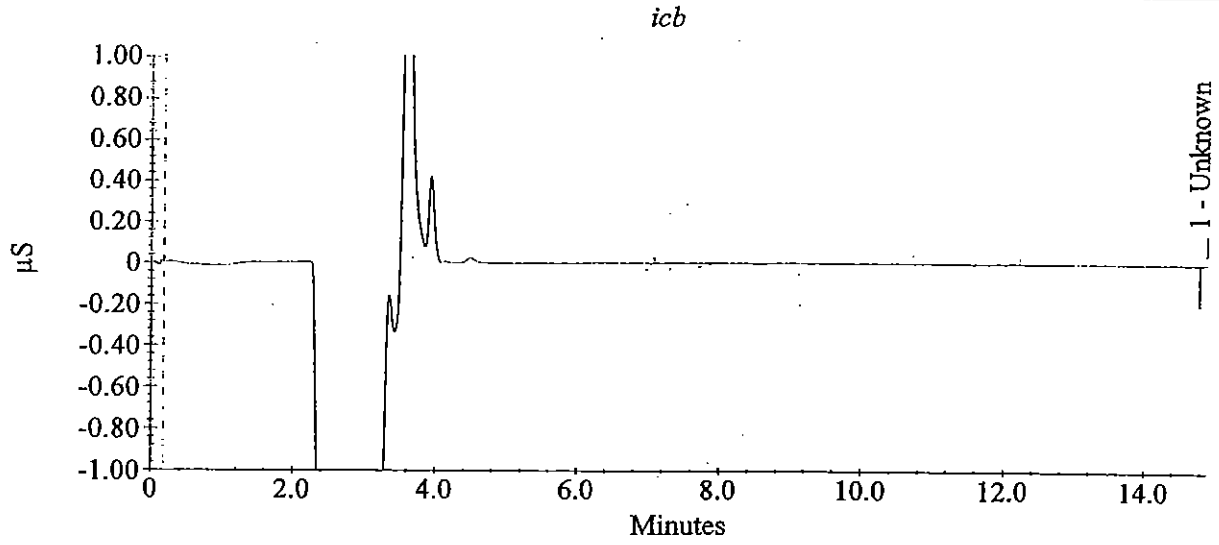
APCL Perchlorate Analysis Report

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

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

Peak Information : All Components

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



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: 33015
Project ID: JPL Project No.: 04-4428.10

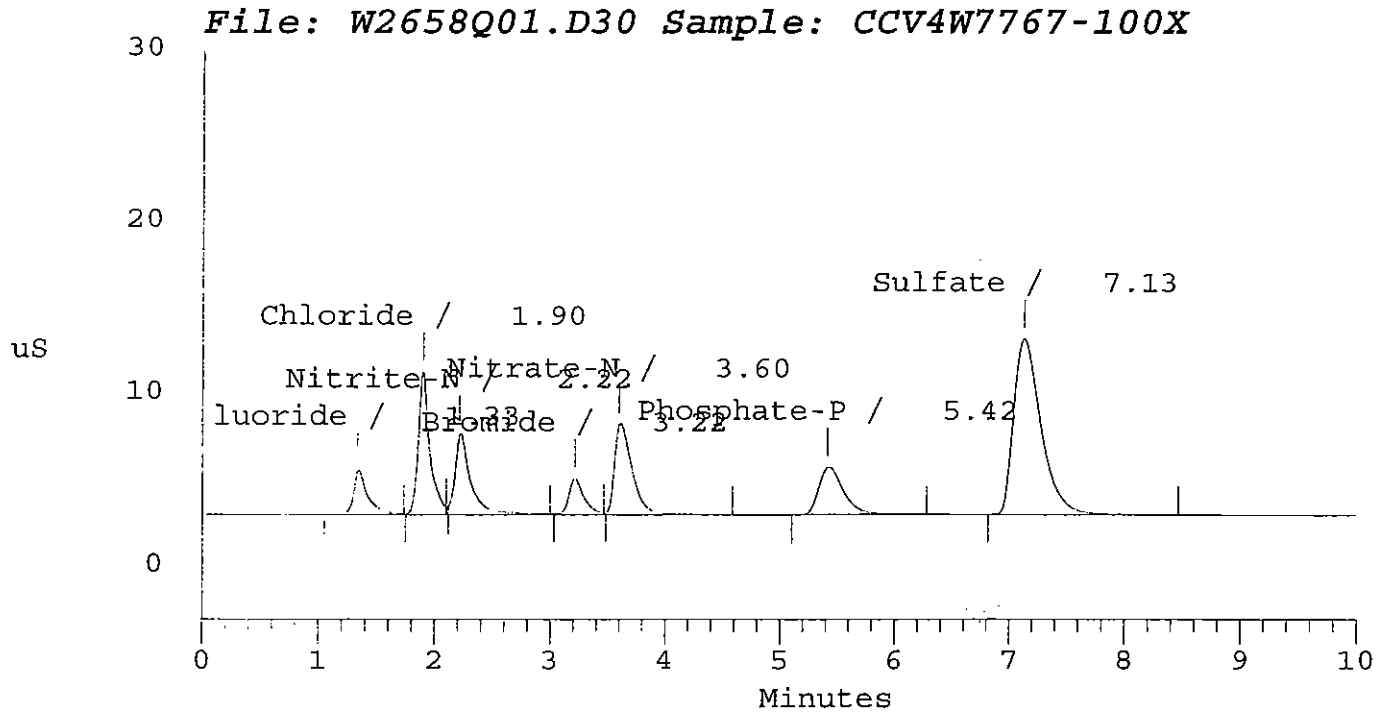
#	Component Name	Method	Batch No.	Unit	Expe-cted	Test Result	Rec. %	Dev. %	Flag	Control Limit, %	Test Date
1	Chloride Cl^-	300.0	03W2658	mg/L	4.0	4.02	101	1	√	90-110	05/01/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2658	mg/L	1.5	1.51	101	1	√	90-110	05/01/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2658	mg/L	15	15.1	101	1	√	90-110	05/01/2003
	Chloride Cl^-	300.0	03W2658	mg/L	4.0	3.95	99	-1	√	90-110	05/01/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2658	mg/L	1.5	1.51	101	1	√	90-110	05/01/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2658	mg/L	15	15.0	100	0	√	90-110	05/01/2003
	Chloride Cl^-	300.0	03W2658	mg/L	4.0	3.89	97	-3	√	90-110	05/01/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2658	mg/L	1.5	1.51	101	1	√	90-110	05/01/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2658	mg/L	15	14.9	99	-1	√	90-110	05/01/2003
	Chloride Cl^-	300.0	03W2658	mg/L	4.0	3.92	98	-2	√	90-110	05/01/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2658	mg/L	1.5	1.52	101	1	√	90-110	05/01/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2658	mg/L	15	14.9	99	-1	√	90-110	05/01/2003
2	Perchlorate	314.0	03W2719	μg/L	50	50.6	101	1	√	90-110	05/05/2003
	Perchlorate	314.0	03W2719	μg/L	50	50.4	101	1	√	90-110	05/05/2003
	Perchlorate	314.0	03W2719	μg/L	50	50.9	102	2	√	90-110	05/05/2003
	Perchlorate	314.0	03W2719	μg/L	50	50.7	101	1	√	90-110	05/05/2003
3	Chromium (VI)	7196	03W2664	mg/L	0.25	0.238	95	-5	√	90-110	05/01/2003
	Chromium (VI)	7196	03W2664	mg/L	0.25	0.252	101	1	√	90-110	05/01/2003

```
==============================================================================
| Sample Name: CCV4W7767-100X                    Date: 05/01/2003 18:04:18    |
| Data File  : C:\DX\DATA\03W2658\W2658Q01.D30                                |
| Method     : C:\DX\METHOD\E300-063.MET                                      |
| ACI Address: 1  System: 1  Inject#: 30                  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	1.005	81040	730680	2	0.00
2	1.90	Chloride	3.921	275377	1941988	2	0.00
3	2.22	Nitrite-N	1.484	152969	1495643	2	-1.48
4	3.22	Bromide	3.094	68949	630678	2	0.89
5	3.60	Nitrate-N	1.522	173088	1836427	2	0.00
6	5.42	Phosphate-P	3.000	91114	1372808	1	0.00
7	7.13	Sulfate	14.888	339282	5668487	1	0.00
		Totals	28.913	1181819	13676711		

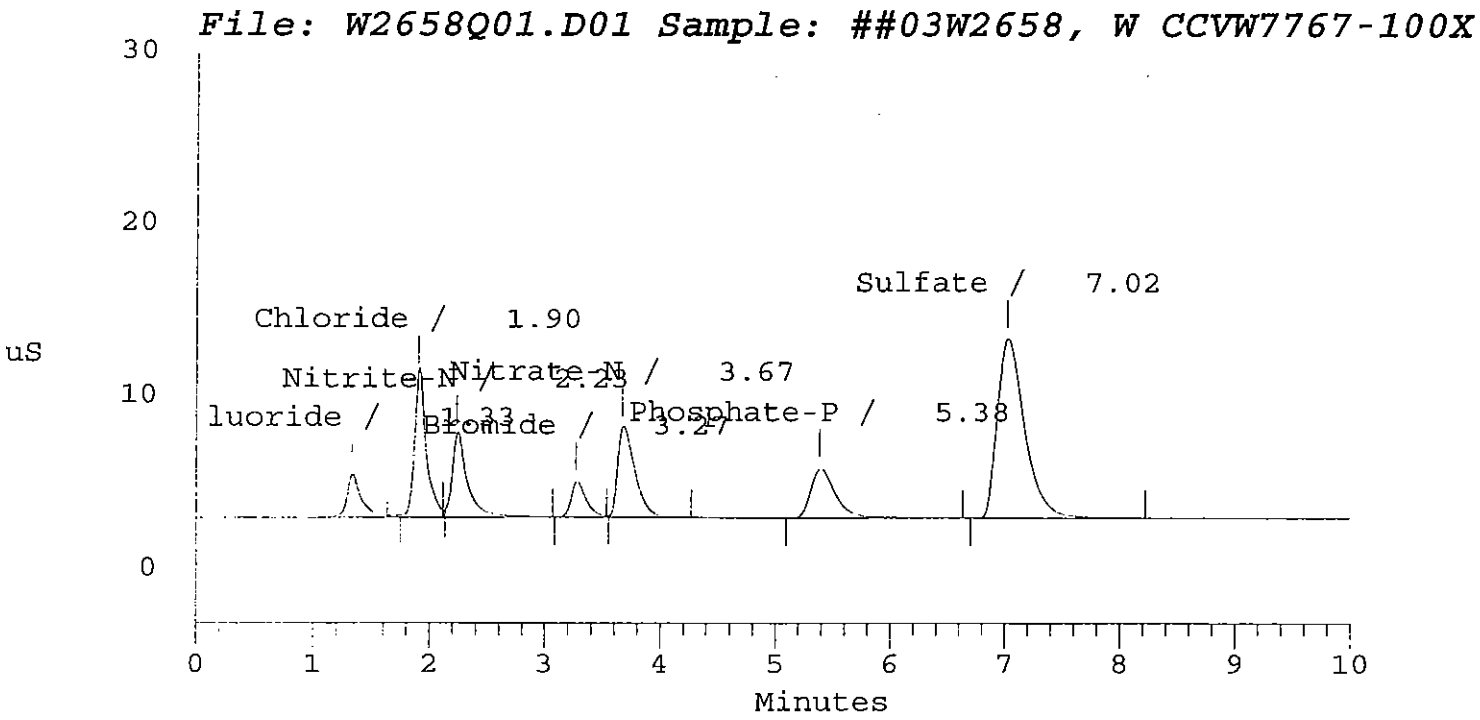


```
==========================================================================
| Sample Name: ##03W2658, W CCVW7767-100X     Date: 05/01/2003 10:28:40   |
| Data File   : C:\DX\DATA\03W2658\W2658Q01.D01                           |
| Method      : C:\DX\METHOD\E300-063.MET                                 |
| 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	0.991	83269	720966	2	0.00
2	1.90	Chloride	4.022	273355	1993904	2	0.00
3	2.23	Nitrite-N	1.503	157524	1514898	2	-0.74
4	3.27	Bromide	3.047	67107	620921	2	0.60
5	3.67	Nitrate-N	1.509	171468	1821065	2	0.00
6	5.38	Phosphate-P	3.155	93509	1445511	2	0.00
7	7.02	Sulfate	15.075	343700	5742294	2	0.00
		Totals	29.301	1189931	13859559		

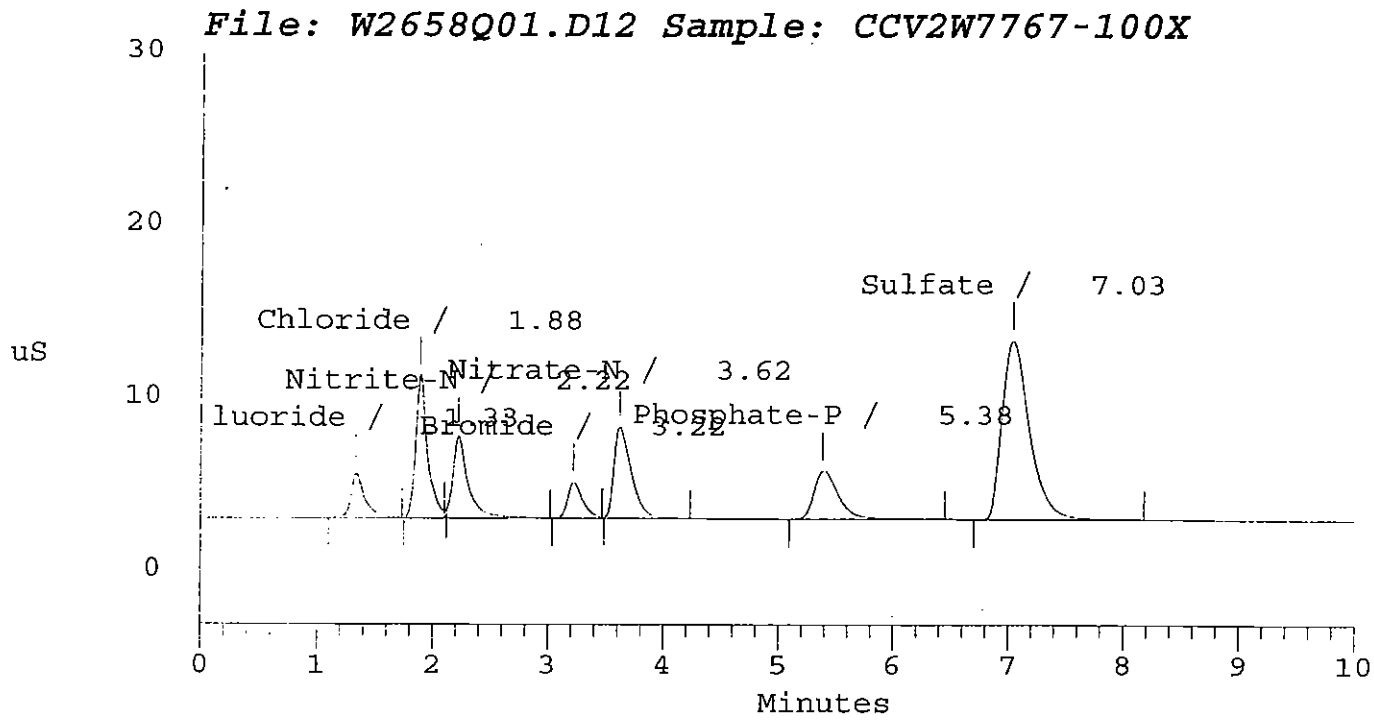


Sample Name: CCV2W7767-100X	Date: 05/01/2003 13:39:28
Data File : C:\DX\DATA\03W2658\W2658Q01.D12	
Method : C:\DX\METHOD\E300-063.MET	
ACI Address: 1 System: 1 Inject#: 12	Detector:COND
Analyst : David	Column: Dionex AS4A-SC

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	1.33	Fluoride	0.992	85279	721602	2	0.00
2	1.88	Chloride	3.947	272010	1955662	2	0.00
3	2.22	Nitrite-N	1.450	156698	1460678	2	-0.61
4	3.22	Bromide	3.029	68324	617342	2	0.42
5	3.62	Nitrate-N	1.511	176001	1823548	2	0.00
6	5.38	Phosphate-P	3.085	91854	1412710	2	0.00
7	7.03	Sulfate	15.024	343414	5722199	2	0.00
		Totals	29.039	1193580	13713742		

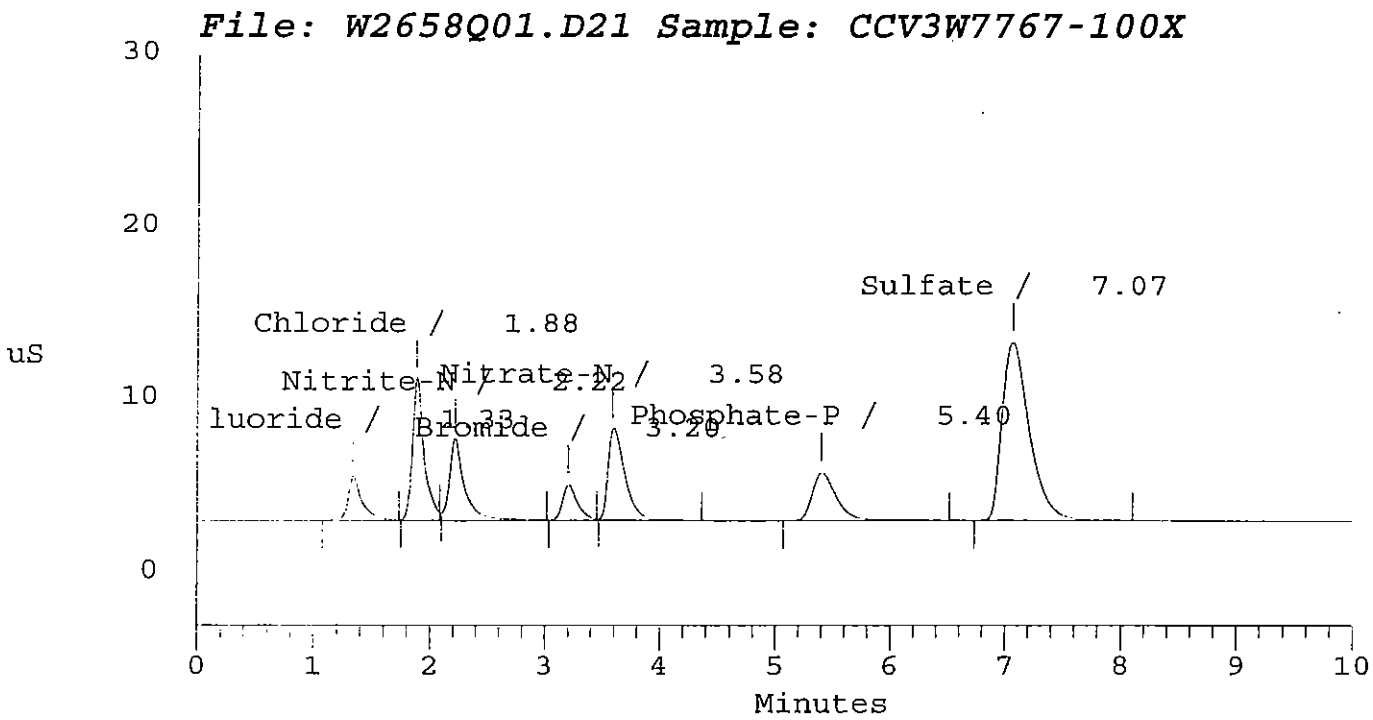


```
==============================================================================
| Sample Name: CCV3W7767-100X                    Date: 05/01/2003 15:59:43    |
| Data File  : C:\DX\DATA\03W2658\W2658Q01.D21                                |
| Method     : C:\DX\METHOD\E300-063.MET                                      |
| ACI Address: 1  System: 1  Inject#: 21                  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	0.997	84736	725295	2	0.00
2	1.88	Chloride	3.890	270274	1926149	2	0.00
3	2.22	Nitrite-N	1.472	157587	1483605	2	-0.61
4	3.20	Bromide	3.061	68756	623822	2	0.83
5	3.58	Nitrate-N	1.513	171697	1826033	2	0.00
6	5.40	Phosphate-P	3.039	92136	1391171	2	0.00
7	7.07	Sulfate	14.850	342510	5653450	2	0.00
		Totals	28.822	1187697	13629526		



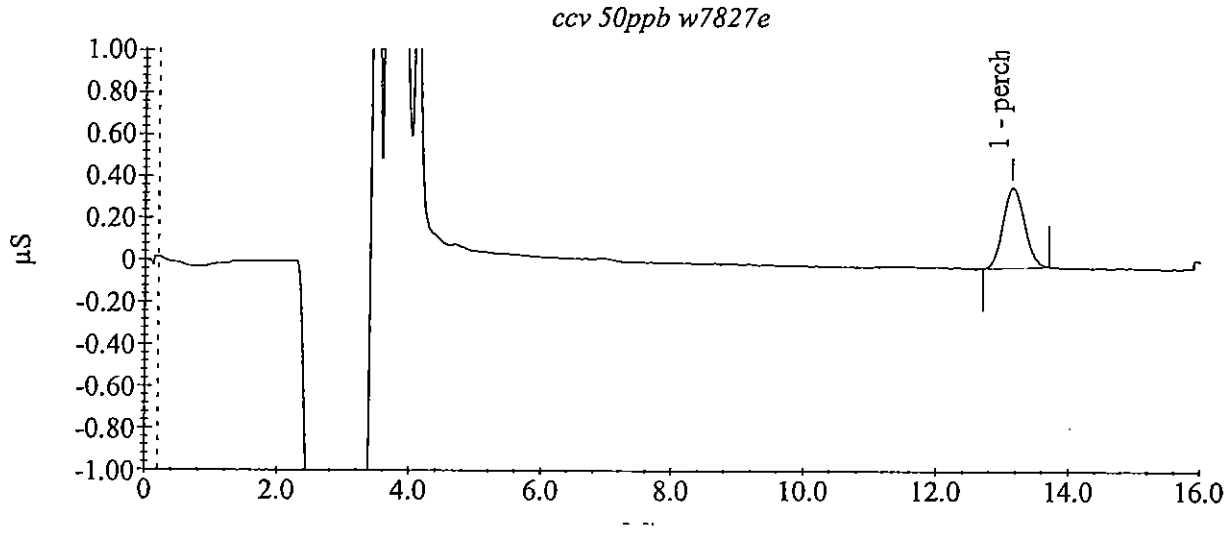
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2719K\W2719K Q01_002.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 10:22:41 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	13.13	50.56	85809.05	3807.65



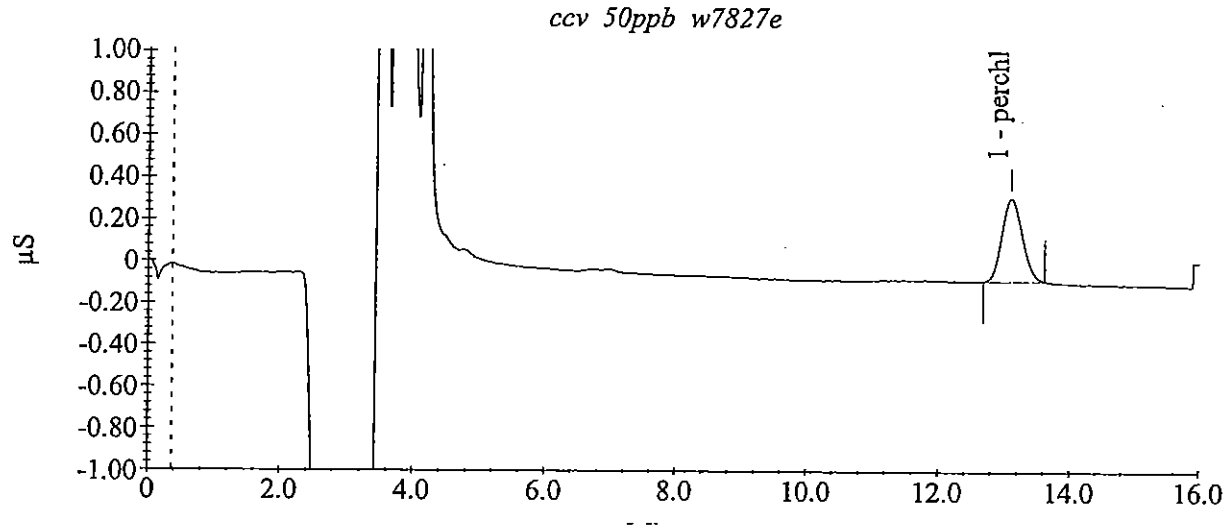
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2719K\W2719K Q02_013.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 1:48:27 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	13.10	50.42	85571.10	3951.66



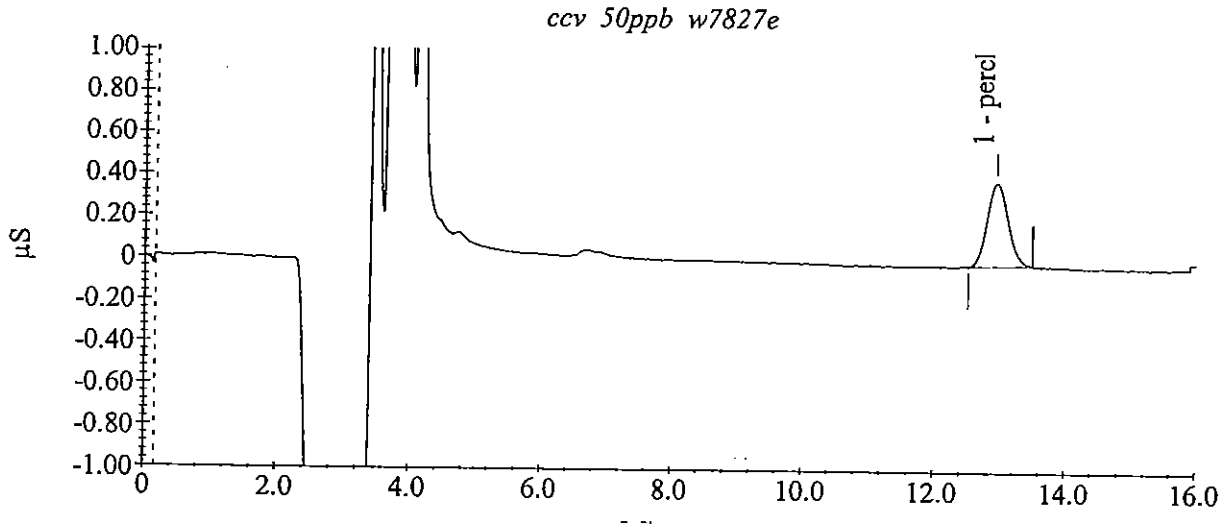
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2719K\W2719K Q03_024.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 5:12:50 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	12.93	50.89	86364.65	3980.02



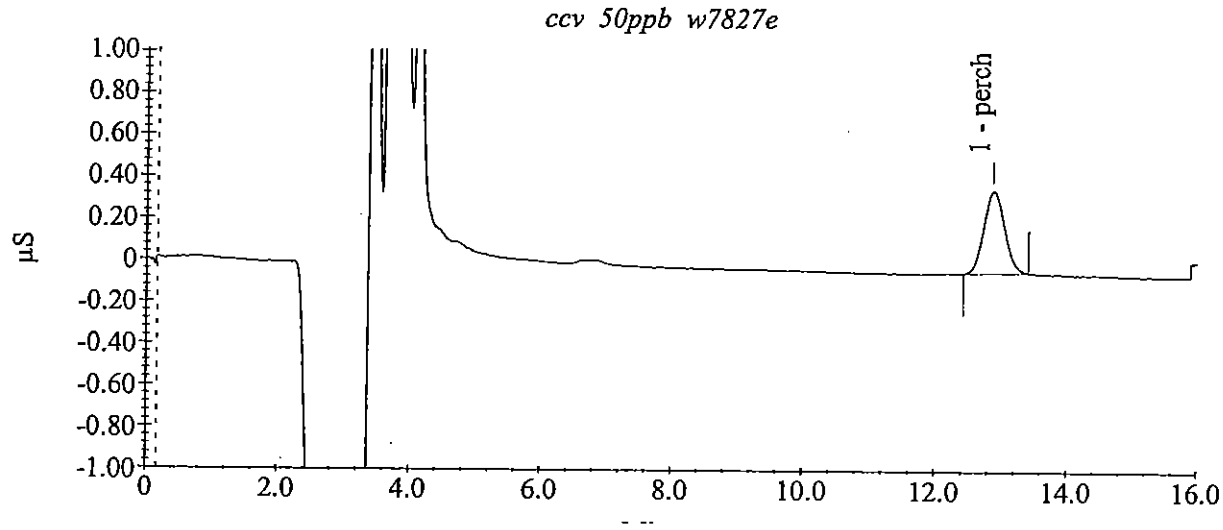
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w7827e
Data File Name : C:\DATA\03W2719K\W2719K Q04_030.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 7:05:15 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	12.87	50.68	86013.30	3916.47



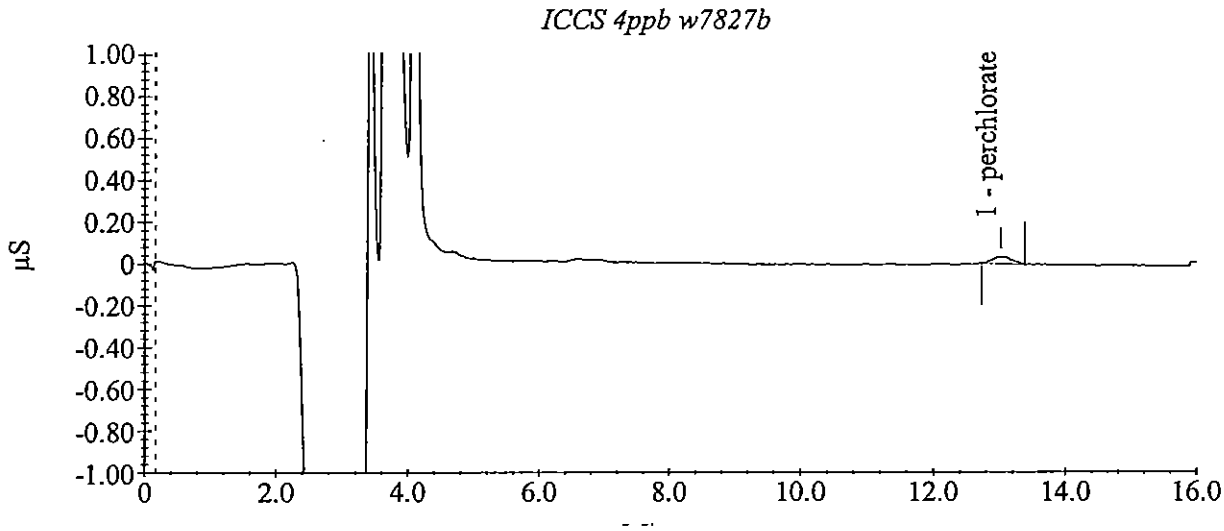
APCL Perchlorate Analysis Report

Sample Name : ICCS 4ppb w7827b
Data File Name : C:\DATA\03W2719K\W2719K ICCS 4PPB_006.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 11:38:01 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	13.02	4.14	7028.90	331.20



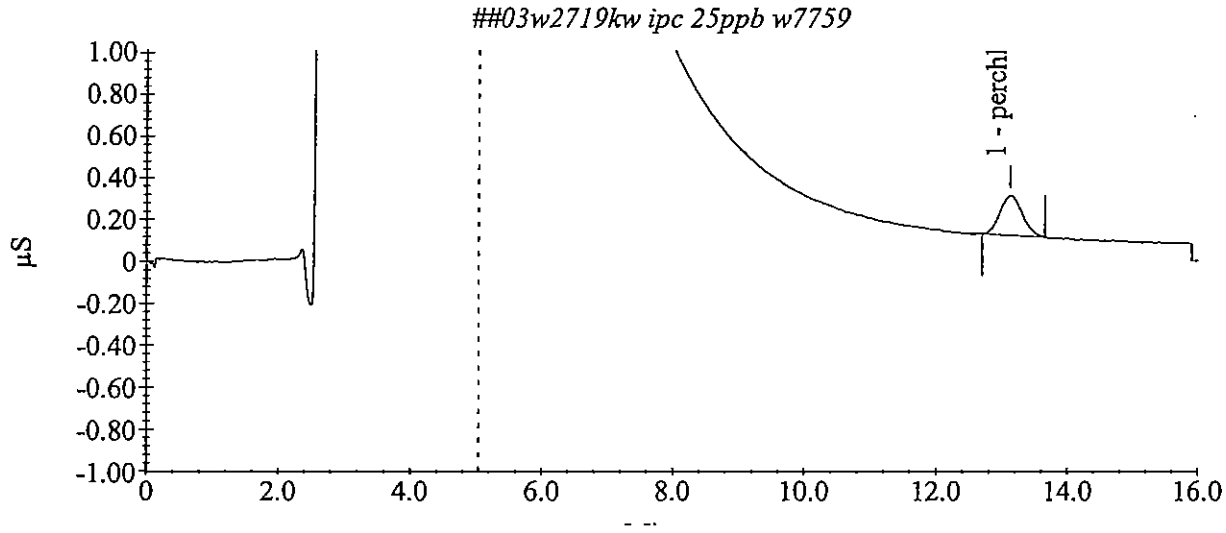
APCL Perchlorate Analysis Report

Sample Name : ##03w2719kw ipc 25ppb w7759
Data File Name : C:\DATA\03W2719K\W2719K IPC 25PPB_001.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 10:03:24 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	13.12	25.95	44036.30	1883.19



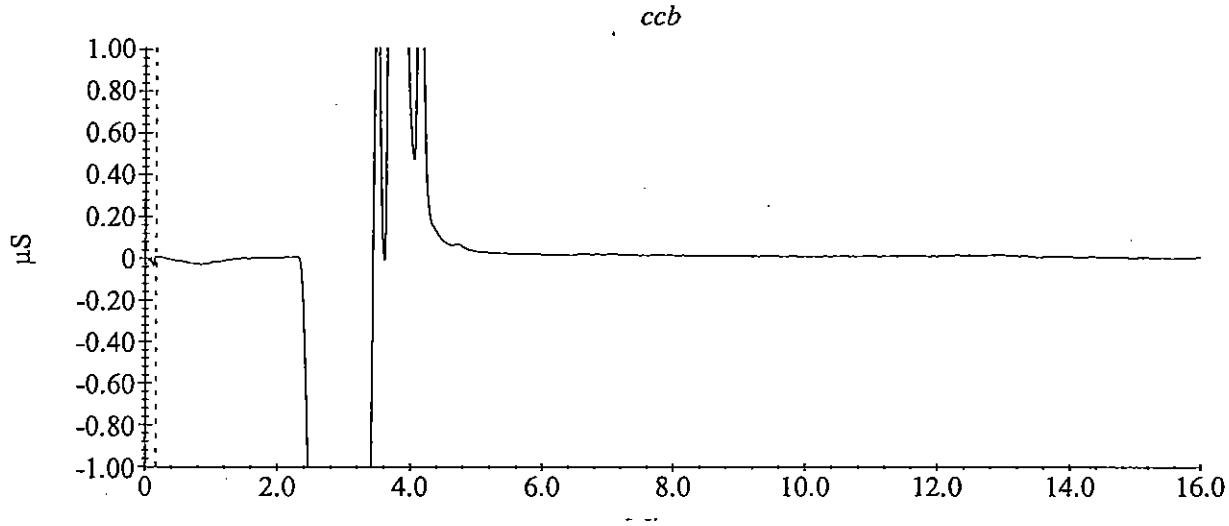
APCL Perchlorate Analysis Report

Sample Name : ccb
Data File Name : C:\DATA\03W2719K\W2719K CCB01_003.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 10:41:26 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



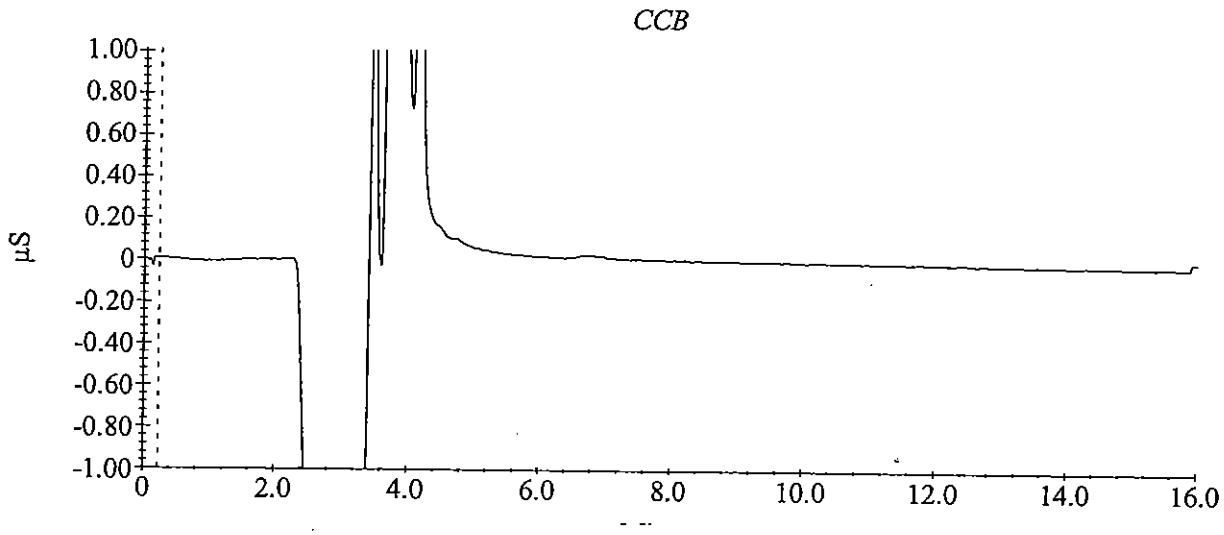
APCL Perchlorate Analysis Report

Sample Name : CCB
Data File Name : C:\DATA\03W2719K\W2719K K03_025.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 5:31:36 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



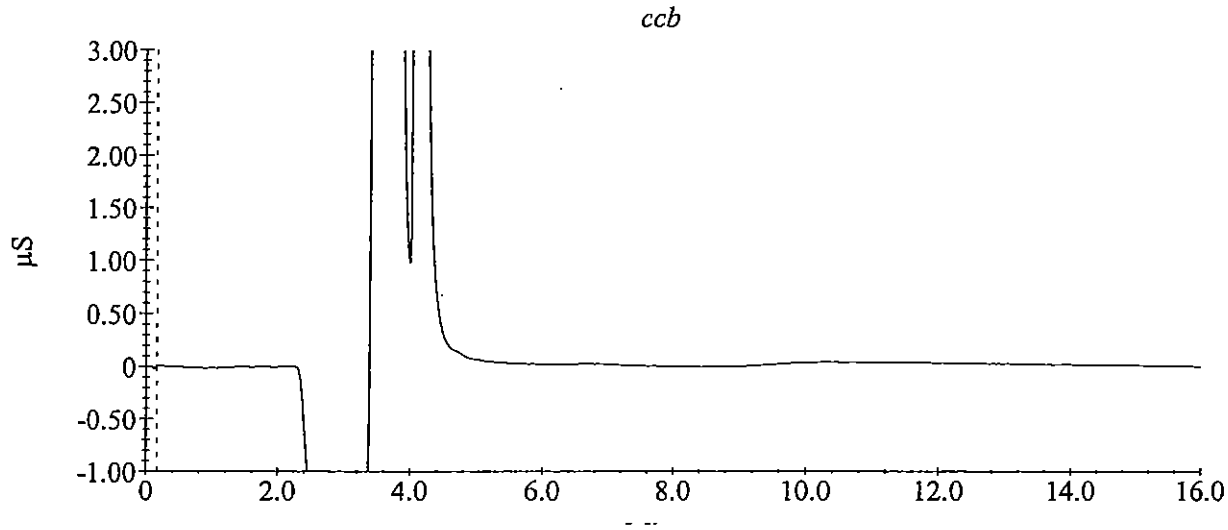
APCL Perchlorate Analysis Report

Sample Name : ccb
Data File Name : C:\DATA\03W2719K\W2719K K02_014.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 2:07:09 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



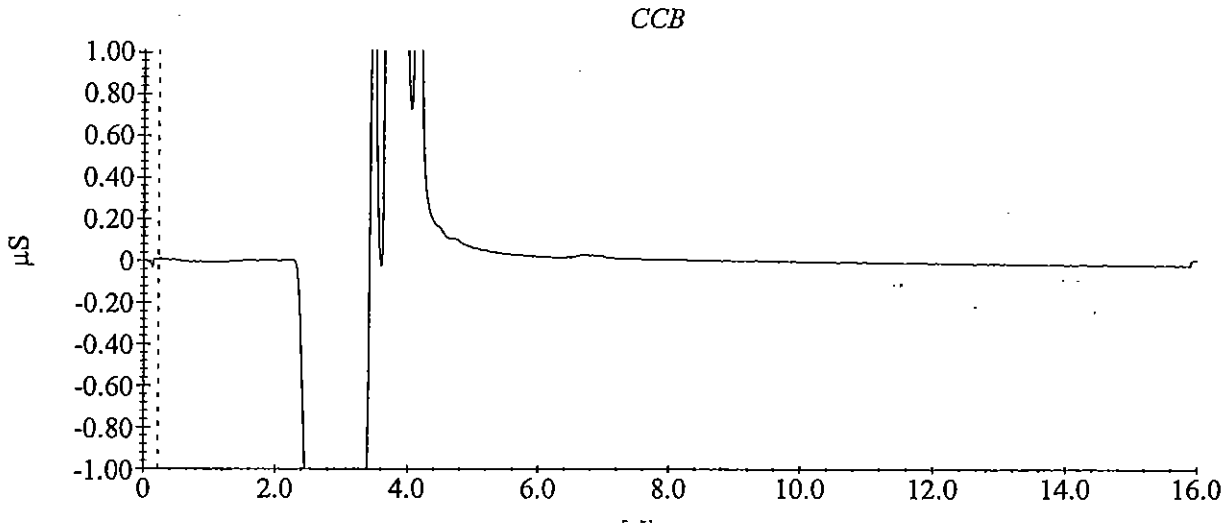
APCL Perchlorate Analysis Report

Sample Name : CCB
Data File Name : C:\DATA\03W2719K\W2719K K03_025.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 05/05/2003 5:31:36 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



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

Conductance (120.1) Worksheet

Batch # for reference Matrix: W

Cell Constant _____ Calibration STD: 0.0100M KCl

Test Date: 5/5/03 Analyst: mw

SOP: G-45

#	Sample ID	Treatment V/X=f0	Dilution V_f/V_i=f1	Temperature T, °C	$C_{25}=C_T f_1/[1-0.0191(25-T)]$ C_T, μmhos/cm	C_{25}, μmhos/cm	ρ=1/C_{25} MΩ cm	Note & Anomaly
Cal.	Lot #:	-	-	25°C				C_{25}=1,413±20
MB		/ =	/ =					
1	2987-1	/ =	/ =			31.8		for cup
2	-2	/ =	/ =			1.5		
3	-3	/ =	/ =			980		
4	-4	/ =	/ =			431		
5	-5	/ =	/ =			354		
6	-6	/ =	/ =			483		
7	3015-1	/ =	/ =			448		
8	-2	/ =	/ =			234		
9	-3	/ =	/ =			560		
10	-4	/ =	/ =			399		
11	-5	/ =	/ =			535		
12	-6	/ =	/ =			325		
13	-7	/ =	/ =			~~38~~ 360		
14	3000-4	/ =	/ =			569		
15		/ =	/ =					
16		/ =	/ =					
17		/ =	/ =					
18		/ =	/ =					
19		/ =	/ =					
20		/ =	/ =					
Dup.		/ =	/ =					

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Solid Analysis (160.1, 160.2, 160.3) Worksheet

Batch # 03W27 Matrix W Method: 160.1 Balance No. _____ Date: 5/5/03 Analyst: DR

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	117.8965	117.8968	117.8967	0.0002	2	7
2	LCS	T116	1 =	100	114.7498	114.7889	114.7888	0.0390	390	XX
3	Sample-1	3037-1	1 =	100	113.0607	113.0949	113.0950	0.0343	343	PR
4	MS on S-1	3065-2	1 =	100	108.5743	108.7023	108.7021	0.1589	1589	1P
5	MSD on S-1	↓ -2	1 =	100	112.9002	113.0601	113.0600	0.1598	1598	1
6	Sample-2	3037-2	1 =	100	117.6087	117.6317	117.6319	0.0232	232	X5
7	Sample-3	3	1 =	100	115.9136	115.9382	115.9383	0.0247	247	19
8	Sample-4	4	1 =	100	106.3180	106.3409	106.3407	0.0227	227	8
9	Sample-5	5	1 =	100	113.8604	113.8814	113.8817	0.0213	213	6
10	Sample-6	3015-1	1 =	100	114.3069	114.3365	114.3363	0.0294	249	H
11	Sample-7	3015-2	1 =	100	116.9511	116.9520	116.9520	0.0009	9	W
12	Sample-8	3015-3	1 =	100	103.3042	103.3390	103.3392	0.0350	350	L
13	Sample-9	3015-4	1 =	100	116.0612	116.0892	116.0890	0.0278	278	31
14	Sample-10	3015-5	1 =	100	104.3072	104.3321	104.3321	0.0249	249	3
15	LCSD	T116	1 =	100	115.1108	115.1507	115.1506	0.0398	398	G
16	Sample-11	3015-6	1 =	100	98.0998	98.4129	98.1198	0.0200	200	Y1
17	Sample-12	3015-7	1 =	100	113.1728	113.1988	113.1987	0.0259	259	25
18	Sample-13	3050-1	1 =	20.0	115.2909	115.4252	115.4252	0.1343	6715	38
19	~~Sample-14~~	~~3052-1~~	~~1 =~~	~~10.0~~	~~114.2624~~	~~114.3919~~	~~114.3916~~	~~0.1292~~	~~12920~~	~~N~~
20	Sample-15	3065-3	1 =	100	114.1689	114.1972	114.1973	0.0284	284	41
21	Sample-16	3065-6	1 =	100	115.8605	115.8898	115.8899	0.0294	294	30
22	~~Sample-17~~	~~↓ -2~~	~~5/5/03 =~~	~~100~~	~~113.9032~~	~~114.0282~~	~~114.0284~~	~~0.1252~~	~~1252~~	~~P~~
23	Sample-18	3065-9 ↓ -9	1 =	100	~~114.8984~~ 114.8663	114.8663	114.8665	0.0215	215	12
24	Sample-19	3052-1	1 =	10.0	114.2624	114.3919	114.3916	0.1292	12920	N
25	Sample-20	3065-2	1 =	100	112.2697	112.3937	112.3935	0.1238	1238	24
26	Mtx Dup.		1 =							

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- 7648	× 1 = 400 ppm	%	85-115 %/80-120 %
MSD	W- ↓	× 1 = ↓ ppm	%	.. ..
LCS	W- 7659	× 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 S-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

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Balance Daily Calibration Worksheet

Weight Set S/N: 12006

Calib. Date	Lab Balance					Digital Balance					Analytical Balance					Calib. by
	Balance #	1 g ±0.05g	10 g ±0.1g	200 g ±0.5g	Note (C)	Balance #	1 g ±0.02g	10 g ±0.05g	200 g ±0.10g	Note (D) (C) (AR)	Balance #	1 g ±0.0002g	10 g ±0.0005g	200 g ±0.0010g	Note (D) (C) (AR)	
5/1/03	A-01	not	in	use	✓	B-01	1.00	10.01	200.00	✓✓✓	C-01	1.0000	10.0000	200.0000	✓✓✓	
	~~A-02~~					B-02	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	✓✓✓	
	~~A-02~~					B-02	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	✓✓✓	
	~~A-02~~					B-02	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-					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	✓✓✓	
	~~A-02~~					B-02	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.

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pH (150.1/9045B) Worksheet

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

Batch # 03W2661 Analysis Date: 5/01/03
Starting Time: 12:10 Ending Time: :
Matrix ☒ Aaueous ☐ Soil

Standard	4.00	7.00	10.00
Lot #		2120	030689-20
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	T116		6.89	
1	2999-1		7.44	
2	-2		7.07	
3	-3		7.22	
4	-4		7.65	
5	-5		7.64	
6	3020-2		9.04	
7	3015-1		7.55	
8	-2		6.98	
9	-3		7.32	
10	-4		8.05	
11	-5		8.00	
12	-6		8.66	
13	-7		9.64	
14				
15				
16				
17				
18				
19				
20				
Dup.	3015-1		7.59	

Batch # 03W2675 Analysis Date: 5/2/03
Starting Time: 08:45 Ending Time: :
Matrix ☒ Aaueous ☐ Soil

Standard	4.00	7.00	10.00
Lot #		2120	030689-20
Temperature °C		23.8	23.8
pH Reading		7.02	10.03
T-corrected pH		7.00	10.02
Control Limit	±0.05 pH unit		

#	Sample ID	Pre-treat	pH	Note
MB	T116		6.80	
1	3037-1		7.36	
2	-2		7.25	
3	-3		7.71	
4	-4		7.23	
5	-5		6.68	
6	3038-1		6.64	
7	-2		7.07	
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Dup.	3037-1		7.32	

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Chromium (VI) (7196) Worksheet

Batch # 03W2664 Matrix: W [Holding Time: 24 hours!!] Test Date: 5/1/03 Analyst: [illegible]

Lot #: Reagent Water _____ Diphenylcazide solution _____ Test Time: 15:19 SOP: G-22

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

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0=f_1$	Treat. Ratio $V/X=f_2$	540 nm A	Concentration $C'=A/\bar{RF}$	C (Sample) $C=f_1\ f_2\ C'$	Anomaly Note
CCV	Lot: W- 7853	Expected Conc.:	×	/ =0.25 mg/L	0.199	0.238 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 =	95.0/ =	0.186	mg/L	0.222 ppm	
Sample-1	3015-1		/X_0 =	95.0/ =	0.000	mg/L	0.000 ppm	
MS on S-1	1		/X_0 =	95.0/ =	0.183	mg/L	0.219 ppm	
MSD on S-1	1		/X_0 =	95.0/ =	0.181	mg/L	0.217 ppm	
Sample 2	2		/X_0 =	95.0/ =	~~0.003~~ 0.001	mg/L	0.001 ppm	
Sample 3	3		/X_0 =	95.0/ =	0.003	mg/L	0.004 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/ =	0.190	mg/L	0.227 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/ =	0.211	0.252 mg/L	ppm	

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL)/X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
MS	W- 7853	× / = 0.25 ppm	%	80-120 %/80-120 %
MSD	W- "	× / = ppm	%	.. ..
LCS	W- 7759	× / = ppm	%	80-120 %/80-120 %
LCSD	W- "	× / = ppm	%	.. ..

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

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Chromium (VI) (7196) Worksheet

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

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

Calibration	STD Lot #	$C_{std} \times V_{std}/V_f = C_i$	A_i	$RF_i = A_i/C_i$	Calibration results	Note
STD-1	W-7191	× / =0.000mg/L	0.000		Least Square [RF]=	Cal. Code:
STD-2	W-	× / =0.025mg/L	0.006		Average RF=	A=0.000+0.836C
STD-3	W-	× / =0.050mg/L	0.041		C.C.=0.9977 (≥ 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 $C'=A/RF$	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

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
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TRPH/OG (418.1/9071/413.2 IR) Worksheet

Batch # 03W2296 Matrix: W EPA Method _____ Test Date: 4/8/03 Analyst: [illegible]

Lot #: $C_2Cl_3F_3$ (F112) _____ Na_2SO_4 _____ $MgSO_4 \cdot H_2O$ _____ Silica gel _____ SOP: G-31, G-35

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-7874	× / = 0.00 mg/L	0.000		Least Square [RF]=	Cal. Code:
STD-2	W-	× / = 10.0 mg/L	0.015		Average $\bar{RF}$=	
STD-3	W-	× / = 50.0 mg/L	0.069		C.C.=0.999 (≥ 0.995)	
STD-4	W-	× / = 100.0 mg/L	0.131		RSD= % (≤ 15%)	
STD-5	W-	× / = 200.0 mg/L	0.272		Ref. page	
STD-6	W-	× / = 400.0 mg/L	0.410		A=0.003+0.00129C	

Analysis Type	Sample ID or Lot #	Samp. Amnt X (g or mL)	$C_2Cl_3F_3$ ratio V(mL)/X=f_1	2nd Dilu./Ext $V_f/V_i=f_2$	2930 cm^{-1} Abs. A	Concentration $C'=A/\bar{RF}$	C (Sample) $C=f_1 f_2 C'$	Anomaly Note
CCV	Lot: W-7875	Expected Conc.:	×	/ = 200 mg/L	0.243	186 mg/L	REC. %	90-110 %
M-Blk	Bl. Lot: T1115	1000	50 /X=0.05	/ =	0.000	mg/L	0.00 ppm	
LCS1	Bl. Lot: "		/X=	/ =	0.264	mg/L	9.98 ppm	
Smpl-1	2582-1		/X=	/ =	0.200	mg/L	7.64 ppm	
MS on S-1			/X=	/ =		mg/L	ppm	
MSD on S-1			/X=	/ =		mg/L	ppm	
Smpl 2	2582-1	1000	50 /X=0.05	/ =	0.013	mg/L	0.388 ppm	
Smpl 3			/X=	/ =		mg/L	ppm	
Smpl 4			/X=	/ =		mg/L	ppm	
Smpl 5			/X=	/ =		mg/L	ppm	
Smpl 6			/X=	/ =		mg/L	ppm	
Smpl 7			/X=	/ =		mg/L	ppm	
Smpl 8			/X=	/ =		mg/L	ppm	
Smpl 9			/X=	/ =		mg/L	ppm	
Smpl 10			/X=	/ =		mg/L	ppm	
Blank	Lot:		/X=	/ =		mg/L	ppm	
LCS2	Bl. Lot: T1115	1000	50 /X=0.05	/ =	0.260	mg/L	9.96 ppm	
Smpl 11			/X=	/ =		mg/L	ppm	
Smpl 12			/X=	/ =		mg/L	ppm	
Smpl 13			/X=	/ =		mg/L	ppm	
Smpl 14			/X=	/ =		mg/L	ppm	
Smpl 15			/X=	/ =		mg/L	ppm	
Smpl 16			/X=	/ =		mg/L	ppm	
Smpl 17			/X=	/ =		mg/L	ppm	
Smpl 18			/X=	/ =		mg/L	ppm	
Smpl 19			/X=	/ =		mg/L	ppm	
Smpl 20			/X=	/ =	0.251	mg/L	ppm	
Mtx Dup.	Dosing 200 mg/L		/X=	/ =	~~0.245~~	192 mg/L	ppm	

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL)/X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
MS	W-	× / = ppm	%	76-113 %/75-120 %
MSD	W-	× / = ppm	%	.. ..
LCS	W-7875	× / = 10.0 ppm	%	80-120 %/80-120 %
LCSD	W- "	× / = ppm	%	.. ..

PQL/MDL (in ppm)	
PQL(w)	1
PQL(s)	10
MDL(w)	0.24
MDL(s)	5

APCL form 5-128 March 31, 1995. Ver. 4.0 No pencil. Use blue pen for record. Use red pen for correction.
File:[CUST.DOC.WET]TRPH .TEX Root-File:[CUST.DOC.WET]TRPH_ROOT.TEX 1-Page-File: TRPH1.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

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

Batch # 03102665 Matrix: W Titrant H_2SO_4 Lot # W7900 Concentration (C) 0.02555 N; Test Date: 5/1/03 Analyst: DL SOP: G-51

#	Sample ID	Dilution $V_f/V_i=f_1$	Smpl Amnt V, mL	H_2SO_4 (mL) by Phnln S_A	E_A	A	H_2SO_4 (mL) by MR-BCG S_B	E_B	B	Phnln-Alk., P	Tot. Alk., T (in unit of mg$CaCO_3$/L)	OH^-	CO_3^{2-}	HCO_3^-	Note & Anomaly
1	MB: 7115	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	129.1 ~~139.4~~	0	40.8	88.3	
17	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:

$A=S_A \cdot E_A$

$B=S_B \cdot E_B$

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

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

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

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\03W2658.SCH

Inj#	Sample Name	Method	Data File	Vol.	Dil.	Int.Std.
1	##03W2658, W CCVW77	..\E300-063	..\W2658Q01.D01	1	1	1
2	MB RW1409	..\E300-063	..\W2658K01.D02	1	1	1
3	LCS W7768-100X	..\E300-063	..\W2658L01.D03	1	1	1
4	LCSD W7768-100X	..\E300-063	..\W2658J01.D04	1	1	1
5	2987-2 F=20	..\E300-063	..\2987-201.D05	1	20	1
6	2987-3 F=10	..\E300-063	..\2987-301.D06	1	10	1
7	2987-4 F=2	..\E300-063	..\2987-401.D07	1	2	1
8	2987-5 F=2	..\E300-063	..\2987-501.D08	1	2	1
9	2987-6 F=2.5	..\E300-063	..\2987-601.D09	1	2.5	1
10	2987-4 F=4	..\E300-063	..\2987-401.D10	1	4	1
11	2987-1 F=1.25	..\E300-063	..\2987-101.D11	1	1.25	1
12	CCV2W7767-100X	..\E300-063	..\W2658Q01.D12	1	1	1
13	MB RW1409	..\E300-063	..\W2658K01.D13	1	1	1
14	$2987-6 MS F=5	..\E300-063	..\W2658M01.D14	1	5	1
15	$2987-6 MSD F=5	..\E300-063	..\W2658N01.D15	1	5	1
16	2999-1 F=25	..\E300-063	..\2999-101.D16	1	25	1
17	2999-2 F=25	..\E300-063	..\2999-201.D17	1	25	1
18	2999-3 F=25	..\E300-063	..\2999-301.D18	1	25	1
19	2999-4 F=1.25	..\E300-063	..\2999-401.D19	1	1.25	1
20	2999-5 F=1.25	..\E300-063	..\2999-501.D20	1	1.25	1
21	CCV3W7767-100X	..\E300-063	..\W2658Q01.D21	1	1	1
22	MB RW1409	..\E300-063	..\W2658K01.D22	1	1	1
23	3015-1 F=4	..\E300-063	..\3015-101.D23	1	4	1
24	3015-3 F=4	..\E300-063	..\3015-301.D24	1	4	1
25	3015-4 F=4	..\E300-063	..\3015-401.D25	1	4	1
26	3015-5 F=8	..\E300-063	..\3015-501.D26	1	8	1
27	3015-6 F=2	..\E300-063	..\3015-601.D27	1	2	1
28	3015-7 F=2	..\E300-063	..\3015-701.D28	1	2	1
29	3015-2 F=1.25	..\E300-063	..\3015-201.D29	1	1.25	1
30	CCV4W7767-100X	..\E300-063	..\W2658Q01.D30	1	1	1
31		..\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 1/6/03
Instrument I

e	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.mel		1	1

Analyst Wei Wang

Date 5/5/03

Instrument IC-K

5620

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
0	icb	Sample		e314-011.met	c:\data\e314-011\icb_010.dxd	1	1
1	anion 100pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-100_011.dxd	1	1
2	anion 200pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-200_012.dxd	1	1
3	anion 300pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-300_013.dxd	1	1
4	anion 400pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-400_014.dxd	1	1
5	anion 500pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-500_015.dxd	1	1
6	anion 600pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-600_016.dxd	1	1
7	anion 800pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-800_017.dxd	1	1
8	anion 1000pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-1000_018.dxd	1	1
9	anion 400pm each 2pb	Sample		e314-011.met	c:\data\e314-011\ipc-2pb_019.dxd	1	1
0	anion 400pm each 4pb	Sample		e314-011.met	c:\data\e314-011\ipc-4pb_020.dxd	1	1
1	anion 400pm each 25pb	Sample		e314-011.met	c:\data\e314-011\ipc-25pb_021.dxd	1	1
2	ICV 50 ppb	Sample		e314-011.met	c:\data\e314-011\ccv-50pb	1	1
3	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-02_023.dxd	1	1
4	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-03_024.dxd	1	1
5	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-04	1	1
6	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-05	1	1
7	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-06	1	1
8	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-07	1	1
9	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-08	1	1
0	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
1	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
2	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
3	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
4	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
5	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
6	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
7	MCT anion 800pm each, 25pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-25pb	1	1
8	MCT anion 800pm each, 25pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-25pb	1	1
9	MCT anion 800pm each, 4pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-4pb	1	1
0	MCT anion 800pm each, 4pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-4pb	1	1
1	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s01	1	5
2	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s02	1	5
3	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s03	1	5
4	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s04	1	5
5	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s05	1	5
6	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s06	1	5
7	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s07	1	5
8	standard 25ppb W7827d	Sample		e314-011.met	c:\data\e314-011\std-25pb	1	1
9	anion 100pm each,4pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-100-4pb	1	1
0	anion 200pm each ,4pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-200-4pb	1	1
1	anion 300pm each ,4pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-300-4pb	1	1
2	anion 100pm each,2pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-100-2pb	1	1
3	anion 200pm each,2pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-200-2pb	1	1
4	anion 300pm each,2pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-300-2pb	1	1
5	1982-01 B S.C 4450us/cm	Sample		e314-011.met	c:\data\e314-011\1982-01	1	1
6	1982-01 B S.C 4450us/cm	Sample		e314-011.met	c:\data\e314-011\1982-01	1	2
7	1982-02 f=10	Sample		e314-011.met	c:\data\e314-011\1982-02_057.dxd	1	10
		Sample		aastopcl.met		1	1

APCL

Applied Physics & Chemistry Laboratory

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

May 23, 2003

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

Dear Leo,

This package contains samples in our Service ID 03-2809 and your project : 04-4428.10 JPL
Enclosed please find:

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

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

Respectfully submitted,

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

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

APCL Analytical Report

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

Service ID #: 801-032809
Collected by: Leo Williamson
Collected on: 04/21/03

Received: 04/21/03
Extracted: 04/23/03
Tested: 04/21-24/03
Reported: 04/28/03

Sample Description: Water from MW-4.
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-1-2Q03 03-02809-1	EB-2-4/21/03 03-02809-2	MW-4-1 03-02809-3
BICARBONATE	SM2320B	mg/L	2	161	<2	179
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	<2	<2	<2
PH	9040B	pH unit	0.01	7.88	7.85	7.28
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	221	<10	244
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4
Dilution Factor				2.5	1.25	2
CHLORIDE CL^-	300.0	mg/L	0.2	24.2	0.25J	18.8
NITRATE AS N	300.0	mg/L	0.04	1.7	0.078	1.5
SULFATE SO_4^{--}	300.0	mg/L	0.5	9.5	0.73	40.7
Dilution Factor				1	1	1
ARSENIC	200.9	µg/L	5	<5	<5	1.7J
CALCIUM	200.7	µg/L	200	24,500	89.4J	54,200
IRON	200.7	µg/L	50	231	<50	274
MAGNESIUM	200.7	µg/L	100	11,900	<100	17,700
POTASSIUM	200.7	µg/L	400	1,930	80.7J	2,510
SODIUM	200.7	µg/L	2000	37,500	398J	19,100
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-1-2Q03 03-02809-1	EB-2-4/21/03 03-02809-2	MW-4-1 03-02809-3
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	1.1 [a]	<1.1	<1.1	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1.8 [a]	<1.8	<1.8	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-2 03-02809-4	MW-4-3 03-02809-5	MW-4-4 03-02809-6
BICARBONATE	SM2320B	mg/L	2	224	197	147
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	<2	<2	<2
PH	9040B	pH unit	0.01	7.05	7.58	8.01
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	587	226	191
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	6.6	<4	<4
Dilution Factor				20	4	4
CHLORIDE CL^-	300.0	mg/L	0.2	95.4	27.4	22.7
NITRATE AS N	300.0	mg/L	0.04	10.0	0.24	1.7
SULFATE SO_4^{--}	300.0	mg/L	0.5	124	2.3	10.2
Dilution Factor				1	1	1
ARSENIC	200.9	µg/L	5	1.6J	<5	<5
CALCIUM	200.7	µg/L	200	115,000	38,200	24,500
IRON	200.7	µg/L	50	592	6,410	243
MAGNESIUM	200.7	µg/L	100	39,300	16,100	11,800
POTASSIUM	200.7	µg/L	400	2,990	2,320	1,920
SODIUM	200.7	µg/L	2000	32,500	32,700	37,000
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	1.8	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	1.1 [a]	<1.1	<1.1	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-2 03-02809-4	MW-4-3 03-02809-5	MW-4-4 03-02809-6
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	1.9	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1.8 [a]	<1.8	<1.8	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	0.7	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	0.3J	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	0.4J	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-5 03-02809-7	SOURCE-2Q03 03-02809-8	TB-2-4/21/03 03-02809-9
BICARBONATE	SM2320B	mg/L	2	120	<2	-
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	10.2	<2	-
PH	9040B	pH unit	0.01	8.47	6.60	-
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	133	<10	-
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	-
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	-
Dilution Factor				4	1.25	1
CHLORIDE CL^-	300.0	mg/L	0.2	22.5	0.21J	-
NITRATE AS N	300.0	mg/L	0.04	0.20	0.075	-
SULFATE SO_4^{--}	300.0	mg/L	0.5	8.2	<0.63	-
Dilution Factor				1	1	1
ARSENIC	200.9	µg/L	5	<5	<5	-
CALCIUM	200.7	µg/L	200	16,400	<200	-
IRON	200.7	µg/L	50	1,280	<50	-
MAGNESIUM	200.7	µg/L	100	11,200	<100	-
POTASSIUM	200.7	µg/L	400	1,930	66.7J	-
SODIUM	200.7	µg/L	2000	37,000	341J	-

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-5 03-02809-7	SOURCE-2Q03 03-02809-8	TB-2-4/21/03 03-02809-9
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	1.1 [a]	<1.1	<1.1	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1.8 [a]	<1.8	<1.8	<1.8

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-5 03-02809-7	SOURCE-2Q03 03-02809-8	TB-2-4/21/03 03-02809-9
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	<10	<10
NAPHTHALENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
STYRENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-1 03-02809-3
Dilution Factor				1
1,4-DIOXANE	8270-SIM	μg/L	1	<1

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) MDL reported.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: 04-4418.10 JPL

APCL Service ID: 03-2809

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

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

Case Narrative

Project: JPL/04-4428.10

For GEOFON, Inc.

APCL Service No: 03-2809

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-4-5	03-02809-7
MW-4-4	03-02809-6
MW-4-3	03-02809-5
MW-4-2	03-02809-4
MW-4-1	03-02809-3
TB-2-4/21/03	03-02809-9
EB-2-4/21/03	03-02809-2
DUPE-1-2Q03	03-02809-1
SOURCE-2Q03	03-02809-8

2. Analytical Methodology

Samples are analyzed by EPA methods

SM2320B (Bicarbonate and Carbonate),
9040B (pH),
160.1 (Solids, Total Dissolved (TDS)),
7196 (Chromium (VI)),
314.0 (Perchlorate, low level),
300.0 (Anion by IC),
200.9 (Arsenic, As, by GFAA),
200.7 (Metal by ICP),
524.2 (Volatile Organic Compounds),
8270-SIM (1,4-Dioxane),

3. Holding Time

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

4. Preservation

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

5. Tele-log

None

6. Anomaly

None

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

Respectfully submitted,

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

GEOFON INCORPORATED

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

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

MW-4 0018

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-4 (SE Facility Perimeter)	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 SWDIV	Chino, CA. 91710		Diamond Bar, CA. 91765
PROJECT MANAGER	**PROJECT MANAGER'S PHONE**	**PROJECT MANAGER'S FAX**			
Asiar 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) + 9040B (pH)	200.8 (Cr + Pb)	Comments
1	MW-4-5	H_2O	4/21/03	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-4-4	↓	↓	930	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
3	MW-4-3	↓	↓	1015	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
4	MW-4-2	↓	↓	1140	↓	↓	↓	↓	X	X	X	X	X	X	X	X	MS/MSD
5	MW-4-1	↓	↓	1330	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
6																	2809
7	TB-2-4/21/03	H_2O	—	—	HCl	2	III	NORMAL	X								
8	EB-2-4/21/03	↓	4/21/03		HCl NONE HNO_3	3+1+ 1+1	↓	↓	X	X	X	X	X	X	X	X	
9	DUPE-1-2Q03	↓	↓	—	↓	3+1+ 1+1	IV	↓	X	X	X	X	X	X	X	X	
10	SOURCE-2Q03	↓	↓	1400	↓	3+1+ 1+1	III	NORMAL	X	X	X	X	X	X	X	X	

SAMPLES COLLECTED BY: Leo W. Williamson

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Leo W. Williamson	[illegible]	4/21/03	14:35	
[illegible]	Paul C	4/22/03	1780	

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

GEOFON
INCORPORATED
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DIAMOND BAR, CA 91765 • (909) 396-7662 • FAX (909) 396-1455

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

MW-4 0019

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-4 (SE Facility Perimeter)	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 ~~Ekno~~ Magnolia	22632 Golden Springs Dr. #270

PROJECT ADDRESS	CITY, STATE AND ZIPCODE	CLIENT	CITY, STATE AND ZIPCODE	CITY, STATE AND ZIPCODE
4802 Oak Grove Dr.	Pasadena, CA	US NAVY SWDIV	Chino, CA. 91710	Diamond Bar, CA. 91765

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

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses: 8270SIM	Analyses: 4,4-Dioxane (NDMA) 1625M							Comments
1	MW-4-1	H_2O	4/21/03	1330	NONE	2L + 2L	III	NORMAL	X	X							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

2809

SAMPLES COLLECTED BY: Leo W. Williamson

COURIER AND AIR BILL NUMBER.

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Leo W. Williamson	[illegible]	4/21/03	14:24	
[illegible]	[illegible]	4/21/03	17:00	

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: 2809 **Client Name/Project:** Geofon

1. Sample Arrival

Date/Time Received 4/21/03 1700 Date/Time Opened 4/21/03 1700 By (name): Paul Kers

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

2. Chain-of-Custody (CoC)

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

3. Shipping Container/Cooler

☑ Cooler Used? # of 2 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Temp °C 2.9°C 3.8°C _____ _____ _____ _____

(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: 5day ☐ 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: Paul K Date: 21 Apr 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

03-02809 (0470_ 128) (2202777_ 128)

04/22/03

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?	*Paul Kou*
		Receiving Date/Time:	*04/21/03 1700*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*2.9 3.8 °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-4-5	VOC	03-02809-7-α	W	V	C	40	3	G	042103	N	0	6	☐
	MW-4-5	Metal	03-02809-7-β	W	P	N	500	1	G	042103	N	0	6	☐
	MW-4-5	Anion	03-02809-7-γ	W	P		500	1	G	042103	N	0	6	☐
2	MW-4-4	VOC	03-02809-6-α	W	V	C	40	3	G	042103	N	0	6	☐
	MW-4-4	Metal	03-02809-6-β	W	P	N	500	1	G	042103	N	0	6	☐
	MW-4-4	Anion	03-02809-6-γ	W	P		500	1	G	042103	N	0	6	☐
3	MW-4-3	VOC	03-02809-5-α	W	V	C	40	3	G	042103	N	0	6	☐
	MW-4-3	Metal	03-02809-5-β	W	P	N	500	1	G	042103	N	0	6	☐
	MW-4-3	Anion	03-02809-5-γ	W	P		500	1	G	042103	N	0	6	☐
4	MW-4-2	VOC	03-02809-4-α	W	V	C	40	6	G	042103	N	0	6	☐
	MW-4-2	Metal	03-02809-4-β	W	P	N	500	2	G	042103	N	0	6	☐
	MW-4-2	Anion	03-02809-4-γ	W	P		500	2	G	042103	N	0	6	☐
5	MW-4-1	VOC	03-02809-3-α	W	V	C	40	3	G	042103	N	0	6	☐
	MW-4-1	Metal	03-02809-3-β	W	P	N	500	1	G	042103	N	0	6	☐
	MW-4-1	Anion	03-02809-3-γ	W	P		500	1	G	042103	N	0	6	☐
	MW-4-1	Dioxane	03-02809-3-δ	W	G		1000	2	G	042103	N	0	6	☐
6	TB-2-4/21/03	VOC	03-02809-9	W	V	C	40	2	G	042103	N	0	6	☐
7	EB-2-4/21/03	VOC	03-02809-2-α	W	V	C	40	3	G	042103	N	0	6	☐
	EB-2-4/21/03	Metal	03-02809-2-β	W	P	N	500	1	G	042103	N	0	6	☐
	EB-2-4/21/03	Anion	03-02809-2-γ	W	P		500	1	G	042103	N	0	6	☐
8	DUPE-1-2Q03	VOC	03-02809-1-α	W	V	C	40	3	G	042103	N	0	6	☐
	DUPE-1-2Q03	Metal	03-02809-1-β	W	P	N	500	1	G	042103	N	0	6	☐
	DUPE-1-2Q03	Anion	03-02809-1-γ	W	P		500	1	G	042103	N	0	6	☐
9	SOURCE-2Q03	VOC	03-02809-8-α	W	V	C	40	3	G	042103	N	0	6	☐
	SOURCE-2Q03	Metal	03-02809-8-β	W	P	N	500	1	G	042103	N	0	6	☐
	SOURCE-2Q03	Anion	03-02809-8-γ	W	P		500	1	G	042103	N	0	6	☐

Part 3: Analysis Information

Test Items:

- ☐ *524.2* Volatile Organic Compounds
- ☐ *7196A* Chromium (VI)
- ☐ *314.0/300.0* Perchlorate, low level
- ☐ *300.0* Chloride Cl^- by IC
- ☐ *300.0* Sulfate (SO_4^{--}), by IC
- ☐ *300.0/SM4500NO3C* Nitrate (NO_3^-) as N by IC
- ☐ *SM2320B* Carbonate
- ☐ *SM2320B* Bicarbonate
- ☐ *9040B/150.1* pH
- ☐ *160.1* Solids, Total Dissolved (TDS)