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 Williamson,

This package contains samples in our Service ID 03-2767 and your project : 04-442810 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 #: 801-032767
Collected by: Leo Williamson
Collected on: 04/17/03

Received: 04/17/03
Extracted: N/A
Tested: 04/17-23/03
Reported: 04/23/03

Sample Description: Water
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-1-4/17/03 03-02767-1	MW-21-1 03-02767-2	MW-21-2 03-02767-3
BICARBONATE	SM2320B	mg/L	2	< 2	181	319
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	< 2	< 2	< 2
PH	9040B	pH unit	0.01	6.04	6.88	7.28
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	< 10	637	755
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	3.6J	2.9J
Dilution Factor				1.25	20	20
CHLORIDE	300.0	mg/L	0.2	0.29	110	127
NITRATE AS N	300.0	mg/L	0.04	0.079	13.2	5.3
SULFATE	300.0	mg/L	0.5	0.70	181	144
Dilution Factor				1	1	1
ARSENIC	200.9	µg/L	5	< 5	< 5	< 5
CALCIUM	200.7	µg/L	200	278	128,000	122,000
IRON	200.7	µg/L	50	19.4J	150	146
MAGNESIUM	200.7	µg/L	100	38.4J	40,300	41,800
POTASSIUM	200.7	µg/L	400	152J	2,180	3,370
SODIUM	200.7	µg/L	2000	720J	30,800	67,300
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	0.8	< 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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Component Analyzed	Method	Unit	PQL	Analysis Result EB-1-1/17/03 03-02767-1	MW-21-1 03-02767-2	MW-21-2 03-02767-3
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	0.6	<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	0.5J	1
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	0.7	0.4J
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-21-3 03-02767-4	MW-21-4 03-02767-5	MW-21-5 03-02767-6	TB-1-4/17/03 03-02767-7
BICARBONATE	SM2320B	mg/L	2	286	220	98.4	-
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	<2	<2	<2	-
PH	9040B	pH unit	0.01	7.44	7.23	7.71	-
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	651	413	503	-
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	-
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	2.9J	2.1J	2.7J	-
Dilution Factor				20	8	8	1
CHLORIDE	300.0	mg/L	0.2	102	52.7	68.5	-
NITRATE AS N	300.0	mg/L	0.04	8.8	7.1	6.8	-
SULFATE SO_4^{--}	300.0	mg/L	0.5	122	65.2	103	-
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	<5	2.2J	<5	-
CALCIUM	200.7	µg/L	200	123,000	77,200	83,600	-
IRON	200.7	µg/L	50	40.5J	16.1J	210	-
MAGNESIUM	200.7	µg/L	100	40,300	23,900	30,800	-
POTASSIUM	200.7	µg/L	400	3,130	2,130	2,570	-
SODIUM	200.7	µg/L	2000	39,800	26,200	32,500	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	0.8	1.9	2.7	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	1.1 [a]	<1.1	<1.1	<1.1	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-21-3 03-02767-4	MW-21-4 03-02767-5	MW-21-5 03-02767-6	TB-1-4/17/03 03-02767-7
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	0.8	1.7	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1.8 [a]	<1.8	<1.8	<1.8	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	2.1	5.2	12.3	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	1.0	<0.5	0.6	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

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

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: JPL

APCL Service ID: 03-2767

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

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Case Narrative

Project: JPL/04-4428.10

For GEOFON, Inc.

APCL Service No: 03-2767

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-21-5	03-02767-6
MW-21-4	03-02767-5
MW-21-3	03-02767-4
MW-21-2	03-02767-3
MW-21-1	03-02767-2
TB-1-4/17/03	03-02767-7
EB-1-4/17/03	03-02767-1

2. Analytical Methodology

Samples are analyzed by EPA methods

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

3. Holding Time

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

4. Preservation

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

5. Tele-log

None

6. Anomaly

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-21

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**
SPE GW MON-2003	MW-21 (Habamonga Park)	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**			
Ascar Faheem	(909) 396-7662	(909) 396-7665			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T	Analyses: 524.2 (VOCs)	200.7 & 200.8 (Minerals)	7196 (Hex Chrome)	SM 2320B (Lab. Alkalinity)	300.0 (Cl / SO4 / NO3)	314.0 (Perchlorate)	160.1 (TDS) + 9040B (pH)	200.8 (Cr + Pb)	Comments
1	MW-21-5	H_2O	4/17/03	900	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-21-4	↓	↓	1000	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
3	MW-21-3			1110					X	X	X	X	X	X	X	X	
4	MW-21-2			1205					X	X	X	X	X	X	X	X	2767
5	MW-21-1			1250					X	X	X	X	X	X	X	X	
6																	
7	TB-1-4/17/03	H_2O	—	—	HCl	2	III	NORMAL	X								
8	EB-1-4/17/03	↓	4/17/03	1215	HCl NONE HNO_3	3+1+ 1+1	↓	↓	X	X	X	X	X	X	X	X	
9																	
10																	

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		4-17-03	1345	
Richard Stevens	Paul	4-17-03	1435	

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: 2767 **Client Name/Project:** Geofon

1. Sample Arrival

Date/Time Received 4/17/03 1435 Date/Time Opened 4/17/03 1435 By (name): Paul Kan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: R. Stratson

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 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 3.2°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: 5 day ☐ 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: 17 Apr 2003 Time: 7:44 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 2nd

03-02767 (0470_ 127) (2202777_ 127)

04/18/03

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:	*04/17/03 1435*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*3.2 °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-21-5	524.2	03-02767-6-α	W	V	C	40	3	G	041703	N	0	7	☐
	MW-21-5	Metals	03-02767-6-β	W	P	N	500	1	G	041703	N	0	7	☐
	MW-21-5	Anions	03-02767-6-γ	W	P		1000	1	G	041703	N	0	7	☐
2	MW-21-4	524.2	03-02767-5-α	W	V	C	40	3	G	041703	N	0	7	☐
	MW-21-4	Metals	03-02767-5-β	W	P	N	500	1	G	041703	N	0	7	☐
	MW-21-4	Anions	03-02767-5-γ	W	P		1000	1	G	041703	N	0	7	☐
3	MW-21-3	524.2	03-02767-4-α	W	V	C	40	3	G	041703	N	0	7	☐
	MW-21-3	Metals	03-02767-4-β	W	P	N	500	1	G	041703	N	0	7	☐
	MW-21-3	Anions	03-02767-4-γ	W	P		1000	1	G	041703	N	0	7	☐
4	MW-21-2	524.2	03-02767-3-α	W	V	C	40	3	G	041703	N	0	7	☐
	MW-21-2	Metals	03-02767-3-β	W	P	N	500	1	G	041703	N	0	7	☐
	MW-21-2	Anions	03-02767-3-γ	W	P		1000	1	G	041703	N	0	7	☐
5	MW-21-1	524.2	03-02767-2-α	W	V	C	40	3	G	041703	N	0	7	☐
	MW-21-1	Metals	03-02767-2-β	W	P	N	500	1	G	041703	N	0	7	☐
	MW-21-1	Anions	03-02767-2-γ	W	P		1000	1	G	041703	N	0	7	☐
6	TB-1-4/17/03	524.2	03-02767-7	W	V	C	40	2	G	041703	N	0	7	☐
7	EB-1-4/17/03	524.2	03-02767-1-α	W	V	C	40	3	G	041703	N	0	7	☐
	EB-1-4/17/03	Metals	03-02767-1-β	W	P	N	500	1	G	041703	N	0	7	☐
	EB-1-4/17/03	Anions	03-02767-1-γ	W	P		1000	1	G	041703	N	0	7	☐

Part 3: Analysis Information

Test Items:

☐ *524.2*	Volatile Organic Compounds
☐ *7196A*	Chromium (VI)
☐ *314.0/300.0*	Perchlorate, low level
☐ *300.0*	Chloride Cl^- by IC
☐ *300.0*	Sulfate (SO_4^{--}), by IC
☐ *300.0/SM4500NO3C*	Nitrate (NO_3^-) as N by IC
☐ *SM2320B*	Carbonate
☐ *SM2320B*	Bicarbonate
☐ *9040B/150.1*	pH
☐ *160.1*	Solids, Total Dissolved (TDS)
☐ *200.7/6010B*	Sodium, Na, by ICP
☐ *200.7/6010B*	Calcium, Ca, by ICP
☐ *200.7/6010B*	Potassium, K, by ICP
☐ *200.7/6010B*	Magnesium, Mg, by ICP
☐ *200.7/6010B*	Iron, Fe, by ICP

☐ *8270-SIM* 1,4-Dioxane

☐ *206.2/7060A* Arsenic, As, by GFAA

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCH	CL	SO4	NO3	CARBON	BICARB	
1	MW-21-5	524.2	03-02767-6-α	W	X								☐
	MW-21-5	Metals	03-02767-6-β	W									☐
	MW-21-5	Anions	03-02767-6-γ	W		X	X	X	X	X	X	X	☐
2	MW-21-4	524.2	03-02767-5-α	W	X								☐
	MW-21-4	Metals	03-02767-5-β	W									☐
	MW-21-4	Anions	03-02767-5-γ	W		X	X	X	X	X	X	X	☐
3	MW-21-3	524.2	03-02767-4-α	W	X								☐
	MW-21-3	Metals	03-02767-4-β	W									☐
	MW-21-3	Anions	03-02767-4-γ	W		X	X	X	X	X	X	X	☐
4	MW-21-2	524.2	03-02767-3-α	W	X								☐
	MW-21-2	Metals	03-02767-3-β	W									☐
	MW-21-2	Anions	03-02767-3-γ	W		X	X	X	X	X	X	X	☐
5	MW-21-1	524.2	03-02767-2-α	W	X								☐
	MW-21-1	Metals	03-02767-2-β	W									☐
	MW-21-1	Anions	03-02767-2-γ	W		X	X	X	X	X	X	X	☐
6	TB-1-4/17/03	524.2	03-02767-7	W	X								☐
7	EB-1-4/17/03	524.2	03-02767-1-α	W	X								☐
	EB-1-4/17/03	Metals	03-02767-1-β	W									☐
	EB-1-4/17/03	Anions	03-02767-1-γ	W		X	X	X	X	X	X	X	☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	PH	TDS	NA	CA	K	MG	FE	DIOXANE	
1	MW-21-5	524.2	03-02767-6-α	W									☐
	MW-21-5	Metals	03-02767-6-β	W			X	X	X	X	X		☐
	MW-21-5	Anions	03-02767-6-γ	W	X	X							☐
2	MW-21-4	524.2	03-02767-5-α	W									☐
	MW-21-4	Metals	03-02767-5-β	W			X	X	X	X	X		☐
	MW-21-4	Anions	03-02767-5-γ	W	X	X							☐
3	MW-21-3	524.2	03-02767-4-α	W									☐
	MW-21-3	Metals	03-02767-4-β	W			X	X	X	X	X		☐
	MW-21-3	Anions	03-02767-4-γ	W	X	X							☐
4	MW-21-2	524.2	03-02767-3-α	W									☐
	MW-21-2	Metals	03-02767-3-β	W			X	X	X	X	X		☐
	MW-21-2	Anions	03-02767-3-γ	W	X	X							☐
5	MW-21-1	524.2	03-02767-2-α	W									☐
	MW-21-1	Metals	03-02767-2-β	W			X	X	X	X	X		☐
	MW-21-1	Anions	03-02767-2-γ	W	X	X							☐
6	TB-1-4/17/03	524.2	03-02767-7	W									☐
7	EB-1-4/17/03	524.2	03-02767-1-α	W									☐
	EB-1-4/17/03	Metals	03-02767-1-β	W			X	X	X	X	X		☐

EB-1-4/17/03	Anions	03-02767-1-γ	W	X	X	☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	AS	
1	MW-21-5	524.2	03-02767-6-α	W		☐
	MW-21-5	Metals	03-02767-6-β	W	X	☐
	MW-21-5	Anions	03-02767-6-γ	W		☐
2	MW-21-4	524.2	03-02767-5-α	W		☐
	MW-21-4	Metals	03-02767-5-β	W	X	☐
	MW-21-4	Anions	03-02767-5-γ	W		☐
3	MW-21-3	524.2	03-02767-4-α	W		☐
	MW-21-3	Metals	03-02767-4-β	W	X	☐
	MW-21-3	Anions	03-02767-4-γ	W		☐
4	MW-21-2	524.2	03-02767-3-α	W		☐
	MW-21-2	Metals	03-02767-3-β	W	X	☐
	MW-21-2	Anions	03-02767-3-γ	W		☐
5	MW-21-1	524.2	03-02767-2-α	W		☐
	MW-21-1	Metals	03-02767-2-β	W	X	☐
	MW-21-1	Anions	03-02767-2-γ	W		☐
6	TB-1-4/17/03	524.2	03-02767-7	W		☐
7	EB-1-4/17/03	524.2	03-02767-1-α	W		☐
	EB-1-4/17/03	Metals	03-02767-1-β	W	X	☐
	EB-1-4/17/03	Anions	03-02767-1-γ	W		☐

☐ Client"s Requirement: RUN ~~MS/MSD ON SAMPLE~~ # GPC 4/18/03

Login By En-Yu Paul Kou

Check By DY

Level C Data Package Deliverables

Volatile Organics

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/18/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03G2086-MB-01	Received Date:	04/18/2003
Sample ID:	**03G2086-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/18/03	Anal. Date:	04/18/03
Batch No:	03G2086	Prep. No:	–	Anal. Time:	15:16
Data File Name:	G2086K01	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	1.8	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	70-129	104
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	83
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	96
4	TOLUENE-D8	2037-26-5	73-129	108
# of out-of-control				0

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

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

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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-1	Received Date:	04/17/2003
Sample ID:	**EB-1-4/17/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/18/03	Anal. Date:	04/18/03
Batch No:	03G2086	Prep. No:	–	Anal. Time:	17:41
Data File Name:	2767-01	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	113
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	93
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	102
4 TOLUENE-D8	2037-26-5	73-129	111
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	83
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	79
3 FLUOROBENZENE	462-06-6	50-200	89
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.
[a]MDL reported.

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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-2	Received Date:	04/17/2003
Sample ID:	**MW-21-1**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/18/03	Anal. Date:	04/18/03
Batch No:	03G2086	Prep. No:	–	Anal. Time:	18:10
Data File Name:	2767-02	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	0.8	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	0.6	
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	0.5	J
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	0.7	
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	96
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	84
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	92
4 TOLUENE-D8	2037-26-5	73-129	98
# of out-of-control			0

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

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.
[a]MDL reported.

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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-3	Received Date:	04/17/2003
Sample ID:	**MW-21-2**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/18/03	Anal. Date:	04/18/03
Batch No:	03G2086	Prep. No:	–	Anal. Time:	18:39
Data File Name:	2767-03	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
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23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
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35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
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41	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	1	
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	0.4	J
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	104
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	85
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	92
4 TOLUENE-D8	2037-26-5	73-129	101
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	88
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	84
3 FLUOROBENZENE	462-06-6	50-200	93
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.
[a]MDL reported.

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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-4	Received Date:	04/17/2003
Sample ID:	**MW-21-3**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/18/03	Anal. Date:	04/18/03
Batch No:	03G2086	Prep. No:	–	Anal. Time:	19:07
Data File Name:	2767-04	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	0.8	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	2.1	
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	1.0	
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	104
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	85
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	98
4 TOLUENE-D8	2037-26-5	73-129	105
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	87
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	84
3 FLUOROBENZENE	462-06-6	50-200	91
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.
[a]MDL reported.

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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-5	Received Date:	04/17/2003
Sample ID:	**MW-21-4**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/18/03	Anal. Date:	04/18/03
Batch No:	03G2086	Prep. No:	–	Anal. Time:	19:37
Data File Name:	2767-05	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	1.9	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	0.8	
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	5.2	
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	107
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	91
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	102
4 TOLUENE-D8	2037-26-5	73-129	112
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	82
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	79
3 FLUOROBENZENE	462-06-6	50-200	83
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.
[a]MDL reported.

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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-6	Received Date:	04/17/2003
Sample ID:	**MW-21-5**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/18/03	Anal. Date:	04/18/03
Batch No:	03G2086	Prep. No:	–	Anal. Time:	20:05
Data File Name:	2767-06	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	2.7	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	1.7	
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	12.3	
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	0.6	
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	107
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	91
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	101
4 TOLUENE-D8	2037-26-5	73-129	112
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	80
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	81
3 FLUOROBENZENE	462-06-6	50-200	85
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.
[a] MDL reported.

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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-7	Received Date:	04/17/2003
Sample ID:	**TB-1-4/17/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/18/03	Anal. Date:	04/18/03
Batch No:	03G2086	Prep. No:	–	Anal. Time:	20:34
Data File Name:	2767-07	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	104
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	88
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	101
4 TOLUENE-D8	2037-26-5	73-129	107
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	83
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	80
3 FLUOROBENZENE	462-06-6	50-200	87
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.
[a]MDL reported.

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

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		SDG Number:	032767
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G2086		

#	Client Sample No	Lab Sample ID	S1 %	#	S2 %	#	S3 %	#	S4 %	#	TOT OUT
1	03G2086-LCS-01	03G2086-LCS-01	102		97		102		104		0
2	MW-21-1MS	03-2767-2MS	93		87		94		98		0
3	MW-21-1MSD	03-2767-2MSD	99		88		97		102		0
4	03G2086-MB-01	03G2086-MB-01	104		83		96		108		0
5	EB-1-4/17/03	03-2767-1	113		93		102		111		0
6	MW-21-1	03-2767-2	96		84		92		98		0
7	MW-21-2	03-2767-3	104		85		92		101		0
8	MW-21-3	03-2767-4	104		85		98		105		0
9	MW-21-4	03-2767-5	107		91		102		112		0
10	MW-21-5	03-2767-6	107		91		101		112		0
11	TB-1-4/17/03	03-2767-7	104		88		101		107		0
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

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

Column to be used to flag recovery values:

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

FORM-3A

Applied P & Ch Laboratory

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

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32767
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G2086		
LCS Filename:	G2086L01	Date Analyzed:	041803	Time Analyzed:	11:24
LCSD Filename:	–	Date Analyzed:	–	Time Analyzed:	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	21.4	107	65-120
CHLOROBENZENE	µg/L	20	0	20.7	104	65-134
1,1-DICHLOROETHENE	µg/L	20	0	19.6	98	65-127
TOLUENE	µg/L	20	0	19.8	99	65-134
TRICHLOROETHENE	µg/L	20	0	19.5	98	67-122
# of Out-of-control					0	

Column to be used to flag recovery and RPD values:

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

Comments: _____

FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32767
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G2086		
MS Filename:	G2086M02	Date Analyzed:	041803	Time Analyzed:	13:20
MSD Filename:	G2086N02	Date Analyzed:	041803	Time Analyzed:	13:48
MS Sample No:	**MW-21-1**	Sample Lab ID:	03-2767-2		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	19.5	98	65-121
CHLOROBENZENE	µg/L	20	0	20.3	102	65-134
1,1-DICHLOROETHENE	µg/L	20	0	17.4	87	65-127
TOLUENE	µg/L	20	0	18.9	95	65-134
TRICHLOROETHENE	µg/L	20	0.7	18.6	90	65-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	µg/L	20	20.1	101	3	28	65-121
CHLOROBENZENE	µg/L	20	20.4	102	0	35	65-134
1,1-DICHLOROETHENE	µg/L	20	18.4	92	6	31	65-127
TOLUENE	µg/L	20	19.6	98	3	35	65-134
TRICHLOROETHENE	µg/L	20	19.3	93	3	30	65-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

_____

FORM-4A

Applied P & Ch Laboratory

Method Blank Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32767
Project ID:	JPL	Project No:	04-4428.10	Analysis Date:	04/18/03
		Sample Matrix:	Water	Analysis Time:	15:16
Sample ID:	**03G2086-MB-01**	Batch No:	03G2086	Instrument ID:	GC/MS: G
Lab Sample ID:	03G2086-MB-01	Data File Name:	G2086K01	GC Column:	DB-VEX
		Heated Purge: (Y/N)	N	Column ID:	0.45 mm

This Method Blank applies to the following samples and QC samples:

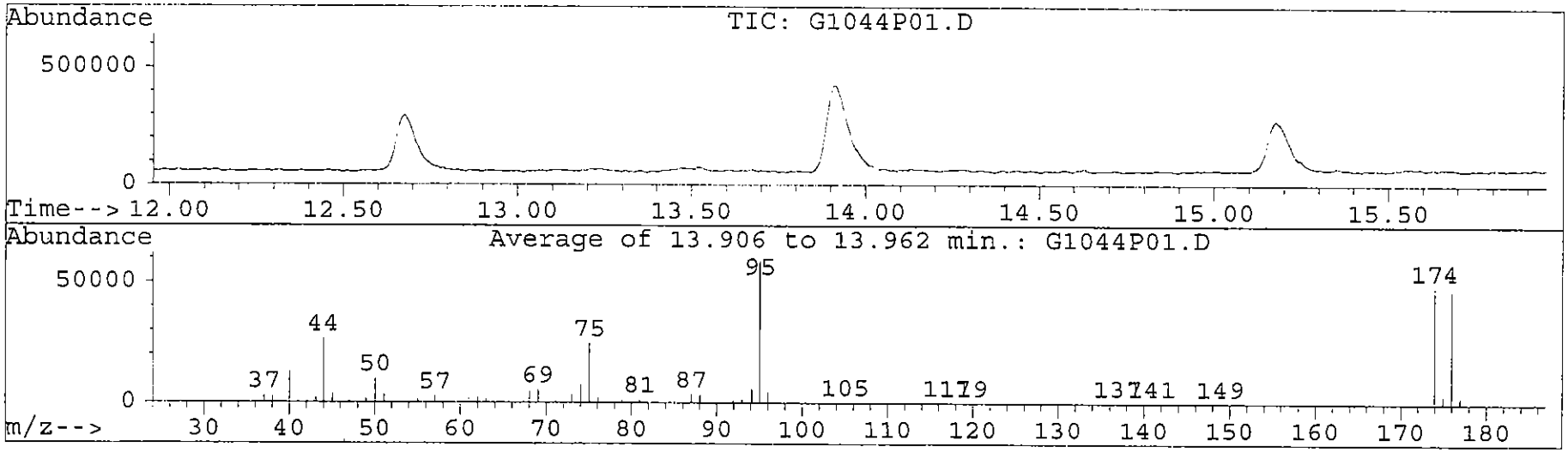
#	Client Sample No	Lab Sample ID	Sample Type	Data Filename	Analysis Date	Analysis Time
1	03G2086-LCS-01	03G2086-LCS-01	Lab Control Spike	G2086L01	04/18/03	11:24
2	MW-21-1MS	03-2767-2MS	Matrix Spike	G2086M02	04/18/03	13:20
3	MW-21-1MSD	03-2767-2MSD	Matrix Spike Duplicate	G2086N02	04/18/03	13:48
4	EB-1-4/17/03	03-2767-1	Field Sample	2767-01	04/18/03	17:41
5	MW-21-1	03-2767-2	Field Sample	2767-02	04/18/03	18:10
6	MW-21-2	03-2767-3	Field Sample	2767-03	04/18/03	18:39
7	MW-21-3	03-2767-4	Field Sample	2767-04	04/18/03	19:07
8	MW-21-4	03-2767-5	Field Sample	2767-05	04/18/03	19:37
9	MW-21-5	03-2767-6	Field Sample	2767-06	04/18/03	20:05
10	TB-1-4/17/03	03-2767-7	Field Sample	2767-07	04/18/03	20:34
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

BFB

Data File : C:\HPCHEM\1\DATA\03G1044\G1044P01.D
Acq On : 10 Jan 03 1:51 pm
Sample : ##03g1044, w
Misc :

Vial: 16
Operator: Eddie
Inst : GCMS-G
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2



Peak Apex is scan: 1479

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	9968	PASS
75	95	30	60	41.9	24658	PASS
95	95	100	100	100.0	58860	PASS
96	95	5	9	7.2	4263	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	82.4	48487	PASS
175	174	5	9	7.2	3468	PASS
176	174	95	101	96.8	46953	PASS
177	176	5	9	6.3	2949	PASS

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name : APPLIED P & CH LAB Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 03-2767

Lab File ID: G1044 P01 BFB Injection Date: 1/10/03

Instrument ID: GCMS-G BFB Injection Time: 1351

GC Column: VOCOL ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.9
75	30.0 - 60.0% of mass 95	41.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	82.4
175	5.0 - 9.0% of mass 174	5.9 (7.2)1
176	95.0 - 101.0% of mass 174	79.8 (96.8)1
177	5.0 - 9.0% of mass 176	5.0 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0003	003-A0003	003-A0003.D	01/10/03	1427
02	VSTD002	003-002	003-0002.D	01/10/03	1526
03	VSTD010	003-0010	003-0010.D	01/10/03	1555
04	VSTD020	003-0020	003-0020.D	01/10/03	1624
05	VSTD040	003-0040	003-0040.D	01/10/03	1654
06	VSTD080	003-0080	003-0080.D	01/10/03	1723
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

3030

Response Factor Report GCMS-G

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

			Compound	0.3	2	10	20	40	80	Avg	%RSD	r2
1)	I	1	Fluorobenzene I1	ISTD								
2)		3	di-Cl-di-F-metha	0.401	0.288	0.312	0.289	0.285	0.276	0.308	15.17	1.000
3)	P	4	Chloromethane		0.201	0.216	0.253	0.278	0.269	0.243	13.88	
4)		9	F114 85 135	0.350	0.300	0.334	0.313	0.315	0.304	0.319	5.93	
5)	C	5	vinyl chloride	0.217	0.232	0.243	0.233	0.237	0.223	0.231	3.96	
6)		6	bromomethane	0.255	0.283	0.240	0.190	0.198	0.198	0.227	16.60	0.999
7)		7	Chloroethane	0.158	0.177	0.177	0.169	0.175	0.169	0.171	4.25	
8)		8	tri-Cl-F-methane	0.318	0.367	0.432	0.414	0.413	0.398	0.390	10.70	
9)		111	isopropyl alcoh		0.005	0.005	0.004	0.005	0.004	0.005#	12.57	
10)		100	ethyl ether x5	0.177	0.141	0.135	0.133	0.137	0.133	0.143	12.11	
11)		102	Acrolein x10		0.010	0.010	0.015	0.012	0.011	0.011#	17.19	
12)		119	methyl acetate	0.177	0.103	0.110	0.126		0.124	0.128	22.73	1.000
13)		104	Carbon disulfid	0.919	0.866	0.830	0.793	0.817	0.777	0.834	6.25	
14)		103	Acrylonitrilex1		0.024	0.024	0.024	0.024	0.024	0.024#	1.28	
15)		95	Acetone x10		0.027	0.017	0.018	0.016	0.016	0.019#	25.00	0.999
16)		108	F-113	0.232	0.267	0.343	0.325	0.321	0.311	0.300	13.95	
17)	M,C	13	11-dichloroethen	0.376	0.399	0.409	0.389	0.398	0.381	0.392	3.13	
18)		101	Acetonnitrilex1	0.009	0.001	0.007	0.007	0.007	0.006	0.006#	44.01	0.998
19)		109	Iodomethane	0.170	0.363	0.385	0.320	0.331	0.296	0.311	24.45	0.996
20)		113	Tert butyl alco		0.012	0.008	0.009	0.008	0.009	0.009#	17.38	0.999
21)		18	methylene chlori	1.220	0.724	0.498	0.407	0.365		0.643	54.62	0.993
22)		112	Allyl chloride	0.514	0.479	0.422	0.416	0.405	0.365	0.434	12.39	
23)		200	Nitro methane x	0.044	0.044	0.044	0.043	0.044	0.042	0.044#	1.92	
24)		10	t-Bu-Me-ether	0.842	0.479	0.398	0.418	0.420	0.429	0.498	34.33	1.000
25)		19	t-12-di-Cl-ethen	0.324	0.294	0.299	0.296	0.301	0.289	0.301	4.05	
26)		98	Vinyl acetate x5	0.312	0.304	0.286	0.157	0.315	0.248	0.270	22.48	
27)	P	21	11-dichloroethan	0.500	0.546	0.535	0.527	0.534	0.507	0.525	3.36	
28)		91	2-butanone MEKx1	0.104	0.095	0.090	0.088	0.094	0.092	0.094	6.20	

(#) = Out of Range

Response Factor Report GCMS-G

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

		Compound	0.3	2	10	20	40	80	Avg	%RSD	r^2
29)		115 Di isoprop ethe	0.108	1.340	1.315	1.320	1.351	1.317	1.125	44.32	1.000
30)		22 c-12-di-Cl-ethen	0.299	0.300	0.291	0.291	0.297	0.287	0.294	1.83	
31)		23 22-Dichloropropa	0.573	0.467	0.437	0.419	0.418	0.403	0.453	13.83	
32)		24 Br-Cl-methane	0.042	0.099	0.104	0.104	0.108	0.105	0.094	27.43	1.000
33)	C	25 chloroform	0.648	0.531	0.493	0.488	0.504	0.487	0.525	11.86	
34)		201 Ethyl acetate x		0.144	0.137	0.100	0.151	0.136	0.134	14.75	
35)		116 ETBE	0.910	0.810	0.787	0.780	0.785	0.769	0.807	6.50	
36)		117 Iso-butyl alcoh	0.024	0.029	0.029	0.020	0.031	0.027	0.027#	14.60	
37)		26 tetrahydrofuranx		0.011	0.010	0.010	0.010	0.010	0.010#	4.18	
38)	S	27 Di-Br-F-Methane	0.604	0.385	0.352	0.350	0.360	0.349	0.400	25.18	1.000
39)		34 111-tri-Cl-ethan	0.542	0.428	0.418	0.409	0.414	0.413	0.437	11.85	
40)		30 12-dichloroethan	0.024	0.205	0.204	0.201	0.208	0.205	0.175	42.30	1.000
41)		35 11-Di-Cl-propene	0.413	0.378	0.379	0.371	0.378	0.373	0.382	4.04	
42)	S	29 1,2-di-Cl-ethane		0.173	0.165	0.164	0.165	0.159	0.165	3.14	
43)	M	36 benzene	0.854	0.901	0.876	0.863	0.883	0.837	0.869	2.63	
44)		37 CCl4	0.341	0.311	0.354	0.334	0.340	0.329	0.335	4.32	
45)		97 thiophene	0.441	0.456	0.429	0.421	0.430	0.415	0.432	3.39	
46)		118 TAME		0.635	0.539	0.536	0.527	0.541	0.556	8.06	
47)	C	39 12-di-Cl-propane	0.255	0.253	0.252	0.254	0.257	0.253	0.254	0.66	
48)	M	40 trichloroethene	0.253	0.267	0.275	0.273	0.279	0.269	0.269	3.39	
49)		96 Me-methacrylate		0.128	0.086	0.083	0.087	0.092	0.095	19.43	0.99 P
50)		42 Br-di-Cl-methane	0.441	0.364	0.340	0.327	0.331	0.324	0.355	12.65	
51)		41 dibromomethane	0.100	0.117	0.128	0.132	0.133	0.127	0.123	10.29	
52)		45 c-13-di-Cl-prope	0.341	0.316	0.303	0.301	0.309	0.307	0.313	4.71	
53)	S	55 toluene-d8(S2)		0.509	0.500	0.491	0.504	0.493	0.500	1.57	
54)		92 2-ClEt-Vi-ether1	0.045	0.052	0.054	0.055	0.057	0.057	0.054	8.68	
55)	M C	56 toluene	0.926	0.820	0.796	0.777	0.794	0.786	0.817	6.80	
56)		107 Et methacrylate		0.232	0.176	0.112	0.178	0.147	0.169	26.25	
57)		93 2-Hexanone x5		0.062	0.058	0.050	0.058	0.057	0.057	7.78	

(#) = Out of Range

Response Factor Report GCMS-G

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

			Compound	0.3	2	10	20	40	80	Avg	%RSD	
58)		48	112-tri-Cl-Et	0.226	0.143	0.120	0.116	0.121	0.118	0.141	30.67	
59)		58	1,2-di-br-ethane	0.050	0.125	0.124	0.129	0.129	0.128	0.114	27.70	
60)		51	di-Br-Cl-methane	0.117	0.177	0.166	0.165	0.170	0.172	0.161	13.59	
61)		46	t-13-di-cl-prope	0.200	0.197	0.206	0.204	0.206	0.197	0.202	2.11	
62)		105	1-Chlorohexane	0.564	0.285	0.272	0.253	0.249	0.237	0.310	40.49	
63)	I	47	Cl-benzene-d5, I2	ISTD								
64)		54	MIBK	0.207	0.298	0.328	0.319	0.325	0.304	0.297	15.38	
65)		49	1,3-di-cl-propan	0.624	0.665	0.699	0.690	0.647	0.598	0.654	5.95	
66)		59	tetra-Cl-ethene	0.767	0.892	0.960	0.927	0.884	0.850	0.880	7.60	
67)	M P	60	chlorobenzene	1.465	1.556	1.560	1.485	1.424	1.278	1.461	7.13	
68)		61	1112-tetra-Cl-Et	0.473	0.619	0.613	0.631	0.602	0.573	0.585	9.96	
69)	C	64	ethylbenzene	3.150	3.064	2.822	2.754	2.619	2.485	2.816	9.06	
70)		65	m/p-Xylenes x2	2.309	2.321	2.213	2.124	2.010	1.868	2.141	8.30	
71)		99	1-4-di-Cl-butane	0.809	0.710	0.649	0.615	0.570	0.518	0.645	16.06	
72)	P	52	bromoform	0.118	0.305	0.317	0.319	0.302	0.282	0.274	28.23	
73)		66	styrene	1.595	1.641	1.561	1.507	1.441	1.326	1.512	7.58	
74)		67	o-xylene	2.457	2.410	2.147	2.035	1.889	1.700	2.106	13.98	
75)	P	68	1122-Tetra-Cl-Et	0.391	0.469	0.403	0.385	0.349	0.323	0.387	12.94	
76)		110	t-1,4-dichloro-		0.153	0.078	0.060	0.058	0.053	0.081	51.75	
77)		106	Cl-benzyl	0.890	0.534	0.539	0.531	0.489	0.448	0.572	27.91	
78)	I	62	1,4-DCB-d4 150 152	ISTD								
79)		69	123-tri-Cl-Pr		0.112	0.116	0.123	0.127	0.131	0.122	6.42	
80)	S	70	4-Br-1-F-Bz (S3)		0.935	0.877	0.886	0.890	0.880	0.893	2.69	
81)		71	isopropylbenzene	2.780	3.439	3.399	3.298	3.366	3.435	3.286	7.71	
82)		72	bromobenzene	0.527	0.700	0.760	0.772	0.787	0.782	0.721	13.87	
83)		73	n-propylbenzene	0.727	0.924	0.921	0.910	0.914	0.920	0.886	8.83	
84)		74	2-Cl-Tl 126	0.646	0.602	0.566	0.545	0.606	0.566	0.589	6.23	

(#) = Out of Range

3033

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

	Compound		0.3	2	10	20	40	80	Avg	%RSD	
85)	75 4-Cl-Tl	126	0.683	0.834	0.866	0.784	0.843	0.816	0.804	8.13	
86)	76 135-tri-Me-Bz		2.482	2.722	2.700	2.625	2.675	2.716	2.653	3.43	
87)	79 tert-butylbenzen		2.218	2.871	2.824	2.765	2.829	2.837	2.724	9.19	
88)	78 124-tri-Me-Bz		1.891	2.455	2.250	2.296	2.326	2.317	2.256	8.48	
89)	80 13-di-Cl-Bz	146	0.934	1.158	1.264	1.084	1.198	1.258	1.149	10.87	
90)	82 14-di-Cl-Bz	146	1.527	1.764	1.616	1.744	1.694	1.675	1.670	5.24	
91)	81 sec-butylbenzene		3.330	4.148	4.224	3.968	4.057	4.172	3.983	8.35	
92)	77 4-iso-Pr-toluene		2.419	3.039	3.032	2.939	2.928	2.886	2.874	8.04	
93)	84 12-di-Cl-benzene		0.920	1.150	1.163	1.111	1.152	1.156	1.109	8.49	
94)	85 n-butylbenzene		3.034	2.990	3.069	2.970	2.978	3.028	3.012	1.28	
95)	86 12-diBr-3-Cl-Pra			0.063	0.077	0.085	0.089	0.091	0.081	13.95	
96)	87 124-tri-Cl-Bz		0.534	0.749	0.838	0.873	0.858	0.901	0.792	17.24	0.999
97)	88 naphthalene		0.804	0.553	0.616	0.666	0.652	0.700	0.665	12.68	
98)	90 123-tri-Cl-Bz		0.497	0.559	0.642	0.649	0.636	0.642	0.604	10.29	
99)	89 hx-Cl-butadiene		0.432	0.625	0.690	0.663	0.662	0.652	0.621	15.29	1.000

(#) = Out of Range

INITIAL CALIBRATION SUMMARY

Method File	E524G003
Last Calibration Update	Mon Jan 13 09:57:17 2003

Level 1 File Name	3-0003.D	**Level 1 ID**	0.3
Level 2 File Name	3-002.D	**Level 2 ID**	2
Level 3 File Name	3-010.D	**Level 3 ID**	10
Level 4 File Name	3-020.D	**Level 4 ID**	20
Level 5 File Name	3-040.D	**Level 5 ID**	40
Level 6 File Name	3-080.D	**Level 6 ID**	80
Level 7 File Name	3-020.D	**Level 7 ID**	cc

Compound Name	Level 1 Response	Level 2 Response	Level 3 Response	Level 4 Response	Level 5 Response	Level 6 Response	Level 7 Response	Coeff X^0	Coeff X^1 / ave RF	Coeff X^2	R^2 / RSD
1 Fluorobenzene I1 1	765834	768596	755237	739905	721219	703721	-1	------	------	------	------
3 di-Cl-di-F-methane 85 87	9202	44272	235359	427426	820884	1551879	-1	0.0191	0.2750	0.0000	0.9996
4 Chloromethane 50 52	4751	30836	163038	374044	803175	1514667	-1	0.0000	0.2433	0.0000	0.1388
9 F114 85 135	8035	46094	252154	462947	909235	1714061	-1	0.0000	0.3193	0.0000	0.0593
5 vinyl chloride 62 64	4990	35625	183259	344227	682967	1258237	-1	0.0000	0.2307	0.0000	0.0396
6 bromomethane 94 96	5861	43488	181174	281305	570773	1116110	-1	0.0126	0.1961	0.0000	0.9990
7 Chloroethane 64 66	3629	27223	133510	250119	505034	952606	-1	0.0000	0.1709	0.0000	0.0425
8 tri-Cl-F-methane 101 103	7295	56379	326202	612174	1192828	2238212	-1	0.0000	0.3902	0.0000	0.1070
111 isopropyl alcohol x10	1236	8181	34708	55395	131600	244204	-1	0.0000	0.0045	0.0000	0.1257
100 ethyl ether x5	20361	108089	509174	980952	1975186	3742221	-1	0.0000	0.1425	0.0000	0.1211
102 Acrolein x10	3234	15074	75489	215710	340415	601157	-1	0.0000	0.0114	0.0000	0.1719
119 methyl acetate	4062	15788	82815	187169	-1	696519	-1	-0.0033	0.1242	0.0000	0.9997
104 Carbon disulfide	21121	133095	626926	1173322	2357195	4372134	-1	0.0000	0.8336	0.0000	0.0625
103 Acrylonitrilex10	4569	37044	178667	348877	701313	1341637	-1	0.0000	0.0239	0.0000	0.0128
95 Acetone x10	989	41993	128289	268909	465240	912905	-1	0.0227	0.0159	0.0000	0.9991
108 F-113	5327	41068	259145	480691	925581	1749444	-1	0.0000	0.2998	0.0000	0.1395
13 11-dichloroethene 61 96	8641	61263	309126	575822	1147783	2146767	-1	0.0000	0.3920	0.0000	0.0313
101 Acetonnitrilex10	2063	1527	53569	97490	189257	353648	-1	0.0013	0.0063	0.0000	0.9985
109 Iodomethane	3901	55824	290992	473953	954242	1666625	-1	0.0467	0.2964	0.0000	0.9961
113 Tert butyl alcohol x10	2556	18436	60720	133851	240444	485913	-1	0.0016	0.0086	0.0000	0.9991
18 methylene chloride 49 84	28023	111315	375753	602942	1052979	-1	-1	0.0818	0.3520	0.0000	0.9932

112 Allyl chloride	11807	73643	318868	616004	1168854	2056270	-1	0.0000	0.4336	0.0000	0.1239
200 Nitro methane x10	10089	68361	334791	633827	1264975	2385881	-1	0.0000	0.0436	0.0000	0.0192
10 t-Bu-Me-ether 73 57	19344	73627	300489	618307	1211982	2415631	-1	-0.0086	0.4281	0.0000	0.9997
19 t-12-di-Cl-ethene 96 61	7446	45222	225516	438020	867973	1629626	-1	0.0000	0.3005	0.0000	0.0405
98 Vinyl acetate x5	35861	233914	1080092	1161950	4543111	6984572	-1	0.0000	0.2704	0.0000	0.2248
21 11-dichloroethane 63 83	11490	83925	403704	780313	1539657	2853804	-1	0.0000	0.5248	0.0000	0.0336
91 2-butanone MEKx10	23960	146366	680153	1296553	2708302	5159574	-1	0.0000	0.0938	0.0000	0.0620
115 Di isoprop ether	2475	206054	993426	1953682	3898884	7414434	-1	0.0032	1.3231	0.0000	0.9998
22 c-12-di-Cl-ethene 96 61	6875	46067	219592	430734	857123	1613152	-1	0.0000	0.2941	0.0000	0.0183
23 22-Dichloropropane 77 97	13155	71811	330092	619878	1207116	2269373	-1	0.0000	0.4529	0.0000	0.1383
24 Br-Cl-methane 128 130	956	15248	78733	153832	312235	593248	-1	-0.0008	0.1060	0.0000	0.9998
25 chloroform 83 85	14881	81604	372529	722194	1453363	2739754	-1	0.0000	0.5251	0.0000	0.1186
201 Ethyl acetate x2	-1	44403	206670	296783	873148	1526995	-1	0.0000	0.1337	0.0000	0.1475
116 ETBE	20917	124488	594002	1154600	2264664	4329036	-1	0.0000	0.8068	0.0000	0.0650
117 Iso-butyl alcohol X10	5582	44403	221032	297076	880890	1546333	-1	0.0000	0.0268	0.0000	0.1460
26 tetrahydrofuranx5	1945	8407	36840	75144	146600	287877	-1	0.0000	0.0102	0.0000	0.0418
27 Di-Br-F-Methane (S1) 111 1	13867	59189	265788	517816	1038870	1963588	-1	0.0096	0.3493	0.0000	0.9997
34 111-tri-Cl-ethane 97 99	12459	65859	315664	604949	1193974	2324189	-1	0.0000	0.4374	0.0000	0.1185
30 12-dichloroethane 64 62	549	31555	154021	298086	600265	1155412	-1	-0.0025	0.2060	0.0000	0.9999
35 11-Di-Cl-propene 75 110	9488	58117	286388	549558	1091787	2099663	-1	0.0000	0.3822	0.0000	0.0404
29 1,2-di-Cl-ethane-d4 [Surr] 10	-1	26643	124715	242470	475685	894560	-1	0.0000	0.1652	0.0000	0.0314
36 benzene 78 52	19613	138554	661631	1277049	2547937	4710056	-1	0.0000	0.8690	0.0000	0.0263
37 CCl4 117 119	7832	47773	267339	493900	981263	1852391	-1	0.0000	0.3348	0.0000	0.0432
97 thiophene	10129	70133	323713	623624	1239916	2337761	-1	0.0000	0.4320	0.0000	0.0339
118 TAME	4367	97622	406861	792558	1521011	3045504	-1	0.0000	0.5555	0.0000	0.0806
39 12-di-Cl-propane 63 76	5869	38931	190695	376101	741594	1426638	-1	0.0000	0.2543	0.0000	0.0066
40 trichloroethene 130 132	5805	41064	207771	403682	804090	1515012	-1	0.0000	0.2693	0.0000	0.0339
96 Me-methacrylate	1472	19691	65318	123371	250724	519513	-1	-0.0068	0.0920	0.0000	0.9983
42 Br-di-Cl-methane 83 85	10138	55994	256691	484084	955698	1823535	-1	0.0000	0.3546	0.0000	0.1265
41 dibromomethane 174 172	2292	17911	96884	194764	383350	714384	-1	0.0000	0.1227	0.0000	0.1029

Compound Name	Level 1 Response	Level 2 Response	Level 3 Response	Level 4 Response	Level 5 Response	Level 6 Response	Level 7 Response	Coeff X^0	Coeff X^1 / ave RF	Coeff X^2	R^2 / RSD
45 c-13-di-Cl-propene 75 110	7832	48533	229072	445153	890451	1727952	-1	------	------	------	------
55 toluene-d8(S2) 100 99	-1	78299	377922	725871	1455135	2774904	-1	0.0000	0.4995	0.0000	0.0157
92 2-ClEt-Vi-ether10	10352	80060	410701	820365	1655105	3234891	-1	0.0000	0.0536	0.0000	0.0868
56 toluene 91 92	21278	126101	601438	1149709	2291459	4425814	-1	0.0000	0.8167	0.0000	0.0680

107 Et methacrylate	-1	35707	132945	165590	512644	828103	-1	0.0000	0.1690	0.0000	0.2625
93 2-Hexanone x5	10744	47646	218029	368204	831419	1601350	-1	0.0000	0.0568	0.0000	0.0778
48 112-tri-Cl-Et 97 83	5203	21908	90597	172036	347876	664699	-1	0.0031	0.1179	0.0000	0.9998
58 1,2-di-br-ethane 107 109	1144	19207	94012	191133	371448	723238	-1	-0.0016	0.1288	0.0000	1.0000
51 di-Br-Cl-methane 129 127	2693	27173	125300	243477	489254	967601	-1	0.0000	0.1610	0.0000	0.1359
46 t-13-di-cl-propene 75 110	4584	30276	155530	301394	594704	1109294	-1	0.0000	0.2015	0.0000	0.0211
105 1-Chlorohexane	12961	43864	205359	374248	719249	1336615	-1	0.0247	0.2364	0.0000	0.9994
47 Cl-benzene-d5, I2	226795	229493	225971	224981	233528	241678	-1	0.0000	1.0000	0.0000	0.0000
54 MIBK	1407	13676	74160	143757	303184	587112	-1	0.0184	0.3053	0.0000	0.9988
49 1,3-di-cl-propane 76 78	4247	30516	157929	310529	604220	1155285	-1	0.0000	0.6537	0.0000	0.0595
59 tetra-Cl-ethene 166 168	5221	40927	216892	417298	825820	1643233	-1	0.0000	0.8800	0.0000	0.0760

Compound Name	Level 1 Response	Level 2 Response	Level 3 Response	Level 4 Response	Level 5 Response	Level 6 Response	Level 7 Response	Coeff X^0	Coeff X^1 / ave RF	Coeff X^2	R^2 / RSD
60 chlorobenzene 112 77	9971	71440	352480	668143	1330525	2470738	-1	0.0000	------	------	------
61 1112-tetra-Cl-Et 131 133	3219	28400	138607	283855	562377	1108773	-1	0.0000	0.5853	0.0000	0.0996
64 ethylbenzene 91 106	21430	140640	637777	1239073	2446417	4804958	-1	0.0000	2.8157	0.0000	0.0906
65 m/p-Xylenes x2	31419	213036	1000145	1911139	3754507	7222435	-1	0.0000	2.1406	0.0000	0.0830
99 1-4-di-Cl-butane	5503	32572	146606	276558	532573	1001628	-1	0.0000	0.6450	0.0000	0.1606
52 bromoform 173 175	806	13982	71698	143599	281887	544898	-1	0.0303	0.2823	0.0000	0.9980
66 styrene 104 78	10850	75317	352645	677932	1346269	2563056	-1	0.0000	1.5116	0.0000	0.0758
67 o-xylene 91 106	16715	110603	485194	915641	1764503	3287299	-1	0.0000	2.1063	0.0000	0.1398
68 1122-Tetra-Cl-Et 83 85	2658	21540	91096	173152	326262	625224	-1	0.0000	0.3868	0.0000	0.1294
110 t-1,4-dichloro-2-butene	1095	7032	17679	27009	54200	103110	-1	0.0235	0.0507	0.0000	0.9991
106 Cl-benzyl	6053	24517	121704	238713	457227	866531	-1	0.0784	0.4469	0.0000	0.9969
62 1,4-DCB-d4 150 152 I3	197143	197148	188831	184633	176207	164785	-1	0.0000	1.0000	0.0000	0.0000
69 123-tri-Cl-Pr 110 97	253	4401	21971	45443	89331	172722	-1	0.0000	0.1218	0.0000	0.0642
70 4-Br-1-F-Bz (S3) 174 95	-1	36886	165570	327081	627145	1159540	-1	0.0000	0.8935	0.0000	0.0269
71 isopropylbenzene 105 120	16442	135584	641793	1217921	2372165	4528346	-1	0.0000	3.2861	0.0000	0.0771
72 bromobenzene 156 158	3119	27613	143515	285095	554412	1030644	-1	0.0000	0.7214	0.0000	0.1387
73 n-propylbenzene 120 78	4297	36443	173970	335858	643879	1212584	-1	0.0000	0.8858	0.0000	0.0883
74 2-Cl-TI 126 128	3821	23738	106793	201349	427470	745993	-1	0.0000	0.5885	0.0000	0.0623
75 4-Cl-TI 126 128	4042	32882	163598	289530	594245	1075809	-1	0.0000	0.8045	0.0000	0.0813
76 135-tri-Me-Bz 105 120	14680	107323	509842	969387	1885346	3580223	-1	0.0000	2.6533	0.0000	0.0343
79 tert-butylbenzene 119 91	13115	113211	533176	1020985	1994231	3739615	-1	0.0000	2.7239	0.0000	0.0919
78 124-tri-Me-Bz 105 120	11184	96787	424953	847796	1639260	3054447	-1	0.0000	2.2558	0.0000	0.0848
80 13-di-Cl-Bz 146 148	5522	45648	238597	400250	844281	1658291	-1	0.0000	1.1491	0.0000	0.1087

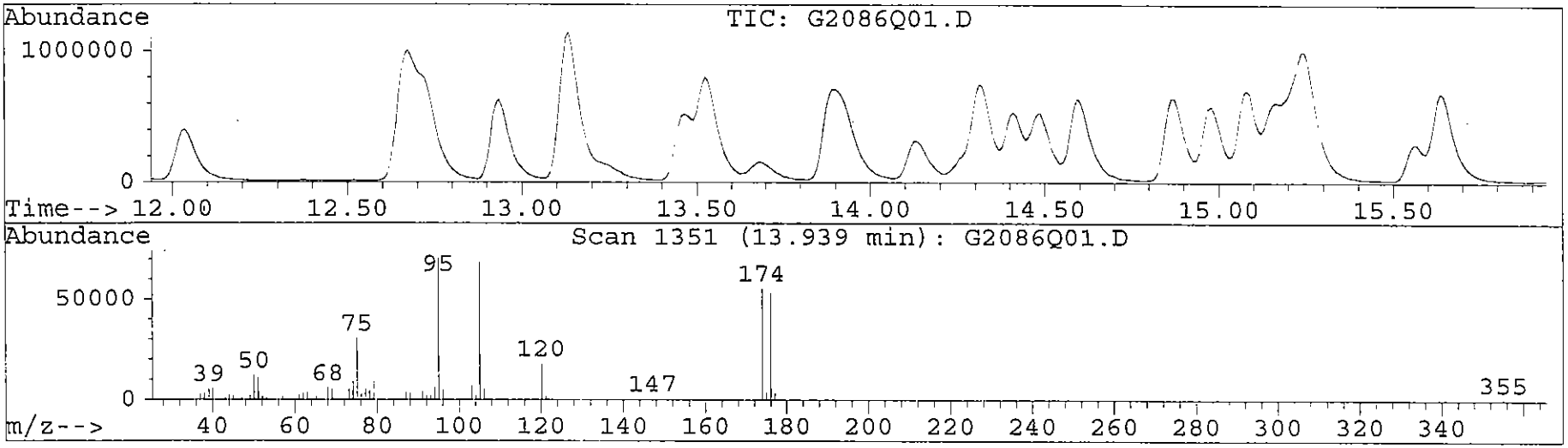
82 14-di-Cl-Bz 146 148	9029	69544	305231	644124	1193857	2207723	-1	0.0000	1.6699	0.0000	0.0524
81 sec-butylbenzene 105 134	19695	163551	797663	1465228	2859247	5499576	-1	0.0000	3.9831	0.0000	0.0835
77 4-iso-Pr-toluene 119 134	14306	119820	572630	1085210	2064029	3804782	-1	0.0000	2.8739	0.0000	0.0804
84 12-di-Cl-benzene 146 148	5444	45355	219614	410082	812246	1524040	-1	0.0000	1.1088	0.0000	0.0849
85 n-butylbenzene 91 134	17944	117913	579573	1096665	2099124	3991637	-1	0.0000	3.0116	0.0000	0.0128
86 12-diBr-3-Cl-Pra 157 155	-1	2498	14611	31395	62914	120318	-1	0.0000	0.0813	0.0000	0.1395
87 124-tri-Cl-Bz 180 182	3158	29532	158333	322231	604462	1187497	-1	-0.0539	0.9002	0.0000	0.9995
88 naphthalene 128 129	4753	21798	116373	245906	459400	922945	-1	0.0000	0.6651	0.0000	0.1268
90 123-tri-Cl-Bz 180 182	2940	22060	121207	239739	448256	845940	-1	0.0000	0.6042	0.0000	0.1029
89 hx-Cl-butadiene 225 260	2553	24644	130257	244690	466707	859594	-1	0.0135	0.6525	0.0000	0.9999

BFB

Data File : C:\HPCHEM\1\DATA\03G2086\G2086Q01.D
Acq On : 18 Apr 03 10:55 am
Sample : f=1
Misc :

Vial: 17
Operator: Eddie
Inst : GCMS-G
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2



Peak Apex is scan: 1351

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	12255	PASS
75	95	30	60	43.6	30768	PASS
95	95	100	100	100.0	70496	PASS
96	95	5	9	7.7	5436	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	79.0	55664	PASS
175	174	5	9	7.0	3870	PASS
176	174	95	101	96.0	53440	PASS
177	176	5	9	7.2	3837	PASS

G2086Q01.D E524G003.M Fri Apr 18 15:06:21 2003

FORM-5A

Applied P & Ch Laboratory

Volatile Organic Instrument Performance Check for Method 524.2

Bromofluorobenzene (BFB), Part II

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	032767
Project ID:	JPL	BFB Inj. Date:	04/18/03	Batch No:	03G2086
		BFB Inj. Time:	10:55	Sequence No:	03G2086
Project No:	04-4428.10	Instrument ID:	G	GC Column:	DB-VEX
Data File Name:	G2086Q01	Heated Purge: (Y/N)	N	Column ID:	0.45 mm

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

#	Client Sample No	Lab Sample ID	Data File Name	Date Analyzed	Time Analyzed
1	03G2086-CCV-01	03G2086-CCV-01	G2086Q01	04/18/03	10:55
2	03G2086-LCS-01	03G2086-LCS-01	G2086L01	04/18/03	11:24
3	MW-21-1MS	03-2767-2MS	G2086M02	04/18/03	13:20
4	MW-21-1MSD	03-2767-2MSD	G2086N02	04/18/03	13:48
5	03G2086-MB-01	03G2086-MB-01	G2086K01	04/18/03	15:16
6	EB-1-4/17/03	03-2767-1	2767-01	04/18/03	17:41
7	MW-21-1	03-2767-2	2767-02	04/18/03	18:10
8	MW-21-2	03-2767-3	2767-03	04/18/03	18:39
9	MW-21-3	03-2767-4	2767-04	04/18/03	19:07
10	MW-21-4	03-2767-5	2767-05	04/18/03	19:37
11	MW-21-5	03-2767-6	2767-06	04/18/03	20:05
12	TB-1-4/17/03	03-2767-7	2767-07	04/18/03	20:34
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Evaluate Continuing Calibration Report

3040

Data File : C:\HPCHEM\1\DATA\03G2086\G2086Q01.D Vial: 17
Acq On : 18 Apr 03 10:55 am Operator: Eddie
Sample : f=1 Inst : GCMS-G
Misc : Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 35% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1 Fluorobenzene I1 1	1.000	1.000	0.0	89	0.00
2		3 di-Cl-di-F-methane 85 8	0.308	0.284	7.7	87	0.00
3	P	4 Chloromethane 50 5	0.243	0.198	18.5	70	0.00
4		9 F114 85 135	0.319	0.302	5.3	86	0.00
5	C	5 vinyl chloride 62 6	0.231	0.187	19.0	71	0.00
6		6 bromomethane 94 9	0.227	0.167	26.4#	78	0.00
7		7 Chloroethane 64 66	0.171	0.154	9.6	81	0.00
8		8 tri-Cl-F-methane 101 10	0.390	0.405	-3.9	87	0.00
9		111 isopropyl alcohol x10	0.005	0.004#	8.3	98	0.00
10		100 ethyl ether x5	0.143	0.116	18.9	77	0.00
11		102 Acrolein x10	0.011	0.009#	24.3#	52	0.00
12		119 methyl acetate	0.128	0.117	8.2	82	0.00
13		104 Carbon disulfide	0.834	0.669	19.7	75	0.00
14		103 Acrylonitrilex10	0.024	0.022#	9.5	81	0.00
15		95 Acetone x10	0.019	0.020#	-5.2	97	0.00
16		108 F-113	0.300	0.326	-8.9	89	0.00
17	M,C	13 11-dichloroethene 61 9	0.392	0.357	8.8	81	0.00
18		101 Acetonnitrilex10	0.006	0.007#	-10.3	90	0.00
19		109 Iodomethane	0.311	0.278	10.7	77	0.00
20		113 Tert butyl alcohol x10	0.009	0.008#	8.0	83	0.00
21		18 methylene chloride 49 8	0.643	0.336	47.8#	73	0.00
22		112 Allyl chloride	0.434	0.441	-1.6	94	0.00
23		200 Nitro methane x10	0.044	0.040#	9.3	82	0.00
24		10 t-Bu-Me-ether 73 57	0.498	0.393	21.0#	83	0.00
25		19 t-12-di-Cl-ethene 96 6	0.301	0.246	18.1	74	0.00
26		98 Vinyl acetate x5	0.270	0.244	9.6	138	0.00
27	P	21 11-dichloroethane 63 8	0.525	0.534	-1.8	90	0.00

(#) = Out of Range

3041

Data File : C:\HPCHEM\1\DATA\03G2086\G2086Q01.D Vial: 17
Acq On : 18 Apr 03 10:55 am Operator: Eddie
Sample : f=1 Inst : GCMS-G
Misc : Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 35% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
28		91 2-butanone MEKx10	0.094	0.089	5.5	90	0.00
29		115 Di isoprop ether	1.125	1.276	-13.4	86	0.00
30		22 c-12-di-Cl-ethene 96 6	0.294	0.253	14.1	77	0.00
31		23 22-Dichloropropane 77 9	0.453	0.449	0.9	95	0.00
32		24 Br-Cl-methane 128 13	0.094	0.084	10.1	72	0.00
33	C	25 chloroform 83 8	0.525	0.458	12.7	83	0.00
34		201 Ethyl acetate x2	0.134	0.124	7.3	110	0.00
35		116 ETBE	0.807	0.759	6.0	86	0.00
36		117 Iso-butyl alcohol X10	0.027	0.025#	6.2	111	0.00
37		26 tetrahydrofuranx5	0.010	0.009#	11.5	79	0.00
38	S	27 Di-Br-F-Methane (S1) 11	0.400	0.329	17.8	83	0.00
39		34 111-tri-Cl-ethane 97 9	0.437	0.421	3.8	91	0.00
40		30 12-dichloroethane 64 6	0.175	0.176	-1.1	78	0.00
41		35 11-Di-Cl-propene 75 11	0.382	0.365	4.4	87	0.00
42	S	29 1,2-di-Cl-ethane-d4 [Sur	0.165	0.140	15.2	76	0.00
43	M	36 benzene 78 5	0.869	0.862	0.8	89	0.00
44		37 CCl4 117 11	0.335	0.346	-3.3	92	0.00
45		97 thiophene	0.432	0.380	12.0	80	0.00
46		118 TAME	0.556	0.483	13.1	80	0.00
47	C	39 12-di-Cl-propane 63 7	0.254	0.263	-3.5	92	0.00
48	M	40 trichloroethene 130 13	0.269	0.246	8.8	80	0.00
49		96 Me-methacrylate	0.095	0.081	15.4	86	0.00
50		42 Br-di-Cl-methane 83 8	0.355	0.310	12.7	84	0.00
51		41 dibromomethane 174 17	0.123	0.107	12.4	72	0.00
52		45 c-13-di-Cl-propene 75 11	0.313	0.286	8.5	84	0.00
53	S	55 toluene-d8(S2) 100	0.500	0.467	6.5	84	0.00
54		92 2-ClEt-Vi-ether10	0.054	0.030#	43.7#	48	0.00

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\03G2086\G2086Q01.D Vial: 17
Acq On : 18 Apr 03 10:55 am Operator: Eddie
Sample : f=1 Inst : GCMS-G
Misc : Multiplr: 1.00

3042

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 35% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

			Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
55	M	C	56 toluene 91 9		0.817	0.732	10.4	84	0.00
56			107 Et methacrylate		0.169	0.158	6.5	125	0.00
57			93 2-Hexanone x5		0.057	0.055	2.7	99	0.00
58			48 112-tri-Cl-Et 97 8		0.141	0.102	27.2#	78	0.00
59			58 1,2-di-br-ethane 107 109		0.114	0.113	1.1	78	0.00
60			51 di-Br-Cl-methane 129 12		0.161	0.143	11.2	77	0.00
61			46 t-13-di-cl-propene 75 11		0.202	0.193	4.3	84	0.00
62			105 1-Chlorohexane		0.310	0.274	11.7	96	0.00
63	I		47 Cl-benzene-d5, I2		1.000	1.000	0.0	92	0.00
64			54 MIBK		0.297	0.302	-1.8	87	0.00
65			49 1,3-di-cl-propane 76 78		0.654	0.611	6.5	81	0.00
66			59 tetra-Cl-ethene 166 16		0.880	0.779	11.5	77	0.00
67	M	P	60 chlorobenzene 112 7		1.461	1.340	8.3	83	0.00
68			61 1112-tetra-Cl-Et 131 13		0.585	0.560	4.2	82	0.00
69	C		64 ethylbenzene 91 10		2.816	2.578	8.5	86	0.00
70			65 m/p-Xylenes x2		2.141	1.972	7.9	85	0.00
71			99 1-4-di-Cl-butane		0.645	0.576	10.6	86	0.00
72	P		52 bromoform 173 17		0.274	0.256	6.4	74	0.00
73			66 styrene 104 7		1.512	1.381	8.6	84	0.00
74			67 o-xylene 91 10		2.106	1.942	7.8	88	0.00
75	P		68 1122-Tetra-Cl-Et 83 8		0.387	0.352	9.0	84	0.00
76			110 t-1,4-dichloro-2-butene		0.081	0.071	12.2	108	0.00
77			106 Cl-benzyl		0.572	0.512	10.5	89	0.00
78	I		62 1,4-DCB-d4 150 152 I3		1.000	1.000	0.0	92	0.00
79			69 123-tri-Cl-Pr 110 9		0.122	0.105	14.1	78	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\03G2086\G2086Q01.D Vial: 17
Acq On : 18 Apr 03 10:55 am Operator: Eddie
Sample : f=1 Inst : GCMS-G
Misc : Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 35% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
80	S	70 4-Br-1-F-Bz (S3) 174 9	0.893	0.789	11.7	82	0.00
81		71 isopropylbenzene 105 12	3.286	3.249	1.1	90	0.00
82		72 bromobenzene 156 15	0.721	0.630	12.6	75	0.00
83		73 n-propylbenzene 120 7	0.886	0.872	1.5	88	0.00
84		74 2-Cl-Tl 126 128	0.589	0.489	16.9	82	0.00
85		75 4-Cl-Tl 126 128	0.804	0.720	10.5	84	0.00
86		76 135-tri-Me-Bz 105 12	2.653	2.519	5.1	88	0.00
87		79 tert-butylbenzene 119 9	2.724	2.592	4.9	86	0.00
88		78 124-tri-Me-Bz 105 12	2.256	2.086	7.5	83	0.00
89		80 13-di-Cl-Bz 146 148	1.149	0.971	15.5	82	0.00
90		82 14-di-Cl-Bz 146 148	1.670	1.430	14.4	75	0.00
91		81 sec-butylbenzene 105 13	3.983	3.806	4.4	88	0.00
92		77 4-iso-Pr-toluene 119 13	2.874	2.765	3.8	86	0.00
93		84 12-di-Cl-benzene 146 14	1.109	0.931	16.0	77	0.00
94		85 n-butylbenzene 91 13	3.012	2.801	7.0	86	0.00
95		86 12-diBr-3-Cl-Pra 157 15	0.081	0.066	18.4	71	0.00
96		87 124-tri-Cl-Bz 180 18	0.792	0.732	7.6	77	0.00
97		88 naphthalene 128 12	0.665	0.565	15.0	78	0.00
98		90 123-tri-Cl-Bz 180 18	0.604	0.548	9.4	77	0.00
99		89 hx-Cl-butadiene 225 26	0.621	0.698	-12.5	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Continuing Calibration Concentration Summary

Data File G2086Q01.D
Method File E524G003

Compound Name	Amount	Actual	Units	%Dev	Target Response
1 Fluorobenzene I1 1	10	10.00	ppb	0.00	656208
3 di-Cl-di-F-methane 85 87	20	19.99	ppb	0.03	373303
4 Chloromethane 50 52	20	16.31	ppb	18.46	260416
9 F114 85 135	20	18.93	ppb	5.33	396728
5 vinyl chloride 62 64	20	16.20	ppb	18.99	245324
6 bromomethane 94 96	20	16.44	ppb	17.82	219745
7 Chloroethane 64 66	20	18.08	ppb	9.59	202729
8 tri-Cl-F-methane 101 103	20	20.77	ppb	3.87	531863
111 isopropyl alcohol x10	200	183.30	ppb	8.35	54274
100 ethyl ether x5	100	81.14	ppb	18.86	758869
102 Acrolein x10	200	151.30	ppb	24.35	112903
119 methyl acetate	20	19.16	ppb	4.20	153986
104 Carbon disulfide	20	16.05	ppb	19.73	878245
103 Acrylonitrilex10	200	180.98	ppb	9.51	283771
95 Acetone x10	200	236.57	ppb	18.28	261725
108 F-113	20	21.77	ppb	8.87	428290
13 11-dichloroethene 61 96	20	18.23	ppb	8.84	469059
101 Acetonnitrilex10	200	209.78	ppb	4.89	88035
109 Iodomethane	20	17.15	ppb	14.26	364232
113 Tert butyl alcohol x10	200	196.13	ppb	1.93	111215
18 methylene chloride 49 84	20	16.74	ppb	16.28	440423
112 Allyl chloride	20	20.32	ppb	1.60	578239
200 Nitro methane x10	200	181.45	ppb	9.28	519472
10 t-Bu-Me-ether 73 57	20	18.57	ppb	7.16	515899
19 t-12-di-Cl-ethene 96 61	20	16.38	ppb	18.08	323126
98 Vinyl acetate x5	100	90.36	ppb	9.64	1603679
21 11-dichloroethane 63 83	20	20.36	ppb	1.81	701142
91 2-butanone MEKx10	200	189.00	ppb	5.50	1163166
115 Di isoprop ether	20	19.27	ppb	3.64	1675259
22 c-12-di-Cl-ethene 96 61	20	17.18	ppb	14.12	331455
23 22-Dichloropropane 77 97	20	19.82	ppb	0.89	589079
24 Br-Cl-methane 128 130	20	15.98	ppb	20.08	110636
25 chloroform 83 85	20	17.46	ppb	12.72	601430
201 Ethyl acetate x2	40	37.07	ppb	7.32	325238
116 ETBE	20	18.80	ppb	5.98	995542
117 Iso-butyl alcohol X10	200	187.67	ppb	6.17	329474
26 tetrahydrofuranx5	100	88.47	ppb	11.53	59497
27 Di-Br-F-Methane (S1) 111 1	20	18.55	ppb	7.24	431533
34 111-tri-Cl-ethane 97 99	20	19.23	ppb	3.83	551998
30 12-dichloroethane 64 62	20	17.25	ppb	13.73	231621
35 11-Di-Cl-propene 75 110	20	19.13	ppb	4.36	479683
29 1,2-di-Cl-ethane-d4 [Surr] 10	20	16.96	ppb	15.22	183825
36 benzene 78 52	20	19.84	ppb	0.78	1131519
37 CCl4 117 119	20	20.66	ppb	3.28	453762

97 thiophene	20	17.59	ppb	12.05	498697
118 TAME	20	17.39	ppb	13.06	633873
39 12-di-Cl-propane 63 76	20	20.71	ppb	3.55	345588
40 trichloroethene 130 132	20	18.24	ppb	8.79	322327
96 Me-methacrylate	20	18.29	ppb	8.56	105983
42 Br-di-Cl-methane 83 85	20	17.46	ppb	12.70	406323
41 dibromomethane 174 172	20	17.51	ppb	12.43	140966
45 c-13-di-Cl-propene 75 110	20	18.30	ppb	8.52	375455
55 toluene-d8(S2) 100 99	20	18.71	ppb	6.46	613193
92 2-ClEt-Vi-ether10	200	112.63	ppb	43.69	396384

Compound Name	Amount	Actual	Units	%Dev	Target Response
56 toluene 91 92	20	17.92	ppb	10.38	960639
107 Et methacrylate	20	18.70	ppb	6.52	207336
93 2-Hexanone x5	100	97.33	ppb	2.67	362791
48 112-tri-Cl-Et 97 83	20	17.10	ppb	14.48	134386
58 1,2-di-br-ethane 107 109	20	17.67	ppb	11.67	148277
51 di-Br-Cl-methane 129 127	20	17.76	ppb	11.22	187575
46 t-13-di-cl-propene 75 110	20	19.14	ppb	4.31	253106
105 1-Chlorohexane	20	22.12	ppb	10.61	359360
47 Cl-benzene-d5, I2	10	10.00	ppb	0.00	206846
54 MIBK	20	19.18	ppb	4.09	124948
49 1,3-di-cl-propane 76 78	20	18.70	ppb	6.51	252835
59 tetra-Cl-ethene 166 168	20	17.70	ppb	11.50	322181
60 chlorobenzene 112 77	20	18.34	ppb	8.29	554472
61 1112-tetra-Cl-Et 131 133	20	19.15	ppb	4.24	231860
64 ethylbenzene 91 106	20	18.31	ppb	8.46	1066309

Compound Name	Amount	Actual	Units	%Dev	Target Response
65 m/p-Xylenes x2	40	36.86	ppb	7.86	1631968
99 1-4-di-Cl-butane	20	17.88	ppb	10.62	238492
52 bromoform 173 175	20	17.08	ppb	14.58	106034
66 styrene 104 78	20	18.27	ppb	8.63	571386
67 o-xylene 91 106	20	18.44	ppb	7.79	803462
68 1122-Tetra-Cl-Et 83 85	20	18.20	ppb	9.00	145601
110 t-1,4-dichloro-2-butene	20	23.27	ppb	16.36	29251
106 Cl-benzyl	20	21.15	ppb	5.75	211727
62 1,4-DCB-d4 150 152 I3	10	10.00	ppb	0.00	169012
69 123-tri-Cl-Pr 110 97	20	17.18	ppb	14.09	35360
70 4-Br-1-F-Bz (S3) 174 95	20	17.66	ppb	11.69	266728
71 isopropylbenzene 105 120	20	19.78	ppb	1.12	1098279
72 bromobenzene 156 158	20	17.47	ppb	12.63	213038
73 n-propylbenzene 120 78	20	19.69	ppb	1.53	294859
74 2-Cl-TI 126 128	20	16.62	ppb	16.88	165366
75 4-Cl-TI 126 128	20	17.90	ppb	10.52	243323
76 135-tri-Me-Bz 105 120	20	18.99	ppb	5.05	851563
79 tert-butylbenzene 119 91	20	19.03	ppb	4.85	876072
78 124-tri-Me-Bz 105 120	20	18.50	ppb	7.51	705283
80 13-di-Cl-Bz 146 148	20	16.89	ppb	15.53	328105
82 14-di-Cl-Bz 146 148	20	17.12	ppb	14.38	483313
81 sec-butylbenzene 105 134	20	19.11	ppb	4.43	1286679

77 4-iso-Pr-toluene	119 134	20	19.24	ppb	3.80	934497
84 12-di-Cl-benzene	146 148	20	16.79	ppb	16.03	314702
85 n-butylbenzene	91 134	20	18.60	ppb	6.99	946813
86 12-diBr-3-Cl-Pra	157 155	20	16.32	ppb	18.42	22407
87 124-tri-Cl-Bz	180 182	20	16.86	ppb	15.71	247380
88 naphthalene	128 129	20	17.00	ppb	15.00	191101
90 123-tri-Cl-Bz	180 182	20	18.13	ppb	9.35	185138
				Ave.% Dev	9.86	

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

3047

Data Filename: C:\HPCHEM\1\DATA\03G2086\G2086Q01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 18 10:55 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 18 15:15 2003
Print Time : Fri Apr 18 15:15 2003
Miscleneous :

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

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards										Dev(Min)	
1	1 Fluorobenzene I1	9.05	9.03	0.002	96	70	656.208	10.00		0.02	
47	47 Cl-benzene-d5, I2	12.70	12.66	0.003	82	119	206.846	10.00		0.03	
62	62 1,4-DCB-d4 150 15	15.20	15.15	0.003	152	150	169.012	10.00		0.05	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Methane (	7.45	7.44	0.000	111	113	431.533	18.55	18.6	92.76%	
29	29 1,2-di-Cl-ethane-	8.04	8.02	0.000	65	102	183.825	16.96	17.0	84.78%	
55	55 toluene-d8(S2)	11.18	11.15	0.002	100	99	613.193	18.71	18.7	93.54%	
70	70 4-Br-1-F-Bz (S3)	13.93	13.90	0.002	174	95	266.728	17.66	17.7	88.31%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
3	3 di-Cl-di-F-methan	2.60	2.60	0.000	85	87	373.303	19.99	20.0	99	
4	4 Chloromethane	2.79	2.78	0.000	50	52	260.416	16.31	16.3	98	
9	9 F114 85 135	2.83	2.83	0.000	85	135	396.728	18.93	18.9	92	
5	5 vinyl chloride	2.97	2.96	0.000	62	64	245.324	16.20	16.2	97	
6	6 bromomethane	3.39	3.37	0.002	94	96	219.745	16.44	16.4	92	
7	7 Chloroethane	3.54	3.52	0.002	64	66	202.729	18.08	18.1	100	
8	8 tri-Cl-F-methane	4.16	4.14	0.002	101	103	531.863	20.77	20.8	100	?
111	111 isopropyl alcoho	4.27	4.27	0.000	45	43	54.274	183.30	183.3	1	#
100	100 ethyl ether x5	4.45	4.44	0.001	59	74	758.869	81.14	81.1	98	
102	102 Acrolein x10	4.17	4.15	0.002	56	55	112.903	151.30	151.3	89	?
119	119 methyl acetate	5.07	5.06	0.001	43	74	153.986	19.16	19.2	94	?
104	104 Carbon disulfide	5.20	5.18	0.002	76	78	878.245	16.05	16.1	99	m
103	103 Acrylonitrilex10	4.90	4.89	0.001	53	52	283.771	180.98	181.0	99	
95	95 Acetone x10	4.33	4.31	0.002	43	58	261.725	236.57	236.6	97	
108	108 F-113	5.04	5.02	0.002	151	101	428.290	21.77	21.8	95	?
13	13 11-dichloroethene	4.78	4.76	0.002	61	96	469.059	18.23	18.2	96	
101	101 Acetonnitrilex10	4.24	4.20	0.004	41	40	88.035	209.78	209.8	74	#
109	109 Iodomethane	4.81	4.80	0.001	142	127	364.232	17.15	17.1	99	
113	113 Tert butyl alcoh	4.87	4.86	0.000	59	57	111.215	196.13	196.1	98	

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

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

Data Filename: C:\HPCHEM\1\DATA\03G2086\G2086Q01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 18 10:55 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 18 15:15 2003
Print Time : Fri Apr 18 15:16 2003
Miscleneous :

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

3048

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
18	18 methylene chlorid	4.99	4.97	0.002	84	49	440.423	16.74	16.7	96	
	112 Allyl chloride	5.09	5.07	0.002	41	76	578.239	20.32	20.3	98	?
200	200 Nitro methane x1	5.83	5.82	0.001	61	46	519.472	181.45	181.4	95	#?
10	10 t-Bu-Me-ether	6.00	6.00	0.000	73	57	515.899	18.57	18.6	97	
19	19 t-12-di-Cl-ethene	5.83	5.82	0.001	96	61	323.126	16.38	16.4	87	?
98	98 Vinyl acetate x5	6.42	6.41	0.001	43	86	1603.679	90.36	90.4	100	
21	21 11-dichloroethane	6.17	6.15	0.002	63	83	701.142	20.36	20.4	99	
91	91 2-butanone MEKx10	6.84	6.83	0.001	43	72	1163.166	189.00	189.0	97	?
115	115 Di isoprop ether	6.86	6.85	0.001	45	87	1675.259	19.27	19.3	99	?
22	22 c-12-di-Cl-ethene	6.99	6.97	0.002	96	61	331.455	17.18	17.2	91	
23	23 22-Dichloropropan	7.37	7.35	0.002	77	97	589.079	19.82	19.8	97	
24	24 Br-Cl-methane	7.20	7.18	0.002	128	130	110.636	15.98	16.0	98	
25	25 chloroform	7.28	7.27	0.000	83	85	601.430	17.46	17.5	99	
201	201 Ethyl acetate x2	7.32	7.31	0.001	43	61	325.238	37.07	37.1	98	?
116	116 ETBE	7.42	7.40	0.002	59	87	995.542	18.80	18.8	98	
117	117 Iso-butyl alcoho	7.32	7.31	0.001	43	42	329.474	187.67	187.7	78	#?
26	26 tetrahydrofuranx5	7.73	7.71	0.003	72	42	59.497	88.47	88.5	89	
34	34 111-tri-Cl-ethane	8.24	8.23	0.001	97	99	551.998	19.23	19.2	98	
30	30 12-dichloroethane	8.14	8.13	0.001	62	64	231.621	17.25	17.3	96	
35	35 11-Di-Cl-propene	8.50	8.48	0.002	75	110	479.683	19.13	19.1	97	
36	36 benzene	8.76	8.75	0.002	78	52	1131.519	19.84	19.8	100	
37	37 CCl4	8.70	8.68	0.002	117	119	453.762	20.66	20.7	99	
97	97 thiophene	8.91	8.89	0.002	84	58	498.697	17.59	17.6	99	
118	118 TAME	9.02	9.00	0.002	73	43	633.873	17.39	17.4	99	
39	39 12-di-Cl-propane	9.51	9.49	0.002	63	76	345.588	20.71	20.7	95	
40	40 trichloroethene	9.57	9.54	0.003	130	132	322.327	18.24	18.2	100	
96	96 Me-methacrylate	9.87	9.85	0.002	69	100	105.983	18.29	18.3	95	
42	42 Br-di-Cl-methane	9.63	9.61	0.001	83	85	406.323	17.46	17.5	97	
41	41 dibromomethane	9.47	9.45	0.002	174	172	140.966	17.51	17.5	97	
45	45 c-13-di-Cl-propen	10.39	10.37	0.002	75	110	375.455	18.30	18.3	95	
92	92 2-ClEt-Vi-ether10	10.17	10.15	0.003	63	43	396.384	112.63	112.6	98	
56	56 toluene	11.26	11.23	0.004	91	92	960.639	17.92	17.9	100	

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

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

Data Filename: C:\HPCHEM\1\DATA\03G2086\G2086Q01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 18 10:55 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 18 15:15 2003
Print Time : Fri Apr 18 15:16 2003
Miscleneous :

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

3049

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
107	107 Et methacrylate	11.39	11.36	0.003	69	99	207.336	18.70	18.7	97	
93	93 2-Hexanone x5	11.51	11.48	0.003	43	58	362.791	97.33	97.3	95	
48	48 112-tri-Cl-Et	11.06	11.03	0.004	97	83	134.386	17.10	17.1	100	
58	58 1,2-di-br-ethane	11.85	11.82	0.003	107	109	148.277	17.67	17.7	98	
51	51 di-Br-Cl-methane	11.60	11.57	0.004	129	127	187.575	17.76	17.8	97	
46	46 t-13-di-cl-propen	10.89	10.87	0.003	75	110	253.106	19.14	19.1	97	
105	105 1-Chlorohexane	12.67	12.64	0.004	55	93	359.360	22.12	22.1	95	?
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	10.56	10.52	0.003	43	58	124.948	19.18	19.2	89	
49	49 1,3-di-cl-propane	11.32	11.29	0.002	76	78	252.835	18.70	18.7	100	
59	59 tetra-Cl-ethene	12.04	12.00	0.002	166	168	322.181	17.70	17.7	99	
60	60 chlorobenzene	12.73	12.70	0.002	112	77	554.472	18.34	18.3	96	
61	61 1112-tetra-Cl-Et	12.65	12.62	0.002	131	133	231.860	19.15	19.2	100	?
64	64 ethylbenzene	12.93	12.90	0.003	91	106	1066.309	18.31	18.3	100	
65	65 m/p-Xylenes x2	13.13	13.10	0.003	91	106	1631.968	36.86	36.9	98	
99	99 1-4-di-Cl-butane	13.49	13.46	0.003	55	41	238.492	17.88	17.9	98	
52	52 bromoform	13.25	13.22	0.002	173	175	106.034	17.08	17.1	95	
66	66 styrene	13.46	13.43	0.002	104	78	571.386	18.27	18.3	98	
67	67 o-xylene	13.52	13.50	0.002	91	106	803.462	18.44	18.4	99	?
68	68 1122-Tetra-Cl-Et	13.53	13.51	0.002	83	85	145.601	18.20	18.2	96	?
110	110 t-1,4-dichloro-2	13.69	13.67	0.002	89	53	29.251	23.27	23.3	75	#?
106	106 Cl-benzyl	15.16	15.12	0.003	91	126	211.727	21.15	21.2	96	?
<<< I3 : ISTD ID = 62 >>>											
69	69 123-tri-Cl-Pr	13.68	13.64	0.002	110	97	35.360	17.18	17.2	88	?
71	71 isopropylbenzene	13.89	13.86	0.002	105	120	1098.279	19.78	19.8	99	
72	72 bromobenzene	14.13	14.10	0.002	156	158	213.038	17.47	17.5	96	
73	73 n-propylbenzene	14.32	14.29	0.002	120	78	294.859	19.69	19.7	99	
74	74 2-Cl-Tl 126 1	14.41	14.37	0.002	126	128	165.366	16.62	16.6	98	
75	75 4-Cl-Tl 126 1	14.48	14.45	0.002	126	128	243.323	17.90	17.9	91	m
76	76 135-tri-Me-Bz	14.59	14.57	0.002	105	120	851.563	18.99	19.0	97	
79	79 tert-butylbenzene	14.87	14.84	0.002	119	91	876.072	19.03	19.0	99	
78	78 124-tri-Me-Bz	14.98	14.94	0.003	105	120	705.283	18.50	18.5	99	

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

4/18/03

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

Data Filename: C:\HPCHEM\1\DATA\03G2086\G2086Q01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 18 10:55 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 18 15:15 2003
Print Time : Fri Apr 18 15:16 2003
Miscleneous :

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

3050

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-di-Cl-Bz 146	15.16	15.11	0.003	146	148	328.105	16.89	16.9	91	
82	82	14-di-Cl-Bz 146	15.22	15.19	0.002	146	148	483.313	17.12	17.1	94	m
81	81	sec-butylbenzene	15.08	15.04	0.002	105	134	1286.679	19.11	19.1	98	
77	77	4-iso-Pr-toluene	15.25	15.22	0.002	119	134	934.497	19.24	19.2	100	
84	84	12-di-Cl-benzene	15.57	15.52	0.003	146	148	314.702	16.79	16.8	97	
85	85	n-butylbenzene	15.64	15.60	0.002	91	134	946.813	18.60	18.6	99	
86	86	12-diBr-3-Cl-Pra	16.02	15.97	0.003	157	155	22.407	16.32	16.3	83	
87	87	124-tri-Cl-Bz	17.29	17.24	0.003	180	182	247.380	16.86	16.9	97	
88	88	naphthalene	17.52	17.49	0.002	128	129	191.101	17.00	17.0	100	
90	90	123-tri-Cl-Bz	17.71	17.68	0.002	180	182	185.138	18.13	18.1	99	
89	89	hx-Cl-butadiene	17.56	17.52	0.002	225	260	236.060	21.20	21.2	96	

m 4/18/03

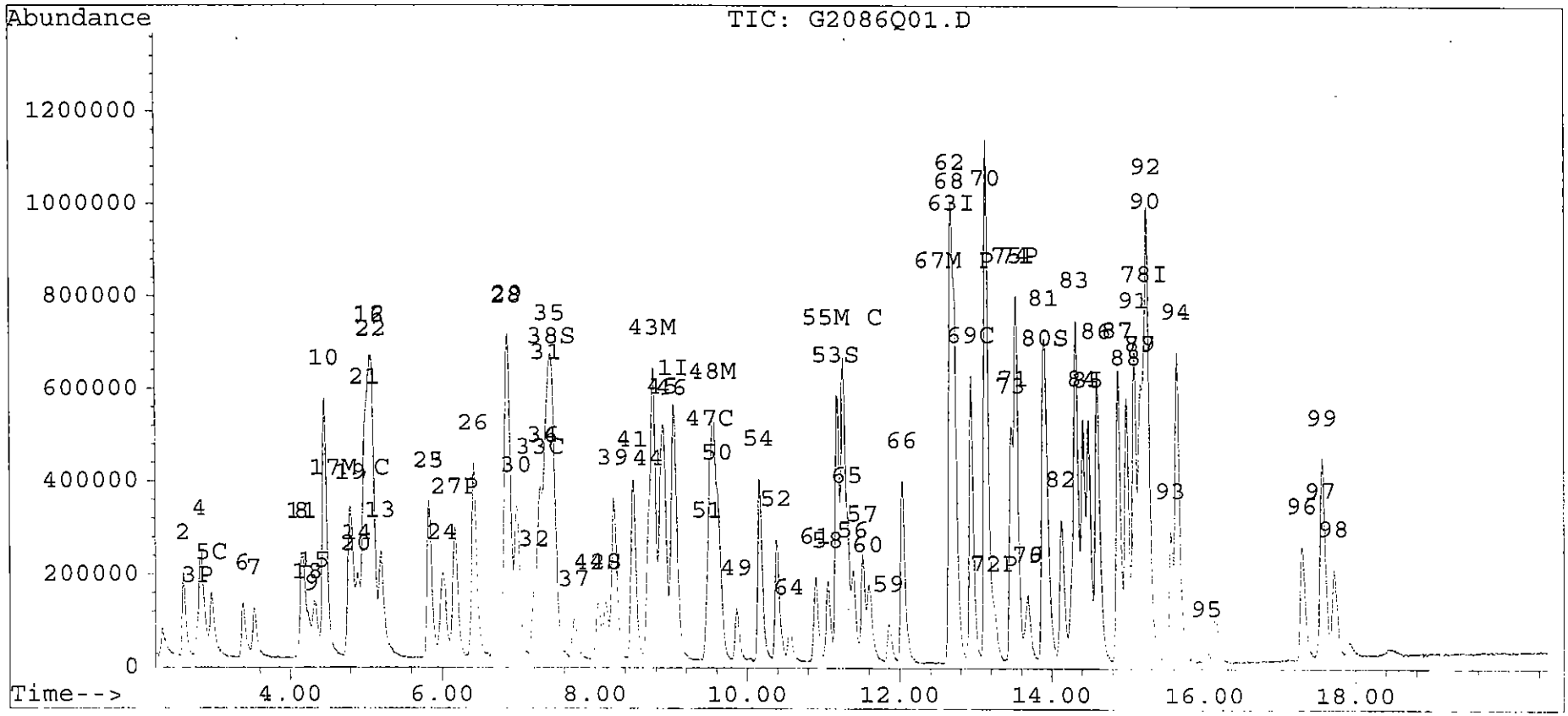
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report

Data File : C:\HPCHEM\1\DATA\03G2086\G2086Q01.D Vial: 17
Acq On : 18 Apr 03 10:55 am Operator: Eddie
Sample : f=1 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: Apr 18 15:15 2003 Quant Results File: quant.res

3051

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration



FORM-8A

Applied P & Ch Laboratory

Internal Standard Area and RT Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	032767
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		CCV Data File:	G2086Q01	Instrument ID:	G

Batch No: 03G2086

#	Client Sample No	Lab Sample ID	Analysis Date & Time	IS-1 Area #	IS-1 RT #	IS-2 Area #	IS-2 RT #	IS-3 Area #	IS-3 RT #
	12 Hour CCV STD		04/18/03 10:55	656208	9.05	206846	12.70	169012	15.20
	CCV Upper Limit			1312416	9.55	413692	13.20	338024	15.70
	CCV Lower Limit			328104	8.55	103423	12.20	84506	14.70
1	03G2086-LCS-01	03G2086-LCS-01	04/18/03 11:24	587614	9.05	180441	12.69	142868	15.19
2	MW-21-1MS	03-2767-2MS	04/18/03 13:20	569851	9.05	170988	12.70	142056	15.20
3	MW-21-1MSD	03-2767-2MSD	04/18/03 13:48	598095	9.05	174992	12.70	146389	15.20
4	03G2086-MB-01	03G2086-MB-01	04/18/03 15:16	575791	9.06	171768	12.70	138799	15.21
5	EB-1-4/17/03	03-2767-1	04/18/03 17:41	582428	9.07	171766	12.70	132940	15.21
6	MW-21-1	03-2767-2	04/18/03 18:10	586527	9.06	176567	12.72	140966	15.22
7	MW-21-2	03-2767-3	04/18/03 18:39	611133	9.07	181514	12.72	141726	15.21
8	MW-21-3	03-2767-4	04/18/03 19:07	594221	9.07	179530	12.72	141446	15.21
9	MW-21-4	03-2767-5	04/18/03 19:37	542538	9.06	170199	12.72	132896	15.22
10	MW-21-5	03-2767-6	04/18/03 20:05	559648	9.07	165496	12.71	136105	15.19
11	TB-1-4/17/03	03-2767-7	04/18/03 20:34	568801	9.06	171013	12.70	134650	15.19
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

IS-1 = FLUOROBENZENE
IS-2 = CHLOROBENZENE-D5
IS-3 = 1,4-DICHLOROBENZENE-D4

Area Upper Limit = +100% of CCV internal standard area
Area Lower Limit = - 50% of CCV internal standard area
RT Upper Limit = +0.50 minutes of CCV internal standard RT
RT Lower Limit = - 0.50 minutes of CCV internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits

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[illegible] Magnolia Ave. Chino CA 91710
(909) 590-1828 Fax: (909) 590-1498

VOC-044

VOC Analysis General Logbook

Sequence # 03G1044 Batch # 03G1044 Matrix: W Date: 1/10/03 Analyst: E. Lin

IS/Surrogate: GC14507/14508 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

Sub. + Ini. Batch ☒ Initial Batch; ☐ Middle Batch; ☐ Final Batch. ☐ Internal Study Datafile Path: _____

#	Type	Sample ID	Method	$V/X=f_1$	$V_f/V_i=f_2$	$V_{spg}/V_{inj}=f_3$	F	A-#	Datafile	Note	pH
2377	SP	G1044P01	E524G-	25/25=1	/ =	/ =	1		G1044P01	1/10/03 L=5 lpm	
2378	Calib	3-0003	003	/ =	/ =	/ =			3-0003	GC14720	
2379	↓	3-002	↓	/ =	/ =	/ =	↓		3-002	↓	
2380		3-010		/ =	/ =	/ =			3-010		
2381		3-020		/ =	/ =	/ =			3-020		
2382		3-040		/ =	/ =	/ =			3-040		
2383	↓	3-080		/ =	/ =	/ =			3-080	↓	
2384	CCV	G1044Q01		/ =	/ =	/ =			G1044Q01	CCV/GC14721/FID	
2385	MS	M01		/ =	/ =	/ =			M01	91011-03	C2
2386	LCS	L01		/ =	/ =	/ =			L01		
2387	MSD	N01		/ =	/ =	/ =			N01	91011-03	C2
2388	MB	K01		/ =	/ =	/ =			K01		
2389	Sample	1084-03		/ =	/ =	/ =			1084-03		C2
2390		6844-02A		/ =	/ =	/ =			6844-02A		
2391		6844-01A		/ =	/ =	/ =			↓ -01A		
2392		1017-1		/ =	/ =	/ =			1017-1		
2393		1011-02		/ =	/ =	/ =			1011-02		
2394		↓ 3		/ =	/ =	/ =			3		
2395		4		/ =	/ =	/ =			4		
2396		↓ 5		/ =	/ =	/ =			↓ 5		
2397		1047-01		/ =	/ =	/ =			1047-01		
2398		↓ -02		/ =	/ =	/ =			↓ -02		
2399		1051-2		/ =	/ =	/ =			1051-02		
2400		↓ 3		/ =	/ =	/ =			↓ 3		
2401		1084-1		/ =	/ =	/ =			1084-01		
2402		↓ 2		/ =	/ =	/ =			2		
2403		↓ 4		/ =	/ =	/ =			↓ 4		
2404				/ =	/ =	/ =					
2405				/ =	/ =	/ =					
2406				/ =	1/10/03	/ =					
2407				/ =	/ =	/ =					
2408				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$
LCS/LCSD	2386	GC-14721	200 × 2.5/X= 20 ppb		GC-	× /X= ppb
MS/MSD	2385/2387	GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly:

Applied P & CT Laboratory
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VOC Analysis General Logbook

Sequence # 0705208b Batch # 0705208b Matrix: W Date: 4-18-03 Analyst: Eddie

IS/Surrogate: GC-14507/14508 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

Sub + Ini. Batch ☑ Initial Batch; ☐ Middle Batch; ☐ Final Batch. ☐ Internal Study Datafile Path: _____

#	Type	Sample ID	Method	$V/X=f_1$	$V_f/V_i=f_2$	$V_{spg}/V_{inj}=f_3$	F	A-#	Datafile	Note	pH
3529	SP	G2086P01	E5246	25/25 = 1	/ =	/ =	/		G2086P01		
3530	CCV	001	003	/ =	/ =	/ =			001	41803 GC4503	
3531	LCS	L01		/ =	/ =	/ =			L01		
3532	MB	M01		/ =	/ =	/ =			M01	于27123-02 <2	
3533	MSD	N01		/ =	/ =	/ =			N01	于27123-02	
3534	MS	M02		/ =	/ =	/ =			M02	于27167-02	
3535	MSD	N02		/ =	/ =	/ =			N02	于27167-02	
3536	MB	K01		/ =	/ =	/ =			K01		
3537	sample	27123-01		/ =	/ =	/ =			27123-01		<2
3538		02		/ =	/ =	/ =			02		
3539		03		/ =	/ =	/ =			03		
3540		04		/ =	/ =	/ =			04		
3541		27167 01		/ =	/ =	/ =			27167-01		
3542		02		/ =	/ =	/ =			02		
3543		03		/ =	/ =	/ =			03		
3544		04		/ =	/ =	/ =			04		
3545		05		/ =	/ =	/ =			05		
3546		06		/ =	/ =	/ =			06		
3547		07		/ =	/ =	/ =			07		
3548				/ =	/ =	/ =					
3549				/ =	/ =	/ =					
3550				/ =	/ =	/ =					
3551				/ =	/ =	/ =					
3552				/ =	/ =	/ =					
3553				/ =	/ =	/ =					
3554				/ =	/ =	/ =					
3555				/ =	/ =	/ =					
3556				/ =	/ =	/ =					
3557				/ =	/ =	/ =					
3558				/ =	/ =	/ =					
3559				/ =	/ =	/ =					
3560				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$
LCS/LCSD	3531	GC-5044	x /X= ppb		GC-	x /X= ppb
MS/MSD	3533/3537	GC-5044	200 x 2.5 /X= 20 ppb		GC-	x /X= ppb

Footnote/Anomaly:

Level C Data Package Deliverables

Metals

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Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/23/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03M1360-MB-01	Received Date:	04/23/2003
Sample ID:	**03M1360-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1360E	04/23/03	04/23/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	158	B	P		03M1353M	04/22/03	04/22/03	1	200.7
IRON	7439-89-6	µg/L	50	< 50	U	P		03M1353M	04/22/03	04/22/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	62.6	B	P		03M1353M	04/22/03	04/22/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	131	B	P		03M1353M	04/22/03	04/22/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	403	B	P		03M1353M	04/22/03	04/22/03	1	200.7

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

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

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

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

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Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-1	Received Date:	04/17/2003
Sample ID:	**EB-1-4/17/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1360E	04/23/03	04/23/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	278		P		03M1353M	04/22/03	04/22/03	1	200.7
IRON	7439-89-6	µg/L	50	19.4	B	P		03M1353M	04/22/03	04/22/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	38.4	B	P		03M1353M	04/22/03	04/22/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	152	B	P		03M1353M	04/22/03	04/22/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	720	B	P		03M1353M	04/22/03	04/22/03	1	200.7

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

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

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

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-2	Received Date:	04/17/2003
Sample ID:	**MW-21-1**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1360E	04/23/03	04/23/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	128000		P		03M1353M	04/22/03	04/22/03	1	200.7
IRON	7439-89-6	µg/L	50	150		P		03M1353M	04/22/03	04/22/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	40300		P		03M1353M	04/22/03	04/22/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	2180		P		03M1353M	04/22/03	04/22/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	30800		P		03M1353M	04/22/03	04/22/03	1	200.7

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

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

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

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-3	Received Date:	04/17/2003
Sample ID:	**MW-21-2**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1360E	04/23/03	04/23/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	122000		P		03M1353M	04/22/03	04/22/03	1	200.7
IRON	7439-89-6	µg/L	50	146		P		03M1353M	04/22/03	04/22/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	41800		P		03M1353M	04/22/03	04/22/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	3370		P		03M1353M	04/22/03	04/22/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	67300		P		03M1353M	04/22/03	04/22/03	1	200.7

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

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

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

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

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Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-4	Received Date:	04/17/2003
Sample ID:	**MW-21-3**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1360E	04/23/03	04/23/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	123000		P		03M1353M	04/22/03	04/22/03	1	200.7
IRON	7439-89-6	µg/L	50	40.5	B	P		03M1353M	04/22/03	04/22/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	40300		P		03M1353M	04/22/03	04/22/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	3130		P		03M1353M	04/22/03	04/22/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	39800		P		03M1353M	04/22/03	04/22/03	1	200.7

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

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

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

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-5	Received Date:	04/17/2003
Sample ID:	**MW-21-4**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	2.2	B	F		03M1360E	04/23/03	04/23/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	77200		P		03M1353M	04/22/03	04/22/03	1	200.7
IRON	7439-89-6	µg/L	50	16.1	B	P		03M1353M	04/22/03	04/22/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	23900		P		03M1353M	04/22/03	04/22/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	2130		P		03M1353M	04/22/03	04/22/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	26200		P		03M1353M	04/22/03	04/22/03	1	200.7

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

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

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/17/2003
Project ID:	JPL	Service ID:	32767	Collected by:	
		Lab Sample ID:	03-2767-6	Received Date:	04/17/2003
Sample ID:	**MW-21-5**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1360E	04/23/03	04/23/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	83600		P		03M1353M	04/22/03	04/22/03	1	200.7
IRON	7439-89-6	µg/L	50	210		P		03M1353M	04/22/03	04/22/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	30800		P		03M1353M	04/22/03	04/22/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	2570		P		03M1353M	04/22/03	04/22/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	32500		P		03M1353M	04/22/03	04/22/03	1	200.7

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

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

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

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9

Batch No.(s): 03M1353

Analysis Date: **04/22/03** Concentration Units: **UG/L**

#	Analyte	ICV True	11:01 Result	%R	CCV True	11:26 Result	%R	CCV True	12:08 Result	%R	CCV True	12:46 Result	%R
1	Aluminum	10000.0	10046.49	100.5	5000.0	5130.29	102.6	5000.0	5123.03	102.5	5000.0	5043.42	100.9
2	Antimony	4000.0	3958.56	99.0	2000.0	2025.54	101.3	2000.0	2017.23	100.9	2000.0	2006.06	100.3
3	Arsenic	1000.0	1001.26	100.1	500.0	513.65	102.7	500.0	506.78	101.4	500.0	499.90	100.0
4	Barium	10000.0	9943.82	99.4	5000.0	5090.86	101.8	5000.0	5183.12	103.7	5000.0	5127.73	102.6
5	Beryllium	1000.0	995.91	99.6	500.0	502.44	100.5	500.0	509.81	102.0	500.0	501.81	100.4
6	Cadmium	2000.0	1989.96	99.5	1000.0	1000.78	100.1	1000.0	1022.39	102.2	1000.0	1007.89	100.8
7	Calcium	100000.0	99942.09	99.9	50000.0	50172.68	100.3	50000.0	50832.39	101.7	50000.0	50129.41	100.3
8	Chromium	1000.0	995.48	99.5	500.0	504.91	101.0	500.0	514.03	102.8	500.0	509.33	101.9
9	Cobalt	4000.0	3973.79	99.3	2000.0	2018.57	100.9	2000.0	2059.24	103.0	2000.0	2035.11	101.8
10	Copper	4000.0	3981.61	99.5	2000.0	1999.70	100.0	2000.0	2043.13	102.2	2000.0	2004.23	100.2
11	Iron	10000.0	9889.82	98.9	5000.0	5064.35	101.3	5000.0	5056.45	101.1	5000.0	4999.45	100.0
12	Lead	1000.0	995.52	99.6	500.0	513.73	102.7	500.0	510.44	102.1	500.0	507.75	101.5
13	Magnesium	50000.0	49668.05	99.3	25000.0	25419.30	101.7	25000.0	25820.74	103.3	25000.0	25435.28	101.7
14	Manganese	4000.0	3965.77	99.1	2000.0	2035.51	101.8	2000.0	2064.47	103.2	2000.0	2048.65	102.4
15	Nickel	4000.0	3971.41	99.3	2000.0	2040.16	102.0	2000.0	2078.71	103.9	2000.0	2033.91	101.7
16	Potassium	30000.0	30830.97	102.8	15000.0	15108.19	100.7	15000.0	15785.16	105.2	15000.0	15252.68	101.7
17	Selenium	1000.0	991.29	99.1	500.0	518.30	103.7	500.0	514.59	102.9	500.0	516.66	103.3
18	Silver	2000.0	2001.24	100.1	1000.0	992.37	99.2	1000.0	1012.86	101.3	1000.0	998.85	99.9
19	Sodium	200000.0	202471.11	101.2	100000.0	99031.73	99.0	100000.0	100811.53	100.8	100000.0	99600.66	99.6
20	Thallium	1000.0	987.13	98.7	500.0	518.05	103.6	500.0	510.69	102.1	500.0	508.36	101.7
21	Vanadium	4000.0	3981.08	99.5	2000.0	2016.40	100.8	2000.0	2052.28	102.6	2000.0	2032.52	101.6
22	Zinc	4000.0	3995.31	99.9	2000.0	2011.69	100.6	2000.0	2056.47	102.8	2000.0	2014.29	100.7
23	Molybdenum	4000.0	3992.62	99.8	2000.0	2002.65	100.1	2000.0	2044.86	102.2	2000.0	2010.39	100.5

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9

Batch No.(s): 03M1353

Analysis Date: **04/22/03** Concentration Units: **UG/L**

#	Analyte	CCV True	13:32 Result	%R	CCV True	13:51 Result	%R	CCV True	15:04 Result	%R	CCV True	15:46 Result	%R
1	Aluminum	5000.0	5181.97	103.6	5000.0	5068.82	101.4	5000.0	5026.43	100.5	5000.0	5399.70	108.0
2	Antimony	2000.0	2001.41	100.1	2000.0	1975.68	98.8	2000.0	2042.11	102.1	2000.0	2034.83	101.7
3	Arsenic	500.0	497.16	99.4	500.0	487.24	97.4	500.0	519.50	103.9	500.0	516.93	103.4
4	Barium	5000.0	5247.24	104.9	5000.0	5132.03	102.6	5000.0	5156.09	103.1	5000.0	5447.97	109.0
5	Beryllium	500.0	495.12	99.0	500.0	493.63	98.7	500.0	510.36	102.1	500.0	503.21	100.6
6	Cadmium	1000.0	1027.28	102.7	1000.0	1001.10	100.1	1000.0	1001.69	100.2	1000.0	1004.68	100.5
7	Calcium	50000.0	50964.88	101.9	50000.0	49415.64	98.8	50000.0	50224.82	100.4	50000.0	50215.84	100.4
8	Chromium	500.0	525.09	105.0	500.0	516.54	103.3	500.0	511.11	102.2	500.0	552.27	110.5
9	Cobalt	2000.0	2070.65	103.5	2000.0	2022.81	101.1	2000.0	2019.08	101.0	2000.0	2046.45	102.3
10	Copper	2000.0	2093.48	104.7	2000.0	2004.10	100.2	2000.0	2021.90	101.1	2000.0	2046.33	102.3
11	Iron	5000.0	5213.00	104.3	5000.0	5056.10	101.1	5000.0	5128.31	102.6	5000.0	5713.16	114.3
12	Lead	500.0	510.23	102.0	500.0	503.20	100.6	500.0	517.86	103.6	500.0	533.52	106.7
13	Magnesium	25000.0	26036.16	104.1	25000.0	25444.69	101.8	25000.0	25541.17	102.2	25000.0	26875.40	107.5
14	Manganese	2000.0	2031.49	101.6	2000.0	2033.01	101.7	2000.0	2065.03	103.3	2000.0	2055.53	102.8
15	Nickel	2000.0	2054.22	102.7	2000.0	1994.49	99.7	2000.0	2026.84	101.3	2000.0	2037.62	101.9
16	Potassium	15000.0	15478.88	103.2	15000.0	15589.40	103.9	15000.0	15499.06	103.3	15000.0	17011.76	113.4
17	Selenium	500.0	523.45	104.7	500.0	518.85	103.8	500.0	533.71	106.7	500.0	570.41	114.1
18	Silver	1000.0	1024.35	102.4	1000.0	1005.15	100.5	1000.0	1006.79	100.7	1000.0	1061.00	106.1
19	Sodium	100000.0	103316.74	103.3	100000.0	101375.17	101.4	100000.0	100106.80	100.1	100000.0	110313.99	110.3
20	Thallium	500.0	513.01	102.6	500.0	507.01	101.4	500.0	520.10	104.0	500.0	535.72	107.1
21	Vanadium	2000.0	2094.77	104.7	2000.0	2061.73	103.1	2000.0	2037.27	101.9	2000.0	2187.69	109.4
22	Zinc	2000.0	2176.87	108.8	2000.0	2055.57	102.8	2000.0	2008.08	100.4	2000.0	2040.00	102.0
23	Molybdenum	2000.0	2051.04	102.6	2000.0	2008.18	100.4	2000.0	2022.82	101.1	2000.0	2092.20	104.6

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9
Batch No.(s):	03M1353				

Analysis Date: **04/22/03** Concentration Units: **UG/L**

#	Analyte	CCV True	16:12 Result	%R	CCV True	16:53 Result	%R	CCV True	17:32 Result	%R	CCV True	18:04 Result	%R
1	Aluminum	5000.0	5107.52	102.2	5000.0	4910.19	98.2	5000.0	5019.07	100.4	5000.0	5129.84	102.6
2	Antimony	2000.0	2019.22	101.0	2000.0	2063.80	103.2	2000.0	2051.19	102.6	2000.0	2058.42	102.9
3	Arsenic	500.0	514.08	102.8	500.0	528.22	105.6	500.0	521.64	104.3	500.0	518.76	103.8
4	Barium	5000.0	5182.26	103.6	5000.0	4994.97	99.9	5000.0	5070.23	101.4	5000.0	5172.91	103.5
5	Beryllium	500.0	510.04	102.0	500.0	523.31	104.7	500.0	522.73	104.5	500.0	521.70	104.3
6	Cadmium	1000.0	1034.72	103.5	1000.0	1048.41	104.8	1000.0	1039.63	104.0	1000.0	1037.43	103.7
7	Calcium	50000.0	51097.29	102.2	50000.0	52103.15	104.2	50000.0	51247.52	102.5	50000.0	51704.04	103.4
8	Chromium	500.0	514.42	102.9	500.0	478.85	95.8	500.0	501.32	100.3	500.0	508.13	101.6
9	Cobalt	2000.0	2074.86	103.7	2000.0	2091.35	104.6	2000.0	2079.87	104.0	2000.0	2083.68	104.2
10	Copper	2000.0	2063.38	103.2	2000.0	2044.85	102.2	2000.0	2041.33	102.1	2000.0	2078.96	103.9
11	Iron	5000.0	5042.33	100.8	5000.0	4883.09	97.7	5000.0	5024.14	100.5	5000.0	5158.50	103.2
12	Lead	500.0	507.72	101.5	500.0	508.18	101.6	500.0	510.15	102.0	500.0	516.94	103.4
13	Magnesium	25000.0	25856.85	103.4	25000.0	25408.50	101.6	25000.0	25842.81	103.4	25000.0	26136.87	104.5
14	Manganese	2000.0	2058.60	102.9	2000.0	2107.40	105.4	2000.0	2096.86	104.8	2000.0	2079.16	104.0
15	Nickel	2000.0	2096.33	104.8	2000.0	2165.10	108.3	2000.0	2115.33	105.8	2000.0	2138.88	106.9
16	Potassium	15000.0	15248.82	101.7	15000.0	14461.43	96.4	15000.0	15108.13	100.7	15000.0	15409.81	102.7
17	Selenium	500.0	515.82	103.2	500.0	494.45	98.9	500.0	514.56	102.9	500.0	524.60	104.9
18	Silver	1000.0	1018.51	101.9	1000.0	968.96	96.9	1000.0	995.30	99.5	1000.0	1008.10	100.8
19	Sodium	100000.0	100399.34	100.4	100000.0	94274.42	94.3	100000.0	97979.85	98.0	100000.0	100877.79	100.9
20	Thallium	500.0	512.19	102.4	500.0	499.17	99.8	500.0	507.00	101.4	500.0	513.05	102.6
21	Vanadium	2000.0	2039.45	102.0	2000.0	1897.87	94.9	2000.0	1981.20	99.1	2000.0	2009.66	100.5
22	Zinc	2000.0	2070.86	103.5	2000.0	2057.24	102.9	2000.0	2063.77	103.2	2000.0	2105.42	105.3
23	Molybdenum	2000.0	2055.74	102.8	2000.0	2001.90	100.1	2000.0	2023.29	101.2	2000.0	2051.13	102.6

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1360E
		Instrument:	GFAA-E	Method:	200.9

Batch No.(s): 03M1360

Analysis Date: **04/23/03** Concentration Units: **UG/L**

		ICV	12:59		CCV	14:17		CCV	15:33		CCV	16:50	
#	Analyte	True	Result	%R	True	Result	%R	True	Result	%R	True	Result	%R
1	Arsenic	50.0	47.60	95.2	50.0	55.10	110.2	50.0	55.10	110.2	50.0	55.50	111.0

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1360E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1360				

Analysis Date: **04/23/03** Concentration Units: **UG/L**

#	Analyte	CCV True	17:09 Result	%R	True	Result	%R	True	Result	%R	True	Result	%R
1	Arsenic	50.0	57.00	114.0									

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2B Metal

Applied P & Ch Laboratory

CRDL Standard For AA and ICP

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9
Batch No.(s):	03M1353				

Analysis Date: **04/22/03** Concentration Units: **UG/L**

#	Analyte	True	11:17 Found	R%	Time Found	R%
1	Aluminum	200.0	205.06	102.5		
2	Antimony	20.0	20.26	101.3		
3	Arsenic	20.0	21.17	105.8		
4	Barium	10.0	11.77	117.7		
5	Beryllium	4.0	4.46	111.6		
6	Cadmium	5.0	4.54	90.8		
7	Calcium	1000.0	1230.76	123.1		
8	Chromium	10.0	10.74	107.4		
9	Cobalt	20.0	22.64	113.2		
10	Copper	10.0	9.24	92.4		
11	Iron	50.0	31.35	62.7		
12	Lead	10.0	9.73	97.3		
13	Magnesium		16.86			
14	Manganese	10.0	10.13	101.3		
15	Nickel	20.0	21.95	109.7		
16	Potassium		125.67			
17	Selenium	10.0	8.83	88.3		
18	Silver	10.0	10.89	108.9		
19	Sodium		352.29			
20	Thallium	10.0	10.03	100.3		
21	Vanadium	10.0	10.35	103.5		
22	Zinc	20.0	19.95	99.8		
23	Molybdenum	15.0	15.54	103.6		

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9

Batch No.(s): 03M1353

Analysis Date: **04/22/03** Concentration Units: **UG/L**

#	Analyte	ICB Result	11:13 C	CCB Result	11:31 C	CCB Result	12:11 C	CCB Result	12:49 C	CCB Result	13:38 C
1	Aluminum	5.50	U	8.66	B	5.50	U	5.50	U	-7.42	B
2	Antimony	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
3	Arsenic	1.40	U	1.40	U	1.40	U	1.40	U	1.40	U
4	Barium	1.10	U	1.15	B	1.34	B	1.88	B	1.10	U
5	Beryllium	0.17	U	0.23	B	0.33	B	0.26	B	0.17	U
6	Cadmium	-0.49	B	-0.47	B	-0.35	B	-0.39	B	-0.48	B
7	Calcium	135.00	U	185.57	B	172.27	B	192.80	B	238.28	
8	Chromium	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
9	Cobalt	0.68	B	1.13	B	1.65	B	1.16	B	1.12	B
10	Copper	1.10	U	1.43	B	4.59	B	2.30	B	16.68	
11	Iron	-14.27	B	-4.97	B	14.59	B	-6.99	B	14.82	B
12	Lead	1.60	U	-1.78	B	1.60	U	1.60	U	1.60	U
13	Magnesium	7.96	B	81.45	B	18.43	B	31.21	B	7.31	B
14	Manganese	0.31	U	0.31	U	0.52	B	0.42	B	0.31	U
15	Nickel	1.10	U	1.10	U	1.10	U	1.10	U	1.19	B
16	Potassium	132.30	B	134.37	B	138.94	B	139.45	B	140.78	B
17	Selenium	2.60	U	-2.70	B	2.60	U	2.60	U	2.60	U
18	Silver	0.65	U	0.65	U	0.88	B	0.65	U	0.65	U
19	Sodium	328.00	U	422.99	B	500.96	B	328.00	U	752.30	B
20	Thallium	1.50	U	1.50	U	1.50	U	1.50	U	1.50	U
21	Vanadium	0.66	U	1.41	B	0.66	U	0.66	U	0.66	U
22	Zinc	1.30	U	1.30	U	1.30	U	1.30	U	43.89	
23	Molybdenum	0.34	U	0.34	U	0.53	B	0.34	B	0.34	U

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9
Batch No.(s):	03M1353				

Analysis Date: **04/22/03** Concentration Units: **UG/L**

#	Analyte	CCB Result	13:58 C	CCB Result	15:08 C	CCB Result	16:15 C	CCB Result	16:56 C	CCB Result	17:35 C
1	Aluminum	5.50	U	5.50	U	-7.51	B	20.87	B	15.85	B
2	Antimony	1.90	U	1.90	U	1.90	U	3.49	B	1.90	U
3	Arsenic	1.40	U	1.40	U	1.71	B	1.40	U	1.40	U
4	Barium	1.10	U	1.56	B	1.10	U	1.10	U	1.10	U
5	Beryllium	0.17	U	0.21	B	0.17	B	0.17	U	0.17	U
6	Cadmium	-0.47	B	0.31	U	0.31	U	0.31	U	0.31	U
7	Calcium	144.65	B	135.00	U	135.00	U	135.00	U	-177.85	B
8	Chromium	0.50	U	1.54	B	0.50	U	0.50	U	0.50	U
9	Cobalt	1.00	B	1.23	B	0.85	B	0.67	U	0.67	U
10	Copper	6.23	B	4.49	B	2.74	B	1.93	B	1.10	U
11	Iron	-3.15	B	41.58	B	-26.31	B	-13.92	B	44.45	B
12	Lead	1.60	U	1.60	U	1.60	U	1.60	U	1.60	U
13	Magnesium	12.19	B	-6.82	B	6.40	U	6.40	U	22.76	B
14	Manganese	0.31	U	0.35	B	-0.37	B	1.35	B	0.31	U
15	Nickel	1.10	U	3.13	B	1.10	U	1.10	U	1.10	U
16	Potassium	132.09	B	156.73	B	85.03	B	74.19	B	79.42	B
17	Selenium	-3.59	B	4.20	B	2.60	U	2.60	U	2.60	U
18	Silver	0.65	U	1.10	B	0.71	B	0.75	B	1.03	B
19	Sodium	618.86	B	328.00	U	328.00	U	465.68	B	508.37	B
20	Thallium	1.50	U	-2.52	B	1.50	U	1.50	U	1.50	U
21	Vanadium	0.66	U	1.52	B	0.66	U	0.66	U	0.66	U
22	Zinc	20.74		-3.64	B	2.15	B	1.30	U	-1.97	B
23	Molybdenum	0.34	U	0.62	B	0.34	U	0.34	U	0.34	U

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9
Batch No.(s):	03M1353				

Analysis Date: **04/22/03** Concentration Units: **UG/L**

#	Analyte	CCB Result	18:08 C	CCB Result	Time C	CCB Result	Time C	CCB Result	Time C	CCB Result	Time C
1	Aluminum	7.93	B								
2	Antimony	1.90	U								
3	Arsenic	1.40	U								
4	Barium	1.10	U								
5	Beryllium	0.17	U								
6	Cadmium	0.31	U								
7	Calcium	238.15									
8	Chromium	0.75	B								
9	Cobalt	0.67	U								
10	Copper	15.61									
11	Iron	22.82	B								
12	Lead	1.60	U								
13	Magnesium	19.02	B								
14	Manganese	-0.59	B								
15	Nickel	2.41	B								
16	Potassium	78.00	B								
17	Selenium	2.60	U								
18	Silver	0.65	U								
19	Sodium	555.72	B								
20	Thallium	2.51	B								
21	Vanadium	-0.92	B								
22	Zinc	4.49	B								
23	Molybdenum	0.34	U								

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1360E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1360				

Analysis Date: **04/23/03** Concentration Units: **UG/L**

#	Analyte	ICB Result	13:05 C	CCB Result	14:23 C	CCB Result	15:39 C	CCB Result	16:56 C	CCB Result	17:15 C
1	Arsenic	2.10	U	2.10	U	2.10	U	2.10	U	2.10	U

FORM-4 Metal

Applied P & Ch Laboratory

ICP Interference Check Sample

Client Name: GEOFON, Inc.
Project Name: JPL
Batch No.(s): 03M1353

Project No: 04-4428.10
Service ID: 032767
ICP ID Number: ICP -M

Lab Code: APCL
Sequence No.: 03M1353M

Analysis Date: **04/22/03**

Concentration Units: **UG/L**

#	Analyte	Expected Sol. A	Expected Sol. AB	Initial 11:19 Sol. A	Found 11:22 Sol. AB	%R	Final 17:52 Sol. A	Found 18:00 Sol. AB	%R
1	Aluminum	500000	500000	486379	468360.2	93.7	490216	469930.8	94.0
2	Antimony	0	1000	5	937.9	93.8	7	952.2	95.2
3	Arsenic	0	1000	7	929.8	93.0	9	922.7	92.3
4	Barium	0	500	4	498.3	99.7	2	496.6	99.3
5	Beryllium	0	500	0	475.9	95.2	0	496.0	99.2
6	Cadmium	0	1000	-1	927.0	92.7	-1	957.5	95.8
7	Calcium	500000	500000	518510	485505.4	97.1	516836	493570.4	98.7
8	Chromium	0	500	6	480.2	96.0	5	480.5	96.1
9	Cobalt	0	500	4	450.2	90.0	2	464.6	92.9
10	Copper	0	500	1	473.8	94.8	85	545.6	109.1
11	Iron	200000	200000	184913	172739.8	86.4	189293	175749.8	87.9
12	Lead	0	1000	-5	898.2	89.8	-1	905.0	90.5
13	Magnesium	500000	500000	484520	464008.3	92.8	497927	473759.3	94.8
14	Manganese	0	500	-1	471.2	94.2	-2	482.7	96.5
15	Nickel	0	1000	-1	877.9	87.8	-1	916.4	91.6
16	Potassium	0	0	206	207.3		145	145.0	
17	Selenium	0	1000	9	933.3	93.3	11	927.7	92.8
18	Silver	0	1000	-4	961.9	96.2	-1	968.9	96.9
19	Sodium	0	0	50	136.7		102	493.4	
20	Thallium	0	1000	5	880.0	88.0	6	866.5	86.7
21	Vanadium	0	500	-4	463.3	92.7	-3	460.7	92.1
22	Zinc	0	1000	5	937.3	93.7	17	1031.1	103.1
23	Molybdenum	0	1000	3	892.0	89.2	1	892.9	89.3

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 200.9

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32767
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1360E		
MS Filename:	-	Date Analyzed:	042303	Time Analyzed:	13:50
MSD Filename:	-	Date Analyzed:	042303	Time Analyzed:	13:57
MS Sample No:	**MW-4-2**	Sample Lab ID:	03-2809-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
ARSENIC	µg/L	50	1.6	54.3	105	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ARSENIC	µg/L	50	56.0	109	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: _____

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FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 200.7

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32767
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1353M		
MS Filename:	-	Date Analyzed:	042203	Time Analyzed:	11:57
MSD Filename:	-	Date Analyzed:	042203	Time Analyzed:	12:00
MS Sample No:	**EB30015**	Sample Lab ID:	03-2755-1		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CALCIUM	µg/L	20000	27300	46300	95	75-125
IRON	µg/L	1000	1520	2380	86	75-125
MAGNESIUM	µg/L	10000	16200	24800	86	75-125
POTASSIUM	µg/L	5000	3810	8840	101	75-125
SODIUM	µg/L	40000	51100	87400	91	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CALCIUM	µg/L	20000	46900	98	3	20	75-125
IRON	µg/L	1000	2360	84	2	20	75-125
MAGNESIUM	µg/L	10000	25100	89	3	20	75-125
POTASSIUM	µg/L	5000	8910	102	1	20	75-125
SODIUM	µg/L	40000	87600	91	0	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: _____

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FORM-5B Metal

Applied P & Ch Laboratory

Post Digest Spike Sample Recovery

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Batch No.:	03M1353	Method:	200.9
Spike Sample No. :	03-2755-01	Matrix:	WATER	Instrument:	ICP -M
Client Sample No.:	**EB30015**	Analysis Date:	04/22/03		

Concentration Units: **UG/L**

#	Analyte	Spiked Sample Result(SSR)	12:04 C	Sample Result(SR)	11:46 C	Spike Added(SA)	% Rec.	Control Limit	Q
1	Aluminum	2500.2644		398.9575		2000.00	105.1	75-125	
2	Antimony	477.9669		-0.4079	U	500.00	95.6	75-125	
3	Arsenic	524.3481		20.6707		500.00	100.7	75-125	
4	Barium	4538.1362		23.2963		4000.00	112.9	75-125	
5	Beryllium	196.2596		0.2007	B	200.00	98.0	75-125	
6	Cadmium	252.2558		0.0945	U	250.00	100.9	75-125	
7	Calcium	46778.0781		27303.1895		20000.00	97.4	75-125	
8	Chromium	1045.3386		6.3040		1000.00	103.9	75-125	
9	Cobalt	1021.7531		1.8087	B	1000.00	102.0	75-125	
10	Copper	1011.1907		8.1122	B	1000.00	100.3	75-125	
11	Iron	2367.1033		1515.1230		1000.00	85.2	75-125	
12	Lead	3118.6533		5.0114		3000.00	103.8	75-125	
13	Magnesium	25305.8711		16222.0957		10000.00	90.8	75-125	
14	Manganese	1517.7841		586.2454		1000.00	93.2	75-125	
15	Nickel	996.0165		7.2018		1000.00	98.9	75-125	
16	Potassium	9029.6807		3807.9873		5000.00	104.4	75-125	
17	Selenium	493.0556		2.2448	U	500.00	98.6	75-125	
18	Silver	989.9293		0.5519	U	1000.00	99.0	75-125	
19	Sodium	88143.6484		51102.2383		40000.00	92.6	75-125	
20	Thallium	519.4246		3.3669	B	500.00	103.2	75-125	
21	Vanadium	2011.7042		12.2086		2000.00	100.0	75-125	
22	Zinc	530.4934		28.2941		500.00	100.4	75-125	
23	Molybdenum	2162.5525		3.6499	B	2000.00	107.9	75-125	

FORM-5B Metal

Applied P & Ch Laboratory

Post Digest Spike Sample Recovery

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1360E
		Batch No.:	03M1360	Method:	200.9
Spike Sample No. :	03-2809-04	Matrix:	WATER	Instrument:	GFAA-E
Client Sample No.:	**MW-4-2**	Analysis Date:	04/23/03		

Concentration Units: **UG/L**

#	Analyte	Spiked Sample Result(SSR)	14:04 C	Sample Result(SR)	13:31 C	Spike Added(SA)	% Rec.	Control Limit	Q
1	Arsenic	54.4000		1.6000	U	50.00	108.8	75-125	

FORM-6 Metal

Applied P & Ch Laboratory

Duplicates Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Batch No.:	03M1353	Method:	200.9
Spike Sample No.	03-2755-01	Matrix:	WATER	Instrument:	ICP -M
Client Sample No.	**EB30015**	% Solid:	0.00	Analysis Date:	04/22/03

Concentration Unit: **UG/L**

#	Analyte	11:46 Sample(s)	C	11:50 Duplicate	C	RPD(%)	Q
1	Aluminum	398.9575		395.0971		1.0	
2	Antimony	-0.4079	U	-0.2717	U		
3	Arsenic	20.6707		19.0895		8.0	
4	Barium	23.2963		21.6343		7.4	
5	Beryllium	0.2007	B	0.1205	U	200.0	
6	Cadmium	0.0945	U	0.0861	U		
7	Calcium	27303.1895		27354.2813		0.2	
8	Chromium	6.3040		6.0628		3.9	
9	Cobalt	1.8087	B	1.5078	B	18.1	
10	Copper	8.1122	B	4.7158	B	53.0	
11	Iron	1515.1230		1494.5897		1.4	
12	Lead	5.0114		3.4259	B	37.6	
13	Magnesium	16222.0957		16025.0703		1.2	
14	Manganese	586.2454		580.6462		1.0	
15	Nickel	7.2018		6.8245		5.4	
16	Potassium	3807.9873		3691.6851		3.1	
17	Selenium	2.2448	U	-0.9251	U		
18	Silver	0.5519	U	0.3063	U		
19	Sodium	51102.2383		50449.8555		1.3	
20	Thallium	3.3669	B	3.1187	B	7.7	
21	Vanadium	12.2086		12.1912		0.1	
22	Zinc	28.2941		29.3744		3.7	
23	Molybdenum	3.6499	B	3.0087	B	19.3	

FORM-6 Metal

Applied P & Ch Laboratory

Duplicates Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1360E
		Batch No.:	03M1360	Method:	200.9
Spike Sample No.	03-2809-04	Matrix:	WATER	Instrument:	GFAA-E
Client Sample No.	**MW-4-2**	% Solid:	0.00	Analysis Date:	04/23/03

Concentration Unit: **UG/L**

#	Analyte	13:31 Sample(s)	C	13:37 Duplicate	C	RPD(%)	Q
1	Arsenic	1.6000	U	1.5000	U		

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 200.9

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32767
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1360E		
LCS Filename:	-	Date Analyzed:	042303	Time Analyzed:	13:18
LCSD Filename:	-	Date Analyzed:	042303	Time Analyzed:	13:24

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
ARSENIC	µg/L	50	0	50.5	101	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ARSENIC	µg/L	50	49.9	100	1	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

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FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 200.7

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32767
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1353M		
LCS Filename:	-	Date Analyzed:	042203	Time Analyzed:	11:39
LCSD Filename:	-	Date Analyzed:	042203	Time Analyzed:	11:43

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CALCIUM	µg/L	20000	0	20500	103	80-120
IRON	µg/L	1000	0	978	98	80-120
MAGNESIUM	µg/L	10000	0	10200	102	80-120
POTASSIUM	µg/L	5000	0	5510	110	80-120
SODIUM	µg/L	40000	0	38600	97	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CALCIUM	µg/L	20000	20500	103	0	20	80-120
IRON	µg/L	1000	977	98	0	20	80-120
MAGNESIUM	µg/L	10000	10200	102	0	20	80-120
POTASSIUM	µg/L	5000	5260	105	5	20	80-120
SODIUM	µg/L	40000	38600	97	0	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

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FORM-9 Metal

Applied P & Ch Laboratory

Serial Dilution

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Batch No.:	03M1353	Method:	200.9
Dilution Sample No.:	03-2755-01	Matrix:	WATER	Instrument:	ICP -M
Client Sample No.:	**EB30015**	Analysis Date:	04/22/03		

Concentration Units: **UG/L**

#	Analyte	Initial Sample Results(I)	11:46 C	Serial Dilut Results(S)	11:53 C	% Diff.	Q
1	Aluminum	398.96		416.13	B	4.3	
2	Antimony	-0.41	U	3.63	U		
3	Arsenic	20.67		22.89	B	10.7	
4	Barium	23.30		22.00	B	5.5	
5	Beryllium	0.20	B	0.44	U	100.0	
6	Cadmium	0.09	U	-1.88	U		
7	Calcium	27303.19		28763.09		5.3	
8	Chromium	6.30		6.47	B	2.7	
9	Cobalt	1.81	B	4.26	B	135.7	
10	Copper	8.11	B	5.96	B	26.5	
11	Iron	1515.12		1513.21		0.1	
12	Lead	5.01		3.65	U	100.0	
13	Magnesium	16222.10		17476.64		7.7	
14	Manganese	586.25		626.44		6.9	
15	Nickel	7.20		6.35	B	11.9	
16	Potassium	3807.99		3664.04		3.8	
17	Selenium	2.24	U	-1.16	U		
18	Silver	0.55	U	-0.08	U		
19	Sodium	51102.24		53105.10		3.9	
20	Thallium	3.37	B	5.11	U	100.0	
21	Vanadium	12.21		11.77	B	3.6	
22	Zinc	28.29		30.46	B	7.6	
23	Molybdenum	3.65	B	3.07	B	16.0	

FORM-9 Metal

Applied P & Ch Laboratory

Serial Dilution

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1360E
		Batch No.:	03M1360	Method:	200.9
Dilution Sample No.:	03-2809-04	Matrix:	WATER	Instrument:	GFAA-E
Client Sample No.:	MW-4-2	Analysis Date:	04/23/03		

Concentration Units: **UG/L**

#	Analyte	Initial Sample Results(I)	13:31 C	Serial Dilut Results(S)	13:44 C	% Diff.	Q
1	Arsenic	1.60	U	5.50	U		

FORM-13 Metal

Applied P & Ch Laboratory

Preparation Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Batch No.:	03M1353	Method:	200.9
Preparation Matrix:	WATER	Instrument:	ICP -M		

#	Client Sample No.	APCL Sample No.	Preparation Date	Weight (gram)	Volume (ml)
1	MW06-030503	03-1999-04	04/22/03		50.0
2	EB30015	03-2755-01DM	04/22/03		50.0
3	EB30016	03-2755-02	04/22/03		50.0
4	1	03-2757-01	04/22/03		50.0
5	2	03-2757-02	04/22/03		50.0
6	3	03-2757-03	04/22/03		50.0
7	4	03-2757-04	04/22/03		50.0
8	5	03-2757-05	04/22/03		50.0
9	EB-1-4/17/03	03-2767-01	04/22/03		50.0
10	MW-21-1	03-2767-02	04/22/03		50.0
11	MW-21-2	03-2767-03	04/22/03		50.0
12	MW-21-3	03-2767-04	04/22/03		50.0
13	MW-21-4	03-2767-05	04/22/03		50.0
14	MW-21-5	03-2767-06	04/22/03		50.0
15	LJ237	03-2769-02	04/22/03		50.0
16	LJ241	03-2769-03	04/22/03		20.0
17	LJ242	03-2769-04	04/22/03		20.0
18	H23HSC0144-W	03-2781-23	04/22/03		50.0
19		03M1353MB	04/22/03		50.0
20		03M1353LCS	04/22/03		50.0
21		03M1353LCSD	04/22/03		50.0
22	EB30015 Dup.	03M1353MD	04/22/03		50.0
23	EB30015 MS	03M1353MS	04/22/03		50.0
24	EB30015 MSD	03M1353MSD	04/22/03		50.0

FORM-13 Metal

Applied P & Ch Laboratory

Preparation Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1360E
		Batch No.:	03M1360	Method:	200.9
Preparation Matrix:	WATER	Instrument:	GFAA-E		

#	Client Sample No.	APCL Sample No.	Preparation Date	Weight (gram)	Volume (ml)
1	EB-1-4/17/03	03-2767-01	04/23/03		50.0
2	MW-21-1	03-2767-02	04/23/03		50.0
3	MW-21-2	03-2767-03	04/23/03		50.0
4	MW-21-3	03-2767-04	04/23/03		50.0
5	MW-21-4	03-2767-05	04/23/03		50.0
6	MW-21-5	03-2767-06	04/23/03		50.0
7	DUPE-1-2Q03	03-2809-01	04/23/03		50.0
8	EB-2-4/21/03	03-2809-02	04/23/03		50.0
9	MW-4-1	03-2809-03	04/23/03		50.0
10	MW-4-2	03-2809-04	04/23/03		50.0
11	MW-4-2	03-2809-04MD	04/23/03		50.0
12	MW-4-3	03-2809-05	04/23/03		50.0
13	MW-4-4	03-2809-06	04/23/03		50.0
14	MW-4-5	03-2809-07	04/23/03		50.0
15	SOURCE-2Q03	03-2809-08	04/23/03		50.0
16	EB-3-4/22/03	03-2819-01	04/23/03		50.0
17	MW-19-1	03-2819-02	04/23/03		50.0
18	MW-19-2	03-2819-03	04/23/03		50.0
19	MW-19-3	03-2819-04	04/23/03		50.0
20	MW-19-4	03-2819-05	04/23/03		50.0
21	MW-19-5	03-2819-06	04/23/03		50.0
22		03M1360MB	04/23/03		50.0
23		03M1360LCS	04/23/03		50.0
24		03M1360LCSD	04/23/03		50.0
25	MW-4-2 Dup.	03M1360MD	04/23/03		50.0
26	MW-4-2 MS	03M1360MS	04/23/03		50.0
27	MW-4-2 MSD	03M1360MSD	04/23/03		50.0

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9
Batch No.(s):	03M1353	Start Date:	04/22/03	End Date:	04/22/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
1	Calib Blank	1.00	10:46	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
2	STD1 1423A	1.00	10:50	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
3	STD2 1423B	1.00	10:54	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
4	STD3 1423C	1.00	10:58	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
5	ICV 1447A	1.00	11:01	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
6	ICB	1.00	11:13	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
7	CRI A1432	1.00	11:17	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
8	ICSA 1441	1.00	11:19	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
9	ICSAB 1443	1.00	11:22	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
10	CCV 1447B	1.00	11:26	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
11	CCB	1.00	11:31	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
12	M-BL 03M1353 W	1.00	11:35	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
13	LCS-03M1353	1.00	11:39	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
14	LCSD-03M1353	1.00	11:43	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
15	2755-1 S F=1	1.00	11:46	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
16	2755-1 D F=1	1.00	11:50	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
17	2755-1 1/5 F=5	5.00	11:53	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
18	2755-1 MS F=1	1.00	11:57	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
19	2755-1 MSD F=1	1.00	12:00	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
20	2755-1 PS F=1	1.00	12:04	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
21	CCV 1447B	1.00	12:08	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
22	CCB	1.00	12:11	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
23	2755-2 F=1	1.00	12:14	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
24	2757-1 F=1	1.00	12:18	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
25	2757-2 F=1	1.00	12:21	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
26	2757-3 F=1	1.00	12:25	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
27	2757-4 F=1	1.00	12:28	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
28	2757-5 F=1	1.00	12:32	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
29	2767-1 F=1	1.00	12:35	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
30	2767-2 F=1	1.00	12:39	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
31	2767-3 F=1	1.00	12:42	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
32	CCV 1447B	1.00	12:46	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
33	CCB	1.00	12:49	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
34	2767-4 F=1	1.00	12:53	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
35	2767-5 F=1	1.00	12:56	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
36	2767-6 F=1	1.00	12:59	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
37	2781-23 F=1	1.00	13:03	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
38	1999-4 F=1	1.00	13:06	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
39	2757-1 F=10	10.00	13:10	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
40	2769-2 F=5	5.00	13:13	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9
Batch No.(s):	03M1353	Start Date:	04/22/03	End Date:	04/22/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
41	2769-3 F=1	1.00	13:17	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
42	2769-4 F=1	1.00	13:20	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
43	2769-2 F=50	50.00	13:26	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
44	CCV 1447B	1.00	13:32	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
45	CCB	1.00	13:38	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
46	2769-3 F=100	100.00	13:43	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
47	2769-4 F=100	100.00	13:46	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
48	CCV 1447B	1.00	13:51	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
49	CCB	1.00	13:58	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
50	Calib Blank	1.00	14:33	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
51	STD1 1423A	1.00	14:36	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
52	Calib Blank	1.00	14:49	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
53	STD1 1423A	1.00	14:53	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
54	STD2 1423B	1.00	14:57	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
55	STD3 1423C	1.00	15:00	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
56	CCV 1447B	1.00	15:04	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
57	CCB	1.00	15:08	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
58	M-BL 03M1354S	1.00	15:11	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
59	LCS-03M1354	1.00	15:14	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
60	LCSD-03M1354	1.00	15:18	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
61	2778-1 S F=50	1.00	15:22	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
62	2778-1 D F=50	1.00	15:25	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
63	2778-1 1/5 F=25	5.00	15:29	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
64	2778-1 MS F=50	1.00	15:32	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
65	2778-1 MSD F=50	1.00	15:36	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
66	2778-1 PS F=50	1.00	15:40	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
67	2778-2 F=50	1.00	15:43	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
68	CCV 1447B	1.00	15:46	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
69	Calib Blank	1.00	15:50	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
70	Calib Blank	1.00	15:57	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
71	STD1 1423A	1.00	16:01	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
72	STD2 1423B	1.00	16:05	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
73	STD3 1423C	1.00	16:08	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
74	CCV 1447B	1.00	16:12	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
75	CCB	1.00	16:15	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
76	M-BL 03M1354S	1.00	16:19	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
77	LCS-03M1354	1.00	16:22	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
78	LCSD-03M1354	1.00	16:26	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
79	2778-1 S F=50	1.00	16:30	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						
80	2778-1 D F=50	1.00	16:33	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√						

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1353M
		Instrument:	ICP -M	Method:	200.9
Batch No.(s):	03M1353	Start Date:	04/22/03	End Date:	04/22/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
81	2778-1 1/5 F=25	5.00	16:37	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
82	2778-1 MS F=50	1.00	16:39	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
83	2778-1 MSD F=50	1.00	16:42	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
84	2778-1 PS F=50	1.00	16:46	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
85	2778-2 F=50	1.00	16:49	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
86	CCV 1447B	1.00	16:53	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
87	CCB	1.00	16:56	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
88	2778-3 F=50	1.00	16:59	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
89	2778-4 F=50	1.00	17:01	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
90	2778-6 F=50	1.00	17:04	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
91	2778-7 F=50	1.00	17:07	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
92	2778-8 F=50	1.00	17:09	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
93	2778-9 F=50	1.00	17:12	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
94	2807-1 F=50	1.00	17:16	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
95	2807-2 F=50	1.00	17:19	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
96	2807-3 F=50	1.00	17:23	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
97		0.00																														
98		0.00																														
99	CCV 1447B	1.00	17:32	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
100	CCB	1.00	17:35	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
101	2769-1 F=250	5.00	17:39	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
102	2769-5 F=200	4.00	17:42	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
103	2769-5 F=20000	400.00	17:50	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
104	ICSA 1441	1.00	17:52	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
105	ICSAB 1443	1.00	18:00	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
106	CCV 1447B	1.00	18:04	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
107	CCB	1.00	18:08	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					
108	DLC A1427	1.00	18:12	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√					

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1360E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1360	Start Date:	04/23/03	End Date:	04/23/03

#	APCL Sample No.	D/F	Time	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn Mo Sr Ti Sn Li B Si
1	AS Position 002	1.00	12:10	√
2	AS Position 001	1.00	12:14	√
3	Calib. Blank	1.00	12:18	√
4	1/2 STD1 1269A	1.00	12:24	√
5	STD1 1269A	1.00	12:30	√
6	STD2 1269B	1.00	12:36	√
7	STD3 1269C	1.00	12:43	√
8	ICV A1271	1.00	12:59	√
9	ICB	1.00	13:05	√
10	M-BL 03M1360	1.00	13:11	√
11	LCS-03M1360	1.00	13:18	√
12	LCSD-03M1360	1.00	13:24	√
13	2809-4 S F=1	1.00	13:31	√
14	2809-4 D F=1	1.00	13:37	√
15	2809-4 1/5 F=5	5.00	13:44	√
16	2809-4 MS F=1	1.00	13:50	√
17	2809-4 MSD F=1	1.00	13:57	√
18	2809-4 PS F=1	1.00	14:04	√
19	2809-1 F=1	1.00	14:10	√
20	CCV A1271	1.00	14:17	√
21	CCB	1.00	14:23	√
22	2809-2 F=1	1.00	14:29	√
23	2809-3 F=1	1.00	14:36	√
24	2809-5 F=1	1.00	14:42	√
25	2809-6 F=1	1.00	14:48	√
26	2809-7 F=1	1.00	14:55	√
27	2809-8 F=1	1.00	15:01	√
28	2819-1 F=1	1.00	15:07	√
29	2819-2 F=1	1.00	15:13	√
30	2819-3 F=1	1.00	15:20	√
31	CCV A1271	1.00	15:33	√
32	CCB	1.00	15:39	√
33	2819-4 F=1	1.00	15:58	√
34	2819-5 F=1	1.00	16:05	√
35	2819-6 F=1	1.00	16:12	√
36	2767-1 F=1	1.00	16:18	√
37	2767-2 F=1	1.00	16:25	√
38	2767-3 F=1	1.00	16:31	√
39	2767-4 F=1	1.00	16:37	√
40	2767-5 F=1	1.00	16:44	√

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	032767	Sequence No.:	03M1360E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1360	Start Date:	04/23/03	End Date:	04/23/03

#	APCL Sample No.	D/F	Time	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn Mo Sr Ti Sn Li B Si
41	CCV A1271	1.00	16:50	√
42	CCB	1.00	16:56	√
43	2767-6 F=1	1.00	17:02	√
44	CCV A1271	1.00	17:09	√
45	CCB	1.00	17:15	√

Applied P & Ch Laboratory
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Metal Digestion (3010/3050) Worksheet

Batch # 03M1353 Matrix: W Method used: 3010A Date: 4/22/03 Digested by: XL Diluted by: LW

Lot #: ASTM Type I water RW1408 HNO_3 1102080 H_2SO_4 _____ HCl 410250 H_2O_2 _____

OP #	Type	Samp ID /Lot #	X (g or mL)	$V_{digest}/X = f_1$	$V_f/V_i = f_2$	$V_f'/V_i' = f_3$	$F=f_1f_2f_3$	Note
3887	Method Blank	Bl. Lot RW1408	50	50 /X= 1	/ =	/ =		23ME
3888	LCS1	Bl. Lot: "		/X=	/ =	/ =		
3889	Sample-1	2755 -1		/X=	/ =	/ =		T=95°C
3890	MS1 on S-1	-1		/X=	/ =	/ =		
3891	MS2 on S-1	-1		/X=	/ =	/ =		
3892	Sample 2	-2		/X=	/ =	/ =		
3893	Sample 3	2757 -1		/X=	/ =	/ =		
3894	Sample 4	-2		/X=	/ =	/ =		
3895	Sample 5	-3		/X=	/ =	/ =		
3896	Sample 6	-4		/X=	/ =	/ =		
3897	Sample 7	-5		/X=	/ =	/ =		
3898	Sample 8	2767 -1		/X=	/ =	/ =		
3899	Sample 9	-2		/X=	/ =	/ =		
3900	Sample 10	-3		/X=	/ =	/ =		
3901	LCS2	Bl. Lot RW1408		/X=	/ =	/ =		
3902	Sample 11	-4		/X=	/ =	/ =		
3903	Sample 12	-5		/X=	/ =	/ =		
3904	Sample 13	-6		/X=	/ =	/ =		
3905	Sample 14	2781-23		/X=	/ =	/ =		
3906	Sample 15	1999-4	↓	/X=	/ =	/ =		filtered.
3907	Sample 16	2769-2	10	↓ /X= 5	/ =	/ =	F=50 for Fe	
3908	Sample 17	-3	20	20 /X= 1	/ =	/ =	F=100 for Zn	
3909	Sample 18	-4	20	20 /X= 1	/ =	/ =		
3910	Sample 19			/X=	/ =	/ =		
3911	Sample 20	XL	4/22/03	/X=	/ =	/ =		
3912	Duplicate	2755-1	50	50 /X= 1	/ =	/ =		

Specification of matrix spike and lab control spike

QC Type	Spiked Element *	Spike Stock Solution Lot #	Spike Stock (Rep.) Conc. C_s, µg/mL	Spike Stock Volum Used V_s mL	Spike Level $T'=C_sV_s/V$ ppm or mg/L	Sample Spike T, ppm
MS1	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA-1133	/ / / 25	/ / / 2	/ / / 1	
MS2	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA- "	/ / / ↓	/ / / ↓	/ / / ↓	
LCS1	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA-1092	/ / / ↓	/ / / ↓	/ / / ↓	
LCS2	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA- "	/ / / ↓	/ / / ↓	/ / / ↓	

* Notation: T = rep. sample spike level. T' = digest solution spike level. $T=f\,T'=C_sV_s/X$. M20 (or Mj) represents 20 (or j) metals, (see STD logbook).
If digest needs dilution for different metals, use dilution worksheet.

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Metal Digestion (3010/3050) Worksheet

Batch # 03M1360 Matrix: W Method used: 3020A Date: 4/23/03 Digested by: KL Diluted by: _____

Lot #: ASTM Type I water RW1408 HNO_3 _____ H_2SO_4 _____ HCl _____ H_2O_2 _____

QC #	Type	Samp ID /Lot #	X (g or mL)	$V_{digest}/X = f_1$	$V_f/V_i = f_2$	$V_f'/V_i' = f_3$	$F = f_1 f_2 f_3$	Note
4017	Method Blank	Bl. Lot: RW1408	50	50/X= 1	/ =	/ =		GFAA – As T>95%
4018	LCS1	Bl. Lot: "		/X=	/ =	/ =		
4019	Sample-1	2809 –4		/X=	/ =	/ =		
4020	MS1 on S-1	–4		/X=	/ =	/ =		
4021	MS2 on S-1	–4		/X=	/ =	/ =		
4022	Sample 2	–1		/X=	/ =	/ =		
4023	Sample 3	–2		/X=	/ =	/ =		
4024	Sample 4	–3		/X=	/ =	/ =		
4025	Sample 5	–5		/X=	/ =	/ =		
4026	Sample 6	–6		/X=	/ =	/ =		
4027	Sample 7	–7		/X=	/ =	/ =		
4028	Sample 8	–8		/X=	/ =	/ =		
4029	Sample 9	2767 –1		/X=	/ =	/ =		
4030	Sample 10	–2		/X=	/ =	/ =		
4031	LCS2	Bl. Lot: RW1408		/X=	/ =	/ =		
4032	Sample 11	–3		/X=	/ =	/ =		
4033	Sample 12	–4		/X=	/ =	/ =		
4034	Sample 13	–5		/X=	/ =	/ =		
4035	Sample 14	–6		/X=	/ =	/ =		
4036	Sample 15	2819 –1		/X=	/ =	/ =		
4037	Sample 16	–2		/X=	/ =	/ =		
4038	Sample 17	–3		/X=	/ =	/ =		MS/MSD
4039	Sample 18	–4		/X=	/ =	/ =		
4040	Sample 19	–5		/X=	/ =	/ =		
4041	Sample 20	–6		/X=	/ =	/ =		
4042	Duplicate	2809 –4	↓	↓ /X= ↓	/ =	/ =		

Specification of matrix spike and lab control spike

QC Type	Spiked Element *	Spike Stock Solution Lot #	Spike Stock (Rep.) Conc. C_s, µg/mL	Spike Stock Volum Used V_s mL	Spike Level $T' = C_s V_s / V$ ppm or mg/L	Sample Spike T, ppm
MS1	/As/Se/Sb/M_{20}	AA- /AA-0803 /AA- /AA-	/ 57 /	10.5? /	10.05? /	
MS2	/As/Se/Sb/M_{20}	AA- /AA-11 /AA- /AA-	/ / /	/ / /	/ / /	
LCS1	/As/Se/Sb/M_{20}	AA- /AA-1001 /AA- /AA-	/ / /	/ / /	/ / /	
LCS2	/As/Se/Sb/M_{20}	AA- /AA-11 /AA- /AA-	↓ / /	X ↓ / /	X ↓ / /	

* Notation: T – rep. sample spike level. T' – digest solution spike level. $T = f\ T' = C_s V_s / X$. M20 (or Mj) represents 20 (or j) metals, (see STD logbook).
If digest needs dilution for different metals, use dilution worksheet.

Supervisor Initial 4/24/03