APCL

Applied Physics & Chemistry Laboratory

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

December 2, 2003

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

Dear Brad,

This package contains samples in our Service ID 03-5892 and your project : 04-4428.10 JPL
Enclosed please find:

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

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

Respectfully submitted,

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

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

APCL Analytical Report

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

Service ID #: 801-035892
Collected by: JR
Collected on: 10/30/03

Received: 10/30/03
Extracted: N/A
Tested: 10/30-11/05/03
Reported: 11/06/03

Sample Description: Water from MW-21.
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-7-10-30-03 03-05892-1	MW-21-1 03-05892-2	MW-21-2 03-05892-3
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	6.5	2.7J
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	0.9	0.3J
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result EB-7-10-30-03 03-05892-1	MW-21-1 03-05892-2	MW-21-2 03-05892-3
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	0.5	<0.5	<0.5	<0.5
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	0.4J	2.2
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	5.5	0.3J
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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Component Analyzed	Method	Unit	PQL	Analysis Result MW-21-3 03-05892-4	MW-21-4 03-05892-5	MW-21-5 03-05892-6	TB-7-10-30-03 03-05892-7
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	3.6J	3.4J	2.6J	-
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	0.3J	<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	0.4J	2.0	2.3	<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	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	1.3	1.4	<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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-21-3 03-05892-4	MW-21-4 03-05892-5	MW-21-5 03-05892-6	TB-7-10-30-03 03-05892-7
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
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.3J
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
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	1.6	7.7	8.8	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	0.7	0.5J	0.5J	<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	0.4J
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: 04-4428.10 JPL

APCL Service ID: 03-5892

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

Project: JPL/MW-21./04-4428.10

For GEOFON, Inc.

APCL Service No: 03-5892

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-21-5	03-05892-6
MW-21-4	03-05892-5
MW-21-3	03-05892-4
MW-21-2	03-05892-3
MW-21-1	03-05892-2
EB-7-10-30-03	03-05892-1
TB-7-10-30-03	03-05892-7

2. Analytical Methodology

Samples are analyzed by EPA methods

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

3. Holding Time

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

4. Preservation

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

5. Tele-log

None

6. Anomaly

None

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

Respectfully submitted,

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

0072

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)
Scott Buhmer	909 396 7662	909 396 1455		Kenny Chan	Geofon
PROJECT NAME:	**PROJECT LOCATION**	**PROJECT NUMBER**	**LABORATORY PHONE**	**LABORATORY FAX**	**RECIPIENT NAME**
JPL GW Mon. 4-003	MW-21	04-4428.10	909 590 1828	909 590 1498	Tony Ford
PROJECT CONTACT	**PROJECT PHONE NUMBER**	**PROJECT FAX**	**LABORATORY ADDRESS**		**ADDRESS**
Brad Shojaie	909396 7662	909 396 1455	13760 Magnolia Ave.		22632 Golden Springs Dr. Ste 27
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**			
Tony Ford	909 396 7662	909 396 1455			

5892

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T	Analyses: 524.0 (VOC)	314.0 (Clo4)	7196A (Hex Cr)	200.8 (Cr)	Comments
1	MW-21-5	W	10/30/03	0818	HCl HNO3 NONE	5	III	Normal	X	X	X	X	
2	MW-21-4			0843					X	X	X	X	MS/MSD
3	MW-21-3			0924					X	X	X	X	
4	MW-21-2			0945					X	X	X	X	
5	MW-21-1			1011					X	X	X	X	
6	TB-7-10-30-03			—	HCl	2			X				
7	EB-7-10-30-03			1016	HCl HNO3 NONE	5			X	X	X	X	
8													
9							9						
10							10.30.03						

SAMPLES COLLECTED BY: J.R.

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
		10-30-03	11:30	
		10-30-03	12:35	

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

Applied P & Ch Laboratory
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Sample Receiving Checklist

APCL ServiceID: 5892 **Client Name/Project:** Geofon

1. Sample Arrival

Date/Time Received 10/30/03 1235 Date/Time Opened 10/30/03 1235 By (name): Jason N.

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☒ APCL Empl: SB

2. Chain-of-Custody (CoC)

☒ With Samples? ☐ Faxed? ☒ Client has Copy? ☐ Signed, dated? By:
☒ Project ID? ☒ Analyses Clear? ☐ Hold Samples? #on Hold ____ # Received 7
☐ 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 3.7
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

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

5. Holding-time Requirements

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

6. Sample Container Condition

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

7. Turn Around Time

☒ RUSH TAT: 5day ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: ____ Printed: 30 Oct 2003 7:29 a.m.

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

DocumentFile: {neal.texfiles}smprcl.tex.

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

Sample Login: Check List

03-05892 (0470_ 183) (2202777_ 183)

10/30/03

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?	*Jason N.*
		Receiving Date/Time:	*10/30/03 1235*
		COC No.	*0072*
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*3.7 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	*JR*
		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	03-05892-6-α	W	V	C	40	3	G	103003	N	0	7	☐
	MW-21-5	CrVI	03-05892-6-β	W	P		500	1	G	103003	N	0	7	☐
2	MW-21-4	524	03-05892-5-α	W	V	C	40	6	G	103003	N	0	7	☐
	MW-21-4	CrVI	03-05892-5-β	W	P		500	2	G	103003	N	0	7	☐
3	MW-21-3	524	03-05892-4-α	W	V	C	40	3	G	103003	N	0	7	☐
	MW-21-3	CrVI	03-05892-4-β	W	P		500	1	G	103003	N	0	7	☐
4	MW-21-2	524	03-05892-3-α	W	V	C	40	3	G	103003	N	0	7	☐
	MW-21-2	CrVI	03-05892-3-β	W	P		500	1	G	103003	N	0	7	☐
5	MW-21-1	524	03-05892-2-α	W	V	C	40	3	G	103003	N	0	7	☐
	MW-21-1	CrVI	03-05892-2-β	W	P		500	1	G	103003	N	0	7	☐
6	EB-7-10-30-03	524	03-05892-1-α	W	V	C	40	3	G	103003	N	0	7	☐
	EB-7-10-30-03	CrVI	03-05892-1-β	W	P		500	1	G	103003	N	0	7	☐
7	TB-7-10-30-03	524	03-05892-7	W	V	C	40	2	G	103003	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
☐ *206.2/7060A*	Arsenic, As, by GFAA
☐ *8270-SIM*	1,4-Dioxane

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCH	CL	SO4	NO3	CARBON	BICARB

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:	11/01/2003
Project ID:	JPL	Service ID:	35892	Collected by:	
		Lab Sample ID:	03G4668-MB-01	Received Date:	11/01/2003
Sample ID:	03G4668-MB-01	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	04:33
Data File Name:	G4668K01	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	μg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	μg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	μg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	μg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	μg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	μg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	μg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	μg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	μg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	μg/L	10	0.61	J
11	CARBON TETRACHLORIDE	56-23-5	μg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	μg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	μg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	μg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	μg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	μg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	μg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	μg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	μg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	μg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	μg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	μg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	μg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	μg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	μg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	μg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	μg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	μg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	μg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	μg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	μg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	μg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	μg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	μg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	μg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	μg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	μg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	μg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	μg/L	0.5	<0.5	U

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

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	70-129	98
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	96
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	98
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	103
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	109
3	FLUOROBENZENE	462-06-6	50-200	111
# 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:	11/05/2003
Project ID:	JPL	Service ID:	35892	Collected by:	
		Lab Sample ID:	03G4695-MB-01	Received Date:	11/05/2003
Sample ID:	**03G4695-MB-01**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/05/03	Anal. Date:	11/05/03
Batch No:	03G4695	Prep. No:	-	Anal. Time:	00:45
Data File Name:	G4695K01	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	-				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

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

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	0.4	J
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<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	109
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	108
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	104
4	TOLUENE-D8	2037-26-5	73-129	106
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	99
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	98
3	FLUOROBENZENE	462-06-6	50-200	103
# 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:	10/30/2003
Project ID:	JPL	Service ID:	35892	Collected by:	JR
		Lab Sample ID:	03-5892-1	Received Date:	10/30/2003
Sample ID:	EB-7-10-30-03	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	05:51
Data File Name:	5892-01	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

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

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

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	98
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	95
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	101
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	106
3	FLUOROBENZENE	462-06-6	50-200	109
# 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:	10/30/2003
Project ID:	JPL	Service ID:	35892	Collected by:	JR
		Lab Sample ID:	03-5892-2	Received Date:	10/30/2003
Sample ID:	MW-21-1	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/05/03	Anal. Date:	11/05/03
Batch No:	03G4695	Prep. No:	–	Anal. Time:	03:01
Data File Name:	5892-02A	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

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

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	0.4	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	5.5	
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	109
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	108
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	105
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	96
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	97
3	FLUOROBENZENE	462-06-6	50-200	100
# 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:	10/30/2003
Project ID:	JPL	Service ID:	35892	Collected by:	JR
		Lab Sample ID:	03-5892-3	Received Date:	10/30/2003
Sample ID:	MW-21-2	Sample Matrix	Water	Moisture %:	-
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/05/03	Anal. Date:	11/05/03
Batch No:	03G4695	Prep. No:	-	Anal. Time:	03:27
Data File Name:	5892-03A	Sample Amount:	25.0 mL	Dilution Factor:	1
Methanol Vol.	-				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	0.3	J
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	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	2.2	
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	0.3	J
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	107
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	108
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	105
4 TOLUENE-D8	2037-26-5	73-129	106
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	97
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	97
3 FLUOROBENZENE	462-06-6	50-200	100
# 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:	10/30/2003
Project ID:	JPL	Service ID:	35892	Collected by:	JR
		Lab Sample ID:	03-5892-4	Received Date:	10/30/2003
Sample ID:	MW-21-3	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	06:43
Data File Name:	5892-04	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	0.4	J
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	1.6	
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	0.7	
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	99
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	101
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	99
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	101
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	107
3	FLUOROBENZENE	462-06-6	50-200	107
# 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:	10/30/2003
Project ID:	JPL	Service ID:	35892	Collected by:	JR
		Lab Sample ID:	03-5892-5	Received Date:	10/30/2003
Sample ID:	MW-21-4	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	06:17
Data File Name:	5892-05	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	0.3	J
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	2.0	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	1.3	
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	7.7	
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	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	97
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	98
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	98
4 TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	101
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	107
3 FLUOROBENZENE	462-06-6	50-200	107
# 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:	10/30/2003
Project ID:	JPL	Service ID:	35892	Collected by:	JR
		Lab Sample ID:	03-5892-6	Received Date:	10/30/2003
Sample ID:	MW-21-5	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	07:09
Data File Name:	5892-06	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	2.3	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	1.4	
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	8.8	
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	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	99
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	100
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	99
4	TOLUENE-D8	2037-26-5	73-129	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	103
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	107
3	FLUOROBENZENE	462-06-6	50-200	107
# 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:	10/30/2003
Project ID:	JPL	Service ID:	35892	Collected by:	JR
		Lab Sample ID:	03-5892-7	Received Date:	10/30/2003
Sample ID:	**TB-7-10-30-03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	05:25
Data File Name:	5892-07	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	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	μg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	μg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	μg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	μg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	μg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	μg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	μg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	μg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	μg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	μg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	μg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	μg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	μg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	μg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	μg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	μg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	μg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	μg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	μg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	μg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	μg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	μg/L	0.5	0.3	J
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	μg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	μg/L	10	<10	U
44	NAPHTHALENE	91-20-3	μg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	μg/L	0.5	<0.5	U
46	STYRENE	100-42-5	μg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	μg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	μg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	μg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	μg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	μg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	μg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	μg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	μg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	μg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	μg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	μg/L	0.5	0.4	J
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	98
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	98
4	TOLUENE-D8	2037-26-5	73-129	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	106
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	112
3	FLUOROBENZENE	462-06-6	50-200	112
# of out-of-control				0

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

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

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		SDG Number:	035892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G4668		

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	S3 % #	S4 % #	TOT OUT
1	03G4668-LCS-01	03G4668-LCS-01	96	95	94	94	0
2	MW-21-4MS	03-5892-5MS	98	95	95	94	0
3	MW-21-4MSD	03-5892-5MSD	94	97	94	92	0
4	03G4668-MB-01	03G4668-MB-01	98	96	98	104	0
5	TB-7-10-30-03	03-5892-7	96	98	98	103	0
6	EB-7-10-30-03	03-5892-1	98	95	98	105	0
7	MW-21-4	03-5892-5	97	98	98	104	0
8	MW-21-3	03-5892-4	99	101	99	105	0
9	MW-21-5	03-5892-6	99	100	99	103	0
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22							
23							
24							
25							

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

Column to be used to flag recovery values:

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

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	035892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G4695		

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	S3 % #	S4 % #	TOT OUT
1	03G4695-LCS-01	03G4695-LCS-01	103	101	100	98	0
2	MW-3-4MS	03-5923-3MS	102	100	100	99	0
3	MW-3-4MSD	03-5923-3MSD	103	99	97	101	0
4	03G4695-MB-01	03G4695-MB-01	109	108	104	106	0
5	MW-21-1	03-5892-2	109	108	105	108	0
6	MW-21-2	03-5892-3	107	108	105	106	0
7							
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	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:	35892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G4668		
LCS Filename:	G4668L01	Date Analyzed:	110103	Time Analyzed:	00:30
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	17.9	90	65-120
CHLOROBENZENE	µg/L	20	0	18.4	92	65-134
1,1-DICHLOROETHENE	µg/L	20	0	19.3	97	65-127
TOLUENE	µg/L	20	0	17.7	89	65-134
TRICHLOROETHENE	µg/L	20	0	19.1	96	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: _____

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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:	35892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G4668		
MS Filename:	G4668M01	Date Analyzed:	110103	Time Analyzed:	01:57
MSD Filename:	G4668N01	Date Analyzed:	110103	Time Analyzed:	02:23
MS Sample No:	**MW-21-4**	Sample Lab ID:	03-5892-5		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	17.9	90	65-121
CHLOROBENZENE	µg/L	20	0	18.7	94	65-134
1,1-DICHLOROETHENE	µg/L	20	0	19.4	97	65-127
TOLUENE	µg/L	20	0	17.6	88	65-134
TRICHLOROETHENE	µg/L	20	0.5	20.4	100	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	17.8	89	1	28	65-121
CHLOROBENZENE	µg/L	20	18.0	90	4	35	65-134
1,1-DICHLOROETHENE	µg/L	20	19.2	96	1	31	65-127
TOLUENE	µg/L	20	17.2	86	2	35	65-134
TRICHLOROETHENE	µg/L	20	19.8	97	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: _____

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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:	35892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G4695		
LCS Filename:	G4695L01	Date Analyzed:	110403	Time Analyzed:	20:47
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	18.4	92	65-120
CHLOROBENZENE	µg/L	20	0	19.5	98	65-134
1,1-DICHLOROETHENE	µg/L	20	0	21.3	107	65-127
TOLUENE	µg/L	20	0	18.3	92	65-134
TRICHLOROETHENE	µg/L	20	0	19.8	99	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: _____

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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:	35892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G4695		
MS Filename:	G4695M01	Date Analyzed:	110403	Time Analyzed:	21:38
MSD Filename:	G4695N01	Date Analyzed:	110403	Time Analyzed:	22:04
MS Sample No:	MW-3-4	Sample Lab ID:	03-5923-3		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	18.5	93	65-121
CHLOROBENZENE	µg/L	20	0	19.5	98	65-134
1,1-DICHLOROETHENE	µg/L	20	0	21.4	107	65-127
TOLUENE	µg/L	20	0	18.6	93	65-134
TRICHLOROETHENE	µg/L	20	0	20.0	100	65-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	µg/L	20	18.4	92	1	28	65-121
CHLOROBENZENE	µg/L	20	19.5	98	0	35	65-134
1,1-DICHLOROETHENE	µg/L	20	21.1	106	1	31	65-127
TOLUENE	µg/L	20	18.6	93	0	35	65-134
TRICHLOROETHENE	µg/L	20	19.8	99	1	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:	35892
Project ID:	JPL	Project No:	04-4428.10	Analysis Date:	11/01/03
		Sample Matrix:	Water	Analysis Time:	04:33
Sample ID:	03G4668-MB-01	Batch No:	03G4668	Instrument ID:	GC/MS: A
Lab Sample ID:	03G4668-MB-01	Data File Name:	G4668K01	GC Column:	HP-VOC
		Heated Purge: (Y/N)	N	Column ID:	0.20 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	03G4668-LCS-01	03G4668-LCS-01	Lab Control Spike	G4668L01	11/01/03	00:30
2	MW-21-4MS	03-5892-5MS	Matrix Spike	G4668M01	11/01/03	01:57
3	MW-21-4MSD	03-5892-5MSD	Matrix Spike Duplicate	G4668N01	11/01/03	02:23
4	TB-7-10-30-03	03-5892-7	Field Sample	5892-07	11/01/03	05:25
5	EB-7-10-30-03	03-5892-1	Field Sample	5892-01	11/01/03	05:51
6	MW-21-4	03-5892-5	Field Sample	5892-05	11/01/03	06:17
7	MW-21-3	03-5892-4	Field Sample	5892-04	11/01/03	06:43
8	MW-21-5	03-5892-6	Field Sample	5892-06	11/01/03	07:09
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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:	35892
Project ID:	JPL	Project No:	04-4428.10	Analysis Date:	11/05/03
		Sample Matrix:	Water	Analysis Time:	00:45
Sample ID:	03G4695-MB-01	Batch No:	03G4695	Instrument ID:	GC/MS: A
Lab Sample ID:	03G4695-MB-01	Data File Name:	G4695K01	GC Column:	HP-VOC
		Heated Purge: (Y/N)	N	Column ID:	0.20 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	03G4695-LCS-01	03G4695-LCS-01	Lab Control Spike	G4695L01	11/04/03	20:47
2	MW-3-4MS	03-5923-3MS	Matrix Spike	G4695M01	11/04/03	21:38
3	MW-3-4MSD	03-5923-3MSD	Matrix Spike Duplicate	G4695N01	11/04/03	22:04
4	MW-21-1	03-5892-2	Field Sample	5892-02A	11/05/03	03:01
5	MW-21-2	03-5892-3	Field Sample	5892-03A	11/05/03	03:27
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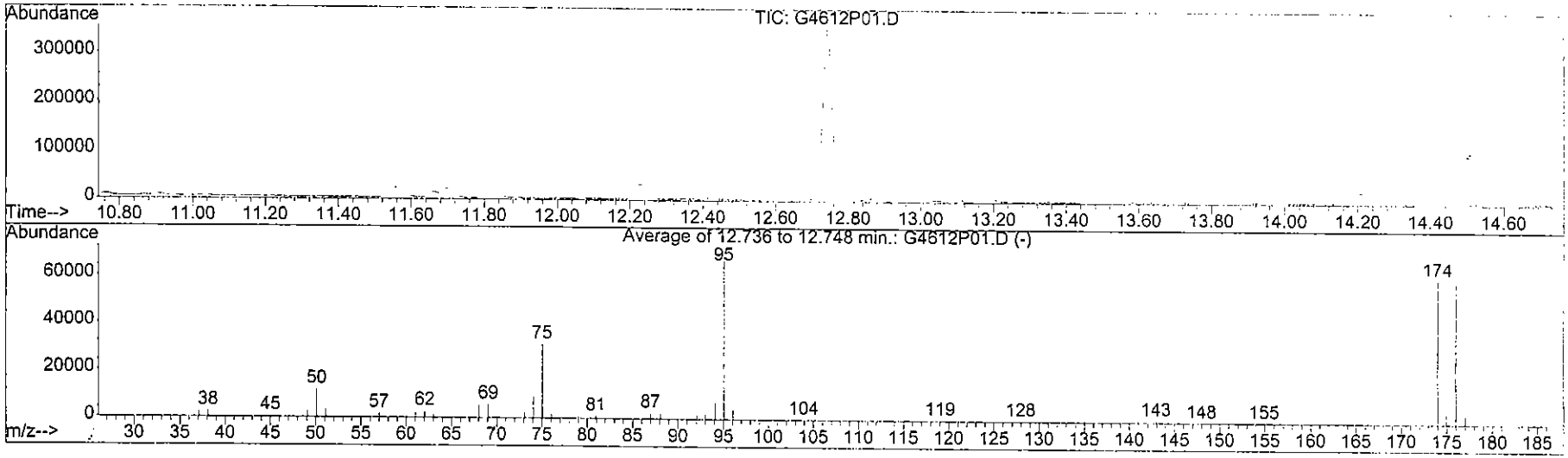
23						
24						
25						

Data File : C:\MSDCHEM\1\DATA\03G4612\G4612P01.D
Acq On : 21 Oct 2003 9:14 am
Sample : ##03g4565,w 50ng
Misc :
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2

Vial: 1
Operator: zou
Inst : GCMS-A
Multiplr: 1.00



Spectrum Information: Average of 12.736 to 12.748 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	11745	PASS
75	95	30	60	45.0	31162	PASS
95	95	100	100	100.0	69181	PASS
96	95	5	9	6.6	4558	PASS
173	174	0.00	2	0.5	275	PASS
174	95	50	100	87.4	60456	PASS
175	174	5	9	7.7	4634	PASS
176	174	95	101	98.1	59312	PASS
177	176	5	9	7.0	4135	PASS

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name : APPLIED P & CH LAB Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 035892

Lab File ID: G 4612 P01 BFB Injection Date: 10/21/03

Instrument ID: GCMS-A BFB Injection Time: 0914

GC Column: HP-VOC ID: 0.20 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.0
75	30.0 - 60.0% of mass 95	45.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 100.0% of mass 95	87.4
175	5.0 - 9.0% of mass 174	6.7 (7.7)1
176	95.0 - 101.0% of mass 174	85.7 (98.1)1
177	5.0 - 9.0% of mass 176	6.0 (7.0)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	3-A0003	3-A0003.D	10/21/03	1005
02	VSTD002	3-0002	3-0002.D	10/21/03	1031
03	VSTD010	3-0010	3-0010.D	10/21/03	1056
04	VSTD020	3-0020	3-0020.D	10/21/03	1122
05	VSTD040	3-0040	3-0040.D	10/21/03	1147
06	VSTD060	3-0060	3-0060.D	10/21/03	1214
07					
08					
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11					
12					
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18					
19					
20					
21					
22					

INITIAL CALIBRATION SUMMARY

Method File	e524a003		
Last Calibration Update	Mon Oct 27 13:56:31 2003		
Level 1 File Name	3-A0003.D	**Level 1 ID**	.3
Level 2 File Name	3-002.D	**Level 2 ID**	2
Level 3 File Name	3-0010.D	**Level 3 ID**	10
Level 4 File Name	3-0020.D	**Level 4 ID**	20
Level 5 File Name	3-0040.D	**Level 5 ID**	40
Level 6 File Name	3-0060.D	**Level 6 ID**	60
Level 7 File Name	3-0020.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	920067	916201	919392	955116	907151	1006211	-1	------	------	------	------
3 di-Cl-di-F-methane	6437	39097	199979	303885	731076	1099511	-1	0.0000	0.2011	0.0000	0.1330
4 Chloromethane	6136	37417	181676	348991	739859	1132557	-1	0.0000	0.1997	0.0000	0.0704
2 F114	1527	19306	101058	155932	367886	551592	-1	0.0028	0.0932	0.0000	0.9919
5 vinyl chloride	4876	33446	161213	285451	640709	982033	-1	0.0000	0.1705	0.0000	0.0717
6 bromomethane	2539	18408	87613	168214	383891	601141	-1	0.0000	0.0969	0.0000	0.0659
7 chloroethane	2197	17752	90280	159905	376464	536590	-1	0.0000	0.0918	0.0000	0.1013
8 tri-Cl-F-methane	8394	56082	277768	461283	1030751	1532166	-1	0.0000	0.2819	0.0000	0.0992
91 Acetonitrile X10	10689	82041	382813	794170	1713507	2428244	-1	0.0000	0.0431	0.0000	0.0662
9 acrolein X10	5645	40130	201945	381523	807796	1232252	-1	0.0000	0.0212	0.0000	0.0467
11 acetone X10	-1	64324	288996	538495	1267205	1816586	-1	0.0000	0.0319	0.0000	0.0947
12 ethyl ether X5	13693	93915	436367	874255	1704647	2654028	-1	0.0000	0.0950	0.0000	0.0552
13 11-dichloroethene	6637	46215	229524	410040	877445	1367991	-1	0.0000	0.2376	0.0000	0.0605
14 Iodomethane	3461	29384	183879	356970	751141	1123042	-1	0.0038	0.1913	0.0000	0.9951
15 F-113	4492	28088	146108	224035	516639	784890	-1	0.0000	0.1441	0.0000	0.1231
16 acrylonitrile X10	10574	78358	419836	794346	1709905	2532493	-1	0.0000	0.0429	0.0000	0.0731
17 carbon disulfide	13839	85463	420250	772812	1671671	2561651	-1	0.0000	0.4524	0.0000	0.0750
94 Isopropyl Alcoholx10	331	1284	1238	28714	240070	128634	-1	0.0000	0.0020	0.0000	1.1427
18 methylene chloride	10278	48191	203033	407143	804880	1192483	-1	0.0203	0.2012	0.0000	0.9947
19 t-12-di-Cl-ethene	6615	45733	217854	407874	774111	1126298	-1	0.0000	0.2233	0.0000	0.1039
20 t-Bu-Me-ether	9529	70095	362056	751228	1592599	2437498	-1	0.0000	0.3929	0.0000	0.0773
95 Tert butyl alcoholx10	1332	4624	88338	76985	452680	251872	-1	0.0000	0.0066	0.0000	0.6496

94 allyl chloride	10689	82041	426268	794170	1724483	2428244	-1	0.0000	0.4409	0.0000	0.0706
21 11-dichloroethane	10035	71189	342138	689918	1398310	2101878	-1	0.0000	0.3698	0.0000	0.0415
97 propionitrile	103	3119	18745	29270	62391	109975	-1	0.0000	0.0176	0.0000	0.1055
22 c-12-di-Cl-ethene	6459	46844	225560	436935	845644	1210430	-1	0.0000	0.2329	0.0000	0.0801
23 22-Dichloropropane	5693	38859	218612	456844	979998	1513030	-1	0.0000	0.2360	0.0000	0.1011
24 Br-Cl-methane	3294	23046	109590	215148	438926	655419	-1	0.0000	0.1177	0.0000	0.0523
25 chloroform	13164	80631	375460	741683	1492648	2229387	-1	0.0000	0.4157	0.0000	0.0920
26 tetrahydrofuranX5	4044	28808	169729	317711	726346	1114014	-1	0.0000	0.0346	0.0000	0.1155
98 Diisopropyl ether	16931	136442	688556	1387177	2723439	4088155	-1	0.0000	0.7101	0.0000	0.0772
27 Di-Br-F-Me (surr)	6137	45047	218874	439096	880145	1314263	-1	0.0000	0.2348	0.0000	0.0481
99 ETBE	9591	74005	411030	879689	1934215	2984281	-1	0.0000	0.4477	0.0000	0.1468
29 1,2-Di-Cl-Et-d4 (S1)	5167	39287	192209	385356	801084	1206050	-1	0.0000	0.2091	0.0000	0.0418
30 12-dichloroethane	2318	14864	77221	146461	303955	463659	-1	0.0000	0.0811	0.0000	0.0434
32 vinyl acetate X5	36279	291623	1683396	3463521	7301957	11062661	-1	0.0000	0.3465	0.0000	0.1412
92 Nitro Methane(x10)	1574	10571	358371	95786	134103	298076	-1	0.0000	0.0117	0.0000	1.3083
33 2-butanoneMEK X10	14739	98541	459782	956754	2014463	3034414	-1	0.0000	0.0522	0.0000	0.0453
93 Ethyl Acetate x2	6463	37342	237607	465630	1199719	1687653	-1	0.0000	0.1292	0.0000	0.1682
34 111-trichloroethane	9393	63933	333945	629233	1352461	2070811	-1	0.0000	0.3496	0.0000	0.0454
35 11-Di-Cl-propene	6749	49362	260487	484228	1020849	1516179	-1	0.0000	0.2639	0.0000	0.0625
36 benzene	23536	167998	811668	1581767	3067808	4519766	-1	0.0000	0.8457	0.0000	0.0673
37 CCl4	9052	59763	312695	555550	1228562	1842053	-1	0.0000	0.3215	0.0000	0.0608

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
100 Isobutyl alcoholx10	2932	21047	112031	247109	552842	880424	-1	------	------	------	------
38 thiophene	10222	83170	428533	868274	1718044	2554816	-1	0.0000	0.4403	0.0000	0.0870
39 12-di-Cl-propane	4815	37555	178169	370946	752605	1124998	-1	0.0000	0.1935	0.0000	0.0628
40 trichloroethene	7696	50098	255616	501517	1020048	1520360	-1	0.0000	0.2710	0.0000	0.0423
41 dibromomethane	3770	26033	124373	247759	508912	747601	-1	0.0000	0.1346	0.0000	0.0506
101 TAME	7879	59032	335735	716981	1622049	2525816	-1	-0.0345	0.4304	0.0000	0.9963
42 Br-di-Cl-methane	9392	56733	274489	546104	1129675	1703118	-1	0.0000	0.3046	0.0000	0.0694
43 Me-methacrylate	1457	14747	87065	188318	435160	662734	-1	-0.0095	0.1138	0.0000	0.9946
44 2-ClEt-Vi-ether10	4887	45249	275793	591932	1294105	1950851	-1	-0.0367	0.0357	0.0000	0.9955
45 c-13-di-Cl-propene	6769	54923	293425	608486	1252896	1891415	-1	0.0000	0.3069	0.0000	0.1096
46 t-1,3-dichloropropene	5153	40425	231011	505285	1067475	1638452	-1	-0.0097	0.2792	0.0000	0.9968
47 Chlorobezene-d5	745928	732691	724575	731811	659336	705610	-1	0.0000	1.0000	0.0000	0.0000

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
48 112-tri-Cl-Et	4896	31570	158039	308164	644393	936372	-1	0.0000	0.2214	0.0000	0.0533
49 13-di-Cl-propane	7569	48826	251096	479955	958048	1392110	-1	0.0000	0.3397	0.0000	0.0396
50 Et methacrylate	2785	29334	189197	404574	897662	1374874	-1	-0.0430	0.3345	0.0000	0.9960
51 di-Br-Cl-methane	7359	44728	219307	430191	895491	1332246	-1	0.0000	0.3141	0.0000	0.0548
52 bromoform	4029	26611	127022	257402	537161	813031	-1	0.0000	0.1848	0.0000	0.0599
53 1,4-dichlorobutane-2	7248	52525	270048	530472	1118631	1708578	-1	0.0000	0.3742	0.0000	0.0947
54 MIBK	2727	20267	114402	244409	567049	883730	-1	-0.0334	0.2144	0.0000	0.9947
55 toluene-d8	22176	162055	811859	1597728	3175057	4699033	-1	0.0000	1.1038	0.0000	0.0617
56 toluene	32453	204349	957684	1867212	3679239	5453434	-1	0.0000	1.3542	0.0000	0.0513
57 2-hexanone X5	8296	70148	400071	806303	1789801	2714840	-1	-0.0660	0.1318	0.0000	0.9958
58 12-dibromoethane	4393	32436	159989	322735	683020	1029927	-1	0.0000	0.2269	0.0000	0.0954
59 tetra-Cl-ethene	8603	59173	281865	498130	1001817	1436032	-1	0.0000	0.3728	0.0000	0.0719
60 chlorobenzene	21200	144953	676974	1307160	2492370	3536493	-1	0.0000	0.9241	0.0000	0.0576
61 1112-tetra-Cl-Et	7365	51367	249086	487380	969491	1437439	-1	0.0000	0.3439	0.0000	0.0403
62 1,4-Dichlorobenzene-d4	436784	441685	431820	433290	398842	428493	-1	0.0000	1.0000	0.0000	0.0000
63 1-chlorohexane	3125	20185	105292	181129	379300	546400	-1	0.0000	0.2284	0.0000	0.0636
64 Et-Bz	31613	225200	1128701	2162672	4307205	6378701	-1	0.0000	2.5420	0.0000	0.0404
65 m/p-Xylenes X2	51588	364290	1753788	3322945	6407191	9314343	-1	0.0000	1.9663	0.0000	0.0463
66 styrene	19899	158986	755749	1448349	2712603	3842415	-1	0.0000	1.6558	0.0000	0.0748
67 o-xylene	25030	181225	888564	1715323	3289680	4761198	-1	0.0000	1.9855	0.0000	0.0445
68 1122-Tetra-Cl-Et	4786	35408	176142	333638	679431	1005365	-1	0.0000	0.3960	0.0000	0.0524
69 123-tri-Cl-Pr	1463	11857	58506	111098	231129	345542	-1	0.0000	0.1315	0.0000	0.0844
70 4-Br-1-F-Bz (S3)	9236	60769	292727	571173	1114624	1638683	-1	0.0000	0.6776	0.0000	0.0376
71 isopropylbenzene	31809	228075	1204677	2257352	4576796	6821750	-1	0.0000	2.6544	0.0000	0.0592
72 bromobenzene	8279	62596	299551	577972	1123002	1610222	-1	0.0000	0.6719	0.0000	0.0539
92 t-1,4-dichloro-2-butene	370	3850	26890	58909	138278	214154	-1	-0.0139	0.0860	0.0000	0.9950
73 n-propylbenzene	9091	70513	355352	656540	1290074	1877926	-1	0.0000	0.7686	0.0000	0.0653
74 2-Cl-Toluene	7570	61543	297725	558317	1084812	1601091	-1	0.0000	0.6518	0.0000	0.0707
75 4-Cl-Toluene	9182	64367	296683	566381	1062470	1497703	-1	0.0000	0.6698	0.0000	0.0750
76 135-tri-Me-Benzene	28727	213694	1063069	2008540	3906361	5670674	-1	0.0000	2.3409	0.0000	0.0517
77 4-iso-Pr-toluene	31720	226621	1149787	2111126	4215398	6174914	-1	0.0000	2.5215	0.0000	0.0463
78 124-tri-Me-Benzene	29971	222021	1078747	2103275	4147713	6124395	-1	0.0000	2.4513	0.0000	0.0448
79 tert-butylbenzene	24279	177466	929162	1736357	3598467	5289165	-1	0.0000	2.0550	0.0000	0.0671

80 13-DCB	19447	131664	611576	1176380	2227519	3166301	-1	0.0000	1.3960	0.0000	0.0684
81 sec-butylbenzene	38627	268975	1387531	2530666	5231475	7732088	-1	0.0000	3.0688	0.0000	0.0475
82 14-DCB	21754	133604	619366	1184125	2334471	3417867	-1	0.0000	1.4610	0.0000	0.0806
83 Cl-benzyl	871	5857	44122	106539	268318	431461	-1	-0.0412	0.1731	0.0000	0.9920
84 12-DCB	17721	121367	559240	1055514	2046326	2953834	-1	0.0000	1.2785	0.0000	0.0657
85 n-butylbenzene	8164	59910	307483	567085	1127859	1596385	-1	0.0000	0.6659	0.0000	0.0599
86 12-diBr-2-Cl-Pra	1032	7477	40003	83208	177685	276212	-1	0.0000	0.0951	0.0000	0.1330
87 124-tri-Cl-Bz	9169	66792	354819	702123	1402301	2085639	-1	0.0000	0.7963	0.0000	0.0771
88 naphthalene	11079	87277	545491	1159824	2506296	3927146	-1	-0.1762	1.5623	0.0000	0.9976
89 hx-Cl-butadiene	6445	40287	205532	360400	746186	1096494	-1	0.0000	0.4557	0.0000	0.0644
90 123-Tri-Cl-Bz	7754	57941	307963	600915	1229181	1798500	-1	0.0000	0.6874	0.0000	0.0870

Response F or Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	r²
1)	I	1	Fluorobenzene	ISTD								
2)		3	di-Cl-di-F-m	0.233	0.213	0.218	0.159	0.201	0.182	0.201	13.30	
3)	p	4	Chloromethan	0.222	0.204	0.198	0.183	0.204	0.188	0.200	7.04	
4)		2	F114	0.055	0.105	0.110	0.082	0.101	0.091	0.091	22.20	0.990
5)	C	5	vinyl chlori	0.177	0.183	0.175	0.149	0.177	0.163	0.171	7.17	
6)		6	bromomethane	0.092	0.100	0.095	0.088	0.106	0.100	0.097	6.59	
7)		7	chloroethane	0.080	0.097	0.098	0.084	0.104	0.089	0.092	10.13	
8)		8	tri-Cl-F-met	0.304	0.306	0.302	0.241	0.284	0.254	0.282	9.92	
9)		91	Acetonitrile		0.045	0.042	0.042	0.047	0.040	0.043	6.62	
10)		9	acrolein	0.020	0.022	0.022	0.020	0.022	0.020	0.021	4.67	
11)		11	acetone X		0.035	0.031	0.028	0.035	0.030	0.032	9.47	
12)		12	ethyl ether	0.099	0.103	0.095	0.092	0.094	0.088	0.095	5.52	
13)	M, C13		11-dichloroe	0.240	0.252	0.250	0.215	0.242	0.227	0.238	6.05#	
14)		14	Iodomethane	0.125	0.160	0.200	0.187	0.207	0.186	0.178	16.98	0.995
15)		15	F-113	0.163	0.153	0.159	0.117	0.142	0.130	0.144	12.31	
16)		16	acrylonitril	0.038	0.043	0.046	0.042	0.047	0.042	0.043	7.31	
17)		17	carbon disul	0.501	0.466	0.457	0.405	0.461	0.424	0.452	7.50	
18)		94	Isopropyl Al	0.001	0.001	0.000	0.002	0.007	0.002	0.002	114.27	
19)		18	methylene ch	0.372	0.263	0.221	0.213	0.222	0.198	0.248	26.04	0.995
20)		19	t-12-di-Cl-e	0.240	0.250	0.237	0.214	0.213	0.187	0.223	10.39	
21)		20	t-Bu-Me-ethe	0.345	0.383	0.394	0.393	0.439	0.404	0.393	7.73	
22)		95	Tert butyl a		0.003	0.010	0.004	0.012	0.004	0.007	64.96	
23)		94	allyl chlori		0.448	0.464	0.416	0.475	0.402	0.441	7.06	
24)	p	21	11-dichloroe	0.364	0.389	0.372	0.361	0.385	0.348	0.370	4.15	
25)		97	propionitril		0.017	0.020	0.015	0.017	0.018	0.018	10.55	
26)		22	c-12-di-Cl-e	0.234	0.256	0.245	0.229	0.233	0.200	0.233	8.01	
27)		23	22-Dichlorop	0.206	0.212	0.238	0.239	0.270	0.251	0.236	10.11	
28)		24	Br-Cl-methan	0.119	0.126	0.119	0.113	0.121	0.109	0.118	5.23	

(#) = Out of Range

1139

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

		Compound	.3	2	10	20	40	60	Avg	%RSD	
29)	C	25 chloroform	0.477	0.440	0.408	0.388	0.411	0.369	0.416	9.20	
30)		26 tetrahydrofu	0.029	0.031	0.037	0.033	0.040	0.037	0.035	11.55	
31)		98 Diisopropyl	0.613	0.745	0.749	0.726	0.751	0.677	0.710	7.72	
32)	S	27 Di-Br-F-Me (		0.246	0.238	0.230	0.243	0.218	0.235	4.81	
33)		99 ETBE	0.347	0.404	0.447	0.461	0.533	0.494	0.448	14.68	
34)	S	29 1,2-Di-Cl-Et		0.214	0.209	0.202	0.221	0.200	0.209	4.18	
35)		30 12-dichloroe	0.084	0.081	0.084	0.077	0.084	0.077	0.081	4.34	
36)		32 vinyl acetat	0.263	0.318	0.366	0.363	0.402	0.366	0.346	14.12	
37)		92 Nitro Methan		0.006	0.039	0.005	0.004	0.005	0.012	130.83	
38)		33 2-butanoneME	0.053	0.054	0.050	0.050	0.056	0.050	0.052	4.53	
39)		93 Ethyl Acetat	0.117	0.102	0.129	0.122	0.165	0.140	0.129	16.82	
40)		34 111-trichlor	0.340	0.349	0.363	0.329	0.373	0.343	0.350	4.54	
41)		35 11-Di-Cl-pro	0.245	0.269	0.283	0.253	0.281	0.251	0.264	6.25	
42)	M	36 benzene	0.853	0.917	0.883	0.828	0.845	0.749	0.846	6.73	
43)		37 CCl4	0.328	0.326	0.340	0.291	0.339	0.305	0.321	6.08	
44)		100 Isobutyl al	0.011	0.011	0.012	0.013	0.015	0.015	0.013	13.92	
45)		38 thiophene	0.370	0.454	0.466	0.455	0.473	0.423	0.440	8.70	
46)	C	39 12-di-Cl-pro	0.174	0.205	0.194	0.194	0.207	0.186	0.194	6.28#	
47)	M	40 trichloroeth	0.279	0.273	0.278	0.263	0.281	0.252	0.271	4.23	
48)		41 dibromometha	0.137	0.142	0.135	0.130	0.140	0.124	0.135	5.06	
49)		101 TAME	0.285	0.322	0.365	0.375	0.447	0.418	0.369	16.15	0.995
50)		42 Br-di-Cl-met	0.340	0.310	0.299	0.286	0.311	0.282	0.305	6.94	
51)		43 Me-methacryl	0.053	0.080	0.095	0.099	0.120	0.110	0.093	25.59	0.994
52)		44 2-ClEt-Vi-et	0.018	0.025	0.030	0.031	0.036		0.028	24.68	0.997
53)		45 c-13-di-Cl-p	0.245	0.300	0.319	0.319	0.345	0.313	0.307	10.96	
54)		46 t-1,3-dichlo	0.187	0.221	0.251	0.265	0.294	0.271	0.248	15.58	0.997
55)	I	47 Chlorobezene-d5	----------	ISTD	----------						
56)		48 112-tri-Cl-E	0.219	0.215	0.218	0.211	0.244	0.221	0.221	5.33	

(#) = Out of Range

1140

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	
57)		49	13-di-Cl-pro	0.338	0.333	0.347	0.328	0.363	0.329	0.340	3.96	
58)		50	Et methacryl	0.124	0.200	0.261	0.276	0.340	0.325	0.255	31.77	0.995
59)		51	di-Br-Cl-met	0.329	0.305	0.303	0.294	0.340	0.315	0.314	5.48	
60)	P	52	bromoform	0.180	0.182	0.175	0.176	0.204	0.192	0.185	5.99	
61)		53	1,4-dichloro	0.324	0.358	0.373	0.362	0.424	0.404	0.374	9.47	
62)		54	MIBK	0.122	0.138	0.158	0.167	0.215	0.209	0.168	22.23	0.992
63)	s	55	toluene-d8	0.991	1.106	1.120	1.092	1.204	1.110	1.104	6.17	
64)	M,C	56	toluene	1.450	1.395	1.322	1.276	1.395	1.288	1.354	5.13	
65)		57	2-hexanone X	0.074	0.096	0.110	0.110	0.136	0.128	0.109	20.41	0.994
66)		58	12-dibromoet	0.196	0.221	0.221	0.221	0.259	0.243	0.227	9.54	
67)		59	tetra-Cl-eth	0.384	0.404	0.389	0.340	0.380	0.339	0.373	7.19	
68)	M,P	60	chlorobenzen	0.947	0.989	0.934	0.893	0.945	0.835	0.924	5.76	
69)		61	1112-tetra-C	0.329	0.351	0.344	0.333	0.368	0.340	0.344	4.03	
70)	I	62	1,4-Dichlorobenzen	----------	----------	ISTD	----------	----------	----------			
71)		63	1-chlorohexa	0.238	0.228	0.244	0.209	0.238	0.213	0.228	6.36	
72)	C	64	Et-Bz	2.413	2.549	2.614	2.496	2.700	2.481	2.542	4.04#	
73)		65	m/p-Xylenes	1.968	2.062	2.031	1.917	2.008	1.811	1.966	4.63	
74)		66	styrene	1.519	1.800	1.750	1.671	1.700	1.495	1.656	7.48	
75)		67	o-xylene	1.910	2.052	2.058	1.979	2.062	1.852	1.985	4.45	
76)	p	68	1122-Tetra-C	0.365	0.401	0.408	0.385	0.426	0.391	0.396	5.24	
77)		69	123-tri-Cl-P	0.112	0.134	0.135	0.128	0.145	0.134	0.131	8.44	
78)	S	70	4-Br-1-F-Bz	0.705	0.688	0.678	0.659	0.699	0.637	0.678	3.76	
79)		71	isopropylben	2.428	2.582	2.790	2.605	2.869	2.653	2.654	5.92	
80)		72	bromobenzene	0.632	0.709	0.694	0.667	0.704	0.626	0.672	5.39	
81)		92	t-1,4-dichlo	0.028	0.044	0.062	0.068	0.087	0.083	0.062	36.62	0.993
82)		73	n-propylben	0.694	0.798	0.823	0.758	0.809	0.736	0.769	6.13	
83)		74	4-Cl Toluene	0.578	0.691	0.664	0.644	0.690	0.626	0.649	6.07	
84)		75	2-Cl Toluene	0.704	0.733	0.731	0.695	0.744	0.677	0.714	3.63	

(5) = 20.07 ng/µL

E524A003.M Mon Oct 27 13:57:07 2003

1141

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

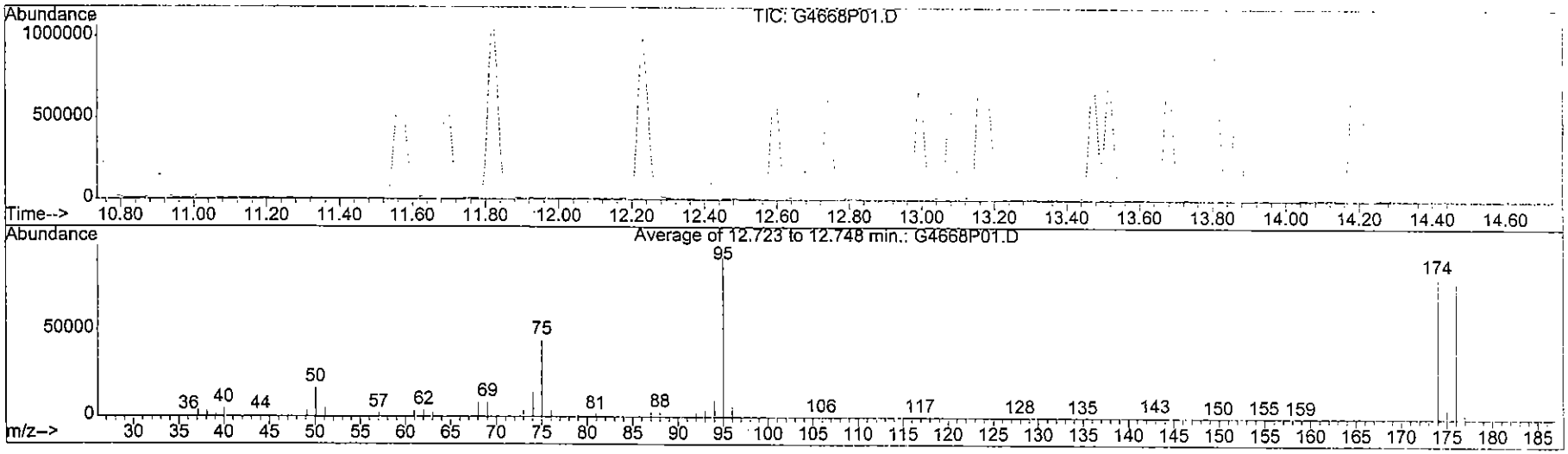
Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

	Compound	.3	2	10	20	40	60	Avg	%RSD	
85)	76 135-tri-Me-B	2.192	2.419	2.462	2.318	2.449	2.206	2.341	5.17	
86)	77 4-iso-Pr-tol	2.421	2.565	2.663	2.436	2.642	2.402	2.522	4.63	
87)	78 124-tri-Me-B	2.287	2.513	2.498	2.427	2.600	2.382	2.451	4.48	
88)	79 tert-butylbe	1.853	2.009	2.152	2.004	2.256	2.057	2.055	6.71	
89)	80 13-DCB	1.484	1.490	1.416	1.357	1.396	1.232	1.396	6.84	
90)	81 sec-butylben	2.948	3.045	3.213	2.920	3.279	3.007	3.069	4.75	
91)	82 14-DCB	1.660	1.512	1.434	1.366	1.463	1.329	1.461	8.06	
92)	83 Cl-benzyl	0.066	0.066	0.102	0.123	0.168	0.168	0.116	39.76	0.989
93)	84 12-DCB	1.352	1.374	1.295	1.218	1.283	1.149	1.278	6.57	
94)	85 n-butylbenze	0.623	0.678	0.712	0.654	0.707	0.621	0.666	5.99	
95)	86 12-diBr-2-Cl	0.079	0.085	0.093	0.096	0.111	0.107	0.095	13.30	
96)	87 124-tri-Cl-B	0.700	0.756	0.822	0.810	0.879	0.811	0.796	7.71	
97)	88 naphthalene	0.845	0.988	1.263	1.338	1.571	1.528	1.256	23.09	0.997
98)	89 hx-Cl-butadi	0.492	0.456	0.476	0.416	0.468	0.426	0.456	6.44	
99)	90 123-Tri-Cl-B	0.592	0.656	0.713	0.693	0.770	0.700	0.687	8.70	

(#) = Out of Range

BFB

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668P01.D Vial: 1
Acq On : 31 Oct 2003 11:34 pm Operator: zou
Sample : ##03g4668,w 50ng Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\826WA015.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 8260



Spectrum Information: Average of 12.723 to 12.748 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.8	16784	PASS
75	95	30	60	46.9	44300	PASS
95	95	100	100	100.0	94537	PASS
96	95	5	9	6.4	6081	PASS
173	174	0.00	2	0.4	368	PASS
174	95	50	100	87.1	82313	PASS
175	174	5	9	7.6	6225	PASS
176	174	95	101	96.0	78992	PASS
177	176	5	9	6.5	5134	PASS

G4668P01.D 826WA015.M Mon Nov 03 12:47:28 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:	035892
Project ID:	JPL	BFB Inj. Date:	10/31/03	Batch No:	03G4668
		BFB Inj. Time:	23:34	Sequence No:	03G4668
Project No:	04-4428.10	Instrument ID:	A	GC Column:	HP-VOC
Data File Name:	G4668P01	Heated Purge: (Y/N)	N	Column ID:	0.20 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	03G4668-CCV-01	03G4668-CCV-01	G4668Q01	11/01/03	00:01
2	03G4668-LCS-01	03G4668-LCS-01	G4668L01	11/01/03	00:30
3	MW-21-4MS	03-5892-5MS	G4668M01	11/01/03	01:57
4	MW-21-4MSD	03-5892-5MSD	G4668N01	11/01/03	02:23
5	03G4668-MB-01	03G4668-MB-01	G4668K01	11/01/03	04:33
6	TB-7-10-30-03	03-5892-7	5892-07	11/01/03	05:25
7	EB-7-10-30-03	03-5892-1	5892-01	11/01/03	05:51
8	MW-21-4	03-5892-5	5892-05	11/01/03	06:17
9	MW-21-3	03-5892-4	5892-04	11/01/03	06:43
10	MW-21-5	03-5892-6	5892-06	11/01/03	07:09
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Continuing Calibration Concentration Summary

Data File G4668Q01
Method File E524A003

Compound Name	Amount	Actual	Units	%Dev	Target Response
1 Fluorobenzene	10	10.00	ppb	0.00	651407
3 di-Cl-di-F-methane	20	19.02	ppb	4.88	249239
4 Chloromethane	20	13.19	ppb	34.05	171595
2 F114	20	18.83	ppb	5.83	116153
5 vinyl chloride	20	16.99	ppb	15.03	188773
6 bromomethane	20	8.19	ppb	59.05	51670
7 chloroethane	20	16.36	ppb	18.19	97875
8 tri-Cl-F-methane	20	22.85	ppb	14.27	419708
91 Acetonitrile X10	200	166.60	ppb	16.70	467583
9 acrolein X10	200	166.23	ppb	16.89	229128
11 acetone X10	200	169.46	ppb	15.27	352670
12 ethyl ether X5	100	87.64	ppb	12.36	542391
13 11-dichloroethene	20	19.77	ppb	1.13	305995
14 Iodomethane	20	7.31	ppb	63.46	93519
15 F-113	20	21.03	ppb	5.15	197406
16 acrylonitrile X10	200	161.70	ppb	19.15	451846
17 carbon disulfide	20	16.39	ppb	18.03	483110
94 Isopropyl Alcoholx10	200	556.81	ppb	178.40	74261
18 methylene chloride	20	17.85	ppb	10.73	247177
19 t-12-di-Cl-ethene	20	18.61	ppb	6.97	270591
20 t-Bu-Me-ether	20	19.71	ppb	1.47	504363
95 Tert butyl alcoholx10	200	344.39	ppb	72.19	147205
94 allyl chloride	20	11.75	ppb	41.27	337380
21 11-dichloroethane	20	18.56	ppb	7.22	446998
97 propionitrile	20	15.77	ppb	21.14	18112
22 c-12-di-Cl-ethene	20	18.59	ppb	7.06	281986
23 22-Dichloropropane	20	21.02	ppb	5.10	323143
24 Br-Cl-methane	20	18.09	ppb	9.57	138714
25 chloroform	20	18.59	ppb	7.05	503399
26 tetrahydrofuranX5	100	83.18	ppb	16.82	187715
98 Diisopropyl ether	20	18.21	ppb	8.95	842401
27 Di-Br-F-Me (surr)	20	19.48	ppb	2.60	297952
99 ETBE	20	20.66	ppb	3.32	602649
29 1,2-Di-Cl-Et-d4 (S1)	20	19.45	ppb	2.75	264980
30 12-dichloroethane	20	19.65	ppb	1.75	103748
32 vinyl acetate X5	100	82.27	ppb	17.73	1856860
92 Nitro Methane(x10)	200	91.65	ppb	54.17	69726
33 2-butanoneMEK X10	200	173.78	ppb	13.11	590609
93 Ethyl Acetate x2	40	33.98	ppb	15.04	285982
34 111-trichloroethane	20	21.61	ppb	8.05	492110
35 11-Di-Cl-propene	20	20.99	ppb	4.95	360774
36 benzene	20	18.26	ppb	8.71	1005846
37 CCl4	20	23.34	ppb	16.71	488757

Compound Name	Amount	Actual	Units	%Dev	Target Response
100 Isobutyl alcoholx10	200	198.71	ppb	0.64	166222
38 thiophene	20	18.85	ppb	5.73	540721
39 12-di-Cl-propane	20	17.95	ppb	10.24	226310
40 trichloroethene	20	19.67	ppb	1.66	347140
41 dibromomethane	20	18.63	ppb	6.85	163375
101 TAME	20	17.98	ppb	10.12	481536
42 Br-di-Cl-methane	20	18.95	ppb	5.26	376000
43 Me-methacrylate	20	17.09	ppb	14.54	120455
44 2-ClEt-Vi-ether10	200	20.12	ppb	89.94	22974
45 c-13-di-Cl-propene	20	19.20	ppb	4.01	383776
46 t-1,3-dichloropropene	20	18.56	ppb	7.21	331170
47 Chlorobezene-d5	10	10.00	ppb	0.00	500092
48 112-tri-Cl-Et	20	18.32	ppb	8.40	202831
49 13-di-Cl-propane	20	18.61	ppb	6.97	316035
50 Et methacrylate	20	17.18	ppb	14.11	265860

Compound Name	Amount	Actual	Units	%Dev	Target Response
51 di-Br-Cl-methane	20	19.26	ppb	3.70	302596
52 bromoform	20	19.42	ppb	2.91	179413
53 1,4-dichlorobutane-2	20	18.32	ppb	8.42	342759
54 MIBK	20	15.66	ppb	21.71	151149
55 toluene-d8	20	19.04	ppb	4.78	1051192
56 toluene	20	17.87	ppb	10.64	1210315
57 2-hexanone X5	100	82.11	ppb	17.89	508188
58 12-dibromoethane	20	18.76	ppb	6.18	212891
59 tetra-Cl-ethene	20	20.61	ppb	3.06	384250
60 chlorobenzene	20	18.83	ppb	5.87	869992
61 1112-tetra-Cl-Et	20	19.82	ppb	0.92	340831
62 1,4-Dichlorobenzene-d4	10	10.00	ppb	0.00	306884
63 1-chlorohexane	20	20.15	ppb	0.76	141214
64 Et-Bz	20	19.04	ppb	4.78	1485668
65 m/p-Xylenes X2	40	38.31	ppb	4.23	2311679
66 styrene	20	18.78	PPB	6.08	954459
67 o-xylene	20	19.27	ppb	3.63	1174323
68 1122-Tetra-Cl-Et	20	18.05	ppb	9.75	219343
69 123-tri-Cl-Pr	20	18.94	ppb	5.30	76421
70 4-Br-1-F-Bz (S3)	20	18.86	ppb	5.68	392291
71 isopropylbenzene	20	20.15	ppb	0.76	1641508
72 bromobenzene	20	19.32	ppb	3.40	398342
92 t-1,4-dichloro-2-butene	20	16.88	ppb	15.59	40284
73 n-propylbenzene	20	20.53	ppb	2.66	484282
74 2-Cl-Toluene	20	19.76	ppb	1.22	395184
75 4-Cl-Toluene	20	18.93	ppb	5.34	389124
76 135-tri-Me-Benzene	20	19.88	ppb	0.61	1427948
77 4-iso-Pr-toluene	20	20.32	ppb	1.62	1572738
78 124-tri-Me-Benzene	20	19.43	ppb	2.87	1461323
79 tert-butylbenzene	20	21.05	ppb	5.25	1327467
80 13-DCB	20	18.99	ppb	5.04	813688
81 sec-butylbenzene	20	20.23	ppb	1.16	1905366

82 14-DCB	20	18.45	ppb	7.75	827238
83 Cl-benzyl	20	14.57	ppb	27.13	64774
84 12-DCB	20	18.96	ppb	5.22	743765
85 n-butylbenzene	20	20.21	ppb	1.06	413048
86 12-diBr-2-Cl-Pra	20	18.84	ppb	5.82	54996
87 124-tri-Cl-Bz	20	19.93	ppb	0.37	486946
88 naphthalene	20	17.22	ppb	13.92	771291
89 hx-Cl-butadiene	20	21.01	ppb	5.03	293734
90 123-Tri-Cl-Bz	20	20.05	ppb	0.26	423006

Average D % 11.894192

Evaluate Continuing Calibration Report

1147

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D Vial: 2
Acq On : 1 Nov 2003 12:01 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1	Fluorobenzene	1.000	1.000	0.0	68	0.00
2		3	di-Cl-di-F-methane	0.201	0.191	5.0	82	0.00
3	p	4	Chloromethane	0.200	0.132	34.0#	49#	0.02
4		2	F114	0.091	0.089	2.2	74	0.00
5	C	5	vinyl chloride	0.171	0.145	15.2	66	0.00
6		6	bromomethane	0.097	0.040	58.8#	31#	0.00
7		7	chloroethane	0.092	0.075	18.5	61	0.00
8		8	tri-Cl-F-methane	0.282	0.322	-14.2	91	0.00
9		91	Acetonitrile X10	0.043	0.036	16.3	59	0.00
10		9	acrolein X10	0.021	0.018	14.3	60	0.00
11		11	acetone X10	0.032	0.027	15.6	65	-0.04
12		12	ethyl ether X5	0.095	0.083	12.6	62	0.00
13	M, C	13	11-dichloroethene	0.238	0.235	1.3	75	0.00
14		14	Iodomethane	0.178	0.072	59.6#	26#	0.00
15		15	F-113	0.144	0.152	-5.6	88	0.00
16		16	acrylonitrile X10	0.043	0.035	18.6	57	-0.01
17		17	carbon disulfide	0.452	0.371	17.9	63	0.00
18		94	Isopropyl Alcoholx10	0.002	0.006	-200.0#	259#	-0.22
19		18	methylene chloride	0.248	0.190	23.4#	61	0.00
20		19	t-12-di-Cl-ethene	0.223	0.208	6.7	66	0.00
21		20	t-Bu-Me-ether	0.393	0.387	1.5	67	0.00
22		95	Tert butyl alcoholx10	0.007	0.011	-57.1#	191	-0.13
23		94	allyl chloride	0.441	0.259	41.3#	42#	0.00
24	p	21	11-dichloroethane	0.370	0.343	7.3	65	0.00
25		97	propionitrile	0.018	0.014	22.2#	62	-0.02
26		22	c-12-di-Cl-ethene	0.233	0.216	7.3	65	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D
Acq On : 1 Nov 2003 12:01 am
Sample : f=1
Misc :
MS Integration Params: Lscint.p

Vial: 2
Operator: zou
Inst : GCMS-A
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
27		23 22-Dichloropropane	0.236	0.248	-5.1	71	0.00
28		24 Br-Cl-methane	0.118	0.106	10.2	64	0.00
29	C	25 chloroform	0.416	0.386	7.2	68	0.00
30		26 tetrahydrofuranX5	0.035	0.029	17.1	59	-0.01
31		98 Diisopropyl ether	0.710	0.647	8.9	61	0.00
32	S	27 Di-Br-F-Me (surr)	0.235	0.229	2.6	68	0.00
33		99 ETBE	0.448	0.463	-3.3	69	0.00
34	S	29 1,2-Di-Cl-Et-d4 (S1)	0.209	0.203	2.9	69	0.00
35		30 12-dichloroethane	0.081	0.080	1.2	71	0.00
36		32 vinyl acetate X5	0.346	0.285	17.6	54	0.00
37		92 Nitro Methane(x10)	0.012	0.005	58.3#	73	-0.05
38		33 2-butanoneMEK X10	0.052	0.045	13.5	62	-0.02
39		93 Ethyl Acetate x2	0.129	0.110	14.7	61	0.00
40		34 111-trichloroethane	0.350	0.378	-8.0	78	0.00
41		35 11-Di-Cl-propene	0.264	0.277	-4.9	75	0.00
42	M	36 benzene	0.846	0.772	8.7	64	0.00
43		37 CCl4	0.321	0.375	-16.8	88	0.00
44		100 Isobutyl alcoholx10	0.013	0.013	0.0	67	0.00
45		38 thiophene	0.440	0.415	5.7	62	0.00
46	C	39 12-di-Cl-propane	0.194	0.174	10.3	61	0.00
47	M	40 trichloroethene	0.271	0.266	1.8	69	0.00
48		41 dibromomethane	0.135	0.125	7.4	66	0.00
49		101 TAME	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50		42 Br-Di-Cl-methane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D Vial: 2
Acq On : 1 Nov 2003 12:01 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53		45	c-13-di-Cl-propene	0.307	0.295	3.9	63	0.00
54		46	t-1,3-dichloropropene	0.248	0.254	-2.4	66	0.00
55	I	47	Chlorobezene-d5	1.000	1.000	0.0	68	0.00
56		48	112-tri-Cl-Et	0.221	0.203	8.1	66	0.00
57		49	13-di-Cl-propane	0.340	0.316	7.1	66	0.00
58		50	Et methacrylate	0.255	0.266	-4.3	66	0.00
59		51	di-Br-Cl-methane	0.314	0.303	3.5	70	0.00
60	P	52	bromoform	0.185	0.179	3.2	70	0.00
61		53	1,4-dichlorobutane-2	0.374	0.343	8.3	65	0.00
62		54	MIBK	0.168	0.151	10.1	62	0.00
63	s	55	toluene-d8	1.104	1.051	4.8	66	0.00
64	M,C	56	toluene	1.354	1.210	10.6	65	0.00
65		57	2-hexanone X5	0.109	0.102	6.4	63	0.00
66		58	12-dibromoethane	0.227	0.213	6.2	66	0.00
67		59	tetra-Cl-ethene	0.373	0.384	-2.9	77	0.00
68	M,P	60	chlorobenzene	0.924	0.870	5.8	67	0.00
69		61	1112-tetra-Cl-Et	0.344	0.341	0.9	70	0.00
70	I	62	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	71	0.00
71		63	1-chlorohexane	0.228	0.230	-0.9	78	0.00
72	C	64	Et-Bz	2.542	2.421	4.8	69	0.00
73		65	m/p-Xylenes X2	1.966	1.883	4.2	70	0.00
74		66	styrene	1.656	1.555	6.1	66	0.00
75		67	o-xylene	1.985	1.913	3.6	68	0.00
76	p	68	1122-Tetra-Cl-Et	0.396	0.357	9.8	66	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D
Acq On : 1 Nov 2003 12:01 am
Sample : f=1
Misc :
MS Integration Params: Lscint.p

Vial: 2
Operator: zou
Inst : GCMS-A
Multiplr: 1.00

1150

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

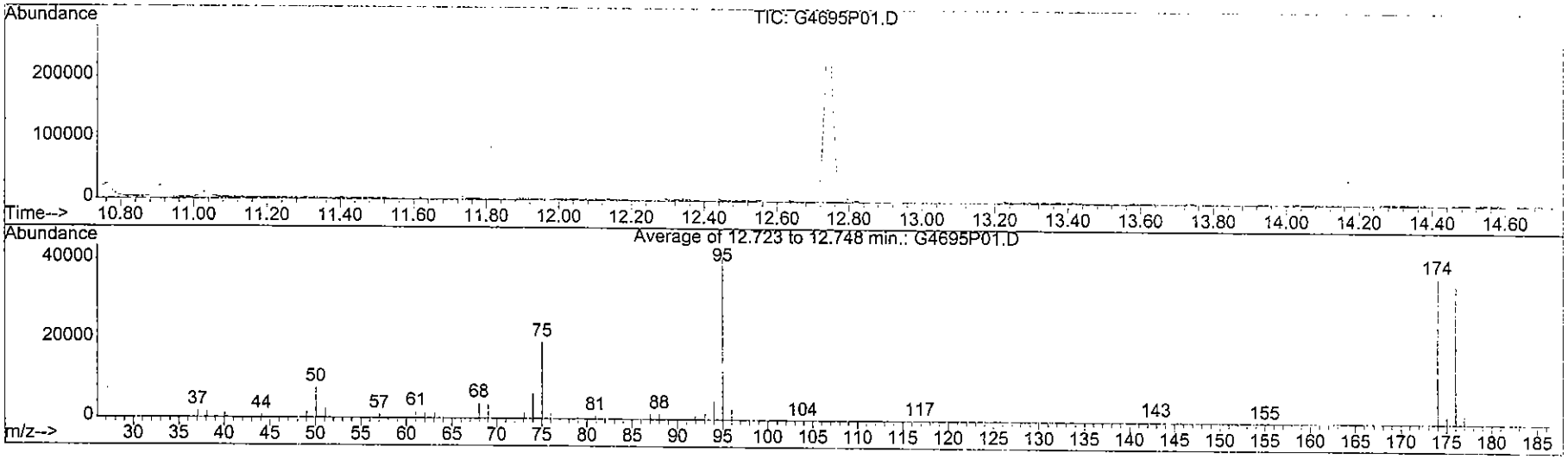
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
77		69 123-tri-Cl-Pr	0.131	0.125	4.6	69	0.00
78	S	70 4-Br-1-F-Bz (S3)	0.678	0.639	5.8	69	0.00
79		71 isopropylbenzene	2.654	2.674	-0.8	73	0.00
80		72 bromobenzene	0.672	0.649	3.4	69	0.00
81		92 t-1,4-dichloro-2-butene	0.062	0.066	-6.5	68	0.00
82		73 n-propylbenzene	0.769	0.789	-2.6	74	0.00
83		74 2-Cl-Toluene	0.652	0.644	1.2	71	0.00
84		75 4-Cl-Toluene	0.670	0.634	5.4	69	0.00
85		76 135-tri-Me-Benzene	2.341	2.327	0.6	71	0.00
86		77 4-iso-Pr-toluene	2.522	2.562	-1.6	74	0.00
87		78 124-tri-Me-Benzene	2.451	2.381	2.9	69	0.00
88		79 tert-butylbenzene	2.055	2.163	-5.3	76	0.00
89		80 13-DCB	1.396	1.326	5.0	69	0.00
90		81 sec-butylbenzene	3.069	3.104	-1.1	75	0.00
91		82 14-DCB	1.461	1.348	7.7	70	0.00
92		83 Cl-benzyl	0.116	0.106	8.6	61	0.00
93		84 12-DCB	1.278	1.212	5.2	70	0.00
94		85 n-butylbenzene	0.666	0.673	-1.1	73	0.00
95		86 12-diBr-2-Cl-Pra	0.095	0.090	5.3	66	0.00
96		87 124-tri-Cl-Bz	0.796	0.793	0.4	69	0.00
97		88 naphthalene	1.256	1.257	-0.1	67	0.00
98		89 hx-Cl-butadiene	0.456	0.479	-5.0	82	0.00
99		90 123-Tri-Cl-Bz	0.687	0.689	-0.3	70	0.00

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

BFB

Data File : C:\MSDCHEM\1\DATA\03G4695\G4695P01.D
Acq On : 4 Nov 2003 7:30 pm
Sample : ##03g4695,w 50ng
Misc :
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2

Vial: 1
Operator: zou
Inst : GCMS-A
Multiplr: 1.00



Spectrum Information: Average of 12.723 to 12.748 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.5	7665	PASS
75	95	30	60	46.9	19418	PASS
95	95	100	100	100.0	41379	PASS
96	95	5	9	6.5	2706	PASS
173	174	0.00	2	0.2	69	PASS
174	95	50	100	89.3	36956	PASS
175	174	5	9	6.9	2564	PASS
176	174	95	101	95.8	35407	PASS
177	176	5	9	6.7	2376	PASS

G4695P01.D E524A003.M Wed Nov 05 09:47:17 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:	035892
Project ID:	JPL	BFB Inj. Date:	11/04/03	Batch No:	03G4695
		BFB Inj. Time:	19:30	Sequence No:	03G4695
Project No:	04-4428.10	Instrument ID:	A	GC Column:	HP-VOC
Data File Name:	G4695P01	Heated Purge: (Y/N)	N	Column ID:	0.20 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	03G4695-CCV-01	03G4695-CCV-01	G4695Q01	11/04/03	20:21
2	03G4695-LCS-01	03G4695-LCS-01	G4695L01	11/04/03	20:47
3	MW-3-4MS	03-5923-3MS	G4695M01	11/04/03	21:38
4	MW-3-4MSD	03-5923-3MSD	G4695N01	11/04/03	22:04
5	03G4695-MB-01	03G4695-MB-01	G4695K01	11/05/03	00:45
6	MW-21-1	03-5892-2	5892-02A	11/05/03	03:01
7	MW-21-2	03-5892-3	5892-03A	11/05/03	03:27
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Continuing Calibration Concentration Summary

Data File G4695Q01
Method File E524A003

Compound Name	Amount	Actual	Units	%Dev	Target Response
1 Fluorobenzene	10	10.00	ppb	0.00	715647
3 di-Cl-di-F-methane	20	18.32	ppb	8.41	263659
4 Chloromethane	20	14.84	ppb	25.79	212128
2 F114	20	20.13	ppb	0.65	136252
5 vinyl chloride	20	18.35	ppb	8.23	223982
6 bromomethane	20	12.97	ppb	35.14	89917
7 chloroethane	20	18.93	ppb	5.33	124441
8 tri-Cl-F-methane	20	23.16	ppb	15.80	467277
91 Acetonitrile X10	200	173.45	ppb	13.27	534824
9 acrolein X10	200	188.61	ppb	5.69	285620
11 acetone X10	200	204.06	ppb	2.03	466557
12 ethyl ether X5	100	94.18	ppb	5.82	640344
13 11-dichloroethene	20	21.12	ppb	5.58	358997
14 Iodomethane	20	17.95	ppb	10.26	248423
15 F-113	20	23.42	ppb	17.10	241527
16 acrylonitrile X10	200	172.16	ppb	13.92	528535
17 carbon disulfide	20	17.59	ppb	12.03	569597
94 Isopropyl Alcoholx10	200	273.15	ppb	36.57	40022
18 methylene chloride	20	17.92	ppb	10.41	272482
19 t-12-di-Cl-ethene	20	18.55	ppb	7.27	296333
20 t-Bu-Me-ether	20	20.40	ppb	2.00	573646
95 Tert butyl alcoholx10	200	267.42	ppb	33.71	125580
94 allyl chloride	20	16.95	ppb	15.25	534824
21 11-dichloroethane	20	18.49	ppb	7.54	489410
97 propionitrile	20	16.90	ppb	15.51	21319
22 c-12-di-Cl-ethene	20	18.62	ppb	6.88	310390
23 22-Dichloropropane	20	23.71	ppb	18.56	400452
24 Br-Cl-methane	20	18.32	ppb	8.38	154396
25 chloroform	20	18.92	ppb	5.39	562936
26 tetrahydrofuranX5	100	86.05	ppb	13.95	213358
98 Diisopropyl ether	20	18.40	ppb	8.02	934859
27 Di-Br-F-Me (surr)	20	19.52	ppb	2.40	327993
99 ETBE	20	21.32	ppb	6.59	683011
29 1,2-Di-Cl-Et-d4 (S1)	20	19.66	ppb	1.70	294251
30 12-dichloroethane	20	19.86	ppb	0.69	115209
32 vinyl acetate X5	100	98.45	ppb	1.55	2441215
92 Nitro Methane(x10)	200	77.46	ppb	61.27	64742
33 2-butanoneMEK X10	200	184.36	ppb	7.82	688357
93 Ethyl Acetate x2	40	36.16	ppb	9.60	334336
34 111-trichloroethane	20	22.30	ppb	11.50	557928
35 11-Di-Cl-propene	20	21.00	ppb	4.99	396504
36 benzene	20	18.03	ppb	9.84	1091366
37 CCl4	20	23.68	ppb	18.41	544796

Compound Name	Amount	Actual	Units	%Dev	Target Response
100 Isobutyl alcoholx10	200	205.65	ppb	2.82	188988
38 thiophene	20	18.86	ppb	5.71	594163
39 12-di-Cl-propane	20	17.84	ppb	10.81	247046
40 trichloroethene	20	19.42	ppb	2.90	376585
41 dibromomethane	20	19.18	ppb	4.11	184754
101 TAME	20	18.76	ppb	6.22	553004
42 Br-di-Cl-methane	20	18.93	ppb	5.33	412782
43 Me-methacrylate	20	16.91	ppb	15.45	130856
44 2-ClEt-Vi-ether10	200	140.25	ppb	29.87	332530
45 c-13-di-Cl-propene	20	19.79	ppb	1.05	434597
46 t-1,3-dichloropropene	20	19.14	ppb	4.32	375373
47 Chlorobezene-d5	10	10.00	ppb	0.00	548576
48 112-tri-Cl-Et	20	18.01	ppb	9.97	218688
49 13-di-Cl-propane	20	18.40	ppb	8.01	342797
50 Et methacrylate	20	17.18	ppb	14.09	291715

Compound Name	Amount	Actual	Units	%Dev	Target Response
51 di-Br-Cl-methane	20	19.43	ppb	2.85	334834
52 bromoform	20	20.03	ppb	0.15	203010
53 1,4-dichlorobutane-2	20	18.36	ppb	8.19	376926
54 MIBK	20	16.06	ppb	19.68	170571
55 toluene-d8	20	18.99	ppb	5.03	1150098
56 toluene	20	17.91	ppb	10.45	1330590
57 2-hexanone X5	100	84.37	ppb	15.63	573801
58 12-dibromoethane	20	18.32	ppb	8.39	228023
59 tetra-Cl-ethene	20	21.20	ppb	6.01	433556
60 chlorobenzene	20	18.90	ppb	5.49	958176
61 1112-tetra-Cl-Et	20	20.13	ppb	0.64	379743
62 1,4-Dichlorobenzene-d4	10	10.00	ppb	0.00	322477
63 1-chlorohexane	20	21.32	ppb	6.61	157016
64 Et-Bz	20	20.04	ppb	0.19	1642645
65 m/p-Xylenes X2	40	40.09	ppb	0.22	2542018
66 styrene	20	19.78	PPB	1.08	1056323
67 o-xylene	20	20.39	ppb	1.93	1305271
68 1122-Tetra-Cl-Et	20	18.80	ppb	6.02	240022
69 123-tri-Cl-Pr	20	20.22	ppb	1.10	85725
70 4-Br-1-F-Bz (S3)	20	20.08	ppb	0.41	438854
71 isopropylbenzene	20	21.36	ppb	6.81	1828579
72 bromobenzene	20	20.59	ppb	2.96	446139
92 t-1,4-dichloro-2-butene	20	18.52	ppb	7.38	46886
73 n-propylbenzene	20	21.72	ppb	8.59	538313
74 2-Cl-Toluene	20	20.82	ppb	4.08	437541
75 4-Cl-Toluene	20	19.96	ppb	0.18	431201
76 135-tri-Me-Benzene	20	21.19	ppb	5.95	1599559
77 4-iso-Pr-toluene	20	21.63	ppb	8.13	1758525
78 124-tri-Me-Benzene	20	20.45	ppb	2.23	1616186
79 tert-butylbenzene	20	22.45	ppb	12.27	1488053
80 13-DCB	20	19.98	ppb	0.12	899278
81 sec-butylbenzene	20	21.57	ppb	7.85	2134667

82 14-DCB	20	19.41	ppb	2.95	914520
83 Cl-benzyl	20	18.01	ppb	9.93	87275
84 12-DCB	20	19.90	ppb	0.52	820293
85 n-butylbenzene	20	21.95	ppb	9.73	471270
86 12-diBr-2-Cl-Pra	20	19.97	ppb	0.16	61268
87 124-tri-Cl-Bz	20	20.70	ppb	3.48	531464
88 naphthalene	20	18.24	ppb	8.79	862264
89 hx-Cl-butadiene	20	23.29	ppb	16.45	342236
90 123-Tri-Cl-Bz	20	20.89	ppb	4.44	462990

Average D % 8.4284793

Evaluate Continuing Calibration Report

1156

Data File : C:\MSDCHEM\1\DATA\03G4695\G4695Q01.D Vial: 3
Acq On : 4 Nov 2003 8:21 pm Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1	Fluorobenzene	1.000	1.000	0.0	75	0.00
2		3	di-Cl-di-F-methane	0.201	0.184	8.5	87	0.00
3	p	4	Chloromethane	0.200	0.148	26.0#	61	0.01
4		2	F114	0.091	0.095	-4.4	87	0.00
5	C	5	vinyl chloride	0.171	0.156	8.8	78	0.00
6		6	bromomethane	0.097	0.063	35.1#	53	0.00
7		7	chloroethane	0.092	0.087	5.4	78	0.00
8		8	tri-Cl-F-methane	0.282	0.326	-15.6	101	0.00
9		91	Acetonitrile X10	0.043	0.037	14.0	67	0.00
10		9	acrolein X10	0.021	0.020	4.8	75	0.00
11		11	acetone X10	0.032	0.033	-3.1	87	-0.02
12		12	ethyl ether X5	0.095	0.089	6.3	73	0.00
13	M, C	13	11-dichloroethene	0.238	0.251	-5.5	88	0.00
14		14	Iodomethane	0.178	0.174	2.2	70	0.00
15		15	F-113	0.144	0.169	-17.4	108	0.00
16		16	acrylonitrile X10	0.043	0.037	14.0	67	0.00
17		17	carbon disulfide	0.452	0.398	11.9	74	0.00
18		94	Isopropyl Alcoholx10	0.002	0.003	-50.0#	139	-0.10
19		18	methylene chloride	0.248	0.190	23.4#	67	0.00
20		19	t-12-di-Cl-ethene	0.223	0.207	7.2	73	0.00
21		20	t-Bu-Me-ether	0.393	0.401	-2.0	76	0.00
22		95	Tert butyl alcoholx10	0.007	0.009	-28.6#	163	-0.04
23		94	allyl chloride	0.441	0.374	15.2	67	0.00
24	p	21	11-dichloroethane	0.370	0.342	7.6	71	0.00
25		97	propionitrile	0.018	0.015	16.7	73	-0.01
26		22	c-12-di-Cl-ethene	0.233	0.217	6.9	71	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4695\G4695Q01.D Vial: 3
Acq On : 4 Nov 2003 8:21 pm Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

1157

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
27		23	22-Dichloropropane	0.236	0.280	-18.6	88	0.00
28		24	Br-Cl-methane	0.118	0.108	8.5	72	0.00
29	C	25	chloroform	0.416	0.393	5.5	76	0.00
30		26	tetrahydrofuranX5	0.035	0.030	14.3	67	0.00
31		98	Diisopropyl ether	0.710	0.653	8.0	67	0.00
32	S	27	Di-Br-F-Me (surr)	0.235	0.229	2.6	75	0.00
33		99	ETBE	0.448	0.477	-6.5	78	0.00
34	S	29	1,2-Di-Cl-Et-d4 (S1)	0.209	0.206	1.4	76	0.00
35		30	12-dichloroethane	0.081	0.080	1.2	79	0.00
36		32	vinyl acetate X5	0.346	0.341	1.4	70	0.00
37		92	Nitro Methane(x10)	0.012	0.005	58.3#	68	-0.03
38		33	2-butanoneMEK X10	0.052	0.048	7.7	72	0.00
39		93	Ethyl Acetate x2	0.129	0.117	9.3	72	0.00
40		34	111-trichloroethane	0.350	0.390	-11.4	89	0.00
41		35	11-Di-Cl-propene	0.264	0.277	-4.9	82	0.00
42	M	36	benzene	0.846	0.763	9.8	69	0.00
43		37	CCl4	0.321	0.381	-18.7	98	0.00
44		100	Isobutyl alcoholx10	0.013	0.013	0.0	76	0.00
45		38	thiophene	0.440	0.415	5.7	68	0.00
46	C	39	12-di-Cl-propane	0.194	0.173	10.8	67	0.00
47	M	40	trichloroethene	0.271	0.263	3.0	75	0.00
48		41	dibromomethane	0.135	0.129	4.4	75	0.00
49		101	TAME	0.369	0.386	-4.6	77	0.00
50		42	Br-di-Cl-methane	0.305	0.288	5.6	76	0.00
51		43	Me-methacrylate	0.093	0.091	2.2	69	0.00
52		44	2-ClEt-Vi-ether10	0.028	0.023	17.9	56	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4695\G4695Q01.D
Acq On : 4 Nov 2003 8:21 pm
Sample : f=1
Misc :
MS Integration Params: Lscint.p

Vial: 3
Operator: zou
Inst : GCMS-A
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53		45	c-13-di-Cl-propene	0.307	0.304	1.0	71	0.00
54		46	t-1,3-dichloropropene	0.248	0.262	-5.6	74	0.00
55	I	47	Chlorobezene-d5	1.000	1.000	0.0	75	0.00
56		48	112-tri-Cl-Et	0.221	0.199	10.0	71	0.00
57		49	13-di-Cl-propane	0.340	0.312	8.2	71	0.00
58		50	Et methacrylate	0.255	0.266	-4.3	72	0.00
59		51	di-Br-Cl-methane	0.314	0.305	2.9	78	0.00
60	P	52	bromoform	0.185	0.185	0.0	79	0.00
61		53	1,4-dichlorobutane-2	0.374	0.344	8.0	71	0.00
62		54	MIBK	0.168	0.155	7.7	70	0.00
63	s	55	toluene-d8	1.104	1.048	5.1	72	0.00
64	M,C	56	toluene	1.354	1.213	10.4	71	0.00
65		57	2-hexanone X5	0.109	0.105	3.7	71	0.00
66		58	12-dibromoethane	0.227	0.208	8.4	71	0.00
67		59	tetra-Cl-ethene	0.373	0.395	-5.9	87	0.00
68	M,P	60	chlorobenzene	0.924	0.873	5.5	73	0.00
69		61	1112-tetra-Cl-Et	0.344	0.346	-0.6	78	0.00
70	I	62	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	74	0.00
71		63	1-chlorohexane	0.228	0.243	-6.6	87	0.00
72	C	64	Et-Bz	2.542	2.547	-0.2	76	0.00
73		65	m/p-Xylenes X2	1.966	1.971	-0.3	76	0.00
74		66	styrene	1.656	1.638	1.1	73	0.00
75		67	o-xylene	1.985	2.024	-2.0	76	0.00
76	p	68	1122-Tetra-Cl-Et	0.396	0.372	6.1	72	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

1159

Data File : C:\MSDCHEM\1\DATA\03G4695\G4695Q01.D Vial: 3
Acq On : 4 Nov 2003 8:21 pm Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
77		69 123-tri-Cl-Pr	0.131	0.133	-1.5	77	0.00
78	S	70 4-Br-1-F-Bz (S3)	0.678	0.680	-0.3	77	0.00
79		71 isopropylbenzene	2.654	2.835	-6.8	81	0.00
80		72 bromobenzene	0.672	0.692	-3.0	77	0.00
81		92 t-1,4-dichloro-2-butene	0.062	0.073	-17.7	80	0.00
82		73 n-propylbenzene	0.769	0.835	-8.6	82	0.00
83		74 2-Cl-Toluene	0.652	0.678	-4.0	78	0.00
84		75 4-Cl-Toluene	0.670	0.669	0.1	76	0.00
85		76 135-tri-Me-Benzene	2.341	2.480	-5.9	80	0.00
86		77 4-iso-Pr-toluene	2.522	2.727	-8.1	83	0.00
87		78 124-tri-Me-Benzene	2.451	2.506	-2.2	77	0.00
88		79 tert-butylbenzene	2.055	2.307	-12.3	86	0.00
89		80 13-DCB	1.396	1.394	0.1	76	0.00
90		81 sec-butylbenzene	3.069	3.310	-7.9	84	0.00
91		82 14-DCB	1.461	1.418	2.9	77	0.00
92		83 Cl-benzyl	0.116	0.135	-16.4	82	0.00
93		84 12-DCB	1.278	1.272	0.5	78	0.00
94		85 n-butylbenzene	0.666	0.731	-9.8	83	0.00
95		86 12-diBr-2-Cl-Pra	0.095	0.095	0.0	74	0.00
96		87 124-tri-Cl-Bz	0.796	0.824	-3.5	76	0.00
97		88 naphthalene	1.256	1.337	-6.4	74	0.00
98		89 hx-Cl-butadiene	0.456	0.531	-16.4	95	0.00
99		90 123-Tri-Cl-Bz	0.687	0.718	-4.5	77	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
G4695Q01.D E524A003.M Wed Nov 05 09:51:42 2003

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:	035892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		CCV Data File:	G4668Q01	Instrument ID:	A

Batch No: 03G4668

#	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		11/01/03 00:01	651407	7.65	500092	11.54	306884	13.84
	CCV Upper Limit			1302814	8.15	1000184	12.04	613768	14.34
	CCV Lower Limit			325703	7.15	250046	11.04	153442	13.34
1	03G4668-LCS-01	03G4668-LCS-01	11/01/03 00:30	666078	7.65	506555	11.54	299632	13.84
2	MW-21-4MS	03-5892-5MS	11/01/03 01:57	673322	7.65	513987	11.54	299670	13.84
3	MW-21-4MSD	03-5892-5MSD	11/01/03 02:23	675140	7.64	520697	11.54	311203	13.84
4	03G4668-MB-01	03G4668-MB-01	11/01/03 04:33	722753	7.64	515463	11.54	333547	13.85
5	TB-7-10-30-03	03-5892-7	11/01/03 05:25	726755	7.64	530474	11.54	343041	13.84
6	EB-7-10-30-03	03-5892-1	11/01/03 05:51	709954	7.64	507149	11.54	326524	13.84
7	MW-21-4	03-5892-5	11/01/03 06:17	696005	7.65	503796	11.54	328352	13.85
8	MW-21-3	03-5892-4	11/01/03 06:43	698290	7.65	506683	11.54	327678	13.85
9	MW-21-5	03-5892-6	11/01/03 07:09	700108	7.64	517539	11.54	329059	13.85
10									
11									
12									
13									
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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

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:	035892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		CCV Data File:	G4695Q01	Instrument ID:	A

Batch No: 03G4695

#	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		11/04/03 20:21	715647	7.64	548576	11.54	322477	13.84
	CCV Upper Limit			1431294	8.14	1097152	12.04	644954	14.34
	CCV Lower Limit			357823	7.14	274288	11.04	161238	13.34
1	03G4695-LCS-01	03G4695-LCS-01	11/04/03 20:47	685756	7.65	519448	11.54	308576	13.84
2	MW-3-4MS	03-5923-3MS	11/04/03 21:38	721481	7.64	539715	11.54	317958	13.84
3	MW-3-4MSD	03-5923-3MSD	11/04/03 22:04	741024	7.64	549434	11.54	323585	13.84
4	03G4695-MB-01	03G4695-MB-01	11/05/03 00:45	734496	7.65	540477	11.54	316574	13.84
5	MW-21-1	03-5892-2	11/05/03 03:01	717418	7.65	526152	11.54	312806	13.85
6	MW-21-2	03-5892-3	11/05/03 03:27	715660	7.65	530034	11.54	311377	13.85
7									
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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

A

VOC-117

VOC Analysis General Logbook

lied P & Ch Laboratory
Magnolia Ave. Chino CA 91710
09) 590-1828 Fax: (909) 590-1498

ice # 034695 Batch # 034695 Matrix: W Date: 11/04/03 Analyst: ZOU

IS/Surrogate: GC-1576/1576 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

6 + 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
1	SP	G4695P01	E524A 003	25/25 = 1	/ =	/ =	1		G4695P01	11/04/03	7:30 pm
2	CCV	R01		/ =	/ =	/ =			R01	GC1576	
3	LCS	L01		/ =	/ =	/ =			L01		
4	MS	M01		/ =	/ =	/ =			M01	$5923-03	<2
5	MSD	N01		/ =	/ =	/ =			N01	↓	↓
6	MB	K01		/ =	/ =	/ =			K01		
7	Sample	5923-01		/ =	/ =	/ =			5923-01		<2
8		02		/ =	/ =	/ =			02		
9		03		/ =	/ =	/ =			03		
10		04		/ =	/ =	/ =			04		
11		5892-02A		/ =	/ =	/ =			5892-02A		
12		03A		/ =	/ =	/ =			03A		
13		5896-01A		10.25=100	/ =	/ =	100		5896-01A		
14		5923-05		1/25= 1	/ =	/ =	1		5923-05		
15				/ =	/ =	/ =					
16				/ =	/ =	/ =					
17				/ =	/ =	/ =					
18				/ =	/ =	/ =					
19				/ =	/ =	/ =					
20				/ =	/ =	/ =					
21				/ =	/ =	/ =					
22				/ =	/ =	/ =					
23				/ =	/ =	/ =					
24				/ =	/ =	/ =					
25				/ =	/ =	/ =					
26				/ =	/ =	/ =					
27				/ =	/ =	/ =					
28				/ =	/ =	/ =					
29				/ =	/ =	/ =					
30				/ =	/ =	/ =					
31				/ =	/ =	/ =					
32				/ =	/ =	/ =					
33				/ =	/ =	/ =					
34				/ =	/ =	/ =					
35				/ =	/ =	/ =					
36				/ =	/ =	/ =					
37				/ =	/ =	/ =					
38				/ =	/ =	/ =					
39				/ =	/ =	/ =					
40				/ =	/ =	/ =					
41				/ =	/ =	/ =					
42				/ =	/ =	/ =					
43				/ =	/ =	/ =					
44				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$
S/LCSD	4715	GC-1577	200 × 2.5 /X= 20 ppb		GC-	× /X= ppb
S/MSD	4716/4717	GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly:

11/05

A

VOC-113

VOC Analysis General Logbook

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

nce # 03J4668 Batch # 03J4668 Matrix: W Date: 10/31/03 Analyst: Zou

IS/Surrogate: GC-15761/15762 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

lb. + 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
5	SP	G4668P01	ES4A 003	25/25 = 1	/ =	/ =	1		G4668P01	10/31/03	11:34 PM
6	CCV	Q01		/ =	/ =	/ =			Q01	GC15796	
7	LCS	L01		/ =	/ =	/ =			L01		
8	MS	M01		/ =	/ =	/ =			M01	5892-05	<2
9	MSD	N01		/ =	/ =	/ =			N01	↓	↓
10	MB	K01		/ =	/ =	/ =			K01		
11	Sample	5852-08		/ =	/ =	/ =			5852-08	tb	<2
12		5892-07		/ =	/ =	/ =			5892-07	tb	
93		01		/ =	/ =	/ =			01	eb	
94		05		/ =	/ =	/ =			05	MS	
95		04		/ =	/ =	/ =			04		
96		06		/ =	/ =	/ =			06		
97		5852-01		/ =	/ =	/ =			5852-01	Dup	
98		02		/ =	/ =	/ =			02	eb	
99		03		/ =	/ =	/ =			03		
00		04		/ =	/ =	/ =			04		
01		05		/ =	/ =	/ =			05		
02		06		/ =	/ =	/ =			06		
03	↓	↓	↓	/ =	/ =	/ =	↓		↓ 07		↓
04				/ =	/ =	/ =					
05				/ =	/ =	/ =					
06				/ =	/ =	/ =					
07				/ =	/ =	/ =					
08				/ =	/ =	/ =					
09				/ =	/ =	/ =					
10				/ =	/ =	/ =					
11				/ =	/ =	/ =					
12				/ =	/ =	/ =					
13				/ =	/ =	/ =					
14				/ =	/ =	/ =					
15				/ =	/ =	/ =					
16				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$
CS/LCSD	4587	GC-15797	200 × 2.5 /X= 20 ppb		GC-	× /X= ppb
MS/MSD	4588/4589	GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly:

A

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

VOC Analysis General Logbook

Sequence # 0364612 Batch # 0364612 Matrix: W. Date: 10/21/03 Analyst: Eddie

Lot #: IS/Surrogate: GC15114/15115 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

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

Op. #	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
4201	SP	G4612P01	ES524A	25/25 = 1	/ =	/ =	1		G4612P01	10/21/03 9:14am	
4202	Calib	3-A003	003	/ =	/ =	/ =			3-A003	gc15731	
4203		3-002		/ =	/ =	/ =			3-002		
4204		3-0010		/ =	/ =	/ =			3-0010		
4205		3-0020		/ =	/ =	/ =			3-0020		
4206		3-0040		/ =	/ =	/ =			3-0040		
4207		3-0060		/ =	/ =	/ =			3-0060		
4208	LCV	LCV		/ =	/ =	/ =			LCV	gc15732	
4209				/ =	/ =	/ =					
4210				/ =	/ =	/ =					
4211				/ =	/ =	/ =					
4212				/ =	/ =	/ =					
4213				/ =	/ =	/ =					
4214				/ =	/ =	/ =					
4215				/ =	/ =	/ =					
4216				/ =	/ =	/ =					
4217				/ =	/ =	/ =					
4218				/ =	/ =	/ =					
4219				/ =	/ =	/ =					
4220				/ =	/ =	/ =					
4221				/ =	/ =	/ =					
4222				/ =	T =	/ =					
4223				/ =	10 =	/ =					
4224				/ =	10 ± 2 (13)	=					
4225				/ =	/ =	/ =					
4226				/ =	/ =	/ =					
4227				/ =	/ =	/ =					
4228				/ =	/ =	/ =					
4229				/ =	/ =	/ =					
4230				/ =	/ =	/ =					
4231				/ =	/ =	/ =					
4232				/ =	/ =	/ =					

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		GC-	× /X= ppb		GC-	× /X= ppb
MS/MSD		GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly:

Level C Data Package Deliverables

Wet Chemistry

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Wet Analysis Results for Method 7196

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	7196
Project ID:	JPL	Service ID:	35892	Collected by:	JR

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

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-5892-1	EB-7-10-30-03	Water	10/30/03	10/30/03	10/30/03	03W5000	mg/L	0.01	<0.01	U
03-5892-2	MW-21-1	Water	10/30/03	10/30/03	10/30/03	03W5000	mg/L	0.01	<0.01	U
03-5892-3	MW-21-2	Water	10/30/03	10/30/03	10/30/03	03W5000	mg/L	0.01	<0.01	U
03-5892-4	MW-21-3	Water	10/30/03	10/30/03	10/30/03	03W5000	mg/L	0.01	<0.01	U
03-5892-5	MW-21-4	Water	10/30/03	10/30/03	10/30/03	03W5000	mg/L	0.01	<0.01	U
03-5892-6	MW-21-5	Water	10/30/03	10/30/03	10/30/03	03W5000	mg/L	0.01	<0.01	U
03W5000-MB-01	03W5000-MB-01	Water	10/30/03	10/30/03	10/30/03	03W5000	mg/L	0.01	<0.01	U

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

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

Applied P & Ch Laboratory

Wet Analysis Results for Method 314.0

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	314.0
Project ID:	JPL	Service ID:	35892	Collected by:	JR

Component Name: Perchlorate

CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-5892-1	EB-7-10-30-03	Water	10/30/03	10/30/03	11/04/03	03W5052	μg/L	4	<4	U
03-5892-2	MW-21-1	Water	10/30/03	10/30/03	11/04/03	03W5052	μg/L	4	6.5	
03-5892-3	MW-21-2	Water	10/30/03	10/30/03	11/04/03	03W5052	μg/L	4	2.7	B
03-5892-4	MW-21-3	Water	10/30/03	10/30/03	11/04/03	03W5052	μg/L	4	3.6	B
03-5892-5	MW-21-4	Water	10/30/03	10/30/03	11/04/03	03W5052	μg/L	4	3.4	B
03-5892-6	MW-21-5	Water	10/30/03	10/30/03	11/04/03	03W5052	μg/L	4	2.6	B
03W5052-MB-01	03W5052-MB-01	Water	11/04/03	11/04/03	11/04/03	03W5052	μg/L	4	<4	U

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

Note: Q - Qualifier.

Qualifier: U - Not Detected or less than MDL

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

FORM-3

Applied P & Ch Laboratory

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

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	35892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W5052		
LCS Filename:	-	Date Analyzed:	110403	Time Analyzed:	
LCSD Filename:	-	Date Analyzed:	110403	Time Analyzed:	

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
PERCHLORATE	µg/L	25	0	27.8	111	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PERCHLORATE	µg/L	25	28.0	112	1	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 314.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	35892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W5052		
MS Filename:	-	Date Analyzed:	110403	Time Analyzed:	
MSD Filename:	-	Date Analyzed:	110403	Time Analyzed:	
MS Sample No:	MW-21-4	Sample Lab ID:	03-5892-5		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
PERCHLORATE	µg/L	25	3.4	29.8	106	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PERCHLORATE	µg/L	25	29.5	104	2	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

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

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	35892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W5000		
LCS Filename:	-	Date Analyzed:	103003	Time Analyzed:	12:42
LCSD Filename:	-	Date Analyzed:	103003	Time Analyzed:	12:42

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.255	102	80-115
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0.261	104	2	19	80-115
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 7196

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	35892
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W5000		
MS Filename:	-	Date Analyzed:	103003	Time Analyzed:	12:42
MSD Filename:	-	Date Analyzed:	103003	Time Analyzed:	12:42
MS Sample No:	MW-21-4	Sample Lab ID:	03-5892-5		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.253	101	78-115
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0.249	100	1	19	78-115
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

6A

INITIAL CALIBRATION DATA

Lab Name: Applied P & Ch Lab Contract: 35892

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

Concentration (mg/L)	0.000	0.0125	0.025	0.125	0.250	0.50
Absorbance	0.000	0.007	0.017	0.107	0.212	0.420

A=-0.001+ 0.846C

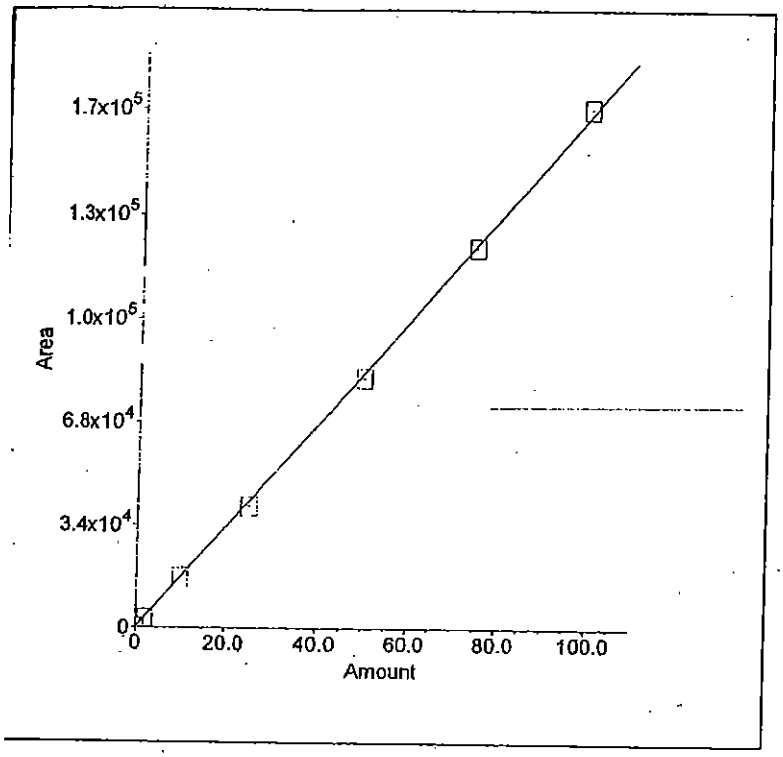
A=Absorbance

C=Concentration (mg/L)

r= 0.9999

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

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



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

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

FORM-7

Applied P & Ch Laboratory

CCV Recovery for Wet Analysis

Client Name: GEOFON, Inc. Contract No.: Lab Code: APCL

Case No: SAS No.: Service ID: 35892

Project ID: JPL Project No.: 04-4428.10

#	Component Name	Method	Batch No.	Unit	Expected	Test Result	Rec. %	Dev. %	Flag	Control Limit, %	Test Date
1	Perchlorate	314.0	03W5052	µg/L	50	55.2	110	10	√	85-115	11/04/2003
	Perchlorate	314.0	03W5052	µg/L	50	57.3	115	15	√	85-115	11/04/2003
	Perchlorate	314.0	03W5052	µg/L	50	55.2	110	10	√	85-115	11/04/2003
	Perchlorate	314.0	03W5052	µg/L	50	56.8	114	14	√	85-115	11/04/2003
2	Chromium (VI)	7196	03W5000	mg/L	0.25	0.242	97	-3	√	90-110	10/30/2003
	Chromium (VI)	7196	03W5000	mg/L	0.25	0.240	96	-4	√	90-110	10/30/2003

Schedule File: C:\PeakNet\schedule\03w5052k.sch

Line	Sample	Sample Type	Level	Method	Data File	Volume	Dilution	Weight	Int. Std.
1	##03w5052k ipc 25ppb w8032	Sample		e314-011.met	w5052k ipc25ppb	1	1	1	1
2	ccv 50ppb w8082	Sample		e314-011.met	w5052k q01	1	1	1	1
3	lcs 25ppb w8087	Sample		e314-011.met	w5052k l01	1	1	1	1
4	Lcsd 25PPB W8257	Sample		e314-011.met	w5052k j01	1	1	1	1
5	ICCS 4ppb w8088	Sample		e314-011.met	w5052k iccs 4ppb	1	1	1	1
6	mb	Sample		e314-011.met	w5052k k01	1	1	1	1
7	5892-05 f=1	Sample		e314-011.met	5892-05	1	1	1	1
8	5892-01 f=1	Sample		e314-011.met	5892-01	1	1	1	1
9	5892-02 f=1	Sample		e314-011.met	5892-02	1	1	1	1
0	5892-03 f=1	Sample		e314-011.met	5892-03	1	1	1	1
1	5892-04 f=1	Sample		e314-011.met	5892-04	1	1	1	1
2	5892-06 f=1	Sample		e314-011.met	5892-06	1	1	1	1
3	ccv 50ppb w8082	Sample		e314-011.met	w5052k q02	1	1	1	1
4	ccb	Sample		e314-011.met	w5052k ccb	1	1	1	1
5	5892-05 ms 25ppb f=1	Sample		e314-011.met	w5052k m01	1	1	1	1
6	5892-05 msd 25ppb f=1	Sample		e314-011.met	w5052k n01	1	1	1	1
7	5885-21 f=1	Sample		e314-011.met	5885-21	1	1	1	1
8	5923-01 f=1	Sample		e314-011.met	5923-01	1	1	1	1
9	5923-02 f=1	Sample		e314-011.met	5923-02	1	1	1	1
0	5923-03 f=1	Sample		e314-011.met	5923-03	1	1	1	1
1	5923-04 f=1	Sample		e314-011.met	5923-04	1	1	1	1
2	ccv 50ppb w8082	Sample		e314-011.met	w5052k q03	1	1	1	1
3	ccb	Sample		e314-011.met	w5052k ccb	1	1	1	1
4	5951-01 f=1	Sample		e314-011.met	5951-01	1	1	1	1
5	5951-10 f=1	Sample		e314-011.met	5951-10	1	1	1	1
6	5951-12 f=1	Sample		e314-011.met	5951-12	1	1	1	1
7	5951-11 f=1	Sample		e314-011.met	5951-11	1	1	1	1
8	5951-05 f=1	Sample		e314-011.met	5951-05	1	1	1	1
9	5951-06 f=1	Sample		e314-011.met	5951-06	1	1	1	1
0	5951-07 f=1	Sample		e314-011.met	5951-07	1	1	1	1
1	5951-08 f=1	Sample		e314-011.met	5951-08	1	1	1	1
2	5951-09 f=1	Sample		e314-011.met	5951-09	1	1	1	1
3	ccv 50ppb w8082	Sample		e314-011.met	w5052k q04	1	1	1	1
4	ccv 50ppb w8082	Sample		e314-011.met	w5052k q05	1	1	1	1
5	ccb	Sample		e314-011.met	w5052k ccb_035.dxd	1	1	1	1
6	5951-01 f=5	Sample		e314-011.met	5951-01_036.dxd	1	5	1	1
7	5951-10 f=5	Sample		e314-011.met	5951-10_037.dxd	1	5	1	1
8	ccv 50ppb w8082	Sample		e314-011.met	w5052k q06	1	1	1	1

Analyst W. W

Date 11/4/03

Instrument IC-K

Applied P & Ch Laboratory
3760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chromium (VI) (7196) Worksheet

Batch # 03W5000 Matrix: W [Holding Time: 24 hours!!] Test Date: 10/30/03 Analyst:

Lot #: Reagent Water _____ Diphenylcazide solution _____ Test Time: 12:47 SOP: G-22

Calibration	STD Lot #	$C_{std} \times V_{std} / V_f = C_i$	A_i	$RF_i = A_i / C_i$	Calibration results	Note
STD-1	W-	× / = mg/L			Least Square [RF]=	Cal. Code:
STD-2	W-	× / = mg/L			Average RF=	
STD-3	W-	× / = mg/L			C.C.=0.9999 (≥ 0.995)	
STD-4	W-	× / = mg/L			RSD= % (≤ 15%)	
STD-5	W-	× / = mg/L			Ref. page	
STD-6	W-	× / = mg/L			A=-0.001+0.846C	

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0=f_1$	Treat. Ratio $V/X=f_2$	540 nm A	Concentration $C'=A/RF$	C (Sample) $C=f_1 f_2 C'$	Anomaly Note
CCV	Lot: W-7757	Expected Conc.: × / =0.25 mg/L			0.204	0.242 mg/L	REC. %	90-110 %
Method Blank	Bl. Lot: T1118		/X_0 = 1	95.0/ =	0.000	mg/L	0.00 ppm	
LCS1	Bl. Lot:		/X_0 = 1	95.0/ =	0.215	mg/L	0.255 ppm	
Sample-1	5892-1		/X_0 =	95.0/ =	0.002	mg/L	0.004 ppm	
MS on S-1	5		/X_0 =	95.0/ =	0.213	mg/L	0.253 ppm	
MSD on S-1	5		/X_0 =	95.0/ =	0.210	mg/L	0.249 ppm	
Sample 2	2		/X_0 =	95.0/ =	0.002	mg/L	0.004 ppm	
Sample 3	3		/X_0 =	95.0/ =	0.001	mg/L	0.002 ppm	
Sample 4	4		/X_0 =	95.0/ =	0.001	mg/L	0.002 ppm	
Sample 5	5		/X_0 =	95.0/ =	0.001	mg/L	0.002 ppm	
Sample 6	6		/X_0 = ↓	95.0/ =	0.001	mg/L	0.002 ppm	
Sample 7			/X_0 =	95.0/ =		mg/L	ppm	
Sample 8			/X_0 =	95.0/ =		mg/L	ppm	
Sample 9			/X_0 =	95.0/ =		mg/L	ppm	
Sample 10			/X_0 =	95.0/ =		mg/L	ppm	
Blank	Lot:		/X_0 =	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot: T1118		/X_0 = 1	95.0/ =	0.220	mg/L	0.261 ppm	
Sample 11			/X_0 =	95.0/ =		mg/L	ppm	
Sample 12			/X_0 =	95.0/ =		mg/L	ppm	
Sample 13			/X_0 =	95.0/ =		mg/L	ppm	
Sample 14			/X_0 =	95.0/ =		mg/L	ppm	
Sample 15			/X_0 =	95.0/ =		mg/L	ppm	
Sample 16			/X_0 =	95.0/ =		mg/L	ppm	
Sample 17			/X_0 =	95.0/ =		mg/L	ppm	
Sample 18			/X_0 =	95.0/ =		mg/L	ppm	
Sample 19	Verification (SW-846, 7196A, 7.2.1)			=		mg/L	ppm	
Sample 20	5892-1 spikecomp.	0.25 mg/L		95.0/ =	0.213	mg/L	0.253 ppm	Rec 101.2%
MTX Dup.	dup. W 0.25 mg/L		/X_0 =	95.0/ =	0.202	0.240 mg/L	ppm	

Type	STD Lot #	$C_{STD(\mu g/mL)} \times V_{STD(mL)} / X_{(g\ or\ mL)} = T$	Spike Rec.	Ctl Limit (W/S)
MS	W-7757	× / = 0.25 ppm	%	80-120 %/80-120 %
MSD	W-7757	× / = ppm	%	.. ..
LCS	W-7857	× / = ppm	%	80-120 %/80-120 %
LCSD	W-7857	× / = ppm	%	.. ..

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

Applied P & Ch Laboratory

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

Chromium (VI) (7196) Workshee

Batch # PZ Matrix: W & GS [Holding Time: 24 hours!!] Test Date: 7/28/03 Analyst: Br

Lot #: Reagent Water _____ PL 7/28/03 Diphenylcazide solution _____ Test Time: _____ SOP:

Calibration	STD Lot #	$C_{std} \times V_{std}/V_f = C_i$	A_i	$RF_i = A_i/C_i$	Calibration results	Note
STD-1	W-7757	× / = 0.00 mg/L	0.000		Least Square [RF]=	Cal. Code:
STD-2	W-	× / = 0.025 mg/L	0.007		Average $\bar{RF}$=	
STD-3	W-	× / 0.025 = 0.050 mg/L	0.017		C.C.= 0.9999 (≥ 0.995)	
STD-4	W-	× / = 0.125 mg/L	0.107		RSD= % (≤ 15%)	
STD-5	W-	× / = 0.250 mg/L	0.212		Ref. page	
STD-6	W-	× / = 0.50 mg/L	0.420		A = -0.001 + 0.846C	

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0 = f_1$	Treat. Ratio $V/X = f_2$	540 nm A	Concentration $C' = A/\bar{RF}$	C (Sample) $C = f_1 f_2 C'$	Anon No
CCV	Lot: W-7853	Expected Conc.:	×	/ = 0.25 mg/L	0.218	0.259 mg/L	REC. %	90-11
Method Blank	Bl. Lot:		$/X_0$ =	95.0/ =	0.000	0.000 mg/L	ppm	
LCS1	Bl. Lot:		$/X_0$ =	95.0/ =	0.210	0.250 mg/L	ppm	
Sample-1	4177-37	1ml → 100ml	$/X_0$ = 1	95.0/ = 2	0.290	0.689 mg/L	ppm	
MS on S-1	37	0.5ml → 100ml	$/X_0$ =	95.0/ = 2	0.287	0.682 mg/L	ppm	
MSD on S-1	4175-15	10.0g	50.0ml $/X_0$ = 5	95.0/ = 10	0.050	3.04 mg/L	ppm	
Sample 2	15	4	$/X_0$ =	95.0/ = 2	0.247	2.94 mg/L	ppm	
Sample 3			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 4			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 5			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 6			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 7			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 8			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 9			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 10			$/X_0$ =	95.0/ =		mg/L	ppm	
Blank	Lot:		$/X_0$ =	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot:		$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 11			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 12			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 13			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 14			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 15			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 16			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 17			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 18			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 19			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 20			$/X_0$ =	95.0/ =		mg/L	ppm	
MTX Dup.	closing on sing		$/X_0$ =	95.0/ =	0.218	0.259 mg/L	ppm	

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

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

1177

APCL form 5-155 May 08, 1996. Ver. 3.1 No pencil. Use blue pen for record. Use red pen for correction.
File:[CUST.DOC.WET]CR6.TEX Root-file: CR6_ROOT.TEX 1-Page-File: CR61.TEX
Control limits are subjected to change. The updated values are given in the latest version of APCL Technical Handbook Vol. 2