APCL

Applied Physics & Chemistry Laboratory

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

March 26, 2003

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

Dear Leo Williamson,

This package contains samples in our Service ID 03-1724 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

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

CHAIN-OF-CUSTODY RECORD

SHALLOW WELLS

LABORATORY COPY 0014

GEOFON's LAB COORDINATOR: Brad Shojaee	LAB COORDINATOR'S PHONE: (909) 396-7662	LAB COORDINATOR'S FAX: (909) 396-1455	LABORATORY SERVICE ID: –	LABORATORY CONTACT: Kenny Chan	MAIL REPORT (COMPANY NAME): GEOFON, INC.
PROJECT NAME: JPL GW MON-1Q03	PROJECT LOCATION: Various Areas	PROJECT NUMBER: 04-4432.10	LABORATORY PHONE: (909) 590-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Leo W. Williamson
PROJECT CONTACT: Leo W. Williamson	PROJECT PHONE NUMBER: (714) 920-8729	PROJECT FAX: (909) 396-1455	LABORATORY ADDRESS: 13760 Magnolia Ave		ADDRESS: 22632 Golden Springs Dr. #270
PROJECT ADDRESS: 4800 Oak Grove Dr.	CITY, STATE AND ZIPCODE: Pasadena, CA.	CLIENT: US NAVY SWDIV	CITY, STATE AND ZIPCODE: Chino, CA. 91710		CITY, STATE AND ZIPCODE: Diamond Bar, CA. 91765
PROJECT MANAGER: Asrar Faheem	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses: 524.2 (VOCs)	314.0 (Perchlorates)	200.8 (Total Chromium)	7196 (Hex Chrome)					Comments
1	MW-5	H_2O	2/19/03	840	HCl HNO3 NONE	3+1+1	III	NORMAL	X	X	X	X					
2																	
3	TB-12-2/19/03	H_2O	–	–	HCl	2	III	NORMAL	X								1724
4																	
5																	
6																	
7																	
8																	
9																	
10																	

SAMPLES COLLECTED BY: Leo W. Williamson

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Leo W. Williamson	[signature]	2/19/03	12:21	
[signature]	[signature]	2/19/03	1300	

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

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

APCL Analytical Report

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

Service ID #: 801-031724
Collected by: Leo Williamson
Collected on: 02/19/03

Received: 02/19/03
Extracted: N/A
Tested: 02/19-24/03
Reported: 02/27/03

Sample Description: Water
Project Description: 04-4432.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-5 03-01724-1
CHROMIUM (VI)	7196	mg/L	0.01	<0.01
Dilution Factor				1
PERCHLORATE	314.0	μg/L	4	25.2

Component Analyzed	Method	Unit	PQL	Analysis Result MW-5 03-01724-1	TB-12-2/19/03 03-01724-2
VOLATILE ORGANIC COMPOUNDS					
Dilution Factor				1	1
BENZENE	524.2	μg/L	0.5	<0.5	<0.5
BROMOBENZENE	524.2	μg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5
BROMOFORM	524.2	μg/L	0.5	<0.5	<0.5
BROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
2-BUTANONE	524.2	μg/L	10	<10	<10
CARBON TETRACHLORIDE	524.2	μg/L	0.5	1.6	<0.5
CHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5
CHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
CHLOROFORM	524.2	μg/L	0.5	1.4	<0.5
CHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	μg/L	1.1 [a]	<1.1	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-5 03-01724-1	TB-12-2/19/03 03-01724-2
1,1-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5
ETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	μg/L	0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	μg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	μg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	μg/L	1.8 [a]	<1.8	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	<10
NAPHTHALENE	524.2	μg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
STYRENE	524.2	μg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	μg/L	0.5	0.7	<0.5
TOLUENE	524.2	μg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	14.9	<0.5
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5
112TRICHLOROTRIFLUOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	μg/L	0.5	<0.5	<0.5
O-XYLENE	524.2	μg/L	0.5	<0.5	<0.5
M/P-XYLENE	524.2	μg/L	0.5	<0.5	<0.5

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

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: 03-1724

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

Applied P & Ch Laboratory
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Case Narrative

Project: JPL/04-4432.10

For GEOFON, Inc.

APCL Service No: 03-1724

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-5	03-01724-1
TB-12-2/19/03	03-01724-2

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196A (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

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

Sample Receiving Checklist

APCL ServiceID: 1724 **Client Name/Project:** Geofon

1. Sample Arrival

Date/Time Received 2/19/03 1300 Date/Time Opened 2/19/03 1300 By (name): Kenny Chan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Jason N.

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By: _____
☐ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received 2
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: _ ☑ #Samples OK? _____
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler

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

Temp °C 4.0 _____ _____ _____ _____ _____

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

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12

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

5. Holding-time Requirements

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

6. Sample Container Condition

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

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

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

7. Turn Around Time

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

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: [signature] Date: 19 Feb 2003 Time: 7:39 a.m.

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

DocumentFile: [neal.texfiles]smprcl.tex.

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Sample Login: Check List

03-01724 (0470_ 114) (2202777_ 114)

02/19/03

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 #:	*04-4432.10*
☐	Billing Information	P.O. #:	
		Bill Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
		Lab Project ID:	
		Client Database #:	*3*
☐	Receiving Information	Who Received Sample?	*Kenny Chan*
		Receiving Date/Time:	*02/19/03 1300*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*4.0 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Rush 5 working day(s)*
☐	QC Option:		*NEESA C*
☐	Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	MW-5	VOC	03-01724-1-α	W	V	C	40	3	G	021003	N	0	7	☐
	MW-5	CRVI/Perch	03-01724-1-β	W	P		500	1	G	021003	N	0	7	☐
2	TB-12-2/19/03	VOC	03-01724-2	W	V	C	40	2	G	021003	N	0	7	☐

Part 3: Analysis Information

Test Items:

☒ *524.2* Volatile Organic Compounds

☒ *7196A* Chromium (VI)

☒ *314.0/300.0* Perchlorate, low level

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCH	
1	MW-5	VOC	03-01724-1-α	W	X			☐
	MW-5	CRVI/Perch	03-01724-1-β	W		X	X	☐
2	TB-12-2/19/03	VOC	03-01724-2	W	X			☐

Login By En-Yu Paul Kou

Check By PX

APCL

Applied Physics & Chemistry Laboratory

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

March 26, 2003

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

Dear Leo Williamson,

This package contains samples in our Service ID 03-1767 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

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

CHAIN-OF-CUSTODY RECORD

SHALLOW WELLS

LABORATORY COPY 0015

GEOFON's LAB COORDINATOR: Brad Shojaee	LAB COORDINATOR'S PHONE: (909) 396-7662	LAB COORDINATOR'S FAX: (909) 396-1455	LABORATORY SERVICE ID: —	LABORATORY CONTACT: Kenny Chan	MAIL REPORT (COMPANY NAME): GEOFON, INC.
PROJECT NAME: JPL GW Mon - 1903	PROJECT LOCATION: MW-13 / MW-6 / MW-10 / MW-15	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 590-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Leo W. Williamson
PROJECT CONTACT: Leo W. Williamson	PROJECT PHONE NUMBER: (714) 920-8729	PROJECT FAX: (909) 396-1455	LABORATORY ADDRESS: 13760 Magnolia Ave		ADDRESS: 22632 Golden Springs Dr. #270
PROJECT ADDRESS: 4800 Oak Grove Dr.	CITY, STATE AND ZIPCODE: Pasadena, CA.	CLIENT: US NAVY, SWDIV	CITY, STATE AND ZIPCODE: Chino, CA. 91710		CITY, STATE AND ZIPCODE: Diamond Bar, CA. 91765
PROJECT MANAGER: Asrar Faheem	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T	Analyses: 524.2 (VOCs)	314.0 (Perchlorates)	200.8 (Total Chromium)	7196 (Hex Chrome)					Comments
1	MW-13	H_2O	2/20/03	820	HCl HNO3 NONE	3+HI	III	NORMAL	X	X	X	X					
2	MW-6	↓	↓	1025	↓	↓	↓	↓	X	X	X	X					
3	MW-10	↓	↓	1210	↓	↓	↓	↓	X	X	X	X					1767
4	MW-15	↓	↓		↓	↓	↓	↓			X	X					
5																	
6	TB-12-2/20/03	H_2O	N/A	N/A	HCl	2	III	NORMAL	X								
7																	
8																	
9																	
10																	

SAMPLES COLLECTED BY: Leo W. Williamson

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME
Leo W. Williamson	[signature]	2/20/03	1500
	[signature]	2/20/03	1615

SAMPLE'S CONDITION UPON RECEIPT

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

Applied P & Ch Laboratory
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APCL Analytical Report

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

Service ID #: 801-031767
Collected by: Leo Williamson
Collected on: 02/20/03

Received: 02/20/03
Extracted: N/A
Tested: 02/21-24/03
Reported: 02/27/03

Sample Description: Water
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-6 03-01767-1	MW-10 03-01767-2	MW-13 03-01767-3
Dilution Factor				1	1	1
PERCHLORATE	314.0	μg/L	4	3.8J	3.5J	68.1

Component Analyzed	Method	Unit	PQL	Analysis Result MW-6 03-01767-1	MW-10 03-01767-2
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01
VOLATILE ORGANIC COMPOUNDS					
Dilution Factor				1	1
BENZENE	524.2	μg/L	0.5	<0.5	<0.5
BROMOBENZENE	524.2	μg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5
BROMOFORM	524.2	μg/L	0.5	<0.5	<0.5
BROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
2-BUTANONE	524.2	μg/L	10	<10	<10
CARBON TETRACHLORIDE	524.2	μg/L	0.5	<0.5	<0.5
CHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5
CHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
CHLOROFORM	524.2	μg/L	0.5	0.4J	0.5
CHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	μg/L	1.1 [a]	<1.1	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-6 03-01767-1	MW-10 03-01767-2
1,1-DICHLOROETHANE	524.2	μg/L	0.5	0.8	0.5J
1,2-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	μg/L	0.5	0.7	<0.5
CIS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5
ETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	μg/L	0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	μg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	μg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	μg/L	1.8 [a]	<1.8	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	<10
NAPHTHALENE	524.2	μg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
STYRENE	524.2	μg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	μg/L	0.5	2.6	1.3
TOLUENE	524.2	μg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	<0.5	2.5
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5
112TRICHLOROTRIFLUOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	μg/L	0.5	<0.5	<0.5
O-XYLENE	524.2	μg/L	0.5	<0.5	<0.5
M/P-XYLENE	524.2	μg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-13 03-01767-3	MW-15 03-01767-4	TB-12-2/20/03 03-01767-5
CHROMIUM (VI)	7196	mg/L	0.01	0.055	<0.01	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
BROMOBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
BROMOCHLOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
BROMODICHLOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
BROMOFORM	524.2	μg/L	0.5	<0.5	-	<0.5
BROMOMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
N-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
SEC-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
TERT-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
2-BUTANONE	524.2	μg/L	10	<10	-	<10
CARBON TETRACHLORIDE	524.2	μg/L	0.5	0.8	-	<0.5
CHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
CHLORODIBROMOMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
CHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
CHLOROFORM	524.2	μg/L	0.5	0.7	-	<0.5
CHLOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	-	<0.5
4-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	μg/L	1.1 [a]	<1.1	-	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5	-	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
DICHLORODIFLUOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1-DICHLOROETHANE	524.2	μg/L	0.5	0.8	-	<0.5
1,2-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	-	<0.5
CIS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	-	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROETHENE (TOTAL)	524.2	μg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,3-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	-	<0.5
2,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	-	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	-	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	-	<0.5
ETHYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-13 03-01767-3	MW-15 03-01767-4	TB-12-2/20/03 03-01767-5
HEXACHLOROBUTADIENE	524.2	μg/L	0.5	<0.5	-	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	μg/L	0.5	<0.5	-	<0.5
P-ISOPROPYLTOLUENE	524.2	μg/L	0.5	<0.5	-	<0.5
METHYLENE CHLORIDE	524.2	μg/L	1.8 [a]	<1.8	-	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	-	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	-	<10
NAPHTHALENE	524.2	μg/L	0.5	<0.5	-	<0.5
N-PROPYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
STYRENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
TETRACHLOROETHENE	524.2	μg/L	0.5	1.0	-	<0.5
TOLUENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2,3-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2,4-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1,1-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,1,2-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	1.2	-	<0.5
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2,3-TRICHLOROPROPANE	524.2	μg/L	0.5	<0.5	-	<0.5
112TRICHLOROTRIFLUOROETHANE	524.2	μg/L	0.5	<0.5	-	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	-	<0.5
VINYL CHLORIDE	524.2	μg/L	0.5	<0.5	-	<0.5
O-XYLENE	524.2	μg/L	0.5	<0.5	-	<0.5
M/P-XYLENE	524.2	μg/L	0.5	<0.5	-	<0.5

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

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

J: Reported between PQL and MDL.

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

[a] MDL rported.

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: 03-1767

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

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Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: JPL/04-4428.10

For GEOFON, Inc.

APCL Service No: 03-1767

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-13	03-01767-3
MW-6	03-01767-1
MW-10	03-01767-2
MW-15	03-01767-4
TB-12-2/20/03	03-01767-5

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196A (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

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

Sample Receiving Checklist

APCL ServiceID: 1767 **Client Name/Project:** Geton

1. Sample Arrival

Date/Time Received 2/20/03 1615 Date/Time Opened 2/20/03 1615 By (name): Kenny Chan

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

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By:
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold # Received 5
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: ☑ #Samples OK?
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs):

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 3.9
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

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

5. Holding-time Requirements

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

6. Sample Container Condition

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

7. Turn Around Time

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

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: [signature] Date: 20 Feb 2003 Time: 7:41 a.m.

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

DocumentFile: [neal.texfiles]smprcl.tex.

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Sample Login: Check List

03-01767 (0470_ 116) (2202777_ 116)

02/20/03

Part 1: General Information

☐	Company Information	Name:	*GEOFON, Inc.*
		Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
☐	Project Information	Project Description:	*JPL*
		Project #:	*04-4428.10*
☐	Billing Information	P.O. #:	
		Bill Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
		Lab Project ID:	
		Client Database #:	*3*
☐	Receiving Information	Who Received Sample?	*Kenny Chan*
		Receiving Date/Time:	*02/20/03 1615*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*3.9 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Rush 5 working day(s)*
☐	QC Option:		*NEESA C*
☐	Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	MW-13	VOC	03-01767-3-α	W	V	C	40	3	G	022003	N	0	7	☐
	MW-13	CRVI/Perch	03-01767-3-β	W	P		500	1	G	022003	N	0	7	☐
2	MW-6	VOC	03-01767-1-α	W	V	C	40	3	G	022003	N	0	7	☐
	MW-6	CRVI/Perch	03-01767-1-β	W	P		500	1	G	022003	N	0	7	☐
3	MW-10	VOC	03-01767-2-α	W	V	C	40	3	G	022003	N	0	7	☐
	MW-10	CRVI/Perch	03-01767-2-β	W	P		500	1	G	022003	N	0	7	☐
4	MW-15	CR VI	03-01767-4	W	P		500	1	G	022003	N	0	7	☐
5	TB-12-2/20/03	VOC	03-01767-5	W	V	C	40	2	G	022003	N	0	7	☐

Part 3: Analysis Information

Test Items:

☒ *524.2* Volatile Organic Compounds

☐ *7196A* Chromium (VI)

☐ *314.0/300.0* Perchlorate, low level

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCH	
1	MW-13	VOC	03-01767-3-α	W	X			☐
	MW-13	CRVI/Perch	03-01767-3-β	W		X	X	☐
2	MW-6	VOC	03-01767-1-α	W	X			☐
	MW-6	CRVI/Perch	03-01767-1-β	W		X	X	☐
3	MW-10	VOC	03-01767-2-α	W	X			☐
	MW-10	CRVI/Perch	03-01767-2-β	W		X	X	☐
4	MW-15	CR VI	03-01767-4	W		X		☐
5	TB-12-2/20/03	VOC	03-01767-5	W	X			☐

Login By En-Yu Paul Kou

Check By 10Y

APCL

Applied Physics & Chemistry Laboratory

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

March 26, 2003

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

Dear Leo Williamson,

This package contains samples in our Service ID 03-1842 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

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

CHAIN-OF-CUSTODY RECORD

SHALLOW WELLS

LABORATORY COPY 0016

GEOFON's LAB COORDINATOR: Brad Shojaee	LAB COORDINATOR'S PHONE: (909) 396-7662	LAB COORDINATOR'S FAX: (909) 396-1455	LABORATORY SERVICE ID: —	LABORATORY CONTACT: Kenny Chan	MAIL REPORT (COMPANY NAME): GEOFON, INC.
PROJECT NAME: JPL GW Mon-1903	PROJECT LOCATION: MW-8 / MW-16 / MW-7	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 590-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Leo W. Williamson
PROJECT CONTACT: Leo W. Williamson	PROJECT PHONE NUMBER: (714) 920-8729	PROJECT FAX: (909) 396-1455	LABORATORY ADDRESS: 13760 Magnolia Ave		ADDRESS: 22632 Golden Springs Dr. #270
PROJECT ADDRESS: 4800 Oak Grove Dr.	CITY, STATE AND ZIPCODE: Pasadena, CA	CLIENT: US NAVY, SWDIV	CITY, STATE AND ZIPCODE: Chino, CA. 91710		CITY, STATE AND ZIPCODE: Diamond Bar, CA. 91765
PROJECT MANAGER: Asrar Faheem	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T	Analyses: 524.2 (VOCs)	314.0 (Perchlorates)	200.8 (Total Chromium)	7196 (Hex Chrome)					Comments
1	MW-8	H_2O	2/24/03	930	HCl HNO3 NONE	3+1+1	III	NORMAL	X	X	X	X					
2	MW-16	↓	↓	1150	↓	↓	↓	↓	X	X	X	X					MS/MSD
3	MW-7	↓	↓	1350	↓	↓	↓	↓	X	X	X	X					
4																	
5	DUPE-6-1903	H_2O	2/24/03	N/A	HCl HNO3 NONE	3+1+1	IV	NORMAL	X	X	X	X					1842
6	TB-13-2/24/03	↓	N/A	N/A	HCl	2	#	↓	X								
7																	
8																	
9																	
10																	

SAMPLES COLLECTED BY: Leo W. Williamson

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Leo W. Williamson	[signature]	2/24/03	1410	
[signature]	[signature]	2/24/03	1942	

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

Applied P & Ch Laboratory
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APCL Analytical Report

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

Service ID #: 801-031842
Collected by: Leo Williamson
Collected on: 02/24/03

Received: 02/24/03
Extracted: N/A
Tested: 02/25-03/07/03
Reported: 03/12/03

Sample Description: Water
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-6-1Q03 03-01842-1	MW-7 03-01842-2
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01
Dilution Factor				100	100
PERCHLORATE	314.0	µg/L	4	6,190	5,200
VOLATILE ORGANIC COMPOUNDS					
Dilution Factor				1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
CARBON TETRACHLORIDE	524.2	µg/L	0.5	122 [a]	102 [a]
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	12.3	12.9
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	1.1 [b]	<1.1	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	6.4	6.1
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-6-1Q03 03-01842-1	MW-7 03-01842-2
1,2-DICHLOROETHENE (TOTAL)	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1.8 (b)	<1.8	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	13.5	11.8
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	4.8	4.4
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	4.2	4.2
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-8 03-01842-3	MW-16 03-01842-4	TB-13-2/24/03 03-01842-5
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	0.020	-
Dilution Factor				1	1	1
PERCHLORATE	314.0	μg/L	4	45.0	97.2	-
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
2-BUTANONE	524.2	μg/L	10	<10	<10	<10
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
CARBON TETRACHLORIDE	524.2	μg/L	0.5	4.3	1.4	<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	1.1	2.3	<0.5
CHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	μg/L	1.1 [b]	<1.1	<1.1	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-8 03-01842-3	MW-16 03-01842-4	TB-13-2/24/03 03-01842-5
ETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	μg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	μg/L	1.8 (b)	<1.8	<1.8	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	<10	<10
NAPHTHALENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
STYRENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	2.6	0.4J	<0.5
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5

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.

† All results are reported on dry basis for soil samples.

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

(a) Analyzed with a dilution factor of 2.

(b) MDL reported.

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: 03-1842

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Case Narrative

Project: JPL/04-4428.10

For GEOFON, Inc.

APCL Service No: 03-1842

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-8	03-01842-3
MW-16	03-01842-4
MW-7	03-01842-2
DUPE-6-1Q03	03-01842-1
TB-13-2/24/03	03-01842-5
DUPE-6-1Q03	03-01842-6

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196A (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

(1) 524.2:

Surrogate BFB recovery in the 2 times dilution of the sample DUPE-6-1Q03 was 139%, higher than 70-129% control limits. Same recovery in the analysis with a dilution factor of 2 was within control limits.

"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

Applied P & Ch Laboratory
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Sample Receiving Checklist

APCL ServiceID: 1842 Client Name/Project: Geotn/JPL

1. Sample Arrival

Date/Time Received 2/24/03 1942 Date/Time Opened 2/24/03 1942 By (name): Kenny Chan

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

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By:
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold # Received 5
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: ☑ #Samples OK?
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs):

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 4.3
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

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

5. Holding-time Requirements

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

6. Sample Container Condition

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

7. Turn Around Time

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

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: Kenny Chan Date: 24 Feb 2003 Time: 7:38 a.m.

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

DocumentFile: [usal.texfiles]smprcl.tex.

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Sample Login: Check List

03-01842 (0470_ 117) (2202777_ 117)

02/25/03

Part 1: General Information

☐	Company Information	Name:	*GEOFON, Inc.*
		Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
☐	Project Information	Project Description:	*JPL*
		Project #:	*04-4428.10*
☐	Billing Information	P.O. #:	
		Bill Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
		Lab Project ID:	
		Client Database #:	*3*
☐	Receiving Information	Who Received Sample?	*Kenny Chan*
		Receiving Date/Time:	*02/24/03 1942*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*4.3 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Rush 5 working day(s)*
☐	QC Option:		*NEESA D*
☐	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-8	VOC	03-01842-3-α	W	V	C	40	3	G	022403	N	0	6	☐
	MW-8	CRVI/Perch	03-01842-3-β	W	P		500	1	G	022403	N	0	6	☐
2	MW-16	VOC	03-01842-4-α	W	V	C	40	6	G	022403	N	0	6	☐
	MW-16	CRVI/Perch	03-01842-4-β	W	P		500	2	G	022403	N	0	6	☐
3	MW-7	VOC	03-01842-2-α	W	V	C	40	3	G	022403	N	0	6	☐
	MW-7	CRVI/Perch	03-01842-2-β	W	P		500	1	G	022403	N	0	6	☐
4	DUPE-6-1Q03	VOC	03-01842-1-α	W	V	C	40	3	G	022403	N	0	6	☐
	DUPE-6-1Q03	CRVI/Perch	03-01842-1-β	W	P		500	1	G	022403	N	0	6	☐
5	TB-13-2/24/03	VOC	03-01842-5	W	V	C	40	2	G	022403	N	0	6	☐

Part 3: Analysis Information

Test Items:

- ☑ *524.2* Volatile Organic Compounds
- ☑ *7196A* Chromium (VI)
- ☑ *314.0/300.0* Perchlorate, low level

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCH	
1	MW-8	VOC	03-01842-3-α	W	X			☐
	MW-8	CRVI/Perch	03-01842-3-β	W		X	X	☐
2	MW-16	VOC	03-01842-4-α	W	X			☐
	MW-16	CRVI/Perch	03-01842-4-β	W		X	X	☐
3	MW-7	VOC	03-01842-2-α	W	X			☐
	MW-7	CRVI/Perch	03-01842-2-β	W		X	X	☐
4	DUPE-6-1Q03	VOC	03-01842-1-α	W	X			☐
	DUPE-6-1Q03	CRVI/Perch	03-01842-1-β	W		X	X	☐
5	TB-13-2/24/03	VOC	03-01842-5	W	X			☐

☐ Client"s Requirement: **RUN MS/MSD ON SAMPLE #4** EPK 2/25/03

Login By En-Yu Paul Kou

Check By PK