APPENDIX A

SOIL VAPOR DATA VALIDATION REPORT
EIGHTH PERIODIC SAMPLING EVENT

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

Geofon, Inc.
22632 Golden Springs Drive, Suite 270
Diamond Bar, CA 91765
ATTN: Mr. Tony Ford

December 31, 2001

SUBJECT: NASA JPL, DO #48, Data Validation

Dear Mr. Ford,

Enclosed is the final validation report for the fraction listed below. This SDG was received on December 12, 2001. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 7610:

SDG #	**Fraction**
GF111401T2	Volatile Halogenated/Aromatic Hydrocarbons

The data validation was performed under EPA Level III guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996

Please feel free to contact us if you have any questions.

Sincerely,

Richard M. Amano
President/Principal Chemist

7610COV.GEO

Attachment 1

LDC #7610 (Geofon Inc.-Diamond Bar / NASA JPL, DO #48)

LDC	SDG#	DATE REC'D	DATE DUE	VOA (8010/ 8020)																																	
Matrix:	Air/Water/Soil			A	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	GF111401T2	12-12-01	1-4-02	63	0																																
Total	B			63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Shaded cells indicate Level IV validation (all other cells are Level III validation).

7610ST.GEO

NASA JPL, DO #48
Data Validation Reports
LDC# 7610

Volatiles

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: NASA JPL, DO #48

Collection Date: November 14 through November 21, 2001

LDC Report Date: December 28, 2001

Matrix: Air

Parameters: Volatile Halogenated/Aromatic Hydrocarbons

Validation Level: EPA Level III

Laboratory: HP Labs

Sample Delivery Group (SDG): GF111401T2

Sample Identification

SVW30-VPA-01	SVW3-VPD-21	SVW33-VPE-41	SVW6-VPC-61
SVW30-VPB-02	SVW4-VPB-22	SVW33-VPE-42DUP	SVW6-VPD-62
SVW30-VPC-03	SVW4-VPD-23	SVW33-VPF-43	SVW6-VPE-63
SVW30-VPD-04	SVW4-VPD-24DUP	SVW36-VPB-44	
SVW30-VPE-05	SVW7-VPA-25	SVW36-VPC-45	
SVW30-VPE-06DUP	SVW7-VPB-26	SVW8-VPC-46	
SVW31-VPA-07	SVW11-VPA-27	SVW8-VPD-47	
SVW31-VPB-08	SVW11-VPE-28	SVWVPD-48DUP	
SVW31-VPD-09	SVW32-VPH-29	SVW8-VPE-49	
SVW31-VPE-10	SVW32-VPH-30DUP	SVW10-VPB-50	
SVW12-VPC-11	SVW14-VPA-31	SVW10-VPD-51	
SVW12-VPC-12DUP	SVW14-VPB-32	SVW37-VPJ-52	
SVW12-VPD-13	SVW17-VPC-33	SVW34-VPH-53	
SVW5-VPB-14	SVW9-VPA-34	SVW34-VPH-54DUP	
SVW1-VPB-15	SVW9-VPB-35	SVW15-VPB-55	
SVW1-VPC-16	SVW9-VPB-36DUP	SVW15-VPC-56	
SVW2-VPA-17	SVW9-VPC-37	SVW15-VPD-57	
SVW2-VPA-18DUP	SVW9-VPD-38	SVW15-VPE-58	
SVW2-VPC-19	SVW9-VPE-39	SVW6-VPB-59	
SVW3-VPC-20	SVW33-VPD-40	SVW6-VPB-60DUP	

Introduction

This data review covers 63 air samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 8010 & 8020 modified for Volatile Halogenated/Aromatic Hydrocarbons.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by these methods.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for selected compounds and less than or equal to 20.0% for all other compounds.

b. Calibration Verification

Calibration verification was performed at the required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were less than or equal to 25.0% for selected compounds and less than or equal to 15.0% for all other compounds.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile halogenated/aromatic hydrocarbon contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the methods. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were not required by the method.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

Samples SVW30-VPE-05 and SVW30-VPE-06DUP, samples SVW12-VPC-11 and SVW12-VPC-12DUP, samples SVW2-VPA-17 and SVW2-VPA-18DUP, samples SVW4-VPB-22 and SVW4-VPD-24DUP, samples SVW32-VPH-29 and SVW32-VPH-30DUP, samples SVW9-VPB-35 and SVW9-VPB-36DUP, samples SVW33-VPE-41 and SVW33-VPE-42DUP, samples SVW8-VPD-47 and SVWVPD-48DUP, samples SVW34-VPH-53 and SVW34-VPH-54DUP and samples SVW6-VPB-59 and SVW6-VPB-60DUP were identified as field duplicates. No volatile halogenated/aromatic hydrocarbons were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L-Vapor)		RPD
	SVW4-VPD-23	SVW4-VPD-24DUP	
Trichloroethene	4.6	2.8	49

Compound	Concentration (ug/L-Vapor)		RPD
	SVW32-VPH-29	SVW32-VPH-30DUP	
Carbon tetrachloride	3.6	3.1	15
1,1,2-Trichlorotrifluoroethane	4.1	3.8	8

Compound	Concentration (ug/L-Vapor)		RPD
	SVW9-VPB-35	SVW9-VPB-36DUP	
1,1,2-Trichlorotrifluoroethane	3.1	2.6	18

Compound	Concentration (ug/L-Vapor)		RPD
	SVW33-VPE-41	SVW33-VPE-42DUP	
Carbon tetrachloride	8.1	5.8	33
1,1-Dichloroethene	1.9	1.7	11
1,1,2-Trichlorotrifluoroethane	1.7	1.2	34

Compound	Concentration (ug/L-Vapor)		RPD
	SVW34-VPH-53	SVW34-VPH-54DUP	
Carbon tetrachloride	1.5	1.7	13

X. Field Blanks

No field blanks were identified in this SDG.

NASA JPL, DO #48
Volatile Halogenated/Aromatic Hydrocarbons - Data Qualification Summary - SDG GF111401T2

No Sample Data Qualified in this SDG

NASA JPL, DO #48
Volatile Halogenated/Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG GF111401T2

No Sample Data Qualified in this SDG