APPENDIX B

B-1 RESULTS OF SOIL VAPOR ANALYSES

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APPENDIX B-1

RESULTS OF SOIL VAPOR ANALYSES

June 12, 2003

Mr. Leo Williamson
Geofon
22632 Golden Springs Drive, Ste. 270
Diamond Bar, CA 91765

SUBJECT: DATA REPORT – JET PROPULSION LABORATORY – 4800 Oak Drive, Pasadena, CA - GEOFON PROJECT #04-4428.10

HP Labs Project # GF052103-L6

Mr. Williamson:

Please find enclosed a data report for the above referenced location. Soil vapor samples were analyzed on-site in DOHS certified mobile laboratory (CERT #1561).

Project Summary

Soil vapor from 10 points was analyzed for:

- Halogenated and volatile aromatic hydrocarbons by EPA Method 8260B

The samples were received on-site in appropriate containers with appropriate labels, seals, and chain-of-custody documentation.

Project Narrative

The results for all analyses and required QA/QC analyses are summarized in the enclosed tables. All calibrations, blanks, surrogates, and spike recoveries fulfill quality control criteria. No data qualifiers (flags) apply to any of the reported data.

HP Labs appreciates the opportunity to provide analytical services to Geofon on this project. If you have any questions relating to this data or report, please do not hesitate to contact us.

Sincerely,

Tamara Davis

Ms. Tamara Davis
Lab Director

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GEOFON PROJECT # 04-4428.10
JET PROPULSION LABORATORY
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #GF052103-L6
INSTRUMENT: AGILENT 6850 GC / 5973 MASS SPECTROMETER
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8260) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	AMBIENT BLANK	SVW37-VPJ-001	SVW36-VPB-002	SVW36-VPC-003	SVW33-VPD-004	SVW33-VPE-005	SVW33-VPF-006	SVW32-VPH-007	SVW4-VPB-008	SVW4-VPD-009	SVW4-VPD-010 DUP
DATE	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03
ANALYSIS TIME	6:06	7:32	7:57	8:23	8:50	9:16	9:43	10:09	10:34	11:00	11:26
SAMPLING DEPTH (feet)	--	185	35	55	85	105	120	155	20	56	56
VOLUME WITHDRAWN (cc)	--	800	200	280	400	480	540	680	140	284	344
VOLUME INJECTED	20	20	20	20	20	20	20	20	20	20	20
DILUTION FACTOR	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	16	22	nd	nd	nd	nd
CHLOROETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	2.0	3.1	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	1.3	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	5.1	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	2.3	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SURROGATES (75-125% RECOVERY)											
DIBROMODIFLUOROMETHANE	110%	113%	108%	108%	120%	123%	116%	108%	118%	125%	122%
1,2-DICHLOROETHANE-d4	109%	109%	111%	109%	125%	120%	125%	109%	117%	125%	123%
4 BROMOFLUORO BENZENE	104%	104%	93%	94%	103%	106%	97%	93%	94%	97%	95%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND
ANALYSES PERFORMED ON-SITE IN CA DOHS MOBILE LABORATORY #1561
ANALYSES PERFORMED BY: MARK BURKE
DATA REVIEWED BY: TAMARA DAVIS

APPENDIX B-2

CHAIN-OF-CUSTODY FORMS

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

GEOFON's LAB COORDINATOR: LED WILLIAMSON	LAB COORDINATOR'S PHONE: 909-396-7662	LAB COORDINATOR'S FAX: 909-396-1455	LABORATORY SERVICE ID: GF052103-L6	LABORATORY CONTACT: MARK BURKE	MAIL REPORT (COMPANY NAME): GEOFON INC
PROJECT NAME: JPL #2	PROJECT LOCATION: QUARTERLY SVE MONITORING	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: 858-793-0401	LABORATORY FAX: 858-793-0404	RECIPIENT NAME: LED WILLIAMSON
PROJECT CONTACT: LED WILLIAMSON	PROJECT PHONE NUMBER: 714-920-8438	PROJECT FAX: N/A	LABORATORY ADDRESS: 432 N. CEDROS AVE		ADDRESS: 22632 GOLDEN SPRINGS DR #270
PROJECT ADDRESS: 4800 OAKGROVE DR	CITY, STATE AND ZIPCODE: PASADENA CA 91108	CLIENT: US NAVY SWDIV	CITY, STATE AND ZIPCODE: SOLANA BEACH CA 92075		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 8260	Comments
1	SVW37-VPJ-001	AIR	5/21/03	0710	NONE	1*	3	NORM	X	1* 60cc SYRINGE
2	SVW36-VPB-002			0732					X	
3	SVW36-VPC-003			0800					X	
4	SVW33-VPD-004			0825					X	
5	SVW33-VPE-005			0855					X	
6	SVW33-VPF-006			0920					X	
7	SVW32-VPH-007			0945					X	
8	SVW4-VPB-008			1010					X	
9	SVW4-VPD-009			1035					X	
10	SVW4-VPD-010 DUPLICATE			1100					X	DUPLICATE

SAMPLES COLLECTED BY: [signature]

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[signature]	[signature]	5-21-03	1200	Good

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

APPENDIX B-3

DAILY OPENING, CLOSING, AND CONTINUING CALIBRATION VERIFICATION REPORTS

QA/QC CALIBRATION DATA

DATE: 05/21/03
HP Labs Project #GF052103-L6
LAB-6

SUPPLY SOURCE: CONTINUING CALIBRATION (OPENING) SUPELCO LOT #LSS-690
SUPPLY SOURCE: QUALITY CONTROL (CLOSING) SUPELCO LOT #LSS-687
INSTRUMENT: AGILENT 6850 GC / 5973 MASS SPECTROMETER

COMPOUND	OPENING STANDARD			2ND SOURCE (1ug/L) CLOSING		
	MASS	RESULT	%DIFF	MASS	RESULT	%DIFF
CARBON TETRACHLORIDE	50	53.2	6.4%	1.0	1.09	9.0%
CHLOROFORM	50	52.3	4.6%	1.0	1.20	20.0%
1,1-DICHLORO ETHANE	50	51.2	2.3%	1.0	1.12	12.0%
1,2-DICHLORO ETHANE	50	49.6	0.9%	1.0	1.08	8.0%
1,1-DICHLORO ETHENE	50	47.9	4.1%	1.0	0.89	11.0%
CIS-1,2-DICHLORO ETHENE	50	48.8	2.4%	1.0	0.94	6.0%
TRANS-1,2-DICHLORO ETHENE	50	51.3	2.6%	1.0	1.01	1.0%
DICHLOROMETHANE	50	51.4	2.8%	1.0	1.16	16.0%
TETRACHLORO ETHENE	50	57.5	15.0%	1.0	1.09	9.0%
1,1,1,2-TETRACHLORO ETHANE	50	56.7	13.4%	1.0	1.12	12.0%
1,1,2,2-TETRACHLORO ETHANE	50	50.6	1.2%	1.0	1.12	12.0%
1,1,1-TRICHLORO ETHANE	50	52.5	5.0%	1.0	1.09	9.0%
1,1,2-TRICHLORO ETHANE	50	44.8	10.4%	1.0	1.04	4.0%
TRICHLORO ETHENE	50	44.4	11.2%	1.0	0.86	14.0%
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	50	47.4	5.2%	1.0	1.22	22.0%
BENZENE	50	51.0	2.0%	1.0	1.09	9.0%
CHLOROBENZENE	50	51.6	3.2%	1.0	1.01	1.0%
ETHYLBENZENE	50	51.3	2.6%	1.0	0.87	13.0%
TOLUENE	50	45.9	8.2%	1.0	0.97	3.0%
m&p-XYLENES	100	101	1.3%	2.0	2.08	4.0%
o-XYLENE	50	49.5	1.0%	1.0	0.87	13.0%

ANALYSES PERFORMED ON-SITE IN CA DOHS MOBILE LABORATORY #1561
ANALYSES PERFORMED BY: MARK BURKE
DATA REVIEWED BY: TAMARA DAVIS

SOIL GAS INITIAL LCS STANDARD REPORT (CALIBRATION VERIFICATION)

LAB: Lab 6
SUPPLY SOURCE: SUPELCO LOT #LSS-690
INSTRUMENT: AGILENT 6850 GC / 5973 MASS SPECTROMETER

COMPOUND	CAL DATE	MASS	RT	RESULT	%DIFF
CARBON TETRACHLORIDE	2/14/2003	50	8.5	49.5	1.1%
CHLOROFORM	2/14/2003	50	8.1	49.6	0.8%
1,1-DICHLORO ETHANE	2/14/2003	50	7.4	51.2	2.4%
1,2-DICHLORO ETHANE	2/14/2003	50	8.6	54.4	8.8%
1,1-DICHLORO ETHENE	2/14/2003	50	6.4	48.9	2.2%
CIS-1,2-DICHLORO ETHENE	2/14/2003	50	7.9	50.4	0.8%
TRANS-1,2-DICHLORO ETHENE	2/14/2003	50	7.1	50.8	1.6%
DICHLOROMETHANE	2/14/2003	50	6.8	49.0	2.0%
TETRACHLORO ETHENE	2/14/2003	50	10.8	50.5	1.0%
1,1,1,2-TETRACHLORO ETHANE	2/14/2003	50	11.7	51.6	3.2%
1,1,2,2-TETRACHLORO ETHANE	2/14/2003	50	12.7	53.6	7.2%
1,1,1-TRICHLORO ETHANE	2/14/2003	50	8.4	49.7	0.6%
1,1,2-TRICHLORO ETHANE	2/14/2003	50	10.6	52.4	4.8%
TRICHLORO ETHENE	2/14/2003	50	9.2	53.4	6.8%
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	2/14/2003	50	6.3	55.7	11.4%
BENZENE	2/14/2003	50	8.7	47.7	4.6%
ETHYLBENZENE	2/14/2003	50	11.7	45.3	9.4%
TOLUENE	2/14/2003	50	10.3	46.3	7.4%
m&p-XYLENES	2/14/2003	100	11.7	89.2	10.8%
o-XYLENE	2/14/2003	50	12.2	44.8	10.4%

ANALYSES PERFORMED IN CA DOHS MOBILE LABORATORY #1561
ANALYSES PERFORMED BY: MARK BURKE
DATA REVIEWED BY: TAMARA DAVIS