APPENDIX B

B-1 RESULTS OF SOIL VAPOR ANALYSES

B-2 CHAIN-OF-CUSTODY FORMS

B-3 DAILY OPENING, CLOSING, AND CONTINUING CALIBRATION VERIFICATION REPORTS

APPENDIX B-1

RESULTS OF SOIL VAPOR ANALYSES

DEC 0 9 2002

HP LABS

December 3, 2002

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

SUBJECT: DATA REPORT – JET PROPULSION LAB – 4800 OAK GROVE DRIVE – PASADENA, CA - GEOFON PROJECT #04-4428.10 JPL#2

HP Labs Project # GF112602-L6

Mr. Ford:

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 9 points was analyzed for:

- volatile halogenated hydrocarbons by EPA Method 8260B
- volatile aromatic hydrocarbons (BTEX) by EPA Method 8260B
- 1 LCS

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

148 S. Vinewood Street • Escondido, CA 92029 • Phone (760) 735-3208 • Fax (760) 735-2469
432 N. Cedros Avenue • Solana Beach, CA 92075 • Phone (858) 793-0401 • Fax (858) 793-0404
2373 208th Street Suite F-1 • Torrance, CA 90501 • Phone (310) 782-2929 • Fax (310) 782-2798

GEOFON PROJECT # 04-4304-480
JET PROPULSION LABORATORY
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #GF112602-L6

GC SHIMADZU 14A
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8260) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	AMBIENT BLANK	SVW37-VPJ-01	SVW33-VPD-02	SVW33-VPE-03	SVW33-VPF-04	SVW36-VPB-05	SVW36-VPC-06	SVW4-VPB-07	SVW4-VPD-08	SVW32-VPH-09	SVW32-VPH-10 DUP
DATE	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02
ANALYSIS TIME	6:37	7:53	8:18	8:43	9:08	9:34	9:59	10:25	10:49	11:14	11:39
SAMPLING DEPTH (feet)	--	185	85	105	120	35	55	20	56	155	155
VOLUME WITHDRAWN (cc)	--	800	400	480	900	200	280	140	284	280	340
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	17	18	5.8	4.1	nd	nd	nd	nd
CHLOROETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	1.1	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	2.4	1.9	nd	nd	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	4.8	3.5	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	9.1	8.0	13	1.4	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	1.4	nd	3.5	2.2	nd	nd	nd	nd	1.1	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	1.1	1.2	1.1	1.4	1.3	1.0	nd	nd	1.1
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											
DIBROMODIFLUOROMETHANE	113%	114%	117%	116%	109%	106%	112%	107%	110%	116%	107%
1,2-DICHLOROETHANE-d4	101%	95%	106%	104%	100%	100%	104%	97%	102%	109%	98%
4 BROMOFLUORO BENZENE	88%	88%	95%	92%	88%	87%	88%	88%	90%	89%	83%

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

GEOFON PROJECT # 04-4304-480
JET PROPULSION LABORATORY
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #GF112602-L6

GC SHIMADZU 14A
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8260) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN PPMV-VAPOR

	Reporting Limit	AMBIENT BLANK	SVW37-VPJ-01	SVW33-VPD-02	SVW33-VPE-03	SVW33-VPF-04	SVW36-VPB-05	SVW36-VPC-06	SVW4-VPB-07	SVW4-VPD-08	SVW32-VPH-09	SVW32-VPH-10 DUP
DATE		11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02
ANALYSIS TIME		6:37	7:53	8:18	8:43	9:08	9:34	9:59	10:25	10:49	11:14	11:39
SAMPLING DEPTH (feet)		--	185	85	105	120	35	55	20	56	155	155
VOLUME WITHDRAWN (cc)		--	800	400	480	900	200	280	140	284	280	340
VOLUME INJECTED		1	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR		1	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	200	nd	nd	nd	2700	2800	900	600	nd	nd	nd	nd
CHLOROETHANE	400	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	200	nd	nd	nd	nd	nd	200	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	200	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	200	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	200	nd	nd	nd	600	500	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	200	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	200	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	300	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	200	nd	nd	nd	nd	nd	900	600	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	200	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	200	nd	nd	nd	nd	nd	1700	1500	2400	300	nd	nd
VINYL CHLORIDE	400	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	200	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	200	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	100	nd	200	nd	500	300	nd	nd	nd	nd	100	nd
BENZENE	300	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROBENZENE	300	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	300	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	200	nd	nd	300	300	300	400	300	300	nd	nd	300
m&p-XYLENES	200	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	200	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SURROGATES												
DIBROMODIFLUOROMETHANE		113%	114%	117%	116%	109%	106%	112%	107%	110%	116%	107%
1,2-DICHLOROETHANE-d4		101%	95%	106%	104%	100%	100%	104%	97%	102%	109%	98%
4 BROMOFLUORO BENZENE		88%	88%	95%	92%	88%	87%	88%	88%	90%	89%	83%

ND INDICATES NOT DETECTED AT THE LISTED REPORTING LIMIT 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	LAB COORDINATOR'S PHONE	LAB COORDINATOR'S FAX	LABORATORY SERVICE ID	LABORATORY CONTACT	MAIL REPORT (COMPANY NAME)
Leo W. Williamson	(909) 396-7662	(909) 396-1455	GF 112602-L6	Marke Burke	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: Leo W. Williamson
PROJECT CONTACT: Leo W. 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 Oak Grove Dr.	CITY, STATE AND ZIPCODE: Pasadena, CA.	CLIENT: US NAVY SWDIV	CITY, STATE AND ZIPCODE: Solana Beach, CA. 92075		CITY, STATE AND ZIPCODE: Diamond Bar, CA.
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 8010/8020	Comments
1	SVW37-VPJ-01	AIR	11/26/02	0730	NONE	1*	III	N/A	X	1 * 60cc Syringe
2	SVW33-VPD-02			0755					X	
3	SVW33-VPE-03			0817					X	
4	SVW33-VPF-04			0840					X	
5	SVW36-VPB-05			0902					X	
6	SVW36-VPC-06			0930					X	
7	SVW4-VPB-07			0952					X	
8	SVW4-VPD-08			1015					X	
9	SVW32-VPH-09			1037					X	[redacted]
10	SVW32-VPH-10 DUPLICATE			1100					X	DUPLICATE

SAMPLES COLLECTED BY: X [signature]

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
X [signature]	[signature]	11-26-02	12:00	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: 11/26/02
HP Labs Project #GF112602-L6
Lab 6

SUPPLY SOURCE: CONTINUING CALIBRATION (OPENING) SUPELCO LOT #LSS-651
SUPPLY SOURCE: QUALITY CONTROL (CLOSING) SUPELCO LOT #LSS-642
INSTRUMENT: AGILENT 6850 GC / 5973 MASS SPECTROMETER

COMPOUND	OPENING STANDARD				2ND SOURCE (1ug/L) CLOSING			
	MASS	RT	RESULT	%DIFF	MASS	RT	RESULT	%DIFF
CARBON TETRACHLORIDE	50	8.5	50.2	0.4%	1.0	8.5	1.08	8.0%
CHLOROFORM	50	8.1	49.5	1.0%	1.0	8.1	1.07	7.0%
1,1-DICHLORO ETHANE	50	7.4	47.9	4.2%	1.0	7.4	1.13	13.0%
1,2-DICHLORO ETHANE	50	8.6	48.6	2.8%	1.0	8.6	1.06	6.0%
1,1-DICHLORO ETHENE	50	6.4	51.0	2.0%	1.0	6.4	1.11	11.0%
CIS-1,2-DICHLORO ETHENE	50	7.9	49.7	0.6%	1.0	7.9	1.06	6.0%
TRANS-1,2-DICHLORO ETHENE	50	7.1	52.9	5.8%	1.0	7.1	1.10	10.0%
DICHLOROMETHANE	50	6.8	51.6	3.2%	1.0	6.8	1.19	19.0%
TETRACHLORO ETHENE	50	10.8	56.5	13.0%	1.0	10.8	1.18	18.0%
1,1,1,2-TETRACHLORO ETHANE	50	11.7	56.7	13.4%	1.0	11.7	1.10	10.0%
1,1,2,2-TETRACHLORO ETHANE	50	12.7	46.8	6.4%	1.0	12.7	1.03	3.0%
1,1,1-TRICHLORO ETHANE	50	8.4	49.4	1.2%	1.0	8.4	1.08	8.0%
1,1,2-TRICHLORO ETHANE	50	10.6	47.2	5.6%	1.0	10.6	0.97	3.0%
TRICHLORO ETHENE	50	9.2	45.3	9.4%	1.0	9.2	1.00	0.0%
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	50	6.3	57.7	15.4%	1.0	6.3	1.14	14.0%
BENZENE	50	8.7	51.1	2.2%	1.0	8.7	1.24	24.0%
CHLOROBENZENE	50	11.6	52.2	4.4%	1.0	11.6	1.12	12.0%
ETHYLBENZENE	50	11.7	50.2	0.4%	1.0	11.7	1.06	6.0%
TOLUENE	50	10.3	47.3	5.4%	1.0	10.3	1.31	31.0%
m&p-XYLENES	100	11.7	107	6.7%	2.0	11.7	2.39	19.5%
o-XYLENE	50	12.2	53.8	7.6%	1.0	12.2	1.13	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-611
INSTRUMENT: AGILENT 6850 GC / 5973 MASS SPECTROMETER

COMPOUND	CAL DATE	MASS	RT	RESULT	%DIFF
CARBON TETRACHLORIDE	9/18/2002	50	8.5	51.2	2.4%
CHLOROFORM	9/18/2002	50	8.1	51.2	2.4%
1,1-DICHLORO ETHANE	9/18/2002	50	7.4	50.0	0.0%
1,2-DICHLORO ETHANE	9/18/2002	50	8.6	53.7	7.4%
1,1-DICHLORO ETHENE	9/18/2002	50	6.4	48.2	3.6%
CIS-1,2-DICHLORO ETHENE	9/18/2002	50	7.9	46.9	6.2%
TRANS-1,2-DICHLORO ETHENE	9/18/2002	50	7.1	47.5	5.0%
DICHLOROMETHANE	9/18/2002	50	6.8	52.4	4.8%
TETRACHLORO ETHENE	9/18/2002	50	10.8	54.4	8.8%
1,1,1,2-TETRACHLORO ETHANE	9/18/2002	50	11.7	55.0	10.0%
1,1,2,2-TETRACHLORO ETHANE	9/18/2002	50	12.7	54.9	9.8%
1,1,1-TRICHLORO ETHANE	9/18/2002	50	8.4	53.4	6.8%
1,1,2-TRICHLORO ETHANE	9/18/2002	50	10.6	54.4	8.8%
TRICHLORO ETHENE	9/18/2002	50	9.2	52.3	4.6%
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	9/18/2002	50	6.3	54.5	9.0%
BENZENE	9/18/2002	50	8.7	52.9	5.8%
ETHYLBENZENE	9/18/2002	50	11.7	52.8	5.6%
TOLUENE	9/18/2002	50	10.3	51.3	2.6%
m&p-XYLENES	9/18/2002	100	11.7	111.4	11.4%
o-XYLENE	9/18/2002	50	12.2	56.8	13.6%

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