APPENDIX B

B-1 RESULTS OF SOIL-VAPOR ANALYSES

B-2 CHAIN-OF-CUSTODY FORMS

B-3 INITIAL THREE-POINT CALIBRATION DATA

B-4 DAILY OPENING, CLOSING, AND CONTINUING CALIBRATION VERIFICATION REPORTS

APPENDIX B-1

RESULTS OF SOIL-VAPOR ANALYSES

HP Labs

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January 5, 2001

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

SUBJECT: DATA REPORT - JPL – 4800 OAK GROVE DRIVE - PASADENA, CA - GEOFON PROJECT #04-4304-480

HP Labs Project # 2K1218W1 to 2K1228W1

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 #1745).

Project Summary

Soil vapor from 80 points was analyzed for:

- volatile halogenated hydrocarbons by EPA Method 8010
- volatile aromatic hydrocarbons (BTEX) by Modified EPA Method 8020

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,

James E. Picker, Ph. D.
Lab Director

d.b.a. teg

d.b.a. MOBILE/ONE LABORATORIES, INC.

HP Labs

GEOFON PROJECT # 04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1218W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	BLANK	SVW25-VPA-001	SVW25-VPB-002	SVW25-VPI-003	SVW25-VPJ-004	SVW26-VPB-005
DATE	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00
SAMPLING TIME	05:55	07:52	08:24	09:33	10:00	10:27
ANALYSIS TIME	05:58	07:56	08:27	09:36	10:02	10:31
SAMPLING DEPTH (feet)	--	20	40	180	190	35
VOLUME WITHDRAWN (cc)	200	80	160	720	760	140
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	98%	101%	95%	101%	101%	96%
CHLOROBENZENE	91%	100%	95%	99%	100%	99%
4 BROMOFLUORO BENZENE	93%	102%	97%	100%	103%	101%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT # 04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1218W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	SVW26-VPB-006 DUP	SVW26-VPF-007	SVW26-VPG-008	SVW26-VPH-009	SVW26-VPI-010
DATE	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00
SAMPLING TIME	10:45	11:16	11:40	12:05	12:28
ANALYSIS TIME	10:55	11:20	11:45	12:09	12:33
SAMPLING DEPTH (feet)	35	115	140	160	180
VOLUME WITHDRAWN (cc)	140	460	560	640	720
VOLUME INJECTED	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1
CARBON TETRACHLORIDE	nd	1.3	4.0	5.8	2.5
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	1.1	1.6	3.3
VINYL CHLORIDE	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd
SURROGATES					
1,4 DIFLUORO BENZENE	94%	99%	96%	98%	94%
CHLOROBENZENE	95%	100%	97%	98%	98%
4 BROMOFLUORO BENZENE	100%	102%	102%	101%	100%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1218W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	BLANK	BLANK	SVW25-VPA-001	SVW25-VPA-001	SVW25-VPB-002	SVW25-VPB-002	SVW25-VPI-003	SVW25-VPI-003
DATE	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00
SAMPLING TIME	5:55	5:55	7:52	7:52	8:24	8:24	9:33	9:33
ANALYSIS TIME	5:58	5:58	7:56	7:56	8:27	8:27	9:36	9:36
SAMPLING DEPTH (feet)	--	--	20	20	40	40	180	180
VOLUME WITHDRAWN (cc)	200	200	80	80	160	160	720	720
VOLUME INJECTED	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd
SURROGATES								
1,4 DIFLUORO BENZENE	10.7	159	10.8	163	10.8	154	10.8	164
CHLOROBENZENE	17.6	359	17.7	397	17.7	377	17.7	392
4 BROMOFLUORO BENZENE	20.7	617	20.9	678	20.9	641	20.9	667

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1218W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SVW25-VPJ-004	SVW25-VPJ-004	SVW26-VPB-005	SVW26-VPB-005	SVW26-VPB-006 DUP	SVW26-VPB-006 DUP
DATE	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00
SAMPLING TIME	10:00	10:00	10:27	10:27	10:45	10:45
ANALYSIS TIME	10:02	10:02	10:31	10:31	10:55	10:55
SAMPLING DEPTH (feet)	190	190	35	35	35	35
VOLUME WITHDRAWN (cc)	760	760	140	140	140	140
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	10.8	163	10.9	156	10.7	153
CHLOROBENZENE	17.8	397	17.8	392	17.7	378
4 BROMOFLUORO BENZENE	21.0	687	21.0	668	20.9	665

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1218W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SVW26-VPF-007	SVW26-VPF-007	SVW26-VPG-008	SVW26-VPG-008	SVW26-VPH-009	SVW26-VPH-009	SVW26-VPI-010	SVW26-VPI-010
DATE	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00	12/18/00
SAMPLING TIME	11:16	11:16	11:40	11:40	12:05	12:05	12:28	12:28
ANALYSIS TIME	11:20	11:20	11:45	11:45	12:09	12:09	12:33	12:33
SAMPLING DEPTH (feet)	115	115	140	140	160	160	180	180
VOLUME WITHDRAWN (cc)	460	460	560	560	640	640	720	720
VOLUME INJECTED	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	10.3	318	10.3	993	10.2	1434	10.2	611
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	11.6	14	11.5	19	11.5	41
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd
SURROGATES								
1,4 DIFLUORO BENZENE	10.8	160	10.8	156	10.8	158	10.8	153
CHLOROBENZENE	17.7	395	17.8	384	17.7	388	17.7	387
4 BROMOFLUORO BENZENE	20.9	679	21.0	675	20.9	672	20.9	664

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT # 04-4304-480
JPL
OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1219W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	BLANK	SVW27-VPA-011	SVW27-VPA-012 DUP	SVW27-VPB-013	SVW27-VPC-014	SVW27-VPD-015
DATE	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00
SAMPLING TIME	05:50	07:03	07:22	07:52	08:13	08:35
ANALYSIS TIME	05:50	07:04	07:28	07:53	08:17	08:41
SAMPLING DEPTH (feet)	--	20	20	35	60	85
VOLUME WITHDRAWN (cc)	200	80	80	140	240	340
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	109%	98%	99%	92%	96%	96%
CHLOROBENZENE	101%	94%	98%	92%	96%	97%
4 BROMOFLUORO BENZENE	103%	98%	102%	95%	99%	99%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT # 04-4304-480
JPL
OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1219W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	SVW27-VPE-016	SVW27-VPF-017	SVW27-VPF-018 DUP	SVW27-VPG-019	SVW27-VPH-020	SVW27-VPI-021
DATE	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00
SAMPLING TIME	09:10	09:32	09:54	10:19	10:41	11:07
ANALYSIS TIME	09:10	09:34	09:57	10:21	10:46	11:10
SAMPLING DEPTH (feet)	100	120	120	140	160	180
VOLUME WITHDRAWN (cc)	400	480	480	560	640	720
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
CARBON TETRACHLORIDE	3.8	nd	nd	2.6	nd	8.0
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	1.4
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	98%	92%	99%	104%	101%	102%
CHLOROBENZENE	94%	92%	99%	102%	102%	104%
4 BROMOFLUORO BENZENE	99%	95%	103%	107%	104%	106%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT # 04-4304-480
JPL
OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1219W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	SVW27-VPJ-022	SVW28-VPA-023	SVW28-VPA-024 DUP	SVW28-VPD-025	SVW28-VPE-026
DATE	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00
SAMPLING TIME	11:28	12:15	12:42	13:03	13:28
ANALYSIS TIME	11:33	12:22	12:45	13:09	13:33
SAMPLING DEPTH (feet)	205	20	20	80	105
VOLUME WITHDRAWN (cc)	820	80	80	320	420
VOLUME INJECTED	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1
CARBON TETRACHLORIDE	2.1	nd	nd	nd	nd
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd
TRICHLORO ETHENE	2.1	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd
SURROGATES					
1,4 DIFLUORO BENZENE	99%	101%	97%	104%	98%
CHLOROBENZENE	100%	101%	100%	106%	97%
4 BROMOFLUORO BENZENE	103%	103%	102%	112%	101%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1219W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	BLANK	BLANK	SVW27-VPA-011	SVW27-VPA-011	SVW27-VPA-012 DUP	SVW27-VPA-012 DUP
DATE	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00
SAMPLING TIME	5:50	5:50	7:03	7:03	7:22	7:22
ANALYSIS TIME	5:50	5:50	7:04	7:04	7:28	7:28
SAMPLING DEPTH (feet)	--	--	20	20	20	20
VOLUME WITHDRAWN (cc)	200	200	80	80	80	80
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	10.7	176	10.8	158	10.8	160
CHLOROBENZENE	17.6	400	17.7	374	17.7	389
4 BROMOFLUORO BENZENE	20.8	683	20.9	653	20.9	674

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1219W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SVW27-VPB-013	SVW27-VPB-013	SVW27-VPC-014	SVW27-VPC-014	SVW27-VPD-015	SVW27-VPD-015	SVW27-VPE-016	SVW27-VPE-016
DATE	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00
SAMPLING TIME	7:52	7:52	8:13	8:13	8:35	8:35	9:10	9:10
ANALYSIS TIME	7:53	7:53	8:17	8:17	8:41	8:41	9:10	9:10
SAMPLING DEPTH (feet)	35	35	60	60	85	85	100	100
VOLUME WITHDRAWN (cc)	140	140	240	240	340	340	400	400
VOLUME INJECTED	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	10.3	936
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd
SURROGATES								
1,4 DIFLUORO BENZENE	10.8	149	10.7	155	10.8	156	10.8	158
CHLOROBENZENE	17.7	363	17.7	381	17.8	384	17.7	374
4 BROMOFLUORO BENZENE	20.9	628	20.9	656	21.0	659	20.9	657

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1219W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SVW27-VPF-017	SVW27-VPF-017	SVW27-VPF-018 DUP	SVW27-VPF-018 DUP	SVW27-VPG-019	SVW27-VPG-019
DATE	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00
SAMPLING TIME	9:32	9:32	9:54	9:54	10:19	10:19
ANALYSIS TIME	9:34	9:34	9:57	9:57	10:21	10:21
SAMPLING DEPTH (feet)	120	120	120	120	140	140
VOLUME WITHDRAWN (cc)	480	480	480	480	560	560
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	10.2	638
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	10.7	149	10.7	160	10.8	168
CHLOROBENZENE	17.7	363	17.7	394	17.7	403
4 BROMOFLUORO BENZENE	20.9	629	20.9	682	21.0	713

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1219W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SVW27-VPH-020	SVW27-VPH-020	SVW27-VPI-021	SVW27-VPI-021	SVW27-VPJ-022	SVW27-VPJ-022	SVW28-VPA-023	SVW28-VPA-023
DATE	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00
SAMPLING TIME	10:41	10:41	11:07	11:07	11:28	11:28	12:15	12:15
ANALYSIS TIME	10:46	10:46	11:10	11:10	11:33	11:33	12:22	12:22
SAMPLING DEPTH (feet)	160	160	180	180	205	205	20	20
VOLUME WITHDRAWN (cc)	640	640	720	720	820	820	80	80
VOLUME INJECTED	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	10.2	1964	10.2	514	nd	nd
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	11.5	17	11.5	25	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd
SURROGATES								
1,4 DIFLUORO BENZENE	10.8	163	10.8	165	10.8	160	10.8	163
CHLOROBENZENE	17.8	403	17.7	412	17.7	395	17.8	399
4 BROMOFLUORO BENZENE	21.0	691	20.9	705	21.0	685	21.0	685

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1219W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SVW28-VPA-024 DUP	SVW28-VPA-024 DUP	SVW28-VPD-025	SVW28-VPD-025	SVW28-VPE-026	SVW28-VPE-026
DATE	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00	12/19/00
SAMPLING TIME	12:42	12:42	13:03	13:03	13:28	13:28
ANALYSIS TIME	12:45	12:45	13:09	13:09	13:33	13:33
SAMPLING DEPTH (feet)	20	20	80	80	105	105
VOLUME WITHDRAWN (cc)	80	80	320	320	420	420
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	10.7	157	10.7	169	10.8	158
CHLOROBENZENE	17.7	396	17.7	419	17.7	384
4 BROMOFLUORO BENZENE	20.9	675	20.9	745	21.0	672

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT # 04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1220W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	BLANK	SVW33-VPA-027	SVW33-VPD-028	SVW33-VPE-029	SVW33-VPE-30 DUP	SVW33-VPF-031
DATE	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00
SAMPLING TIME	05:42	06:50	07:15	07:35	07:57	08:22
ANALYSIS TIME	05:42	06:52	07:15	07:39	08:04	08:29
SAMPLING DEPTH (feet)	--	20	85	105	105	120
VOLUME WITHDRAWN (cc)	200	80	340	420	420	480
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	18	27	24	26
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	4.0	3.0	3.0	2.5
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	1.0	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	3.7	3.1	7.0	6.5	3.5
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	105%	100%	98%	98%	107%	101%
CHLOROBENZENE	96%	101%	98%	99%	109%	102%
4 BROMOFLUORO BENZENE	99%	104%	102%	101%	111%	104%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT # 04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1220W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	SVW33-VPG-032	SVW33-VPJ-033	SVW36-VPB-034	SVW36-VPC-035	SVW36-VPC-036 DUP	SVW36-VPE-037
DATE	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00
SAMPLING TIME	08:53	09:12	09:38	10:02	10:23	10:48
ANALYSIS TIME	08:54	09:18	09:42	10:06	10:30	10:54
SAMPLING DEPTH (feet)	140	200	35	55	55	92
VOLUME WITHDRAWN (cc)	560	800	140	220	220	370
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
CARBON TETRACHLORIDE	13	nd	9.9	61	67	nd
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	1.2	nd	nd	1.7	1.8	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	1.5	nd	nd	8.2	7.5	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	3.8	29	30	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	4.5	28	31	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	3.1	nd	nd	1.0	1.0	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	109%	101%	101%	101%	99%	99%
CHLOROBENZENE	109%	101%	102%	101%	101%	102%
4 BROMOFLUORO BENZENE	112%	105%	105%	104%	104%	104%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1220W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	BLANK	BLANK	SVW33-VPA-027	SVW33-VPA-027	SVW33-VPD-028	SVW33-VPD-028
DATE	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00
SAMPLING TIME	5:42	5:42	6:50	6:50	7:15	7:15
ANALYSIS TIME	5:42	5:42	6:52	6:52	7:15	7:15
SAMPLING DEPTH (feet)	--	--	20	20	85	85
VOLUME WITHDRAWN (cc)	200	200	80	80	340	340
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	10.2	4330
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	5.8	25
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	11.5	13
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	5.7	481	5.6	409
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	10.7	170	10.8	162	10.7	158
CHLOROBENZENE	17.6	382	17.7	398	17.7	389
4 BROMOFLUORO BENZENE	20.7	658	20.9	691	20.9	676

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER

HP Labs

GEOFON PROJECT #04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1220W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SVW33-VPE-029	SVW33-VPE-029	SVW33-VPE-30 DUP	SVW33-VPE-30 DUP	SVW33-VPF-031	SVW33-VPF-031
DATE	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00
SAMPLING TIME	7:35	7:35	7:57	7:57	8:22	8:22
ANALYSIS TIME	7:39	7:39	8:04	8:04	8:29	8:29
SAMPLING DEPTH (feet)	105	105	105	105	120	120
VOLUME WITHDRAWN (cc)	420	420	420	420	480	480
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	10.2	6559	10.3	5916	10.3	6283
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	5.8	19	5.9	18	5.9	15
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	5.6	916	5.7	851	5.7	464
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	10.8	159	10.9	174	10.9	164
CHLOROBENZENE	17.7	394	17.8	430	17.8	402
4 BROMOFLUORO BENZENE	21.0	672	21.0	737	21.0	689

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
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DATA REVIEWED BY: JAMES E. PICKER

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GEOFON PROJECT #04-4304-480
JPL
4800 OAK GROVE DRIVE
PASADENA, CA

HP Labs Project #2K1220W1
GC SHIMADZU 14A FRONT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SVW33-VPG-032	SVW33-VPG-032	SVW33-VPJ-033	SVW33-VPJ-033	SVW36-VPB-034	SVW36-VPB-034
DATE	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00
SAMPLING TIME	8:53	8:53	9:12	9:12	9:38	9:38
ANALYSIS TIME	8:54	8:54	9:18	9:18	9:42	9:42
SAMPLING DEPTH (feet)	140	140	200	200	35	35
VOLUME WITHDRAWN (cc)	560	560	800	800	140	140
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	10.2	3132	nd	nd	10.2	2424
CHLOROETHANE/BROMOMETHANE	nd	nd	nd	nd	nd	nd
CHLOROFORM	9.0	509	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	5.8	9.3	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	9.7	1121
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	11.5	55
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE (FR11)	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE (FR12)	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	5.7	409	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	10.8	176	10.8	164	10.8	164
CHLOROBENZENE	17.8	431	17.8	401	17.8	404
4 BROMOFLUORO BENZENE	21.0	744	21.0	694	21.0	697

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: ALLEN GLOVER
DATA REVIEWED BY: JAMES E. PICKER