0067526

BEACON ENVIRONMENTAL SERVICES, INC.

323 Williams Street • Suite D • Bel Air, MD 21014
410-838-8780 • *fax:* 410-838-8740 • www.emflux.com

F05-013

June 23, 2005

Mr. Stephen Trent
Fluor Hanford, Inc.
1200 Jadwin Avenue
Richland, WA 99352

Subj: Sample Delivery Group BEACON0001
EMFLUX Passive Soil-Gas Survey Data Report
218-E-12B Passive Soil Gas Sampling and Analysis
Contract No. 26796

Dear Mr. Trent:

Enclosed is the data report from the analyses of the samples from the subject project, which were submitted to BEACON on May 19, 2005. Please contact me if you have any questions or comments concerning the enclosures. An electronic data deliverable was previously submitted electronically.

Thank you for the opportunity to provide services to Fluor Hanford. We look forward to continuing to support you on this project. If I can be of any further assistance, please do not hesitate to call.

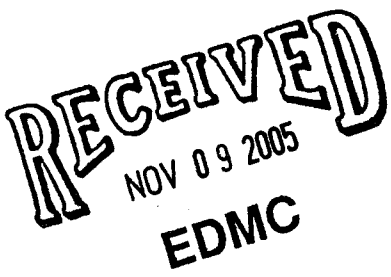
Sincerely,

BEACON Environmental Services, Inc.

Steve Thornley

Steve Thornley
Laboratory Director

Encl(s)



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NARRATIVE

Laboratory Name: BEACON Environmental Services, Inc. (BEACON)
Sample Receipt Date: 5/19/05
Sample Delivery Group: BEACON0001
Project: 218-E-12B Passive Soil Gas Sampling and Analysis Contract No. 26796
Project Code: EM1770

Results for the following samples are included in this data package

	Sample ID	Matrix	Analysis
1	Trip-1	EMFLUX® Cartridge	OTHER-8260B
2	B1CH 16	EMFLUX® Cartridge	OTHER-8260B
3	B1CH 17	EMFLUX® Cartridge	OTHER-8260B
4	B1CH 18	EMFLUX® Cartridge	OTHER-8260B
5	B1CH 19	EMFLUX® Cartridge	OTHER-8260B
6	B1CH 20	EMFLUX® Cartridge	OTHER-8260B
7	B1CH 21	EMFLUX® Cartridge	OTHER-8260B
8	B1CH 22	EMFLUX® Cartridge	OTHER-8260B
9	B1CH 23	EMFLUX® Cartridge	OTHER-8260B
10	B1CH 24	EMFLUX® Cartridge	OTHER-8260B
11	B1CH 25	EMFLUX® Cartridge	OTHER-8260B
12	B1CH 26	EMFLUX® Cartridge	OTHER-8260B
13	B1CH 27	EMFLUX® Cartridge	OTHER-8260B
14	B1CH 28	EMFLUX® Cartridge	OTHER-8260B
15	B1CH 29	EMFLUX® Cartridge	OTHER-8260B
16	B1CH 30	EMFLUX® Cartridge	OTHER-8260B
17	B1CH 31	EMFLUX® Cartridge	OTHER-8260B
18	B1CH 32	EMFLUX® Cartridge	OTHER-8260B
19	B1CH 33	EMFLUX® Cartridge	OTHER-8260B
20	B1CH 34	EMFLUX® Cartridge	OTHER-8260B
21	B1CH 35	EMFLUX® Cartridge	OTHER-8260B
22	B1CH 36	EMFLUX® Cartridge	OTHER-8260B
23	B1CH 37	EMFLUX® Cartridge	OTHER-8260B
24	B1CH 38	EMFLUX® Cartridge	OTHER-8260B
25	B1CH 39	EMFLUX® Cartridge	OTHER-8260B
26	B1CH 40	EMFLUX® Cartridge	OTHER-8260B
27	B1CH 41	EMFLUX® Cartridge	OTHER-8260B

28	Trip-2	EMFLUX® Cartridge	OTHER-8260B
29	B1CH 42	EMFLUX® Cartridge	OTHER-8260B
30	B1CH 43	EMFLUX® Cartridge	OTHER-8260B
31	B1CH 44	EMFLUX® Cartridge	OTHER-8260B
32	B1CH 45	EMFLUX® Cartridge	OTHER-8260B
33	B1CH 46	EMFLUX® Cartridge	OTHER-8260B
34	B1CH 47	EMFLUX® Cartridge	OTHER-8260B
35	B1CH 48	EMFLUX® Cartridge	OTHER-8260B
36	B1CH 49	EMFLUX® Cartridge	OTHER-8260B
37	B1CH 50	EMFLUX® Cartridge	OTHER-8260B
38	B1CH 51	EMFLUX® Cartridge	OTHER-8260B
39	B1CH 52	EMFLUX® Cartridge	OTHER-8260B
40	B1CH 53	EMFLUX® Cartridge	OTHER-8260B
41	B1CH 54	EMFLUX® Cartridge	OTHER-8260B
42	B1CH 55	EMFLUX® Cartridge	OTHER-8260B
43	B1CH 56	EMFLUX® Cartridge	OTHER-8260B
44	B1CH 57	EMFLUX® Cartridge	OTHER-8260B
45	B1CH 58	EMFLUX® Cartridge	OTHER-8260B
46	B1CH 59	EMFLUX® Cartridge	OTHER-8260B
47	B1CH 60	EMFLUX® Cartridge	OTHER-8260B
48	B1CH 61	EMFLUX® Cartridge	OTHER-8260B
49	B1CH 62	EMFLUX® Cartridge	OTHER-8260B
50	B1CH 63	EMFLUX® Cartridge	OTHER-8260B
51	B1CH 64	EMFLUX® Cartridge	OTHER-8260B
52	B1CH 65	EMFLUX® Cartridge	OTHER-8260B
53	B1CH 66	EMFLUX® Cartridge	OTHER-8260B
54	B1CH 67	EMFLUX® Cartridge	OTHER-8260B

Method 8260B

The samples were analyzed for a custom target compound list following EPA Method 8260B. The method was modified by using thermal desorption to introduce the sample, and using a 30% RSD acceptance criteria for linear calibration for targeted analytes. Documentation of internal standards and surrogate recoveries, as well as established limits, are specified in BEACON's *Quality Assurance Program Plan (QAPP) for the Analysis of Soil-Gas Samplers Collected with the EMFLUX® Passive Soil-Gas System.*

Target Compounds

CAS #	Compounds
75-35-4	1,1-Dichloroethene
76-13-1	1,1,2-Trichlorotrifluoroethane
156-60-5	trans-1,2-Dichloroethene
1634-04-4	Methyl-t-butyl ether
75-34-3	1,1-Dichloroethane
156-59-2	cis-1,2-Dichloroethene
67-66-3	Chloroform
594-20-7	2,2-Dichloropropane
107-06-2	1,2-Dichloroethane
71-55-6	1,1,1-Trichloroethane
563-58-6	1,1-Dichloropropene
56-23-5	Carbon Tetrachloride
71-43-2	Benzene
78-87-5	1,2-Dichloropropane
79-01-6	Trichloroethene
10061-01-5	cis-1,3-Dichloropropene
10061-02-6	trans-1,3-Dichloropropene
79-00-5	1,1,2-Trichloroethane
108-88-3	Toluene
142-28-9	1,3-Dichloropropane
106-93-4	1,2-Dibromoethane (EDB)
127-18-4	Tetrachloroethene
630-20-6	1,1,1,2-Tetrachloroethane
108-90-7	Chlorobenzene
100-41-4	Ethylbenzene
108-38-3	p & m-Xylene
75-25-2	Bromoform
79-34-5	1,1,2,2-Tetrachloroethane
95-47-6	o-Xylene
96-18-4	1,2,3-Trichloropropane
98-82-8	Isopropylbenzene
108-67-8	1,3,5-Trimethylbenzene
95-63-6	1,2,4-Trimethylbenzene
541-73-1	1,3-Dichlorobenzene
106-46-7	1,4-Dichlorobenzene
95-50-1	1,2-Dichlorobenzene
104-51-8	n-Butylbenzene
120-82-1	1,2,4-Trichlorobenzene
91-20-3	Naphthalene
87-61-6	1,2,3-Trichlorobenzene

Practical Quantitation Levels (PQL)
As noted in BEACON's QAPP, the PQL for all analytes is 25 nanograms (ng) for purposes of uniformity in reporting.

Blank Contamination
The following table provides the identification for the preparation blank, method blanks, and trip blanks that were analyzed in conjunction with the samples from delivery group number BEACON0001.

Sample ID	Lab File ID	Analysis Date
Prep Blank	05050204.D	5/2/2005
Method Blank	05051903.D	5/19/2005
TRIP-1	05051904.D	5/19/2005
TRIP-2	05051931.D	5/20/2005
Method Blank	05052003.D	5/20/2005

Compounds identified on field samples, trip blanks, and laboratory control samples that were also identified on the associated batch method blank are qualified with a "B." No compounds were identified on any of the prep, method, or trip blank at or above the practical quantitation level.

Calibration Verification
The Continuing Calibration Verification values for the target analytes were all within ±30% of the true value as defined by the initial calibration and met the requirements specified in BEACON's Quality Assurance Program Plan.

Demonstrated Linear Range of Instrumentation
An initial five point calibration is performed on the instrumentation from 10 nanograms to 250 nanograms per EMFLUX® cartridge.

Discussion
The quality assurance checks for all samples in Sample Delivery Group: BEACON0001 passed all acceptance criteria.

ALL DATA MEET REQUIREMENTS AS SPECIFIED IN BEACON'S QUALITY ASSURANCE PROGRAM PLAN EXCEPT AS STATED ABOVE. RELEASE OF THE DATA CONTAINED IN THIS HARDCOPY DATA PACKAGE HAS BEEN AUTHORIZED BY THE LABORATORY DIRECTOR OR HIS SIGNEE, AS VERIFIED BY THE FOLLOWING SIGNATURE:

Steven C. Thornley — 23 June 2005

Steven C. Thornley
Laboratory Director

Date

Chain-of-Custody/
Sample Analysis Request
Forms

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-003 PAGE 1 OF 1

COLLECTOR: GENT

COMPANY CONTACT: TRENT, SJ | TELEPHONE NO.: 373-5869 | PROJECT COORDINATOR: TRENT, SJ | PRICE CODE: 9N | DATA TURNAROUND: 45 Days / 45 Days

SAMPLING LOCATION: 218-E-12B

PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling | SAF NO.: F05-013 | AIR QUALITY:

ICE CHEST NO.: Vendor Seal # 00424511 | FIELD LOGBOOK NO.: | COA: 119624ES10 | METHOD OF SHIPMENT: Federal Express

SHIPPED TO: Beacon Environmental Services | OFFSITE PROPERTY NO.: See PTR 15556 | BILL OF LADING/AIR BILL NO.: See PTR 15556

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C
TYPE OF CONTAINER	EMFLUX Cartridge
NO. OF CONTAINER(S)	1
VOLUME	5g
SAMPLE ANALYSIS	VOA - 8260B (Emflux);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH16	OTHER SOLID	5/12/05	1016	X
B1CH17	OTHER SOLID	5/12/05	1014	X
B1CH18	OTHER SOLID	5/12/05	1018	X
B1CH19	OTHER SOLID	5/12/05	1019	X
B1CH20	OTHER SOLID	5/12/05	1023	X

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PMGENT/Amanda B	5/12/05 1330	FRIG #3	5/12/05 1330
MD-026 KEY 3	5/18/05 0800	M.H. Bauchiere/M.G. Bauchiere	5/18/05 0800
M.H. Bauchiere/M.G. Bauchiere	5/18/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	Steven Thornley		5-19-05 / 1045
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-004 PAGE 1 OF 1

COLLECTOR: GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling		SAF NO.: F05-013
ICE CHEST NO.: Vendor Seal # 00424511	FIELD LOGBOOK NO.	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: 2u PTR 15556		BILL OF LADING/AIR BILL NO.: 2u PTR 15556

PRICE CODE: 9N — AIR QUALITY — DATA TURNAROUND: 45 Days / 45 Days

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C
TYPE OF CONTAINER	EMFLUX Cartridge
NO. OF CONTAINER(S)	1
VOLUME	5g
SAMPLE ANALYSIS	VOA - B260B (Emflux);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH21	OTHER SOLID	5/12/05	1021	X
B1CH22	OTHER SOLID	5/12/05	1025	X
B1CH23	OTHER SOLID	5/12/05	1026	X
B1CH24	OTHER SOLID	5/12/05	1030	X
B1CH25	OTHER SOLID	5/12/05	1028	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT/ [illegible]	5/12/05 1330	FRIGHT3	5/12/05 1330
MO-026, RT 3	5/18/05 0820	M.H. Baichtal/M.L. Baichtal	5/18/05 0820
M.H. Baichtal/M.L. Baichtal	5/18/05 0820	LCA FX	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	Steven Thornley		5.19.05 / 10.45
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-005 PAGE 1 OF 1

COLLECTOR: GENT

COMPANY CONTACT: TRENT, SJ | TELEPHONE NO.: 373-5869 | PROJECT COORDINATOR: TRENT, SJ | PRICE CODE: 9N | DATA TURNAROUND: 45 Days / 45 Days

SAMPLING LOCATION: 218-E-12B

PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling | SAF NO.: F05-013 | AIR QUALITY:

ICE CHEST NO.: Vendor Seal # 00424511 | FIELD LOGBOOK NO. | COA: 119624ES10 | METHOD OF SHIPMENT: Federal Express

SHIPPED TO: Beacon Environmental Services | OFFSITE PROPERTY NO.: SUPTR 15556 | BILL OF LADING/AIR BILL NO.: SUPTR 15556

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C
TYPE OF CONTAINER	EMFLUX Cartridge
NO. OF CONTAINER(S)	1
VOLUME	5g
SAMPLE ANALYSIS	VOA - 8260B (Emflux);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH26	OTHER SOLID	5/12/05	1031	X
B1CH27	OTHER SOLID	5/12/05	1032	X
B1CH28	OTHER SOLID	5/12/05	1034	X
B1CH29	OTHER SOLID	5/12/05	1038	X
B1CH30	OTHER SOLID	5/12/05	1037	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PMGENT/FRIG #3	5/12/05 1330	FRIG #3	5/12/05 1330
FRIG #3	5/18/05 0800	M.E. Bachelor/M.G. Bachelor	5/18/05 0800
M.E. Bachelor/M.G. Bachelor	5/18/05 0800	Lab FR	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	Steven Thornley		5.19.05 1045
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-006 | PAGE 1 OF 1

COLLECTOR: GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling	SAF NO.: F05-013	PRICE CODE: 9N
ICE CHEST NO.: Vendor Seal # 0042451	FIELD LOGBOOK NO.:	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: See PTR 15556		BILL OF LADING/AIR BILL NO.: See PTR 15556

DATA TURNAROUND: AIR QUALITY — 45 Days / 45 Days

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C
TYPE OF CONTAINER	EMFLUX Cartridge
NO. OF CONTAINER(S)	1
VOLUME	5g
SAMPLE ANALYSIS	VOA - 8260B (Emflux);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH31	OTHER SOLID	MAY 12 2005	1040	X
B1CH32	OTHER SOLID	MAY 12 2005	1042	X
B1CH33	OTHER SOLID	MAY 12 2005	1045	X
B1CH34	OTHER SOLID	MAY 12 2005	1043	X
B1CH35	OTHER SOLID	MAY 12 2005	1046	X

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
P.M. GENT	MAY 12 2005 1330	FRIG #3	MAY 12 2005 1330
M.H. Boucher / M.G. Boucher	5/18/05 0800	M.H. Boucher / M.G. Boucher	5/18/05 0800
M.H. Boucher / M.G. Boucher	5/18/05 0800	FedEx	

SPECIAL INSTRUCTIONS

LABORATORY SECTION — RECEIVED BY: Steven Thornley — TITLE — DATE/TIME: 5.19.05 / 10.45

FINAL SAMPLE DISPOSITION — DISPOSAL METHOD — DISPOSED BY — DATE/TIME

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-007 PAGE 1 OF 1

COLLECTOR P.M. GENT	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION 218-E-12B	**PROJECT DESIGNATION** 218-E-12B Passive Soil Gas Sampling		**SAF NO.** F05-013
ICE CHEST NO. Vendor Seal # 0042451I	**FIELD LOGBOOK NO.**	**COA** 119624ES10	**METHOD OF SHIPMENT** Federal Express
SHIPPED TO Beacon Environmental Services	**OFFSITE PROPERTY NO.** 2u PTR 15556		**BILL OF LADING/AIR BILL NO.** 2u PTR 15556

PRICE CODE 9N **AIR QUALITY** **DATA TURNAROUND** 45 Days / 45 Days

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C
TYPE OF CONTAINER	EMFLUX Cartridge
NO. OF CONTAINER(S)	1
VOLUME	5g
SAMPLE ANALYSIS	VOA - 8260B (Emflux);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH36	OTHER SOLID	MAY 12 2005	1048	X
B1CH37	OTHER SOLID	MAY 12 2005	1051	X
B1CH38	OTHER SOLID	MAY 12 2005	1050	X
B1CH39	OTHER SOLID	MAY 12 2005	1054	X
B1CH40	OTHER SOLID	MAY 12 2005	1055	X

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT	5/12/05 1530	FRIGHT 3	1339 5/12/05
110-B26	5/13/05 0800	M.H. Bauchwitz M.G. Bauchwitz	5/18/05 0800
M.H. Bauchwitz M.G. Bauchwitz	5/18/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY** Steven Thornley		**TITLE**	**DATE/TIME** 5-19-05/1045
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**		**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-008 PAGE 1 OF 1

COLLECTOR: P.M. GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 9N
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling		SAF NO.: F05-013	AIR QUALITY:
ICE CHEST NO.: Vendor Seal # 00424511	FIELD LOGBOOK NO.	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express	DATA TURNAROUND: 45 Days / 45 Days
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: SUPTR 15556		BILL OF LADING/AIR BILL NO.: SUPTR 15556	

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C											
TYPE OF CONTAINER	EMFLUX Cartridge											
NO. OF CONTAINER(S)	1											
VOLUME	5g											
SAMPLE ANALYSIS	VOA - 8260B (Emflux);											
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1CH41	OTHER SOLID	MAY 12 2005	1057	X								
B1CH42	OTHER SOLID	MAY 12 2005	1101	X								
B1CH43	OTHER SOLID	12 2005	1059	X								
B1CH44	OTHER SOLID	MAY 12 2005	1102	X								
B1CH45	OTHER SOLID	MAY 12 2005	1105	X								

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PMGENT	1330 5/12/05	FRIG #3	1330 5/12/05
M.A. Bailey	5/18/05 0800	M.H. Bailey M.A. Bailey	5/18/05 0800
M.H. Bailey M.A. Bailey	5/18/05 0800	Fed EX	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY: Steven Thornley		TITLE	DATE/TIME: 5.19.05/1045
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DISPOSED BY	DATE/TIME

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-009 | PAGE 1 OF 1

COLLECTOR: P.M. GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 9N	DATA TURNAROUND: 45 Days / 45 Days		
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling	SAF NO.: F05-013	AIR QUALITY:
ICE CHEST NO.: Vendor Seal # 0424511	FIELD LOGBOOK NO.:	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: SU PTK 15556		BILL OF LADING/AIR BILL NO.: SU PTK 15556

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C
TYPE OF CONTAINER	EMFLUX Cartridge
NO. OF CONTAINER(S)	1
VOLUME	5g
SAMPLE ANALYSIS	VOA - 8260B (Emflux);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH46	OTHER SOLID	MAY 12 2005	1108	X
B1CH47	OTHER SOLID	MAY 12 2005	1106	X
B1CH48	OTHER SOLID	MAY 12 2005	1110	X
B1CH49	OTHER SOLID	MAY 12 2005	1112	X
B1CH50	OTHER SOLID	MAY 12 2005	1115	X

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PMGENT/	1330 5/12/05	FRIG #3	1330 5/12/05
M.A. Bachelor	5/18/05 0800	M.A. Bachelor	5/18/05 0800
M.A. Bachelor	5/18/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY: Steven Thornley		TITLE	DATE/TIME: 5-19-05 / 1045
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-010 PAGE 1 OF 1

COLLECTOR: P.M. GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling	SAF NO.: F05-013	PRICE CODE: 9N
ICE CHEST NO.: Vendor Seal # 00424571	FIELD LOGBOOK NO.	COA: 119624E510	METHOD OF SHIPMENT: Federal Express
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: SU PTR 15556		BILL OF LADING/AIR BILL NO.: SU PTR 15556

AIR QUALITY: _ DATA TURNAROUND: 45 Days / 45 Days

MATRIX*: A=Air; DL=Drum Liquids; DS=Drum Solids; L=Liquid; O=Oil; S=Soil; SE=Sediment; T=Tissue; V=Vegitation; W=Water; WI=Wipe; X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION: Cool 4C	TYPE OF CONTAINER: EMFLUX Cartridge	NO. OF CONTAINER(S): 1	VOLUME: 5g	SAMPLE ANALYSIS: VOA - 8260B (Emflux);
B1CH51	OTHER SOLID	MAY 12 2005	1113	X				
B1CH52	OTHER SOLID	MAY 12 2005	1117	X				
B1CH53	OTHER SOLID	MAY 12 2005	1119	X				
B1CH54	OTHER SOLID	MAY 12 2005	1126	X				
B1CH55	OTHER SOLID	MAY 12 2005	1127	X				

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT	5/12/05 1330	FRIG #3	5/12/05 1330
M.H. Barnhill	5/18/05 0800	M.H. Barnhill	5/18/05 0800
M.H. Barnhill	5/18/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION — RECEIVED BY: Steven Thornley — TITLE — DATE/TIME: 5-19-05 / 1045

FINAL SAMPLE DISPOSITION — DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-011 PAGE 1 OF 1

COLLECTOR: P.M. GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 9N
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling		SAF NO.: F05-013	AIR QUALITY:
ICE CHEST NO.: Vendor Stat # 00424511	FIELD LOGBOOK NO.	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express	DATA TURNAROUND: 45 Days / 45 Days
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: SUPTR 15556		BILL OF LADING/AIR BILL NO.: SUPTR 15556	

MATRIX*: A=Air; DL=Drum Liquids; DS=Drum Solids; L=Liquid; O=Oil; S=Soil; SE=Sediment; T=Tissue; V=Vegitation; W=Water; WI=Wipe; X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C
TYPE OF CONTAINER	EMFLUX Cartridge
NO. OF CONTAINER(S)	1
VOLUME	5g
SAMPLE ANALYSIS	VOA - 8260B (Emflux);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH56	OTHER SOLID	MAY 12 2005	1124	X
B1CH57	OTHER SOLID	MAY 12 2005	1130	X
B1CH58	OTHER SOLID	MAY 12 2005	1131	X
B1CH59	OTHER SOLID	MAY 12 2005	0955	X
B1CH60	OTHER SOLID	MAY 12 2005	0957	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PMGENT	1330 5/12/05	FBIC#3	1330 5/12/05
1102-B RM 3	5/18/05 0800	M.H. Barnhart M.G. Bachhuber	5/18/05 0800
M.H. Barnhart M.G. Bachhuber	5/18/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	Steven Thornley		5.19.05
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-012 PAGE 1 OF 1

COLLECTOR: P.M. GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 9N	DATA TURNAROUND: 45 Days / 45 Days		
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling	SAF NO.: F05-013	AIR QUALITY:
ICE CHEST NO.: Vendor Seal # 00424511	FIELD LOGBOOK NO.:	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: 200 PTR 15556		BILL OF LADING/AIR BILL NO.: 200 PTR 15556

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C
TYPE OF CONTAINER	EMFLUX Cartridge
NO. OF CONTAINER(S)	1
VOLUME	5g
SAMPLE ANALYSIS	VOA - 8260B (Emflux);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH61	OTHER SOLID	MAY 12 2005	1001	X
B1CH62	OTHER SOLID	MAY 12 2005	0959	X
B1CH63	OTHER SOLID	MAY 12 2005	1002	X
B1CH64	OTHER SOLID	MAY 12 2005	1004	X
B1CH65	OTHER SOLID	MAY 12 2005	1009	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PMGENT/Emflux	1330 9/12/05	FRIG #3	1330 5/12/05
M.D. Gilbert RTH3	5/18/05 0800	M.F. Bowker/M.G. Bowker	5/18/05 0800
M.F. Bowker/M.G. Bowker	5/18/05 0820	LAB FX	

SPECIAL INSTRUCTIONS

LABORATORY SECTION — RECEIVED BY: Steven J Thornley — TITLE — DATE/TIME: 5.19.05/1045

FINAL SAMPLE DISPOSITION — DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F05-013-013 PAGE 1 OF 1

COLLECTOR: P.M. GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling		SAF NO.: F05-013
ICE CHEST NO.: Vendor Seal # 0042451	FIELD LOGBOOK NO.	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: See PTR 15556		BILL OF LADING/AIR BILL NO.: See PTR 15556

PRICE CODE: 9N — DATA TURNAROUND: 45 Days / 45 Days — AIR QUALITY: ☐

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C
TYPE OF CONTAINER	EMFLUX Cartridge
NO. OF CONTAINER(S)	1
VOLUME	5g
SAMPLE ANALYSIS	VOA - 8260B (EmFlux);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH66	OTHER SOLID	MAY 12 2005	1006	X
B1CH67	OTHER SOLID	MAY 12 2005	1008	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PMGENT/PMGent	1330 5/12/05	FR16#3	1330 5/12/05
M.D. Gilbert	5/13/05 0800	M.H. Baughman M.D. Gilbert	5/13/05 0800
M.H. Baughman M.D. Gilbert	5/13/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	Steven Thornley		5.19.05/1045
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

PARTS AND TOOLS RETURN (PTR) FORM

PROJECT HANFORD, 2355 STEVENS DR., RICHLAND, WA 99354

REFERENCE BUSINESS PROCESS GUIDE - MATERIAL RETURNS

SECTION A - Material Information

Company FH Date 05/18/2005

One of the following is **REQUIRED:**

PO/Release No. N/A

Contract/Rel. No. 26796

P-Card Log No. N/A

Other N/A

Contract Specialist Name N/A

Phone Number N/A

Material Coordinator/P-Card Holder Name N/A

Phone Number N/A

PTR No. 15556

Total Pieces 1

Line Item No.	Quantity	U/M	Q Level	Description (Catalog ID No., S/N, Gov. Tag No.)/Include Reason for Return	Unit Price	Value
1	1	EA		ENVIRONMENTAL SAMPLES PACKAGED IN INNER POLY BOX AND OUTER CARDBOARD BOX SEAL NUMBER 00424511 12 LB	N/A	N/A

SECTION B - Financial Transaction Information

Passport **Purchase Order** Financial Transaction - Check One

- ☐ **Credit** - Return for Credit - PP Receipt Required
- ☐ **Replace** - Return for Replacement - PP Receipt Required
- ☐ **Inventory** - Return to PHMC inventory
- ☐ **Return** - QA-Non-NCR Material (Credit)

*Requires identification of controlling Purchase Order, Contract, or PHMC Property Custodian accountable for the Govt. property in accordance with Regulations.

Contract/P-Card/Other - No Financial Transaction Created from PTR

- ☐ Credit - Contract/P-Card
- ☐ Repair
- ☐ Ship Supplier Owned Materials, Containers, Samples, etc.
- ☒ *Ship Govt. Owned Materials, Containers, Samples, etc.
- ☐ OTHER
- ☐ Core Charge - Return for Credit of Deposit
- ☐ Replace
- ☐ Ship Waste/Material for Disposal
- ☐ Over Shipment

SECTION C - Hazardous Material Information

Hazardous Material	☐ Yes*	☒ No	*T&P Inspections (req'd) ☐ Yes	☒ No	Certified Free of Contamination ☒ Yes ☐ No
Radioactive Material	☐ Yes*	☒ No	Include appropriate shipping document. Radioactive Material is also Hazardous.		Certifier's Name/Date
Rad. Control Survey	☐ Yes	☒ No			

Custodian: M. A. BAECHLER

Telephone: 509-531-0638

Current Location of Material: MO-026 / 300

Date Available to Ship: 05/18/2005

SECTION D - Vendor/Ship To Information

Ship To: BEACON ENVIRONMENTAL SERVICES, INC.
C/O SAMPLE RECEIVING
323 WILLIAMS, SUITE D
BEL AIRE, MD 21014

Contractor FLUOR HANFORD, INC.
2355 STEVENS DRIVE
RICHLAND, WA 99354
ATTN: MIKE BAECHLER, 300, MO-026

Contact: RYAN SCHNEIDER

Contact Phone: 800-878-5510

RA No.: N/A

F.O.B.

Item	% Cost	Cost Center	CACN	COA
1	100	M8200	119624	ES20

SECTION E - Shipping Information - To be completed by Shipping Department

Routing FEDEX AIR

B/L No. 7929 2618 7249

B/L Wt. 12 LBS

Frt. Collect

Acct. No.

SECTION F - OSD&D/Shipping Notice Information - To be completed by Shipping/Procurement

By CR NELSON

Date Shipped 05/18/2005

OSD&D No.

Shipping Notice No.

Receipt No.

From: Orig n ID: (509)376-7768
SHIPPING DEPT
FLUOR HANFORD
2355 STEVENS DR BLDG 1162

RICHLAND, WA 99352

Ship Date: 18MAY05
Actual Wgt: 17 LB
System#: 5851986/INET2000
Account#: S *********

REF: PTR15556 119624 ES20

[redacted]
Delivery Address Bar Code

SHIP TO: (800)878-5610 **BILL SENDER**

RYAN SCHNEIDER
BEACON ENVIRONMENTAL SERVICES, INC.
323 WILLIAMS, SUITE D
SAMPLE RECEIVING
BEL AIRE, MD 21014

[redacted]

PRIORITY OVERNIGHT

THU
Deliver By:
19MAY05

TRK# 7929 2618 7249 FORM 0201

BWI AA

21014 -MD-US

XH DLOA

[redacted]

CHAIN-OF-CUSTODY
PASSIVE SOIL-GAS SAMPLES

Project Information	
Beacon Project No.:	EM1770
Site Name:	Site 218-E-12B Burial Grounds
Site Location:	Hanford, WA
Analytical Method:	EPA Method 8260B
Target Compounds:	Beacon Project Number EM1770 Target Compound List

BEACON ENVIRONMENTAL SERVICES, INC.
323 Williams Street, Suite D, Bel Air, MD 21014, 800-878-5510

Client Information	
Company Name:	Fluor Hanford, Inc.
Office Location:	Richland, WA
Samples Submitted By:	
Contact Phone No.:	

Field Sample ID	Lab Sample ID (for lab use only)	Comments (only necessary if problem or discrepancy)			
		Condition of sample or vial	Date	Time	Initial
Trip-1	1770 Trip-1				
Trip-2	1770 Trip-2				

Shipment of Field Kit to Site — Custody Seal # 00424503 Intact? (Y) N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Ryan Schreiber	4-28-2005 / 1700	FEDEX	AMGEN/PMGent	02MAY05 / 1330

Shipment of Field Kit to Laboratory — Custody Seal # 00424511 Intact? (Y) N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
PMGENT/PMGent	5/18/05 0800	PED EX	Steven Thornley	19 May 05 / 1000

Sample Receipt Logs

BEACON ENVIRONMENTAL SERVICES, INC.

Beacon Environmental Services, Inc.
Sample Receipt Log
2005

DATE	Lab Sample ID	Lab Batch No.	Field Sample ID	Analytical Method	Comments	Sample Received By
May 18, 2005	1783 76	EM1783	76	8260B	Bag 2	RWS Ryan Schick
May 18, 2005	1783 77	EM1783	77	8260B	Bag 2	RWS
May 18, 2005	1783 78	EM1783	78	8260B	Bag 2	RWS
May 18, 2005	1783 79	EM1783	79	8260B	Bag 2	RWS
May 18, 2005	1783 80	EM1783	80	8260B	Bag 2	RWS
May 18, 2005	1783 81	EM1783	81	8260B	Bag 2	RWS
May 18, 2005	1783 82	EM1783	82	8260B	Bag 2	RWS
May 18, 2005	1783 83	EM1783	83	8260B	Bag 2	RWS
May 18, 2005	1783 84	EM1783	84	8260B	Bag 2	RWS
May 18, 2005	1783 85	EM1783	85	8260B	Bag 2	RWS
May 18, 2005	1783 86	EM1783	86	8260B	Bag 2	RWS
May 18, 2005	1783 87	EM1783	87	8260B	Bag 2	RWS Ryan Schick
May 19, 2005	1770 Trip-1	EM1770	Trip-1	8260B	bag 1	SCT Steven Thornley
May 19, 2005	1770 BICH 16	EM1770	BICH 16	8260B	bag 1	SCT
May 19, 2005	1770 BICH 17	EM1770	BICH 17	8260B	bag 1	SCT
May 19, 2005	1770 BICH 18	EM1770	BICH 18	8260B	bag 1	SCT
May 19, 2005	1770 BICH 19	EM1770	BICH 19	8260B	bag 1	SCT
May 19, 2005	1770 BICH 20	EM1770	BICH 20	8260B	bag 1	SCT
May 19, 2005	1770 BICH 21	EM1770	BICH 21	8260B	bag 1	SCT
May 19, 2005	1770 BICH 22	EM1770	BICH 22	8260B	bag 1	SCT
May 19, 2005	1770 BICH 23	EM1770	BICH 23	8260B	bag 1	SCT
May 19, 2005	1770 BICH 24	EM1770	BICH 24	8260B	bag 1	SCT
May 19, 2005	1770 BICH 25	EM1770	BICH 25	8260B	bag 1	SCT
May 19, 2005	1770 BICH 26	EM1770	BICH 26	8260B	bag 1	SCT
May 19, 2005	1770 BICH 27	EM1770	BICH 27	8260B	bag 1	SCT
May 19, 2005	1770 BICH 28	EM1770	BICH 28	8260B	bag 1	SCT
May 19, 2005	1770 BICH 29	EM1770	BICH 29	8260B	bag 1	SCT
May 19, 2005	1770 BICH 30	EM1770	BICH 30	8260B	bag 1	SCT
May 19, 2005	1770 BICH 31	EM1770	BICH 31	8260B	bag 1	SCT
May 19, 2005	1770 BICH 32	EM1770	BICH 32	8260B	bag 1	SCT
May 19, 2005	1770 BICH 33	EM1770	BICH 33	8260B	bag 1	SCT
May 19, 2005	1770 BICH 34	EM1770	BICH 34	8260B	bag 1	SCT
May 19, 2005	1770 BICH 35	EM1770	BICH 35	8260B	bag 1	SCT
May 19, 2005	1770 BICH 36	EM1770	BICH 36	8260B	bag 1	SCT
May 19, 2005	1770 BICH 37	EM1770	BICH 37	8260B	bag 1	SCT
May 19, 2005	1770 BICH 38	EM1770	BICH 38	8260B	bag 1	SCT
May 19, 2005	1770 BICH 39	EM1770	BICH 39	8260B	bag 1	SCT
May 19, 2005	1770 BICH 40	EM1770	BICH 40	8260B	bag 1	SCT
May 19, 2005	1770 BICH 41	EM1770	BICH 41	8260B	bag 1	SCT
May 19, 2005	1770 Trip-2	EM1770	Trip-2	8260B	bag 2	SCT Steven Thornley

BEACON ENVIRONMENTAL SERVICES, INC.

323 Williams Street, Suite B, Bel Air, MD 21014, 800-870-5510

Beacon Environmental Services, Inc.
Sample Receipt Log
2005

DATE	Lab Sample ID	Lab Batch No.	Field Sample ID	Analytical Method	Comments	Sample Received By
May 19, 2005	1770 BICH 42	EM1770	BICH 42	8260B	bag 2	SCT Steven Thornley
May 19, 2005	1770 BICH 43	EM1770	BICH 43	8260B	bag 2	SCT
May 19, 2005	1770 BICH 44	EM1770	BICH 44	8260B	bag 2	SCT
May 19, 2005	1770 BICH 45	EM1770	BICH 45	8260B	bag 2	SCT
May 19, 2005	1770 BICH 46	EM1770	BICH 46	8260B	bag 2	SCT
May 19, 2005	1770 BICH 47	EM1770	BICH 47	8260B	bag 2	SCT
May 19, 2005	1770 BICH 48	EM1770	BICH 48	8260B	bag 2	SCT
May 19, 2005	1770 BICH 49	EM1770	BICH 49	8260B	bag 2	SCT
May 19, 2005	1770 BICH 50	EM1770	BICH 50	8260B	bag 2	SCT
May 19, 2005	1770 BICH 51	EM1770	BICH 51	8260B	bag 2	SCT
May 19, 2005	1770 BICH 52	EM1770	BICH 52	8260B	bag 2	SCT
May 19, 2005	1770 BICH 53	EM1770	BICH 53	8260B	bag 2	SCT
May 19, 2005	1770 BICH 54	EM1770	BICH 54	8260B	bag 2	SCT
May 19, 2005	1770 BICH 55	EM1770	BICH 55	8260B	bag 2	SCT
May 19, 2005	1770 BICH 56	EM1770	BICH 56	8260B	bag 2	SCT
May 19, 2005	1770 BICH 57	EM1770	BICH 57	8260B	bag 2	SCT
May 19, 2005	1770 BICH 58	EM1770	BICH 58	8260B	bag 2	SCT
May 19, 2005	1770 BICH 59	EM1770	BICH 59	8260B	bag 2	SCT
May 19, 2005	1770 BICH 60	EM1770	BICH 60	8260B	bag 2	SCT
May 19, 2005	1770 BICH 61	EM1770	BICH 61	8260B	bag 2	SCT
May 19, 2005	1770 BICH 62	EM1770	BICH 62	8260B	bag 2	SCT
May 19, 2005	1770 BICH 63	EM1770	BICH 63	8260B	bag 2	SCT
May 19, 2005	1770 BICH 64	EM1770	BICH 64	8260B	bag 2	SCT
May 19, 2005	1770 BICH 65	EM1770	BICH 65	8260B	bag 2	SCT
May 19, 2005	1770 BICH 66	EM1770	BICH 66	8260B	bag 2	SCT
May 19, 2005	1770 BICH 67	EM1770	BICH 67	8260B	bag 2	SCT Steven Thornley
May 25, 2005	1787B Trip-1	EM1787B	Trip-1	8260B	bag 1	SCT Steven Thornley
May 25, 2005	1787B 1	EM1787B	1	8260B	bag 1	SCT
May 25, 2005	1787B 2	EM1787B	2	8260B	bag 1	SCT
May 25, 2005	1787B 3	EM1787B	3	8260B	bag 1	SCT
May 25, 2005	1787B 4	EM1787B	4	8260B	bag 1	SCT
May 25, 2005	1787B 5	EM1787B	5	8260B	bag 1	SCT
May 25, 2005	1787B 6	EM1787B	6	8260B	bag 1	SCT
May 25, 2005	1787B 7	EM1787B	7	8260B	bag 1	SCT
May 25, 2005	1787B 8	EM1787B	8	8260B	bag 1	SCT
May 25, 2005	1787B 9	EM1787B	9	8260B	bag 1	SCT Steven Thornley
May 31, 2005	1763 Trip-1	EM1763	Trip-1	8260B	Bag 1	SCT Steven Thornley
May 31, 2005	1763 PSG-1	EM1763	PSG-1	8260B	Bag 1	SCT
May 31, 2005	1763 PSG-2	EM1763	PSG-2	8260B	Bag 1	SCT
May 31, 2005	1763 PSG-3	EM1763	PSG-3	8260B	Bag 1	SCT Steve. D Thornley

BEACON Report No. EM1770 Task 1

PASSIVE SOIL VAPOR SAMPLING AND ANALYSIS
SAMPLING TASK NO. 1
218-E-12B BURIAL GROUNDS

GROUNDWATER PROTECTION PROJECT
RICHLAND, WA

Management and Integration Contract
DE-AC06-96RL13200

Prepared for

Fluor Hanford
1200 Jadwin Avenue
Richland, WA 99352

by

Beacon Environmental Services, Inc.
323 Williams Street
Suite D
Bel Air, MD 21014

June 23, 2005

BEACON Report Number: EM1770 Task 1

Passive Soil-Gas Survey
Site 218-E-12B Burial Grounds
Hanford, WA

This Passive Soil-Gas Survey Report has been prepared for Fluor Hanford, Inc. (FLUOR HANFORD) by Beacon Environmental Services, Inc. (BEACON) in accordance with the terms of Management and Integration Contract DE-AC06-96RL13200. BEACON's principal technical contacts at FLUOR HANFORD for this project have been Mr. Steve Trent and Mr. Philip Gent. Passive soil-gas samples were collected following the protocols of the EMFLUX® Passive Soil-Gas Sampling System.

1. Objectives

Soil-gas samples were collected to screen the 218-E-12B Burial Grounds Site for the presence of targeted compounds in the gas phase. Results will be used to profile contamination in soil and/or ground water at the site, thereby determining the distribution and relative strength of detected contaminants.

2. Target Compounds

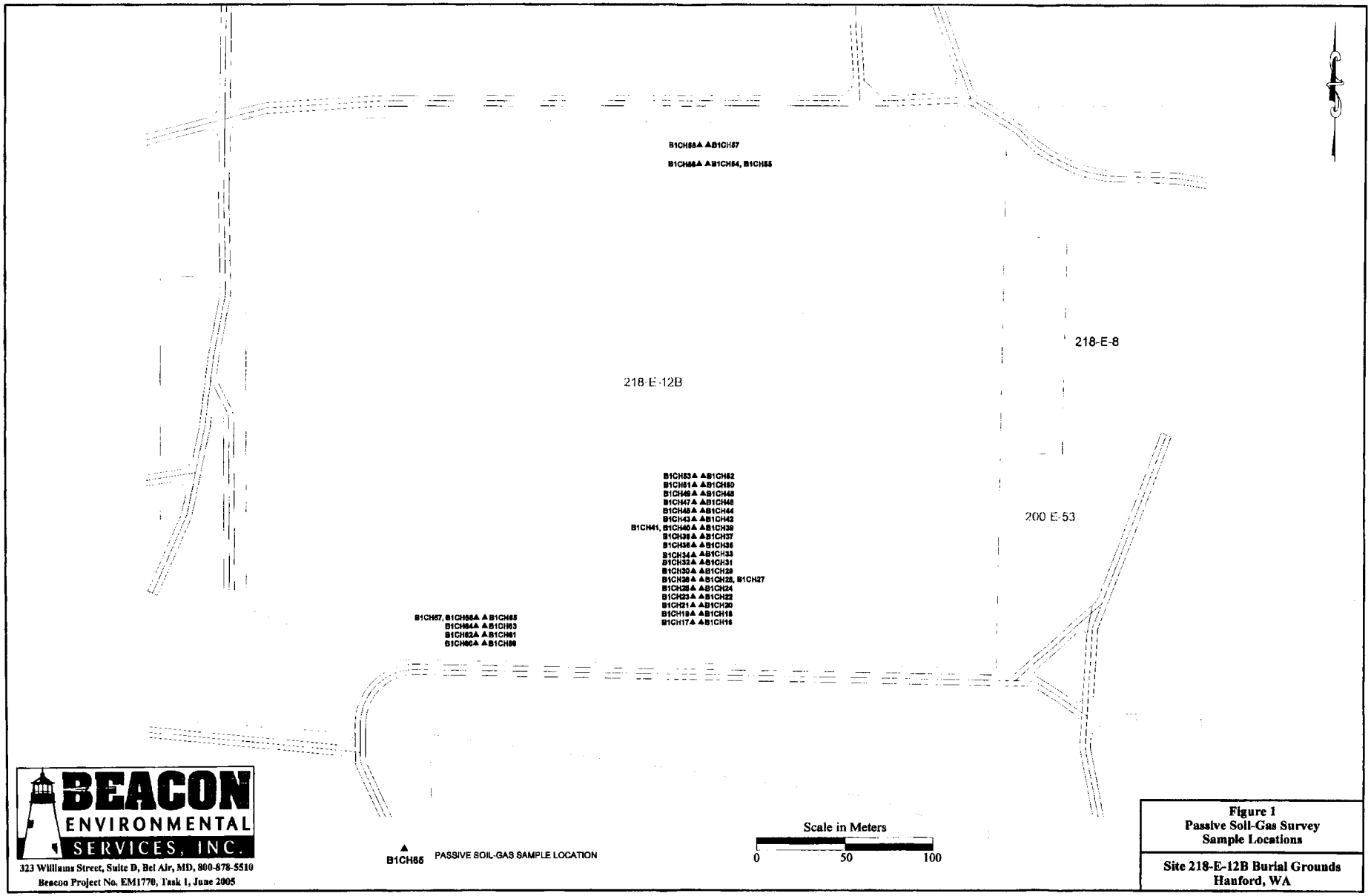
This survey targeted the 40 compounds listed in **Table 1**, which supplies the resulting laboratory data in nanograms (ng) of specific compound per cartridge.

3. Survey Description

- No. of Field Sample Points: 48
- No. of Duplicate Field Samples: 4
- No. of Trip Blanks: 2
- Total No. of Samples: 54
- Field sample locations are shown on **Figure 1**.

4. Field Work

FLUOR HANFORD was provided a Field Kit with the equipment needed to conduct a 48-point passive soil-gas survey. Samplers were deployed on May 5, 2005, and were retrieved on May 12, 2005. **Attachment 1** describes the field procedures used. Individual deployment and retrieval times will be found in the Field Deployment Report (**Attachment 2**).



BEACON ENVIRONMENTAL SERVICES, INC.

323 Williams Street, Suite D, Bel Air, MD, 800-878-5510

Beacon Project No. EM1770, Task 1, June 2005

Figure 1
Passive Soil-Gas Survey
Sample Locations

Site 218-E-12B Burial Grounds
Hanford, WA

5. Analysis and Reporting Dates

- BEACON's laboratory received 54 samples for analysis on May 19, 2005.
- Adsorbent cartridges from the passive samplers were thermally desorbed, then analyzed using gas chromatography/mass spectrometry (GC/MS) equipment, in accordance with EPA Method 8260B (Modified), as described in **Attachment 3**. BEACON's laboratory analyzed each cartridge for the targeted compounds.
- BEACON's laboratory completed the analysis on May 20, 2005. Following a laboratory review, results were provided to FLUOR HANFORD on May 26, 2005.
- BEACON received a site map with sample location coordinates on June 13, 2005.
- Preliminary maps were provided to FLUOR HANFORD for approval on June 20, 2005; following a review, FLUOR HANFORD authorized BEACON to issue a final report.

6. Report Notes and Quality Assurance/Quality Control Factors

- **Table 1** provides survey results in nanograms per cartridge by sample-point number and compound name. The quantitation levels represent values above which quantitative laboratory results can be achieved within specified limits of precision and with a high degree of confidence. The quantitation level for each compound, therefore, provides a reliable basis for comparing the relative strength of any detection of that compound.

- **Data Compatibility**. It is important to note that when sample locations are covered with or near the edge of an artificial surface (*e.g.*, asphalt or concrete), sample measurements are often distorted (increased) significantly. Such distortion can be attributed to the fact that gas rising from sources beneath impermeable caps tends to reach equilibrium underneath the cap. Thus, a reading taken below or near an impermeable surface is much higher than it would be in the absence of such a cap.

- The **Chain-of-Custody** form, which was shipped with the samples for this survey, is supplied as **Attachment 4**.

- **Laboratory QA/QC procedures** included standards, surrogates, and blanks appropriate to EPA Method 8260 (Modified). Field work, analyses, and reporting were done in accordance with BEACON's Quality Assurance Program Plan.

- **QA/QC Contaminant Corrections**. Following EPA guidelines, laboratory data is not corrected for method blank or trip blank sample contamination values; any contamination detected on QA/QC samples is reported in **Table 1**.

- **Laboratory method blanks** are run each day with project samples to identify contamination present in the laboratory. If contamination is detected on a method blank, measurements of identical compounds on samples analyzed the same day are considered to be suspect and are flagged in the laboratory report. The laboratory method blanks analyzed in connection with the present samples revealed no contamination.

- The **trip blank** is a sampling cartridge prepared, transported, and analyzed with other samples but intentionally not exposed. Any target compounds identified on the trip blanks are reported in the laboratory data. The analysis of the trip blanks (labeled Trip-1 and Trip-2 in **Table 1**) reported none of the targeted compounds, indicating that the survey site itself is the source of detected contamination.

- **Survey findings** are relative exclusively to this project and should not routinely be compared with results of other BEACON Surveys. *To establish a relationship between reported soil-gas measurements and actual subsurface contaminant concentrations, which will indicate those detections representing significant subsurface contamination, BEACON recommends the guidelines on the inside front cover of this report.*

  Tetrachloroethene and 1,2,4-Trimethylbenzene were the only compounds identified in this survey at measurements above the reported quantitation level of 25 nanograms, but less than 35 nanograms. As shown on **Figure 2**, three adjacent locations reported Tetrachloroethene and four measurements of 1,2,4-Trimethylbenzene were also reported.

- The following **Attachments** are included:

  -1- Field Procedures
  -2- Field Deployment Report
  -3- Laboratory Procedures
  -4- Chain-of-Custody Form

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	METH_ BL	TRIP-1	B1CH16	B1CH17	B1CH18	B1CH19
Project Number:	EM1770	EM1770	EM1770	EM1770	EM1770	EM1770
Lab File ID:	5051903	5051904	5051905	5051906	5051907	5051908
Received Date:		5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Time:	12:41	13:12	13:43	14:14	14:45	15:16
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
2,2-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
1,1-Dichloropropene	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	B1CH20	B1CH21	B1CH22	B1CH23	B1CH24	B1CH25
Project Number:	EM1770	EM1770	EM1770	EM1770	EM1770	EM1770
Lab File ID:	5051909	5051910	5051911	5051912	5051913	5051914
Received Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Time:	15:47	16:18	16:50	17:21	17:52	18:23
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
2,2-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
1,1-Dichloropropene	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	B1CH26	B1CH27	B1CH28	B1CH29	B1CH30	B1CH31
Project Number:	EM1770	EM1770	EM1770	EM1770	EM1770	EM1770
Lab File ID:	5051915	5051916	5051917	5051918	5051919	5051920
Received Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Time:	18:54	19:25	19:56	20:27	20:58	21:29
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
2,2-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
1,1-Dichloropropene	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	B1CH32	B1CH33	B1CH34	B1CH35	B1CH36	B1CH37
Project Number:	EM1770	EM1770	EM1770	EM1770	EM1770	EM1770
Lab File ID:	5051921	5051922	5051923	5051924	5051925	5051926
Received Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/20/2005	5/20/2005
Analysis Time:	22:01	22:32	23:03	23:34	0:05	0:36
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
2,2-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
1,1-Dichloropropene	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	B1CH38	B1CH39	B1CH40	B1CH41	TRIP-2	B1CH42
Project Number:	EM1770	EM1770	EM1770	EM1770	EM1770	EM1770
Lab File ID:	5051927	5051928	5051929	5051930	5051931	5051932
Received Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Date:	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005
Analysis Time:	1:07	1:38	2:09	2:40	3:12	3:43
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
2,2-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
1,1-Dichloropropene	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	B1CH43	B1CH44	B1CH45	B1CH46	B1CH47	B1CH48
Project Number:	EM1770	EM1770	EM1770	EM1770	EM1770	EM1770
Lab File ID:	5051933	5051934	5051935	5051936	5051937	5051938
Received Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Date:	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005
Analysis Time:	4:14	4:45	5:16	5:47	6:18	6:49
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
2,2-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
1,1-Dichloropropene	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	B1CH49	B1CH50	B1CH51	B1CH52	B1CH53	B1CH54
Project Number:	EM1770	EM1770	EM1770	EM1770	EM1770	EM1770
Lab File ID:	5051939	5051940	5051941	5051942	5051943	5051944
Received Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Date:	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005
Analysis Time:	7:21	7:52	8:23	8:54	9:25	9:56
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
2,2-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
1,1-Dichloropropene	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	26	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	B1CH55	B1CH56	B1CH57	METH_BL	B1CH58	B1CH59
Project Number:	EM1770	EM1770	EM1770	EM1770	EM1770	EM1770
Lab File ID:	5051945	5051946	5051947	5052003	5052004	5052005
Received Date:	5/19/2005	5/19/2005	5/19/2005		5/19/2005	5/19/2005
Analysis Date:	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005
Analysis Time:	10:28	10:59	11:30	13:42	14:13	14:44
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
2,2-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
1,1-Dichloropropene	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	B1CH60	B1CH61	B1CH62	B1CH63	B1CH64	B1CH65
Project Number:	EM1770	EM1770	EM1770	EM1770	EM1770	EM1770
Lab File ID:	5052006	5052007	5052008	5052009	5052010	5052011
Received Date:	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005
Analysis Date:	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005	5/20/2005
Analysis Time:	15:16	15:47	16:18	16:50	17:21	17:52
Units:	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap	ng/trap
COMPOUNDS						
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
2,2-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
1,1-Dichloropropene	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
cis-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	**26**	<25	**33**
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
Bromoform	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	**30**
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
n-Butylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.

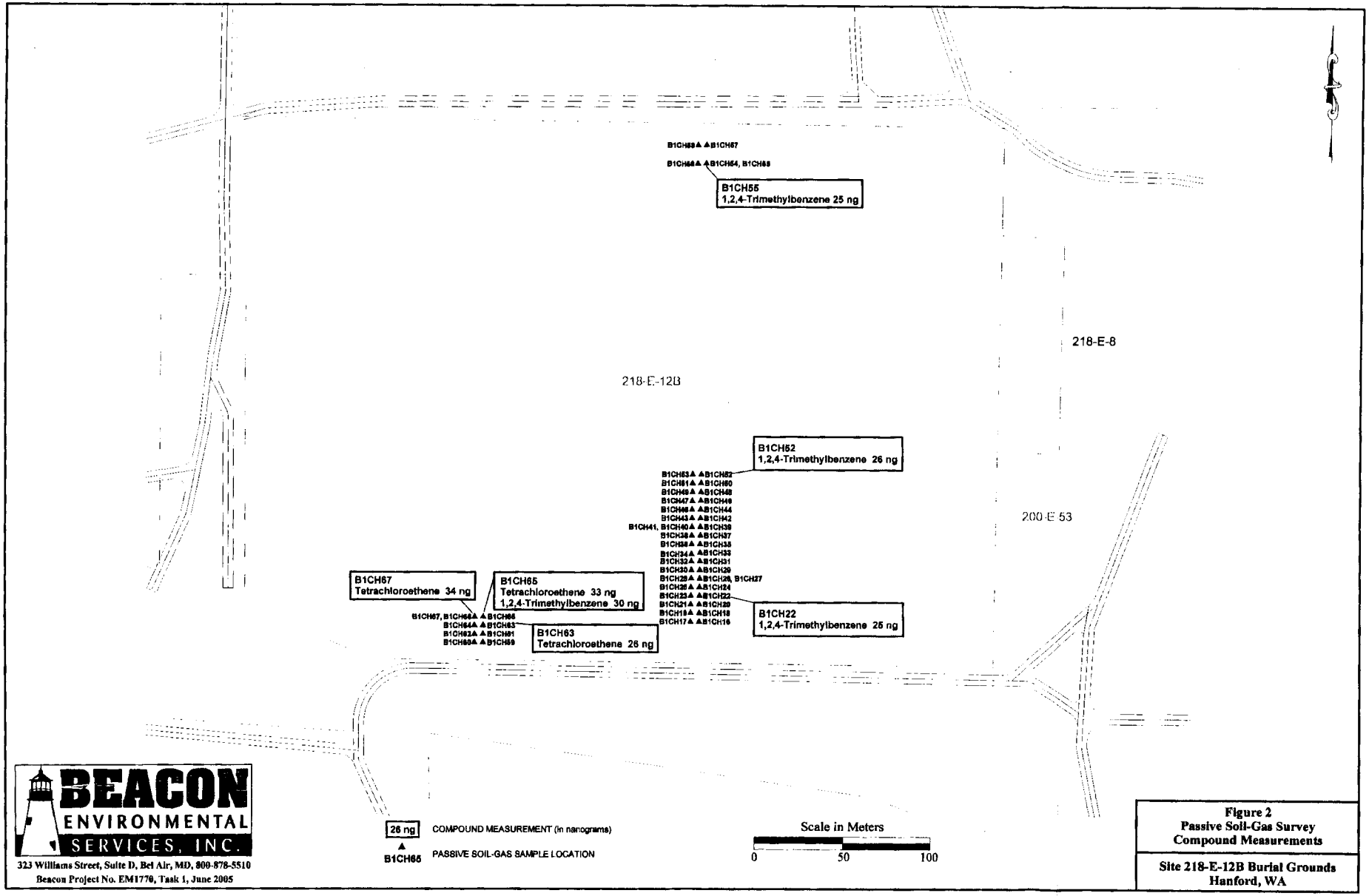
Table 1

Beacon Environmental Services, Inc.
323 Williams Street, Ste. D
Bel Air, MD 21014

Analysis by EPA Method 8260B (Modified)

Client Sample ID:	B1CH66	B1CH67
Project Number:	EM1770	EM1770
Lab File ID:	5052012	5052013
Received Date:	5/19/2005	5/19/2005
Analysis Date:	5/20/2005	5/20/2005
Analysis Time:	18:24	18:55
Units:	ng/trap	ng/trap
COMPOUNDS		
1,1-Dichloroethene	<25	<25
1,1,2-Trichlorotrifluoroethane	<25	<25
trans-1,2-Dichloroethene	<25	<25
Methyl-t-butyl ether	<25	<25
1,1-Dichloroethane	<25	<25
cis-1,2-Dichloroethene	<25	<25
Chloroform	<25	<25
2,2-Dichloropropane	<25	<25
1,2-Dichloroethane	<25	<25
1,1,1-Trichloroethane	<25	<25
1,1-Dichloropropene	<25	<25
Carbon Tetrachloride	<25	<25
Benzene	<25	<25
1,2-Dichloropropane	<25	<25
Trichloroethene	<25	<25
cis-1,3-Dichloropropene	<25	<25
trans-1,3-Dichloropropene	<25	<25
1,1,2-Trichloroethane	<25	<25
Toluene	<25	<25
1,3-Dichloropropane	<25	<25
1,2-Dibromoethane (EDB)	<25	<25
Tetrachloroethene	<25	**34**
1,1,1,2-Tetrachloroethane	<25	<25
Chlorobenzene	<25	<25
Ethylbenzene	<25	<25
p & m-Xylene	<25	<25
Bromoform	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25
o-Xylene	<25	<25
1,2,3-Trichloropropane	<25	<25
Isopropylbenzene	<25	<25
1,3,5-Trimethylbenzene	<25	<25
1,2,4-Trimethylbenzene	<25	<25
1,3-Dichlorobenzene	<25	<25
1,4-Dichlorobenzene	<25	<25
1,2-Dichlorobenzene	<25	<25
n-Butylbenzene	<25	<25
1,2,4-Trichlorobenzene	<25	<25
Naphthalene	<25	<25
1,2,3-Trichlorobenzene	<25	<25

Results in nanograms (ng). J = Estimated value below reported quantitation level. B = Detected in method blank.



BEACON ENVIRONMENTAL SERVICES, INC.

323 Williams Street, Suite D, Bel Air, MD, 800-878-5510

Beacon Project No. EM1770, Task 1, June 2005

Figure 2
Passive Soil-Gas Survey
Compound Measurements

Site 218-E-12B Burial Grounds
Hanford, WA

Attachment 1

FIELD PROCEDURES FOR PASSIVE SOIL-GAS SURVEYS

The following field procedures are routinely used during a BEACON Passive Soil-Gas Survey. Modifications can be and are incorporated from time to time in response to individual project requirements. In all instances, BEACON adheres to EPA-approved Quality Assurance and Quality Control practices.

A. Field personnel carry system components and support equipment to the site and deploy the passive samplers in a prearranged survey pattern. A passive sampler consists of a glass vial containing hydrophobic adsorbent cartridges with a length of wire attached to the vial for retrieval. Although samplers require only one person for emplacement and retrieval, the specific number of field personnel required depends upon the scope and schedule of the project. Each Sampler emplacement generally takes less than two minutes.

B. For those sample locations covered with soils or vegetation, a field technician clears vegetation and debris exposing the ground surface. Using a hammer and a ¾″-diameter pointed metal stake, the technician creates a hole approximately three inches deep. For those locations covered with an asphalt or concrete cap, the field technician drills a 1½″-diameter hole through the cap to the soils beneath. (If necessary, the sampler can be sleeved with a ¾″ i.d. copper pipe for either capped or uncapped locations).

C. The technician then removes the solid plastic cap from a sampler and replaces it with a Sampling Cap (a plastic cap with a hole covered by screen meshing). The technician inserts the sampler, with the Sampling Cap end facing down, into the hole (**see attached figure**). The sampler is then covered with either local soils for uncapped locations or, for capped locations, aluminum foil and a concrete patch. The sampler's location, time and date of emplacement, and other relevant information are recorded on the Field Deployment Form.

D. One or more trip blanks are included as part of the quality-control procedures.

E. Once all the passive samplers have been deployed, field personnel schedule sampler recovery and depart, taking all other equipment and materials with them.

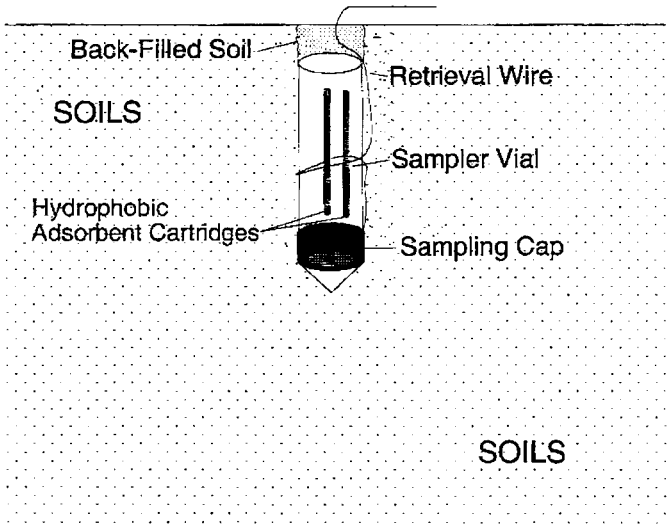
F. Field personnel retrieve the samplers at the end of the exposure period. At each location, a field technician withdraws the sampler from its hole, removes the retrieval wire, and wipes the outside of the vial clean using gauze cloth; following removal of the Sampling Cap, the threads of the vial are also cleaned. A solid plastic cap is screwed onto the vial and the sample location number is written on the label. The technician then records sample-point location, date, time, etc. on the Field Deployment Form.

G. Sampling holes are refilled with soil, sand, or other suitable material. If Samplers have been installed through asphalt or concrete, the hole is filled to grade with a plug of cold patch or cement.

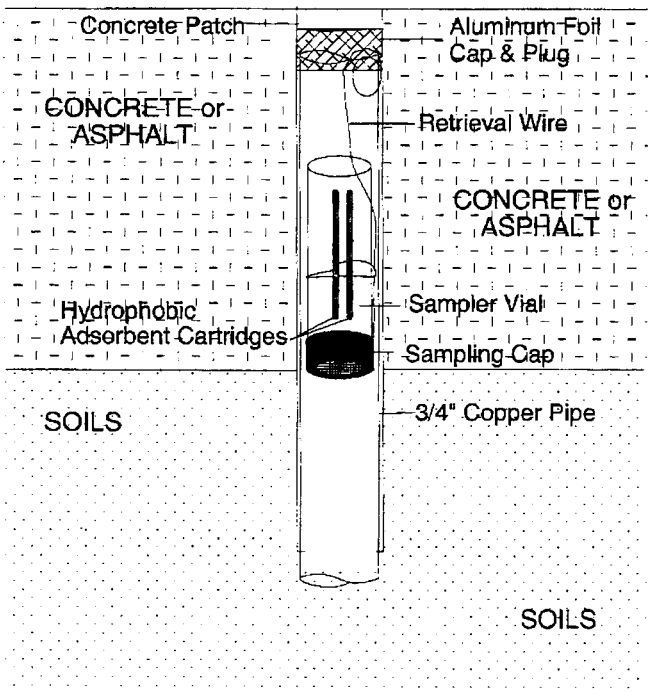
H. Following retrieval, field personnel ship or carry the passive samplers to BEACON's laboratory.

BEACON PASSIVE SAMPLER

DEPLOYMENT THROUGH SOILS



DEPLOYMENT THROUGH AN ASPHALT/CONCRETE CAP



Attachment 2

Field Deployment Report

PASSIVE SOIL-GAS SURVEY
FIELD DEPLOYMENT REPORT

Project Information	
Beacon Project No.:	EM1770
Site Name:	Site 218-E-12B Burial Grounds
Site Location:	Hanford, WA

BEACON ENVIRONMENTAL SERVICES, INC.

323 Williams Street, Suite D, Bel Air, MD 21014, 800-878-5510

Client Information	
Company Name:	Fluor Hanford, Inc.
Office Location:	Richland, WA
Samples Collected By:	

FIELD SAMPLE ID	Date Emplaced ~~05/05/05~~ ~~03MAY05~~ Time Emplaced	Date Retrieved 05/12/05 Time Retrieved	FIELD NOTES (*e.g.*, asphalt/concrete covering, description of sample location, sampling hole depth, cartridge/vial condition)
41	0947	0955	slight sprinkle
43	0951	1001	5-10 m.p.h. out of the west
45	0954	1002	
47	1000	1009	changed out P.A.M. ~ possible RADON
48	1004	1006	
48D	1004	1008	5"- 6" seperation from 48
46	1007	1004	
44	1010	0959	
42	1014	0957	
1	1023	1016	changed to T-17 trench
2	1025	1014	
4	1027	1019	
3	1029	1018	
5	1032	1023	
6	1035	1021	

PASSIVE SOIL-GAS SURVEY
FIELD DEPLOYMENT REPORT

FIELD SAMPLE ID	Date Emplaced 05/05/05 Time Emplaced	Date Retrieved 05/12/05 Time Retrieved	FIELD NOTES (*e.g.*, asphalt/concrete covering, description of sample location, cartridge/vial condition)
8	1037	1026	
7	1040	1025	
9	1043	1030	
10	1046	1028	
12	1052	1034	
11	1056	1031	
11D	1056	1032	5"-6" FROM 11
13	1059	1038	
14	1102	1037	
16	1105	1042	
15	1108	1040	
17	1111	1045	
18	1114	1043	
20	1116	1048	
19	1120	1046	
21	1123	1051	
22	1126	1050	
24	1130	1055	

BEACON ENVIRONMENTAL SERVICES, INC.
323 Williams Street, Suite D, Bel Air, MD 21014, 800-878-5310

PASSIVE SOIL-GAS SURVEY
FIELD DEPLOYMENT REPORT

FIELD SAMPLE ID	Date Emplaced / Time Emplaced	Date Retrieved / Time Retrieved	FIELD NOTES (e.g., asphalt/concrete covering, description of sample location, cartridge/vial condition)
	05/05/05	05/12/05	
24D	1131	1057	PLACED 4"-6" FROM 24
23	1134	1054	
25	1143	1101	SWITCHED PAM, RADON BUILD-UP
26	1147	1059	
28	1150	1105	
27	1152	1102	RAIN STARTED
29	1154	1108	
30	1157	1106	
32	1200	1112	
31	1202	1110	
33	1205	1115	
34	1207	1113	
36	1213	1119	CHANGE PAM, RADON BUILD-UP. STILL RAINING
35	1215	1117	
37	1224	1126	SLOWED TO DRIZZLE
37D	1225	1127	
38	1226	1124	
40	1229	1131	

BEACON ENVIRONMENTAL SERVICES, INC.
327 Williams Street, Suite D, Bel Air, MD 21014, 800-876-5510

PASSIVE SOIL-GAS SURVEY
FIELD DEPLOYMENT REPORT

FIELD SAMPLE ID	Date Emplaced / Time Emplaced	Date Retrieved / Time Retrieved	FIELD NOTES (*e.g.*, asphalt/concrete covering, description of sample location, cartridge/vial condition)
39	05/05/05 1230	05/12/05 1130	

BEACON ENVIRONMENTAL SERVICES, INC.
121 Williams Street, Suite D, Bel Air, MD 21014, 800-878-5810

Sample Point Number	HEIS Number	Date of Placement	Time of Placement	Initials/Date
1	B1CH16	05/05/05	1023	PMG 5/5/05
2	B1CH17	5/5/05	1025	
3	B1CH18	5/5/05	1029	
4	B1CH19	5/5/05	1027	
5	B1CH20	5/5/05	1032	
6	B1CH21		1035	
7	B1CH22		1040	
8	B1CH23		1037	
9	B1CH24		1043	
10	B1CH25		1046	
11	B1CH26		1056	
11D	B1CH27		1056	
12	B1CH28		1052	
13	B1CH29		1059	
14	B1CH30		1102	
15	B1CH31		1108	
16	B1CH32		1105	
17	B1CH33		1111	
18	B1CH34		1114	
19	B1CH35	05/05/05	1120	PMG 05/05/05

5/16/05

Sample Point Number	HEIS Number	Date of Placement	Time of Placement	Initials/Date
20	BICH36	05/05/05	1116	PMG 05/05/05
21	BICH37		1123	
22	BICH38		1126	
23	BICH39		1134	
24	BICH40		1130	
24D	BICH41		1131	
25	BICH42		1143	
26	BICH43		1147	
27	BICH44		1152	
28	BICH45		1150	
29	BICH46		1154	
30	BICH47		1157	
31	BICH48		1202	
32	BICH49		1200	
33	BICH50		1205	
34	BICH51		1207	
35	BICH52		1215	
36	BICH53		1213	
37	BICH54		1224	
37D	BICH55	05/05/05	1225	PMG 05/05/05

5/16/05 PMG

PMG 5/16/05

Sample Point Number	HEIS Number	Date of Placement	Time of Placement	Initials/Date
38	BICH56	05/05/05	1226	PMG 05/05/05
39	BICH57		1230	
40	BICH58		1229	
41	BICH59		0947	
42	BICH60		1014	
43	BICH61		0951	
44	BICH62		1010	
45	BICH63		0954	
46	BICH64		1007	
47	BICH65		1000	
48	BICH66		1004	
48D	BICH67	05/05/05	1004	PMG 05/05/05

2 PMG 5/16/05

EMFLUX COLLECTOR COLLECTION RECORD		
Sample Number	**Date Time of retrieval**	**Initials/Date**
1	5/12/05 1016	PMG/ 05/12/05
2	1014	
3	1018	
4	1019	
5	1023	
6	1021	
7	1025	
8	1026	
9	1030	
10	1028	
11	1031	
11D	1032	
12	1034	
13	1038	
14	1037	
15	1040	
16	1042	
17	1045	
18	1043	
19	5/12/05 1046	PMG 05/12/05

EMFLUX COLLECTOR COLLECTION RECORD		
Sample Number	**Date Time of retrieval**	**Initials/Date**
20	5/12/05 1048	PMG 05/12/05
21	1051	
22	1050	
23	1054	
24	1055	
24D	1057	
25	1101	
26	1059	
27	1102	
28	1105	
29	1108	
30	1106	
31	1110	
32	1112	
33	1115	
34	1113	
35	1117	
36	1119	
37	1126	
37D	5/12/05 1127	PMG 05/12/05

EMFLUX COLLECTOR COLLECTION RECORD

Sample Number	Date Time of retrieval	Initials/Date
38	5/12/05 1124	PMG 05/12/05
39	1130	
40	1131	
41	0955	
42	0957	
43	1001	
44	0959	
45	1002	
46	1004	
47	1009	
48	1006	
48D	5/12/05 1008	PMG 05/12/05

Attachment 3

LABORATORY PROCEDURES FOR PASSIVE SOIL-GAS SAMPLES

Following are laboratory procedures used with BEACON Passive Soil-Gas Surveys, a screening technology for expedited site investigation. After exposure, adsorbent cartridges from the passive samplers are analyzed using U.S. EPA Method 8260B as described in the Solid Waste Manual (SW-846), a capillary gas chromatographic/mass spectrometric method, modified to accommodate high temperature thermal desorption of the adsorbent cartridges. This procedure is summarized as follows:

A. The adsorbent cartridges are loaded with internal standards and surrogates prior to loading the autosampler with the cartridges. The loaded cartridges are purged in a helium flow. Then the cartridges are thermally desorbed in a helium flow onto a focusing trap. Any analytes in the helium stream are adsorbed onto a focusing trap.

B. Following trap focusing, the trap is thermally desorbed onto a DB-VRX 60m, 0.25 mm ID, 1.40 micron filament thickness capillary column.

C. The GC/MS is scanned between 35 and 270 Atomic Mass Units (AMU) at 3.12 scans per second.

D. BFB tuning criteria and the initial five-point calibration procedures are those stated in method SW846-8260B. System performance and calibration check criteria are met prior to analysis of samples. A laboratory method blank is analyzed after the daily standard to determine that the system is contaminant-free.

E. The instrumentation used for these analyses includes:

- Agilent 6890-5973 Gas Chromatograph/Mass Spectrometer;
- Markes Unity thermal desorber;
- Markes UltrA autosampler; and
- Markes Mass Flow Controller Module.

Attachment 4

Chain-of-Custody Form

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F05-013-003	PAGE 1 OF 1
COLLECTOR: GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 9N; DATA TURNAROUND: 45 Days / 45 Days
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling		SAF NO.: F05-013	AIR QUALITY: ☐
ICE CHEST NO.: Vendor Seal # 00424511	FIELD LOGBOOK NO.:	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express	
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: 2e PTR 15556		BILL OF LADING/AIR BILL NO.: 2e PTR 15556	

MATRIX*: A=Air; DL=Drum Liquids; DS=Drum Solids; L=Liquid; O=Oil; S=Soil; SE=Sediment; T=Tissue; V=Vegitation; W=Water; WI=Wipe; X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS:

SPECIAL HANDLING AND/OR STORAGE:

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION: Cool 4C	TYPE OF CONTAINER: EMFLUX Cartridge	NO. OF CONTAINER(S): 1	VOLUME: 5g	SAMPLE ANALYSIS: VOA - 8260B (Emflux)
B1CH16	OTHER SOLID	5/12/05	1016	X				
B1CH17	OTHER SOLID	5/12/05	1014	X				
B1CH18	OTHER SOLID	5/12/05	1018	X				
B1CH19	OTHER SOLID	5/12/05	1019	X				
B1CH20	OTHER SOLID	5/12/05	1023	X				

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT/PM Gent	5/12/05 1330	FRIG #3	5/12/05 1330
M.D. Gerber/M.D. Gerber	5/18/05 0800	M.H. Reichhardt/M.H. Reichhardt	5/18/05 0800
M.H. Reichhardt/M.H. Reichhardt	5/18/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY: Steven Thornley	TITLE	DATE/TIME: 5.19.05 / 1045
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F05-013-004	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 9N	DATA TURNAROUND
GENT	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
218-E-12B	218-E-12B Passive Soil Gas Sampling		F05-013		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
Vendor Seal #00424511		119624ES10	Federal Express		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Beacon Environmental Services	24 PTR 15556		24 PTR 15556		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C														
TYPE OF CONTAINER	EMFLUX Cartridge														
NO. OF CONTAINER(S)	1														
VOLUME	5g														
SAMPLE ANALYSIS	VOA - 8260B (Emflux);														

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1CH21	OTHER SOLID	5/12/05	1021	X										
B1CH22	OTHER SOLID	5/12/05	1025	X										
B1CH23	OTHER SOLID	5/12/05	1026	X										
B1CH24	OTHER SOLID	5/12/05	1030	X										
B1CH25	OTHER SOLID	5/12/05	1028	X										

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT/	5/12/05 1330	FR16#3	5/12/05 1330
MO-026, RT 3	5/18/05 0800	M.H. Bauchler/M.H. Bauchler	5/18/05 0800
M.H. Bauchler/M.H. Bauchler	5/18/05 0800	LEC 2X	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY** Steven Thornley	**TITLE**	**DATE/TIME** 5.19.05 10.45	
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**	

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F05-013-005	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 9N	DATA TURNAROUND
GENT	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / 45 Days
218-E-12B	218-E-12B Passive Soil Gas Sampling		F05-013		
ICE CHEST NO. Vendor Seal # 0042451	**FIELD LOGBOOK NO.**	**COA** 119624ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Beacon Environmental Services	**OFFSITE PROPERTY NO.** 24 PTC 15556		**BILL OF LADING/AIR BILL NO.** 24 PTC 15556		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION: Cool 4C	TYPE OF CONTAINER: EMFLUX Cartridge	NO. OF CONTAINER(S): 1	VOLUME: 5g	SAMPLE ANALYSIS: VOA - 8260B (Emflux);
B1CH26	OTHER SOLID	5/12/05	1031	X				
B1CH27	OTHER SOLID	5/12/05	1032	X				
B1CH28	OTHER SOLID	5/12/05	1034	X				
B1CH29	OTHER SOLID	5/12/05	1038	X				
B1CH30	OTHER SOLID	5/12/05	1037	X				

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PMGENT/PMB	5/12/05 1330	FRIG #3	5/12/05 1330
M.G. Buckley	5/18/05 0800	M.G. Buckley	5/18/05 0800
M.G. Buckley	5/18/05 0800	LAB FR	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	Steven Shumley		5.19.08 / 1040
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F05-013-006	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 9N	DATA TURNAROUND
GENT	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
218-E-12B	218-E-12B Passive Soil Gas Sampling		F05-013		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
Vendor Seal # 0042451		119624ES10	Federal Express		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Beacon Environmental Services	See PTC 15556		See PTC 15556		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C														
TYPE OF CONTAINER	EMFLUX Cartridge														
NO. OF CONTAINER(S)	1														
VOLUME	5g														
SAMPLE ANALYSIS	VOA - 8260B (Emflux);														

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1CH31	OTHER SOLID	MAY 12 2005	1040	X										
B1CH32	OTHER SOLID	MAY 12 2005	1042	X										
B1CH33	OTHER SOLID	MAY 12 2005	1045	X										
B1CH34	OTHER SOLID	MAY 12 2005	1043	X										
B1CH35	OTHER SOLID	MAY 12 2005	1046	X										

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
P.M. GENT	MAY 12 2005 1330	FRIG #3	1330 MAY 12 2005
M.G. Boucher	5/18/05 0800	M.H. Boucher / M.G. Boucher	5/18/05 0800
M.H. Boucher / M.G. Boucher	5/18/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	Steven Thornley		5.19.05 / 10.45
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F05-013-007	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 9N	DATA TURNAROUND
P.M. GENT	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
218-E-12B	218-E-12B Passive Soil Gas Sampling		F05-013		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
Vendor Seal # 00424511		119624ES10	Federal Express		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Beacon Environmental Services	24 PTR 15556		24 PTR 15556		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C												
TYPE OF CONTAINER	EMFLUX Cartridge												
NO. OF CONTAINER(S)	1												
VOLUME	5g												
SAMPLE ANALYSIS	VOA - 8260B (Emflux);												

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1CH36	OTHER SOLID	MAY 12 2005	1048	X									
B1CH37	OTHER SOLID	MAY 12 2005	1051	X									
B1CH38	OTHER SOLID	MAY 12 2005	1050	X									
B1CH39	OTHER SOLID	MAY 12 2005	1054	X									
B1CH40	OTHER SOLID	MAY 12 2005	1055	X									

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT Fedex	5/12/05 1530	FRIGE #3	1339 5/12/05
M.G. Bauhus	5/18/05 0800	M.H. Bauhus M.G. Bauhus	5/18/05 0800
M.H. Bauhus M.G. Bauhus	5/18/05 0800	Led Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	Steven Thornley		5-19-05 / 1045
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F05-013-008	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 9N	DATA TURNAROUND
P.M. GENT	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
218-E-12B	218-E-12B Passive Soil Gas Sampling		F05-013		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
Vendor Seal # 00424511		119624ES10	Federal Express		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Beacon Environmental Services	SUPTR 15556		SUPTR 15556		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C																
TYPE OF CONTAINER	EMFLUX Cartridge																
NO. OF CONTAINER(S)	1																
VOLUME	5g																
SAMPLE ANALYSIS	VOA - 82608 (Emflux);																

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME														
B1CH41	OTHER SOLID	MAY 12 2005	1057	X													
B1CH42	OTHER SOLID	MAY 12 2005	1101	X													
B1CH43	OTHER SOLID	MAY 12 2005	1059	X													
B1CH44	OTHER SOLID	MAY 12 2005	1102	X													
B1CH45	OTHER SOLID	MAY 12 2005	1105	X													

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT	1330 5/12/05	FR16 #3	1330 5/12/05
M.D. Dahl RLT 3 5/18/05	0800	M.H. Barker M.D. Barker 5/18/05	0800
M.H. Barker M.D. Barker 5/18/05	0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**	
	Steven Thornley		5.19.05	1045
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**	

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F05-013-009	PAGE 1 OF 1
COLLECTOR: P.M. GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 9N
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling		SAF NO.: F05-013	AIR QUALITY: ☐
ICE CHEST NO.: Vendor Seal # 0042451	FIELD LOGBOOK NO.:	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express	DATA TURNAROUND: 45 Days / 45 Days
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: SUPTR 15556		BILL OF LADING/AIR BILL NO.: SUPTR 15556	

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS:

SPECIAL HANDLING AND/OR STORAGE:

PRESERVATION	Cool 4C														
TYPE OF CONTAINER	EMFLUX Cartridge														
NO. OF CONTAINER(S)	1														
VOLUME	5g														
SAMPLE ANALYSIS	VOA - 8260B (Emflux);														

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME												
B1CH46	OTHER SOLID	MAY 12 2005	1108	X											
B1CH47	OTHER SOLID	MAY 12 2005	1106	X											
B1CH48	OTHER SOLID	MAY 12 2005	1110	X											
B1CH49	OTHER SOLID	MAY 12 2005	1112	X											
B1CH50	OTHER SOLID	MAY 12 2005	1115	X											

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT/ [illegible]	1330 5/12/05	FRIG #3	1330 5/12/05
M.D. Gibbons	5/18/05 0800	M.A. Bachus	5/18/05 0800
M.A. Bachus	5/18/05 0800	Lab EK	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY: Steven Thornley	TITLE	DATE/TIME: 5.19.05 / 1048
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F05-013-010	PAGE 1 OF 1
COLLECTOR: P.M. GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 9N; DATA TURNAROUND: 45 Days / 45 Days
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling		SAF NO.: F05-013	AIR QUALITY: ☐
ICE CHEST NO.: Vendor Seal # 0024571	FIELD LOGBOOK NO.:	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express	
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: SU PTR 15556		BILL OF LADING/AIR BILL NO.: SU PTR 15556	

MATRIX*: A=Air; DL=Drum Liquids; DS=Drum Solids; L=Liquid; O=Oil; S=Soil; SE=Sediment; T=Tissue; V=Vegitation; W=Water; WI=Wipe; X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C																
TYPE OF CONTAINER	EMFLUX Cartridge																
NO. OF CONTAINER(S)	1																
VOLUME	5g																
SAMPLE ANALYSIS	VOA - 8260B (Emflux);																

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1CH51	OTHER SOLID	MAY 12 2005	1113	X
B1CH52	OTHER SOLID	MAY 12 2005	1117	X
B1CH53	OTHER SOLID	MAY 12 2005	1119	X
B1CH54	OTHER SOLID	MAY 12 2005	1126	X
B1CH55	OTHER SOLID	MAY 12 2005	1127	X

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT / [illegible]	1330 5/12/05	FRIG #3	1330 5/12/05
M.A. Bachman / M.A. Bachman	5/18/05 0800	M.A. Bachman / M.A. Bachman	5/18/05 0800
M.A. Bachman / M.A. Bachman	5/18/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY: Steven Thornley	TITLE	DATE/TIME: 5.19.05 / 1045
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F05-013-011	PAGE 1 OF 1
COLLECTOR: P.M. GENT	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 9N; DATA TURNAROUND: 45 Days / 45 Days
SAMPLING LOCATION: 218-E-12B	PROJECT DESIGNATION: 218-E-12B Passive Soil Gas Sampling		SAF NO.: F05-013	AIR QUALITY: ☐
ICE CHEST NO.: Vendor Shpt # 00424511	FIELD LOGBOOK NO.	COA: 119624ES10	METHOD OF SHIPMENT: Federal Express	
SHIPPED TO: Beacon Environmental Services	OFFSITE PROPERTY NO.: SU PTR 15556		BILL OF LADING/AIR BILL NO.: SU PTR 15556	

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C																
TYPE OF CONTAINER	EMFLUX Cartridge																
NO. OF CONTAINER(S)	1																
VOLUME	5g																
SAMPLE ANALYSIS	VOA - 8260B (Emflux);																

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME													
B1CH56	OTHER SOLID	MAY 12 2005	1124	X												
B1CH57	OTHER SOLID	MAY 12 2005	1130	X												
B1CH58	OTHER SOLID	MAY 12 2005	1131	X												
B1CH59	OTHER SOLID	MAY 12 2005	0955	X												
B1CH60	OTHER SOLID	MAY 12 2005	0957	X												

CHAIN OF POSSESSION	SIGN/ PRINT NAMES		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PMGENT / [illegible]	1330 5/12/05	FRIG #3	1338 5/12/05
1102-126 RM 3	5/13/05 0800	M.H. Bowman M.G. Buchanan	5/13/05 0800
M.H. Bowman M.G. Buchanan	5/13/05 0800	LEd EX	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY: Steven Thornley	TITLE	DATE/TIME: 5-19-05
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F05-013-012	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 9N	DATA TURNAROUND
P.M. GENT	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
218-E-12B	218-E-12B Passive Soil Gas Sampling		F05-013		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
Vendor Seal # 00424511		119624ES10	Federal Express		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Beacon Environmental Services	26 PTR 15556		26 PTR 15556		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C																
TYPE OF CONTAINER	EMFLUX Cartridge																
NO. OF CONTAINER(S)	1																
VOLUME	5g																
SAMPLE ANALYSIS	VOA - 8260B (Emflux);																

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME														
B1CH61	OTHER SOLID	MAY 12 2005	1001	X													
B1CH62	OTHER SOLID	MAY 12 2005	0959	X													
B1CH63	OTHER SOLID	MAY 12 2005	1002	X													
B1CH64	OTHER SOLID	MAY 12 2005	1004	X													
B1CH65	OTHER SOLID	MAY 12 2005	1009	X													

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT	1330 5/12/05	FRIG #3	1330 5/12/05
M.G. Boucher	5/18/05 0820	M.G. Boucher	5/18/05 0820
M.G. Boucher	5/18/05 0820	LAB EX	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY** Steven Thornley	**TITLE**	**DATE/TIME** 5-19-05 1048
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F05-013-013	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 9N	DATA TURNAROUND
P.M. GENT	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
218-E-12B	218-E-12B Passive Soil Gas Sampling		F05-013		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
Vendor Seal # 0024511		119624ES10	Federal Express		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Beacon Environmental Services	See PTR 15556		See PTR 15556		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool 4C														
TYPE OF CONTAINER	EMFLUX Cartridge														
NO. OF CONTAINER(S)	1														
VOLUME	5g														
SAMPLE ANALYSIS	VOA - 8260B (Emflux);														

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1CH66	OTHER SOLID	MAY 12 2005	1006	X										
B1CH67	OTHER SOLID	MAY 12 2005	1008	X										

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
PM GENT / [signature]	1330 5/12/05	FR16#3	1330 5/12/05
MO-026 KL3	5/18/05 0800	M.H. Barnhill M.G. Barnhill	5/18/05 0800
M.H. Barnhill M.G. Barnhill	5/18/05 0800	Fed Ex	

SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY** Steven Thornley	**TITLE**	**DATE/TIME** 5.19.05 / 1045	
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**	

A-6003-618(03/03)

CHAIN-OF-CUSTODY
PASSIVE SOIL-GAS SAMPLES

Project Information	
Beacon Project No.:	EM1770
Site Name:	Site 218-E-12B Burial Grounds
Site Location:	Hanford, WA
Analytical Method:	EPA Method 8260B
Target Compounds:	Beacon Project Number EM1770 Target Compound List

BEACON ENVIRONMENTAL SERVICES, INC.
323 Williams Street, Suite D, Bel Air, MD 21014, 800-878-5510

Client Information	
Company Name:	Fluor Hanford, Inc.
Office Location:	Richland, WA
Samples Submitted By:	
Contact Phone No.:	

Field Sample ID	Lab Sample ID (for lab use only)	Comments (only necessary if problem or discrepancy)			
		Condition of sample or vial	Date	Time	Initial
Trip-1	1770 Trip-1				
Trip-2	1770 Trip-2				

Shipment of Field Kit to Site — Custody Seal # 00424503 Intact? (Y) N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Ryan Schmid	4-28-2005 / 1700	FedEx	PMGENT/	02MAY05 / 1330

Shipment of Field Kit to Laboratory — Custody Seal # 00424511 Intact? (Y) N

Relinquished by:	Date/Time	Courier	Received by:	Date/Time
PMGENT/	5/18/05 0800	FED EX	Steven Thornley	19 May 05 / 1000