

0049004



4203 West Swift ▼ Fresno, California 93722 ▼ Phone 209 275 2175 ▼ Fax 209 275 4422

August 11, 1997



Bechtel Hanford, Inc.
3350 George Washington Way
Richland, Washington 99352
Attn: Michael A. Hughes

Subject: Report of Data: Case 25656

Dear Mr. Hughes:

Two soil samples for job North Slope H & S were received August 01, 1997, in good condition. Written results are being provided on this August 11, 1997, for the analyses requested. The samples were received past holding times. No unusual problems or complications were encountered with this sample set.

If you have any questions or require further information, please contact us at your convenience. Thank you for choosing APPL, Inc.

Sincerely,

Mike Ray, Laboratory Director
APPL, Inc.

MR/mr
Enclosure

**Case Narrative
EPA Method 6010**

ARF: 25656

Project: Bechtel Hanford, Inc.

Sample Receipt Information:

The sample group was assigned Analytical Request Form (ARF) # 25656, and the sample numbers and requested analyses were compared to the chain of custody. No exceptions were encountered.

Sample Table:

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received	Date Analyzed
BOLKB7	53908	Soil	5/29/97	8/01/97	8/05/97
BOLKB8	53909	Soil	5/29/97	8/01/97	8/05/97

Sample Preparation:

The samples were received past holding time. The samples were digested according to EPA method 3050A.

Analysis Information:

Samples:

The samples were analyzed by Thermo Jarrel Ash ICP.

Calibrations:

A calibration was performed according to the method. All QC criteria were met.

Blanks:

No target compounds were detected at or above the reporting level.

Spikes:


Spikes were performed on batch QC. The sample used was not a Bechtel sample. The MS/MSD required a post digestion spike. All parameters passed.

Summary:

All data were acceptable. No problems were encountered.

CERTIFICATION

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.


Michael Ray, Laboratory Manager

Metals Analysis

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8
Sample Collection Date: 5/29/97

APPL ID: AP53909
ARF: 25858

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
6010A	Aluminum (Al)	14300	50	mg/kg	8/4/97	8/5/97
6010A	Antimony (Sb)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Arsenic (As)	2.3	0.5	mg/kg	8/4/97	8/5/97
6010A	Barium (Ba)	55.1	0.5	mg/kg	8/4/97	8/5/97
6010A	Beryllium (Be)	Not detected	0.2	mg/kg	8/4/97	8/5/97
6010A	Cadmium (Cd)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Calcium (Ca)	2120	10	mg/kg	8/4/97	8/5/97
6010A	Chromium (Cr)	33.9	0.5	mg/kg	8/4/97	8/5/97
6010A	Cobalt (Co)	7.5	0.5	mg/kg	8/4/97	8/5/97
6010A	Copper (Cu)	10.0	0.5	mg/kg	8/4/97	8/5/97
6010A	Iron (Fe)	15700	25	mg/kg	8/4/97	8/5/97
6010A	Lead (Pb)	2.5	0.3	mg/kg	8/4/97	8/5/97
6010A	Magnesium (Mg)	3230	5	mg/kg	8/4/97	8/5/97
6010A	Manganese (Mn)	229	2.5	mg/kg	8/4/97	8/5/97
6010A	Molybdenum (Mo)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Nickel (Ni)	43.5	0.5	mg/kg	8/4/97	8/5/97
6010A	Selenium (Se)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Silver (Ag)	Not detected	0.1	mg/kg	8/4/97	8/5/97
6010A	Thallium (Tl)	Not detected	2	mg/kg	8/4/97	8/5/97
6010A	Vanadium (V)	38.5	0.5	mg/kg	8/4/97	8/5/97
6010A	Zinc (Zn)	18.2	5	mg/kg	8/4/97	8/5/97

Initials: *fs*

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Metals Analysis

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLK87
Sample Collection Date: 5/29/97

APPL ID: AP53908
ARF: 25858

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
6010A	Aluminum (Al)	13400	50	mg/kg	8/4/97	8/5/97
6010A	Antimony (Sb)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Arsenic (As)	2.3	0.5	mg/kg	8/4/97	8/5/97
6010A	Barium (Ba)	52.9	0.5	mg/kg	8/4/97	8/5/97
6010A	Beryllium (Be)	Not detected	0.2	mg/kg	8/4/97	8/5/97
6010A	Cadmium (Cd)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Calcium (Ca)	2380	10	mg/kg	8/4/97	8/5/97
6010A	Chromium (Cr)	39.1	0.5	mg/kg	8/4/97	8/5/97
6010A	Cobalt (Co)	7.6	0.5	mg/kg	8/4/97	8/5/97
6010A	Copper (Cu)	9.1	0.5	mg/kg	8/4/97	8/5/97
6010A	Iron (Fe)	15900	25	mg/kg	8/4/97	8/5/97
6010A	Lead (Pb)	2.6	0.3	mg/kg	8/4/97	8/5/97
6010A	Magnesium (Mg)	4770	5	mg/kg	8/4/97	8/5/97
6010A	Manganese (Mn)	228	2.5	mg/kg	8/4/97	8/5/97
6010A	Molybdenum (Mo)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Nickel (Ni)	60.5	0.5	mg/kg	8/4/97	8/5/97
6010A	Selenium (Se)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Silver (Ag)	Not detected	0.1	mg/kg	8/4/97	8/5/97
6010A	Thallium (Tl)	Not detected	2	mg/kg	8/4/97	8/5/97
6010A	Vanadium (V)	36.0	0.5	mg/kg	8/4/97	8/5/97
6010A	Zinc (Zn)	19.6	5	mg/kg	8/4/97	8/5/97

Initials: B

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**Case Narrative
Heated Purge GC/FID**

ARF: 25656

Project: Bechtel Hanford, Inc.

Sample Receipt Information:

The sample group was assigned Analytical Request Form (ARF) # 25656, and the sample numbers and requested analyses were compared to the chain of custody. No exceptions were encountered.

Sample Table:

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received	Date Extracted	Date Analyzed
BOLKB7	53908	Soil	5/29/97	8/01/97	8/01/97	8/05/97
BOLKB8	53909	Soil	5/29/97	8/01/97	8/01/97	8/05/97

Sample Preparation:

The samples were received past holding time. Approximately ten grams of sample was weighed and purged while heating using a Dynotech auto sampler and injected into a Hewlett Packard GC/FID. The column used is a DB-624 30m in length 0.53mm id with a film thickness of 0.12 μ . Surrogates were added to equal a 10ppb response. The instrument was calibrated for gas and BTEX. Purgable amines present should have responded under these chromatographic conditions. The chromatograms are included. There were no peaks present other than the surrogates. No forms 1 are included.

Analysis Information:

Samples:

The samples were analyzed by GC/FID. Surrogates were added at normal concentrations. No MS/MSD or LCS was performed. Since there was no target analyte list, there are no forms 1. The chromatograms show no detection of purgable amines.

Calibrations:

A calibration standard for gas and BTEX was used to ensure the system was operating satisfactorily.

Blanks:

No target compounds were detected at or above the reporting level.

Surrogates:

All surrogates passed as per the method.

Spikes:

Spikes were not performed on this set of samples.

Summary:

All data were acceptable. No problems were encountered.

CERTIFICATION

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.


Michael Ray, Laboratory Manager

**Case Narrative
EPA Method 8080
Chlorinated Pesticides**

ARF: 25656

Project: Bchtel Hanford, Inc.

Sample Receipt Information:

The sample group was assigned Analytical Request Form (ARF) # 25656, and the sample numbers and requested analyses were compared to the chain of custody. No exceptions were encountered.

Sample Table:

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received	Date Extracted	Date Analyzed
BOLKB7	53908	Soil	5/29/97	8/01/97	8/01/97	8/05/97
BOLKB8	53909	Soil	5/29/97	8/01/97	8/01/97	8/05/97

Sample Preparation:

The samples were received past holding time. Extractions and analyses were performed upon receipt by EPA method 3540. The samples were analyzed using a Hewlett Packard GC/ECD.

Analysis Information:

Samples:

The samples were analyzed by EPA Method 8080. The samples had a distinctive odor. A sample aliquot of 30grams was extracted with methylene chloride by sonication. Surrogates were added at normal concentrations. Method 8080 was followed with the exception that no MS/MSD or LCS was performed. The detected target analytes are listed on the forms 1.

Calibrations:

A calibration standard was injected after the samples were run. The samples were quantified using the most recent curve.

Blanks:

No target compounds were detected at or above the reporting level.

Surrogates:

At least one surrogate passed as per the method.

Spikes:


Spikes were not performed on this set of samples

Summary:

All data were acceptable. No problems were encountered.

CERTIFICATION

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.


Michael Ray, Laboratory Manager

EPA 8080 OCL SOIL

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7

APPL ID: AP63908

Sample Collection Date: 5/29/97

ARF: 25856

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8080	Aldrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	a-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	b-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	d-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Chlordane	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-DDE	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-DDT	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Dieldrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan I	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan II	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan sulfate	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin aldehyde	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin ketone	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	g-BHC (Lindane)	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Heptachlor	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Heptachlor epoxide	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Methoxychlor	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-TDE/DDO	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Toxaphene	Not detected	1000	ug/kg	8/1/97	8/5/97
EPA 8080	Surrogate OBC	31.4 #	44-136	%	8/1/97	8/5/97
EPA 8080	Surrogate DECA	30.9 #	35-141	%	8/1/97	8/5/97
EPA 8080	Surrogate TCMX	64.6	23-112	%	8/1/97	8/5/97

Run #: 204036
Instrument: FCD01
Sequence: 970704
Initials: DJ
Printed: 8/11/97 11:17:22 AM

EPA 8080 OCL SOIL

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8

APPL ID: AP53909

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8080	Aldrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	a-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	b-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	d-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Chlordane	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-DDE	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-DDT	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Dieldrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan I	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan II	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan sulfate	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin aldehyde	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin ketone	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	g-BHC (Lindane)	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Heptachlor	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Heptachlor epoxide	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Methoxychlor	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-TDE/DDD	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Toxaphene	Not detected	1000	ug/kg	8/1/97	8/5/97
EPA 8080	Surrogate: DBC	79.7	44-136	%	8/1/97	8/5/97
EPA 8080	Surrogate: DECA	69.7	35-141	%	8/1/97	8/5/97
EPA 8080	Surrogate: TCMX	93.9	23-112	%	8/1/97	8/5/97

Run #:	804037
Instrument:	EC201
Sequence:	970804
Initials:	DA
Printed: 8/11/97 11:17:23 AM	

Case Narrative
EPA Method 8270
Volatile Organics

ARF: 25656

Project: Bechtel Hanford, Inc.

Sample Receipt Information:

The sample group was assigned Analytical Request Form (ARF) # 25656, and the sample numbers and requested analyses were compared to the chain of custody. No exceptions were encountered.

Sample Table:

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received	Date Extracted	Date Analyzed
BOLKB7	53908	Soil	5/29/97	8/01/97	8/01/97	8/01/97
BOLKB8	53909	Soil	5/29/97	8/01/97	8/01/97	8/01/97

Sample Preparation:

The samples were received past holding time. Extractions and analyses were performed upon receipt by EPA method 8270. The samples were analyzed using a Hewlett Packard GC/MS.

Analysis Information:

Samples:

The samples were analyzed by EPA Method 8270. The samples had a distinctive odor. A sample aliquot of 30grams was extracted with methylene chloride by sonication. Surrogates were added at normal concentrations. Internal standards were added at normal concentrations. Method 8270B was followed with the exception that no MS/MSD or LCS was performed. The detected target analytes are listed on the forms 1. The peaks not identified as target analytes were searched through the Wiley Library containing 138,000 compounds. This library contains the pesticide compounds also.

A tentatively identified compound summary list is provided for your information. The TICs have been examined by our analyst and project manager and the best hit has been chosen. Copies of the raw data is included for your review.

Calibrations:

The instrument was tuned to DFTPP. The samples were injected immediately following the tune. A calibration standard was injected after the samples were run. The samples were quantified using the most recent curve.

Blanks:

No target compounds were detected at or above the reporting level.

Surrogates:

All recoveries were acceptable

Spikes:

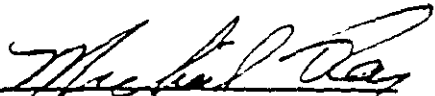
Spikes were not performed on this set of samples

Summary:

All data were acceptable. No problems were encountered.

CERTIFICATION

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.


Michael Ray, Laboratory Manager

EPA Method 8270

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7

APPL ID: AP53908

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8270	Acenaphthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Acenaphthylene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(a)anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(a)pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(b)fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(g,h,i)perylene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(k)fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzoic acid	84 J	3300	ug/kg	8/1/97	8/1/97
EPA 8270	Benzyl alcohol	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	4-Bromophenylphenylether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Butylbenzylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Di-n-butylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Chloro-3-methylphenol	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroethoxy)methane	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroethyl)ether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroisopropyl)ether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Chloronaphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Chlorophenol	17 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Chlorophenylphenylether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Chrysene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dibenz(a,h)anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dibenzofuran	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,2-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,3-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,4-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	3,3'-Dichlorobenzidine	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dichlorophenol	170 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	Diethylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dimethylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dimethylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dinitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dinitrotoluene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,6-Dinitrotoluene	Not detected	600	ug/kg	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #	0801501
Instrument	TR
Sequence	3080197
Initials	MH
Printed: 8/6/97 2:13:49 PM	

EPA Method 8270

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Att: MICHAEL A. HUGHES

Sample ID: BOLKB7

APPL ID: AP53908

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8270	Bis(2-ethylhexyl)phthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Fluorene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorobutadiene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorocyclopentadiene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachloroethane	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Indeno(1,2,3-cd)pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Isophorone	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methyl-4,6-dinitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methylnaphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Methylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Naphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Nitrobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Nitrophenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Nitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodimethylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodiphenylamine	2.3 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodiphenylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Di-n-octylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Pentachlorophenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Phenanthrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Phenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,2,4-Trichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4,6-Trichlorophenol	100 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	Surrogate recovery (ZFP)	95.4	35-135	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (FBP)	86.1	43-155	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (NBZ)	99.7	25-137	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (PML)	95.9	27-145	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (TBP)	94.0	37-149	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (TPH)	91.9	43-159	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #	0801J01
Instrument	JA
Sequence	1080197
Initials	JA
Printed: 8/6/97 2:13:50 PM	

EPA Method 8270

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A HUGHES

Sample ID: BOLKB8

APPL ID: AP53909

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8270	Acenaphthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Acenaphthylene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benz(a)anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(a)pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(b)fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(g,h,i)perylene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(k)fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzoic acid	9.0	3300	ug/kg	8/1/97	8/1/97
EPA 8270	Benzyl alcohol	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	4-Bromophenylphenylether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Butylbenzylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Di-n-butylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Chloro-3-methylphenol	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroethoxy)methane	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroethyl)ether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroisopropyl)ether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Chloronaphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Chlorophenol	1.1 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Chlorophenylphenylether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Chrysene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dibenz(a,h)anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dibenzofuran	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,2-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,3-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,4-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	3,3'-Dichlorobenzidine	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dichlorophenol	150 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	Diethylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dimethylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dimethylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dinitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dinitrotoluene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,6-Dinitrotoluene	Not detected	600	ug/kg	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0801502
Instrument:	JR
Sequence:	5080197
Initials:	MIC
Printed: 8/6/97 2:13:51 PM	

EPA Method 8270

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8

APPL ID: AP53909

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8270	Bis(2-ethylhexyl)phthalate	Not detected	500	ug/kg	8/1/97	8/1/97
EPA 8270	Fluoranthene	Not detected	500	ug/kg	8/1/97	8/1/97
EPA 8270	Fluorene	Not detected	500	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorobutadiene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorocyclopentadiene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachloroethane	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Indeno(1,2,3-cd)pyrene	Not detected	500	ug/kg	8/1/97	8/1/97
EPA 8270	Isophorone	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methyl-4,6-dinitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methylnaphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Methylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Naphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Nitrobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Nitrophenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Nitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodipropylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodimethylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodiphenylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Di-n-octylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Pentachlorophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	Phenanthrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Phenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,2,4-Trichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4,6-Trichlorophenol	28 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	Surrogate recovery (ZFP)	93.1	15-135	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (FBP)	97.2	43-155	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (NBZ)	96.5	15-137	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (PML)	99.4	27-145	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (TBP)	91.5	37-149	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (TPH)	116	43-150	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #	0801J02
Instrument	JR
Sequence	0801J2
Initials	HL
Printed: 8/6/97 2:13:51 PM	

Case Narrative
EPA Method 8260
Volatile Organics

ARF: 25656

Project: Bechtel Hanford, Inc.

Sample Receipt Information:

The sample group was assigned Analytical Request Form (ARF) # 25656, and the sample numbers and requested analyses were compared to the chain of custody. No exceptions were encountered.

Sample Table:

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received	Date Extracted	Date Analyzed
BOLKB7	53908	Soil	5/29/97	8/01/97	8/01/97	8/01/97
BOLKB8	53909	Soil	5/29/97	8/01/97	8/01/97	8/01/97

Sample Preparation:

The samples were received past holding time. Extractions and analyses were performed upon receipt by EPA method 8260. The samples were analyzed using a Hewlett Packard GC/MS.

Analysis Information:

Samples:

The samples were analyzed by EPA Method 8260. The samples had a distinctive odor not consistent with routine volatile compounds detected using this method. A sample aliquot of one-half gram was run by heated purge injection. Surrogates were added at normal concentrations. Internal standards were added at normal concentrations. No compounds were detected. No nontarget compounds were present above the reporting limit. All compounds detected are listed on the form 1 and labeled as "J". The definition of "J" is an estimated value below the quantitation limit but above the method detection limit. There were no peaks present to search as tentatively identified compounds.

Calibrations:

The instrument was tuned for Bromofluorobenzene. No calibration was performed within the 12 hour period as discussed with the client beforehand. The quantitation was performed using the most recent curve. These calibrations were performed according to the method. All compounds met the criteria for the method.

Blanks:

No target compounds were detected at or above the reporting level.

Surrogates:

All recoveries were acceptable

Spikes:


Spikes were not performed on this set of samples

Summary:

All data were acceptable. No problems were encountered.

CERTIFICATION

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.


Michael Ray, Laboratory Manager

EPA 8260

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8

APPL ID: AP53909

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8260	Acetone	84 J	200	ug/Kg	8/1/97	8/1/97
EPA 8260	Benzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromodichloromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromoform	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromomethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Carbon tetrachloride	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloroethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	2-Chloroethylvinyl ether	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloroform	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloromethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Dibromochloromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,3-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,4-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1-Dichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1-Dichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	trans-1,2-Dichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichloropropane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	cis-1,3-Dichloropropene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	trans-1,3-Dichloropropene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Ethylbenzene	32 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Methylene chloride	65 J	100	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,2,2-Tetrachloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Tetrachloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Toluene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,1-Trichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,2-Trichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Trichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Trichlorofluoromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Vinyl chloride	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Xylenes	18 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Surrogate recovery (BFB)	95.4	59-113	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0501102
Instrument:	HEWLETT
Sequence:	HUS0197
Initials:	W
Printed: 8/6/97 2:15:42 PM	

EPA 8260

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8

APPL ID: AP53909

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8260	Surrogate recovery (DCE)	94.0	70-121	%	8/1/97	8/1/97
EPA 8260	Surrogate recovery (TOL)	92.5	84-138	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0501102
Instrument:	176144
Sequence:	HU80197
Initials:	✓
Printed: 8/5/97 2:15:45 PM	

EPA 8260

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7

APPL ID: AP53908

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8260	Acetone	190 J	200	ug/Kg	8/1/97	8/1/97
EPA 8260	Benzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromodichloromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromoform	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromomethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	2-Butanone	38 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Carbon Disulfide	20 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Carbon tetrachloride	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloroethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	2-Chloroethylvinyl ether	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloroform	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloromethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Dibromochloromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,3-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,4-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1-Dichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1-Dichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	trans-1,2-Dichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichloropropane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	cis-1,3-Dichloropropene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	trans-1,3-Dichloropropene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Ethylbenzene	3.0 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Methylene chloride	73 J	100	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,2,2-Tetrachloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Tetrachloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Toluene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,1-Trichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,2-Trichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Trichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Trichlorofluoromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Vinyl chloride	Not detected	100	ug/Kg	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0801 H01
Instrument:	Hewlett
Sequence:	17080197
Initials:	ML
Printed: 8/6/97 2:15:41 PM	

EPA 8260

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7
Sample Collection Date: 5/29/97

APPL ID: AP63908
ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8260	Xylenes	17 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Surrogate recovery (BFB)	97.5	59-113	%	8/1/97	8/1/97
EPA 8260	Surrogate recovery (DCE)	95.7	70-121	%	8/1/97	8/1/97
EPA 8260	Surrogate recovery (TOL)	93.4	84-138	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0501 HUL
Instrument:	Hewlett
Sequence:	11050197
Initials:	w
Printed:	8/1/97 2:15:42 PM

Date Turnaround
 Priority
 Standard

Collector JAL	Company Contact Joan Kessner / Jeff Lerch	Telephone (509) 372-9538 372-9535
Project Designation North Slope H+S	Sampling Location North Slope	SAF No. 1397-154
Ice Chest No. 25	Field Logbook No. N/A	Method of Shipment FedEx
Shipped To APPL Laboratory	Offsite Property No. W97-0-0001-18	Bill of Lading/Air Bill No.
Possible Sample Hazards/Remarks	Preservation 4°C none / 4°C none	
	Type of Container AG / AG	
	No. of Container(s) 1 / 1	
Special Handling and/or Storage	Volume 250ml / 250ml	

SAMPLE ANALYSIS

Sample No.	Matrix*	Date Sampled	Time Sampled										
BOLKBT	soil	05/29/97	-	X									
BOLKBB	soil	05/29/97	-	X									
				see note ①									

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By <i>Jeff Lerch</i>	Date/Time 1155 07/31/97	Received By <i>Fred Esp.</i>	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS
 ① analyze both by method 8260 and 8270 with modifications specified in work instruction
 Quickest possible turnaround is desired

- Matrix*
- S = Soil
 - SE = Sediment
 - SD = Solid
 - SL = Sludge
 - W = Water
 - O = Oil
 - A = Air
 - DS = Drum Solids
 - DL = Drum Liquids
 - T = Tissue
 - WI = Wipe
 - L = Liquid
 - V = Vegetation
 - X = Other

LABORATORY SECTION	Received By <i>[Signature]</i>	Title Sample Recovery	Date/Time 8/1/97 1035
FINAL SAMPLE DISPOSITION	Disposed Method	Disposed By	Date/Time

8260, 8270, 8080, 8010, GC/FID
 AS per Dir. 1/11
 Chilled + Intact. *[Signature]*

EPA 8260

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7

APPL ID: AP53908

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8260	Acetone	190 J	200	ug/Kg	8/1/97	8/1/97
EPA 8260	Benzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromodichloromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromoform	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromomethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	2-Butanone	38 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Carbon Disulfide	20 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Carbon tetrachloride	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloroethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	2-Chloroethylvinyl ether	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloroform	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloromethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Dibromochloromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,3-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,4-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1-Dichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1-Dichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	trans-1,2-Dichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichloropropane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	cis-1,3-Dichloropropene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	trans-1,3-Dichloropropene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Ethylbenzene	3.0 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Methylene chloride	73 J	100	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,2,2-Tetrachloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Tetrachloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Toluene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,1-Trichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,2-Trichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Trichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Trichlorofluoromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Vinyl chloride	Not detected	100	ug/Kg	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0801 H01
Instrument:	Hewlett
Sequence:	H080197
Initials:	vk
Printed: 8/8/97 2:15:41 PM	

EPA 8260

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7

APPL ID: AP53908

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8260	Xylenes	17 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Surrogate recovery (BFB)	97.5	59-113	%	8/1/97	8/1/97
EPA 8260	Surrogate recovery (DCE)	95.7	70-121	%	8/1/97	8/1/97
EPA 8260	Surrogate recovery (TOL)	93.4	84-138	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0501 H01
Instrument:	Hewlett
Sequence:	1050197
Initials:	w
Printed: 8/5/97 2:15:42 PM	

EPA 8260

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8

APPL ID: AP53909

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8260	Acetone	84 J	200	ug/Kg	8/1/97	8/1/97
EPA 8260	Benzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromodichloromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromoform	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Bromomethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Carbon tetrachloride	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloroethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	2-Chloroethylvinyl ether	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloroform	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Chloromethane	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Dibromochloromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,3-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,4-Dichlorobenzene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1-Dichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1-Dichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	trans-1,2-Dichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,2-Dichloropropane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	cis-1,3-Dichloropropene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	trans-1,3-Dichloropropene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Ethylbenzene	3.2 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Methylene chloride	65 J	100	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,2,2-Tetrachloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Tetrachloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Toluene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,1-Trichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	1,1,2-Trichloroethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Trichloroethene	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Trichlorofluoromethane	Not detected	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Vinyl chloride	Not detected	100	ug/Kg	8/1/97	8/1/97
EPA 8260	Xylenes	18 J	50	ug/Kg	8/1/97	8/1/97
EPA 8260	Surrogate recovery (BFB)	95.4	59-113	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0801102
Instrument:	Hewlett
Sequence:	H080197
Initials:	W
Printed: 8/6/97 2:15:42 PM	

EPA 8260

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8

APPL ID: AP53909

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8260	Surrogate recovery (DCE)	94.0	70-121	%	8/1/97	8/1/97
EPA 8260	Surrogate recovery (TOL)	92.5	84-138	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0801102
Instrument:	Hewlett
Sequence:	4080197
Initials:	W
Printed: 8/8/97 2:15:45 PM	

EPA Method 8270

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7
Sample Collection Date: 5/29/97

APPL ID: AP53908
ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8270	Acenaphthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Acenaphthylene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benz(a)anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(a)pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(b)fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(g,h,i)perylene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(k)fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzoic acid	8.4 J	3300	ug/kg	8/1/97	8/1/97
EPA 8270	Benzyl alcohol	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	4-Bromophenylphenylether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Butylbenzylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Di-n-butylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Chloro-3-methylphenol	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroethoxy)methane	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroethyl)ether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroisopropyl)ether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Chloronaphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Chlorophenol	17 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Chlorophenylphenylether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Chrysene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dibenz(a,h)anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dibenzofuran	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,2-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,3-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,4-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	3,3'-Dichlorobenzidine	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dichlorophenol	170 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	Diethylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dimethylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dimethylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dinitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dinitrotoluene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,6-Dinitrotoluene	Not detected	600	ug/kg	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0801501
Instrument:	JR
Sequence:	3080197
Initials:	HL
Printed: 8/5/97 2:13:49 PM	

EPA Method 8270

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7

APPL ID: AP53908

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8270	Bis(2-ethylhexyl)phthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Fluorene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorobutadiene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorocyclopentadiene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachloroethane	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Indeno(1,2,3-cd)pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Isophorone	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methyl-4,6-dinitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methylnaphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Methylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Naphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Nitrobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Nitrophenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Nitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodi-n-propylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodimethylamine	2.3 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodiphenylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Di-n-octylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Pentachlorophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	Phenanthrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Phenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,2,4-Trichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4,6-Trichlorophenol	100 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	Surrogate recovery (2FP)	85.4	35-135	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (FBP)	86.1	43-155	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (NBZ)	89.7	25-137	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (PHL)	95.9	27-145	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (TBP)	84.0	37-149	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (TPH)	119	43-159	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0801501
Instrument:	JA
Sequence:	T080197
Initials:	JA
Printed: 8/6/97 2:13:50 PM	

EPA Method 8270

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8

APPL ID: AP53909

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8270	Acenaphthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Acenaphthylene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benz(a)anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(a)pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(b)fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(g,h,i)perylene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzo(k)fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Benzoic acid	8.0 J	3300	ug/kg	8/1/97	8/1/97
EPA 8270	Benzyl alcohol	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	4-Bromophenylphenylether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Butylbenzylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Di-n-butylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Chloro-3-methylphenol	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroethoxy)methane	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroethyl)ether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Bis(2-chloroisopropyl)ether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Chloronaphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Chlorophenol	11 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Chlorophenylphenylether	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Chrysene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dibenz(a,h)anthracene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dibenzofuran	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,2-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,3-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,4-Dichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	3,3'-Dichlorobenzidine	Not detected	1300	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dichlorophenol	150 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	Diethylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dimethylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Dimethylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dinitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	2,4-Dinitrotoluene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,6-Dinitrotoluene	Not detected	600	ug/kg	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0801102
Instrument:	JK
Sequence:	3080197
Initials:	HL
Printed: 8/6/97 2:13:51 PM	

EPA Method 8270

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8

APPL ID: AP53909

Sample Collection Date: 5/29/97

ARF: 25656

Method	Analyte	Result	PQL	Unjts	Extraction Date	Analysis Date
EPA 8270	Bis(2-ethylhexyl)phthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Fluoranthene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Fluorene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorobutadiene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachlorocyclopentadiene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Hexachloroethane	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Indeno(1,2,3-cd)pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	isophorone	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methyl-4,6-dinitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methylnaphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Methylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Methylphenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Naphthalene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Nitrobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2-Nitrophenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	4-Nitrophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodi-n-propylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodimethylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	N-Nitrosodiphenylamine	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Di-n-octylphthalate	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Pentachlorophenol	Not detected	3300	ug/kg	8/1/97	8/1/97
EPA 8270	Phenanthrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Phenol	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	Pyrene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	1,2,4-Trichlorobenzene	Not detected	600	ug/kg	8/1/97	8/1/97
EPA 8270	2,4,6-Trichlorophenol	28 J	600	ug/kg	8/1/97	8/1/97
EPA 8270	Surrogate recovery (2FP)	93.1	35-135	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (FBP)	97.2	43-155	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (NBZ)	96.5	25-137	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (PHL)	99.4	27-145	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (TBP)	91.5	37-149	%	8/1/97	8/1/97
EPA 8270	Surrogate recovery (TPH)	116	43-159	%	8/1/97	8/1/97

J = Estimated value, below quantitation limit.

Run #:	0801302
Instrument:	JR
Sequence:	3080177
Initials:	HL
Printed: 8/6/97 2:13:51 PM	

Metals Analysis

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7
Sample Collection Date: 5/29/97

APPL ID: AP53908
ARF: 25658

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
6010A	Aluminum (Al)	13400	50	mg/kg	8/4/97	8/5/97
6010A	Antimony (Sb)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Arsenic (As)	2.3	0.5	mg/kg	8/4/97	8/5/97
6010A	Barium (Ba)	52.9	0.5	mg/kg	8/4/97	8/5/97
6010A	Beryllium (Be)	Not detected	0.2	mg/kg	8/4/97	8/5/97
6010A	Cadmium (Cd)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Calcium (Ca)	2380	10	mg/kg	8/4/97	8/5/97
6010A	Chromium (Cr)	39.1	0.5	mg/kg	8/4/97	8/5/97
6010A	Cobalt (Co)	7.6	0.5	mg/kg	8/4/97	8/5/97
6010A	Copper (Cu)	9.1	0.5	mg/kg	8/4/97	8/5/97
6010A	Iron (Fe)	15900	25	mg/kg	8/4/97	8/5/97
6010A	Lead (Pb)	2.6	0.3	mg/kg	8/4/97	8/5/97
6010A	Magnesium (Mg)	4770	5	mg/kg	8/4/97	8/5/97
6010A	Manganese (Mn)	228	2.5	mg/kg	8/4/97	8/5/97
6010A	Molybdenum (Mo)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Nickel (Ni)	60.5	0.5	mg/kg	8/4/97	8/5/97
6010A	Selenium (Se)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Silver (Ag)	Not detected	0.1	mg/kg	8/4/97	8/5/97
6010A	Thallium (Tl)	Not detected	2	mg/kg	8/4/97	8/5/97
6010A	Vanadium (V)	36.0	0.5	mg/kg	8/4/97	8/5/97
6010A	Zinc (Zn)	19.6	5	mg/kg	8/4/97	8/5/97

Initials: _____

B

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Metals Analysis

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8
Sample Collection Date: 5/29/97

APPL ID: AP53909
ARF: 25856

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
6010A	Aluminum (Al)	14300	50	mg/kg	8/4/97	8/5/97
6010A	Antimony (Sb)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Arsenic (As)	2.3	0.5	mg/kg	8/4/97	8/5/97
6010A	Barium (Ba)	55.1	0.5	mg/kg	8/4/97	8/5/97
6010A	Beryllium (Be)	Not detected	0.2	mg/kg	8/4/97	8/5/97
6010A	Cadmium (Cd)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Calcium (Ca)	2120	10	mg/kg	8/4/97	8/5/97
6010A	Chromium (Cr)	33.9	0.5	mg/kg	8/4/97	8/5/97
6010A	Cobalt (Co)	7.5	0.5	mg/kg	8/4/97	8/5/97
6010A	Copper (Cu)	10.0	0.5	mg/kg	8/4/97	8/5/97
6010A	Iron (Fe)	15700	25	mg/kg	8/4/97	8/5/97
6010A	Lead (Pb)	2.5	0.3	mg/kg	8/4/97	8/5/97
6010A	Magnesium (Mg)	3230	5	mg/kg	8/4/97	8/5/97
6010A	Manganese (Mn)	229	2.5	mg/kg	8/4/97	8/5/97
6010A	Molybdenum (Mo)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Nickel (Ni)	43.5	0.5	mg/kg	8/4/97	8/5/97
6010A	Selenium (Se)	Not detected	0.5	mg/kg	8/4/97	8/5/97
6010A	Silver (Ag)	Not detected	0.1	mg/kg	8/4/97	8/5/97
6010A	Thallium (Tl)	Not detected	2	mg/kg	8/4/97	8/5/97
6010A	Vanadium (V)	38.5	0.5	mg/kg	8/4/97	8/5/97
6010A	Zinc (Zn)	18.2	5	mg/kg	8/4/97	8/5/97

Initials: fs

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EPA 8080 OCL SOIL

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB7

APPL ID: AP53908

Sample Collection Date: 5/29/97

ARF: 25856

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8080	Aldrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	a-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	b-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	d-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Chlordane	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-DDE	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-DDT	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Dieldrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan I	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan II	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan sulfate	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin aldehyde	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin ketone	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	g-BHC (Lindane)	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Heptachlor	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Heptachlor epoxide	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Methoxychlor	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-TDE/DDD	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Toxaphene	Not detected	1000	ug/kg	8/1/97	8/5/97
EPA 8080	Surrogate: DBC	31.4	44-136	%	8/1/97	8/5/97
EPA 8080	Surrogate: DECA	30.9	35-141	%	8/1/97	8/5/97
EPA 8080	Surrogate: TCMX	64.6	23-112	%	8/1/97	8/5/97

Run #:	38
Instrument:	EC002
Sequence:	970804
Initials:	MP
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EPA 8080 OCL SOIL

BECHTEL HANFORD, INC.
3350 GEORGE WASHINGTON WAY
RICHLAND, WA 99352

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: MICHAEL A. HUGHES

Sample ID: BOLKB8
Sample Collection Date: 5/29/97

APPL ID: AP53909
ARF: 25656

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8080	Aldrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	a-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	b-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	d-BHC	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Chlordane	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-DDE	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-DDT	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Dieldrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan I	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan II	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endosulfan sulfate	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin aldehyde	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Endrin ketone	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	g-BHC (Lindane)	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Heptachlor	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Heptachlor epoxide	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Methoxychlor	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	4,4'-TDE/DDD	Not detected	50	ug/kg	8/1/97	8/5/97
EPA 8080	Toxaphene	Not detected	1000	ug/kg	8/1/97	8/5/97
EPA 8080	Surrogate: DBC	79.7	44-136	%	8/1/97	8/5/97
EPA 8080	Surrogate: DECA	69.7	35-141	%	8/1/97	8/5/97
EPA 8080	Surrogate: TCMX	93.9	23-112	%	8/1/97	8/5/97

Run #:	39
Instrument:	EC002
Sequence:	970804
Initials:	SR
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