Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

0051986

CERTIFICATE OF ANALYSIS

Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

May 20, 1999

Attention: Rich Weiss

NOV 1999 RECEIVED EDMC
JUN 1999 RECEIVED Data Log In

SAF Number	:	B99-053
Date Samples Received	:	April 16, 1999
Number of Samples	:	Four (4)
Sample Type	:	Air
SDG Number	:	W02747
Data Deliverable	:	45 Day Data Package

I. Introduction

Four (4) air samples were received on April 16, 1999 by the Quanterra Environmental Services Knoxville Laboratory (QESKL) for analysis. A duplicate sample was assigned for each analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Bechtel Hanford, Inc. (BHI) specific ID:

QESRL ID#	BHI ID#	MATRIX	DATE OF RECEIPT
CTPQM	BOV808	Air	4/16/99
CTPQN	BOV809	Air	4/16/99
CTPQP	BOV806	Air	4/16/99
CTPQQ	BOV807	Air	4/16/99
CVMDG	BOV808 DUPLICATE	Air	4/16/99
CVMDQ	BOV809 DUPLICATE	Air	4/16/99

II. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information and analytical results.

The requested analysis was:

Volatile Organics by TO-14
Reformed Gases by ASTM D 1946/E260

III. Quality Control

The analytical results for the analysis performed includes a minimum of one Laboratory Control Sample (LCS) and duplicate.

Quality control sample results are reported in the same units as sample results.

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

Reviewed and approved:

Jamie McKinney
Project Manager

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA

SDG Number: W02747

Matrix: (soil/water) AIR

Lab Sample ID:H9D170101 002

Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL
Work Order: CTPQN101
Dilution factor: 38718

Date Received: 04/16/99
Date Extracted:05/12/99
Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
75-71-8	Dichlorodifluoromethane	7700	U
75-45-6	Chlorodifluoromethane	7700	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	7700	U
74-87-3	Chloromethane	19000	U
75-01-4	Vinyl chloride	7700	U
106-97-8	n-Butane	7700	U
106-99-0	1,3-Butadiene	7700	U
74-83-9	Bromomethane	7700	U
75-00-3	Chloroethane	7700	U
75-69-4	Trichlorofluoromethane	7700	U
109-66-0	Pentane	19000	U
75-35-4	1,1-Dichloroethene	7700	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	7700	U
75-15-0	Carbon disulfide	7700	U
107-05-1	3-Chloropropene	7700	U
75-09-2	Methylene chloride	7700	U
156-60-5	trans-1,2-Dichloroethene	7700	U
110-54-3	n-Hexane	7700	U
75-34-3	1,1-Dichloroethane	7700	U
156-59-2	cis-1,2-Dichloroethene	7700	U
67-66-3	Chloroform	7700	U
71-55-6	1,1,1-Trichloroethane	7700	U
110-82-7	Cyclohexane	19000	U
56-23-5	Carbon tetrachloride	7700	U
71-43-2	Benzene	7700	U
107-06-2	1,2-Dichloroethane	7700	U
142-82-5	n-Heptane	7700	U
79-01-6	Trichloroethene	7700	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 002
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQN101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
78-87-5	1,2-Dichloropropane	7700	U
74-95-3	Dibromomethane	7700	U
75-27-4	Bromodichloromethane	7700	U
10061-01-5	cis-1,3-Dichloropropene	7700	U
108-88-3	Toluene	7700	U
111-65-9	n-Octane	7700	U
10061-02-6	trans-1,3-Dichloropropene	7700	U
79-00-5	1,1,2-Trichloroethane	7700	U
127-18-4	Tetrachloroethene	7700	U
124-48-1	Dibromochloromethane	7700	U
106-93-4	1,2-Dibromoethane (EDB)	7700	U
108-90-7	Chlorobenzene	7700	U
100-41-4	Ethylbenzene	7700	U
136777-61-2	m-Xylene & p-Xylene	7700	U
111-84-2	Nonane	7700	U
95-47-6	o-Xylene	7700	U
100-42-5	Styrene	7700	U
75-25-2	Bromoform	7700	U
98-82-8	Cumene	7700	U
79-34-5	1,1,2,2-Tetrachloroethane	7700	U
103-65-1	n-Propylbenzene	7700	U
108-67-8	1,3,5-Trimethylbenzene	7700	U
124-18-5	n-Decane	7700	U
98-83-9	alpha-Methylstyrene	7700	U
95-63-6	1,2,4-Trimethylbenzene	7700	U
541-73-1	1,3-Dichlorobenzene	7700	U
106-46-7	1,4-Dichlorobenzene	7700	U
100-44-7	Benzyl chloride	7700	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 002
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQN101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
95-50-1	1,2-Dichlorobenzene	7700	U
1120-21-4	**n-Undecane**	**9400**	
112-40-3	n-Dodecane	7700	U
120-82-1	1,2,4-Trichlorobenzene	7700	U
87-68-3	Hexachlorobutadiene	7700	U
91-20-3	Naphthalene	7700	U
67-56-1	Methanol	390000	U
60-29-7	Ethyl ether	19000	U
67-64-1	Acetone	190000	U
107-13-1	Acrylonitrile	19000	U
108-05-4	Vinyl acetate	19000	U
78-93-3	2-Butanone (MEK)	19000	U
71-36-3	1-Butanol	19000	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**1600000**	
591-78-6	2-Hexanone	19000	U
1634-04-4	Methyl tert-butyl ether	19000	U
107-02-8	Acrolein	19000	U
75-05-8	Acetonitrile	39000	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 004
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQQ101 Date Extracted:05/12/99
Dilution factor: 170531 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV807

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
75-71-8	Dichlorodifluoromethane	34000	U
75-45-6	Chlorodifluoromethane	34000	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	34000	U
74-87-3	Chloromethane	85000	U
75-01-4	Vinyl chloride	34000	U
106-97-8	n-Butane	34000	U
106-99-0	1,3-Butadiene	34000	U
74-83-9	Bromomethane	34000	U
75-00-3	Chloroethane	34000	U
75-69-4	Trichlorofluoromethane	34000	U
109-66-0	Pentane	85000	U
75-35-4	1,1-Dichloroethene	34000	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	34000	U
75-15-0	Carbon disulfide	34000	U
107-05-1	3-Chloropropene	34000	U
75-09-2	Methylene chloride	34000	U
156-60-5	trans-1,2-Dichloroethene	34000	U
110-54-3	n-Hexane	34000	U
75-34-3	1,1-Dichloroethane	34000	U
156-59-2	cis-1,2-Dichloroethene	34000	U
67-66-3	Chloroform	34000	U
71-55-6	1,1,1-Trichloroethane	34000	U
110-82-7	Cyclohexane	85000	U
56-23-5	Carbon tetrachloride	34000	U
71-43-2	Benzene	34000	U
107-06-2	1,2-Dichloroethane	34000	U
142-82-5	n-Heptane	34000	U
79-01-6	Trichloroethene	34000	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 004
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQQ101 Date Extracted:05/12/99
Dilution factor: 170531 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV807

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
78-87-5	1,2-Dichloropropane	34000	U
74-95-3	Dibromomethane	34000	U
75-27-4	Bromodichloromethane	34000	U
10061-01-5	cis-1,3-Dichloropropene	34000	U
108-88-3	Toluene	34000	U
111-65-9	n-Octane	34000	U
10061-02-6	trans-1,3-Dichloropropene	34000	U
79-00-5	1,1,2-Trichloroethane	34000	U
127-18-4	Tetrachloroethene	34000	U
124-48-1	Dibromochloromethane	34000	U
106-93-4	1,2-Dibromoethane (EDB)	34000	U
108-90-7	Chlorobenzene	34000	U
100-41-4	Ethylbenzene	34000	U
136777-61-2	m-Xylene & p-Xylene	34000	U
111-84-2	Nonane	34000	U
95-47-6	o-Xylene	34000	U
100-42-5	Styrene	34000	U
75-25-2	Bromoform	34000	U
98-82-8	Cumene	34000	U
79-34-5	1,1,2,2-Tetrachloroethane	34000	U
103-65-1	n-Propylbenzene	34000	U
108-67-8	1,3,5-Trimethylbenzene	34000	U
124-18-5	n-Decane	34000	U
98-83-9	alpha-Methylstyrene	34000	U
95-63-6	1,2,4-Trimethylbenzene	34000	U
541-73-1	1,3-Dichlorobenzene	34000	U
106-46-7	1,4-Dichlorobenzene	34000	U
100-44-7	Benzyl chloride	34000	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 004
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQQ101 Date Extracted:05/12/99
Dilution factor: 170531 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV807

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
95-50-1	1,2-Dichlorobenzene	34000	U
1120-21-4	n-Undecane	34000	U
112-40-3	n-Dodecane	34000	U
120-82-1	1,2,4-Trichlorobenzene	34000	U
87-68-3	Hexachlorobutadiene	34000	U
91-20-3	Naphthalene	34000	U
67-56-1	Methanol	1700000	U
60-29-7	Ethyl ether	85000	U
67-64-1	Acetone	850000	U
107-13-1	Acrylonitrile	85000	U
108-05-4	Vinyl acetate	85000	U
78-93-3	2-Butanone (MEK)	85000	U
71-36-3	1-Butanol	85000	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**6100000**	
591-78-6	2-Hexanone	85000	U
1634-04-4	Methyl tert-butyl ether	85000	U
107-02-8	Acrolein	85000	U
75-05-8	Acetonitrile	170000	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA

SDG Number: W02747

Matrix: (soil/water) AIR

Lab Sample ID:H9D170101 006

Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL
Work Order: CVMDQ101
Dilution factor: 38718

Date Received: 04/16/99
Date Extracted:05/12/99
Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809 DUPLICATE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
75-71-8	Dichlorodifluoromethane	7700	U
75-45-6	Chlorodifluoromethane	7700	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	7700	U
74-87-3	Chloromethane	19000	U
75-01-4	Vinyl chloride	7700	U
106-97-8	n-Butane	7700	U
106-99-0	1,3-Butadiene	7700	U
74-83-9	Bromomethane	7700	U
75-00-3	Chloroethane	7700	U
75-69-4	Trichlorofluoromethane	7700	U
109-66-0	Pentane	19000	U
75-35-4	1,1-Dichloroethene	7700	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	7700	U
75-15-0	Carbon disulfide	7700	U
107-05-1	3-Chloropropene	7700	U
75-09-2	Methylene chloride	7700	U
156-60-5	trans-1,2-Dichloroethene	7700	U
110-54-3	n-Hexane	7700	U
75-34-3	1,1-Dichloroethane	7700	U
156-59-2	cis-1,2-Dichloroethene	7700	U
67-66-3	Chloroform	7700	U
71-55-6	1,1,1-Trichloroethane	7700	U
110-82-7	Cyclohexane	19000	U
56-23-5	Carbon tetrachloride	7700	U
71-43-2	Benzene	7700	U
107-06-2	1,2-Dichloroethane	7700	U
142-82-5	n-Heptane	7700	U
79-01-6	Trichloroethene	7700	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 006
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CVMDQ101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809 DUPLICATE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
78-87-5	1,2-Dichloropropane	7700	U
74-95-3	Dibromomethane	7700	U
75-27-4	Bromodichloromethane	7700	U
10061-01-5	cis-1,3-Dichloropropene	7700	U
108-88-3	Toluene	7700	U
111-65-9	n-Octane	7700	U
10061-02-6	trans-1,3-Dichloropropene	7700	U
79-00-5	1,1,2-Trichloroethane	7700	U
127-18-4	Tetrachloroethene	7700	U
124-48-1	Dibromochloromethane	7700	U
106-93-4	1,2-Dibromoethane (EDB)	7700	U
108-90-7	Chlorobenzene	7700	U
100-41-4	Ethylbenzene	7700	U
136777-61-2	m-Xylene & p-Xylene	7700	U
111-84-2	Nonane	7700	U
95-47-6	o-Xylene	7700	U
100-42-5	Styrene	7700	U
75-25-2	Bromoform	7700	U
98-82-8	Cumene	7700	U
79-34-5	1,1,2,2-Tetrachloroethane	7700	U
103-65-1	n-Propylbenzene	7700	U
108-67-8	1,3,5-Trimethylbenzene	7700	U
124-18-5	n-Decane	7700	U
98-83-9	alpha-Methylstyrene	7700	U
95-63-6	1,2,4-Trimethylbenzene	7700	U
541-73-1	1,3-Dichlorobenzene	7700	U
106-46-7	1,4-Dichlorobenzene	7700	U
100-44-7	Benzyl chloride	7700	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 006
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CVMDQ101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809 DUPLICATE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
95-50-1	1,2-Dichlorobenzene	7700	U
1120-21-4	**n-Undecane**	**9200**	
112-40-3	n-Dodecane	7700	U
120-82-1	1,2,4-Trichlorobenzene	7700	U
87-68-3	Hexachlorobutadiene	7700	U
91-20-3	Naphthalene	7700	U
67-56-1	Methanol	390000	U
60-29-7	Ethyl ether	19000	U
67-64-1	Acetone	190000	U
107-13-1	Acrylonitrile	19000	U
108-05-4	Vinyl acetate	19000	U
78-93-3	2-Butanone (MEK)	19000	U
71-36-3	1-Butanol	19000	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**1600000**	
591-78-6	2-Hexanone	19000	U
1634-04-4	Methyl tert-butyl ether	19000	U
107-02-8	Acrolein	19000	U
75-05-8	Acetonitrile	39000	U

BECHTEL HANFORD, INC.

Client Sample ID: BOV808

GC Volatiles

Lot-Sample #...: H9D170101-001 **Work Order #...:** CTPQM101 **Matrix.....:** AIR
Date Sampled...: 04/15/99 **Date Received..:** 04/16/99
Prep Date.....: 05/13/99 **Analysis Date..:** 05/13/99
Prep Batch #...: 9134151
Dilution Factor: 4.26 **Method.....:** ASTM D 1946/E 260

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	ND	0.43	%
Carbon monoxide	ND	0.43	%
Methane	ND	0.43	%
Oxygen	**23**	**0.43**	**%**
Nitrogen	**81**	**0.43**	**%**

BECHTEL HANFORD, INC.

Client Sample ID: BOV808

GC Volatiles

Lot-Sample #...: H9D170101-001 **Work Order #...:** CTPQM201 **Matrix.....:** AIR
Date Sampled...: 04/15/99 **Date Received..:** 04/16/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9134157
Dilution Factor: 2.13 **Method.....:** ASTM D 1946/E 260

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.21	%
Ethene	ND	0.21	%

BECHTEL HANFORD, INC.

Client Sample ID: BOV806

GC Volatiles

Lot-Sample #...: H9D170101-003 **Work Order #...:** CTPQP101 **Matrix.....:** AIR
Date Sampled...: 04/08/99 **Date Received..:** 04/16/99
Prep Date.....: 05/13/99 **Analysis Date..:** 05/13/99
Prep Batch #...: 9134151
Dilution Factor: 4.24 **Method.....:** ASTM D 1946/E 260

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	ND	0.42	%
Carbon monoxide	ND	0.42	%
Methane	ND	0.42	%
Oxygen	**23**	**0.42**	**%**
Nitrogen	**81**	**0.42**	**%**

BECHTEL HANFORD, INC.

Client Sample ID: BOV806

GC Volatiles

Lot-Sample #...: H9D170101-003 **Work Order #...:** CTPQP201 **Matrix.....:** AIR
Date Sampled...: 04/08/99 **Date Received..:** 04/16/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9134157
Dilution Factor: 2.12 **Method.....:** ASTM D 1946/E 260

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.21	%
Ethene	ND	0.21	%

BECHTEL HANFORD, INC.

Client Sample ID: BOV808 DUPLICATE

GC Volatiles

Lot-Sample #...: H9D170101-005 **Work Order #...:** CVMDG101 **Matrix.....:** AIR
Date Sampled...: 04/08/99 **Date Received..:** 04/16/99
Prep Date.....: 05/13/99 **Analysis Date..:** 05/13/99
Prep Batch #...: 9134151
Dilution Factor: 4.26 **Method.....:** ASTM D 1946/E 260

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Carbon dioxide	ND	0.43	%
Carbon monoxide	ND	0.43	%
Methane	ND	0.43	%
Oxygen	**23**	**0.43**	**%**
Nitrogen	**80**	**0.43**	**%**

BECHTEL HANFORD, INC.

Client Sample ID: BOV808 DUPLICATE

GC Volatiles

Lot-Sample #...: H9D170101-005 **Work Order #...:** CVMDG201 **Matrix.....:** AIR
Date Sampled...: 04/08/99 **Date Received..:** 04/16/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9134157
Dilution Factor: 2.13 **Method.....:** ASTM D 1946/E 260

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Ethane	ND	0.21	%
Ethene	ND	0.21	%

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: H9D170101 **Work Order #...:** CVR7D101 **Matrix.....:** AIR
MB Lot-Sample #: H9E140000-151

Prep Date.....: 05/13/99
Analysis Date..: 05/13/99 **Prep Batch #...:** 9134151
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon dioxide	ND	0.10	%	ASTM D 1946/E 260
Carbon monoxide	ND	0.10	%	ASTM D 1946/E 260
Methane	ND	0.10	%	ASTM D 1946/E 260
Oxygen	ND	0.10	%	ASTM D 1946/E 260
Nitrogen	ND	0.10	%	ASTM D 1946/E 260

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: H9D170101 **Work Order #...:** CVR89101 **Matrix.....:** AIR
MB Lot-Sample #: H9E140000-157

Prep Date.....: 05/14/99
Analysis Date..: 05/14/99 **Prep Batch #...:** 9134157
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Ethane	ND	0.10	%	ASTM D 1946/E 260
Ethene	ND	0.10	%	ASTM D 1946/E 260

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: H9D170101 **Work Order #...:** CVR7D102 **Matrix.....:** AIR
LCS Lot-Sample#: H9E140000-151
Prep Date.....: 05/13/99 **Analysis Date..:** 05/13/99
Prep Batch #...: 9134151
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Methane	**4.0**	**3.8**	**%**	**94**	**ASTM D 1946/E**
Carbon dioxide	**5.0**	**4.7**	**%**	**94**	**ASTM D 1946/E**
Nitrogen	**5.0**	**5.2**	**%**	**105**	**ASTM D 1946/E**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: H9D170101 **Work Order #...:** CVR7D102 **Matrix.....:** AIR
LCS Lot-Sample#: H9E140000-151
Prep Date.....: 05/13/99 **Analysis Date..:** 05/13/99
Prep Batch #...: 9134151
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Methane	**94**	**(70 - 130)**	**ASTM D 1946/E 260**
Carbon dioxide	**94**	**(75 - 125)**	**ASTM D 1946/E 260**
Nitrogen	**105**	**(70 - 130)**	**ASTM D 1946/E 260**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: H9D170101 **Work Order #...:** CVR89102 **Matrix.....:** AIR
LCS Lot-Sample#: H9E140000-157
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9134157
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Ethene	**5.0**	**4.4**	**%**	**88**	**ASTM D 1946/E**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: H9D170101 **Work Order #...:** CVR89102 **Matrix.....:** AIR
LCS Lot-Sample#: H9E140000-157
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9134157
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Ethene	**88**	**(70 - 130)**	**ASTM D 1946/E 260**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Sample Receipt Documentation

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-053-03	Page 1 of 1

Collector: Doug Bowers	Company Contact: Tom Brown	Telephone No.: 376-1547	Project Coordinator: TRENT, SJ
Price Code	Data Turnaround: 45 Days		
Project Designation: 276-S Hexone Storage Tank	Sampling Location: 276-S Hexone tanks (200 West)		SAF No.: B99-053
Ice Chest No.: N/A Sample Cage No #	Field Logbook No.: EFL 1133-7		Method of Shipment: Gov Vehicle
Shipped To: Quanterra Incorporated	Offsite Property No.		Bill of Lading/Air Bill No.
			COA

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	Summa Canister											
No. of Container(s)	1											
Volume	6L											
SAMPLE ANALYSIS	VOA - T0-14 (Add-on) {4-Methyl-2-Pentanone}											

Sample No.	Matrix *	Sample Date	Sample Time										
* B0V808	Vapor	4-15-99	0949	X				tank 276-S-142 @ 5'7"					
B0V809	Vapor	4-15-99	0939	X				tank 276-S-142 @ 14'					

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: Doug Bowers	Date/Time: 4-15-99/1210	Received By: [illegible]	Date/Time: 4-15-99 1210
Relinquished By	Date/Time	Received By: Bryan Blanquet	Date/Time: 4/16/99 0915
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS
** Close SDG upon receipt of samples.

Rec'd @ Ambient temp
w/custody Seals Intact
B/B 4/16/99

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

UU54

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-053-01	Page 1 of 1

Collector Doug Bowers	Company Contact Tom Brown	Telephone No. 376-1547	Project Coordinator TRENT, SJ	Price Code	Date Turnaroun 45 Days
Project Designation 276-S Hexone Storage Tank	Sampling Location 276-S Hexone tanks (200 West)		SAF No. B99-053		
Ice Chest No. N/A Summa cans no #	Field Logbook No. EFL 1133-7		Method of Shipment Gov Vehicle		
Shipped To Quanterra Incorporated	Offsite Property No.		Bill of Lading/Air Bill No.		
			COA		

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	None									
	Type of Container	Summa Canister									
	No. of Container(s)	1									
Special Handling and/or Storage	Volume	6L									
SAMPLE ANALYSIS		VOA - T0-14 (Add-on) (4-Methyl-2-Pentanone)									

Sample No.	Matrix *	Sample Date	Sample Time										
* BOU806	AT	4-8-99	1339	X				BOU872		2765-141 @ 5' 7'			
BOU807	AT	4-8-99	1354	X				BOU873		2765-~~142~~ 141 @ 1			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By Doug Bowers Doug Bowers	Date/Time 4-8-99/1626	Received By Refg 14 3728	Date/Time 4-8-99/1626
Relinquished By Refg 14 3728	Date/Time 4-15-99/1100	Received By Doug Bowers Doug Bowers	Date/Time 4-15-99/1100
Relinquished By Doug Bowers Doug Bowers	Date/Time 4-15-99/1210	Received By K. Dekeling	Date/Time 4-15-99 1210
Relinquished By	Date/Time	Received By Bryan Blanquet	Date/Time 4/16/99 0915

SPECIAL INSTRUCTIONS
** Close SDG upon receipt of samples.
@ 4°C in 1A
Rec'd @ Ambient temp
w/custody seals intact
BPB 4/16/99

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Jean Marshall
BHI Sample Management
Phone: (509) 372-9346
FAX: (509) 372-9487

facsimile transmittal

To: Jamie McKinney
Fax: 423-~~5~~84-4215
From: Rich Weiss
Date: May 10, 1999
Re: Gas Analysis
Pages: 2
CC:

☑ Quick Turn / Priority Data
☐ Final Data Package

Jamie,

Begin analysis ~~on~~ of the samples on the following sheet as marked. We will provide formal documentation via an SDR shortly.

Call me if you have any questions

Rich Weiss

509-372-9592

SAMPLE SUMMARY

Project ID:	276-S Hexone Storage Tank	Sampling Team:	ERC Sampling
Task ID:	1	Sampling Mgr/Coordinator:	TRENT, SJ
Operable Unit:	200-RO-2	Samplers:	BOWERS, DL
SAF Number:	B99-053	Field Logbook ID:	EFL 1133-7
		Sampling Media:	Vapor

Sample Number	SDG Number	Location	Analyte Code	Laboratory	Date Collected	Date Shipped	Comments
B0V806	W0FAKE02	276-S Hexone Tank #141	1	Quanterra Incorporated	4/8/99 1:39 PM	4/15/99 12:10 PM	5'7" Light Gas
B0V807	W0FAKE02	276-S Hexone Tank #141	1	Quanterra Incorporated	4/8/99 1:58 PM	4/15/99 12:10 PM	14' TO-14
B0V808	W0FAKE02	276-S Hexone Tank #142	1	Quanterra Incorporated	4/15/99 9:49 AM	4/15/99 12:10 PM	5'7" Light Gas
B0V809	W0FAKE02	276-S Hexone Tank #142	1	Quanterra Incorporated	4/15/99 9:39 AM	4/15/99 12:10 PM	14' TO-14
B0V810	W0FAKE02	276-S Hexone Tank #142	1	Quanterra Incorporated	5/4/99 2:16 PM	5/5/99 7:26 AM	5'7" Light Gas
B0V811	W0FAKE02	276-S Hexone Tank #142	1	Quanterra Incorporated	5/4/99 2:27 PM	5/5/99 7:26 AM	14' TO-14
B0V812	W0FAKE02	276-S Hexone Tank #141	1	Quanterra Incorporated	5/4/99 2:48 PM	5/5/99 7:26 AM	5'7" Light Gas
B0V813	W0FAKE02	276-S Hexone Tank #141	1	Quanterra Incorporated	5/4/99 2:57 PM	5/5/99 7:26 AM	14' TO-14
~~B0V872~~	~~RCP99053~~	~~276-S HEXONE TANK #141~~	~~2~~	~~Radiological Counting Facility~~	~~4/8/99 1:39 PM~~	~~4/9/99 9:20 AM~~	~~Rad. Screen for (B0V806,B0V807)~~
~~B0V873~~	~~RCP99053~~	~~276-S HEXONE TANK #141~~	~~2~~	~~Radiological Counting Facility~~	~~4/8/99 2:16 PM~~	~~4/9/99 9:20 AM~~	~~Rad. Screen for (B0V808,B0V809)~~

Analyte Codes:

ERC Radiological Counting Facility Analysis Report

RCF Number RCF5729

Sample Date & Time 4/8/99 1339

Project ID: 276-S (RadScreen) SAF Number: B99-053 Date Analyzed 4/9/99

Sample ID: B0V872 B0U806 + B0U807

Gamma Energy Analysis

Nuclide		Activity (pCi/g)	Error (pCi/g)	MDC (pCi/g)
K-40 #	<	3.3E+01		3.3E+01
Co-60	<	2.2E+00		2.2E+00
Cs-137	<	2.5E+00		2.5E+00
Eu-152	<	6.0E+00		6.0E+00
Eu-154	<	3.2E+00		3.2E+00
Eu-155	<	6.3E+00		6.3E+00
Th-232d	<	5.1E+01		5.1E+01
U-235	<	1.5E+01		1.5E+01
Np-237	<	5.2E+00		5.2E+00
U-238d#	<	5.4E+00		5.4E+00
U-238 #	<	1.4E+02		1.4E+02
Am-241	<	3.1E+00		3.1E+00

Post-it® Fax Note 7671	Date	# of pages ▶
To Dave St. John	From K.A. Robertson-DeMers	
Co./Dept.	Co.	
Phone #	Phone # 373-9731	
Fax # 372-9487	Fax #	

Total GEA (pCi/g) +/-

		Activity (pCi/g)		Error (pCi/g)
Gross Alpha**		1.7E-01	+/-	3.4E-01
Gross Beta	<	6.7E-02		

Alpha MDC (pCi/g)
1.4E-01
Beta MDC (pCi/g)
6.7E-02

Definitions:

All errors reported at 2 standard deviations.
N/R – no result or analysis not requested. <MDC = Less than detection limit.
All GEA results reported as "<" list the Minimum Detectable Concentration (MDC) value for that radionuclide.
Rounding error may result in the reported total GEA activity differing from the sum of the > MDC GEA values in the second significant digit.

For soils and natural samples, the following applies:

The analysis of U-238 is based on the activity of Pa-234m.
The analysis of Np-237 is based on the activity of Pa-233.
U-238dau is the activity of Pb-214 and Bi-214, short lived daughter products of U-238. Equilibrium between parent and daughter products probably does not exist in disturbed materials.
Th-232dau is the activity of Ac-228, Pb-212, and Tl-208, short lived daughter products of Th-232. Equilibrium between parent and daughter products may not exist in disturbed materials.
Other samples, not containing natural materials, may have inapplicable results for the Th, U, transuranics and daughter products. The results must then be balanced for the gross alpha analysis.
**The gross alpha results are not corrected for mass absorbtion
No peaks for this radionuclide were visible above background in the spectrum. The result was reported as less than MDC.

Kathryn Robertson-DeMers

Analyst Kathryn A. Robertson-DeMers 4/12/99

Report To	Fax
Tom Brown	372-7711
Dave St John	372-9487

Report Printed: Monday, April 12, 1999

LRC Radiological Counting Facility Analysis Report

RCF Number RCF5730 Bov808 & Bov809 Sample Date & Time 4/8/99 1358

Project ID: 276-S (RadScreen) SAF Number: B99-053 Date Analyzed 4/12/99

Sample ID: B0V873

Gamma Energy Analysis

Nuclide		Activity (pCi/g)	Error (pCi/g)	MDC (pCi/g)
K-40	<	4.4E+01		4.4E+01
Co-60	<	2.9E+00		2.9E+00
Cs-137	<	2.9E+00		2.9E+00
Eu-152	<	6.0E+00		6.0E+00
Eu-154	<	1.3E+01		1.3E+01
Eu-155	<	3.7E+00		3.7E+00
Th-232d#	<	3.8E+01		3.8E+01
U-235	<	1.8E+01		1.8E+01
Np-237	<	8.1E+00		8.1E+00
U-238d	<	9.2E+00		9.2E+00
U-238 #	<	4.8E+02		4.8E+02
Am-241	<	4.2E+00		4.2E+00

Total GEA (pCi/g) +/-

		Activity (pCi/g)	Error (pCi/g)
Gross Alpha**	<	9.9E-02	
Gross Beta	<	2.5E-01	

Alpha MDC (pCi/g)	Beta MDC (pCi/g)
9.9E-02	2.5E-01

Definitions:

All errors reported at 2 standard deviations.
N/R = no result or analysis not requested. <MDC = Less than detection limit.
All GEA results reported as "<" list the Minimum Detectable Concentration (MDC) value for that radionuclide.
Rounding error may result in the reported total GEA activity differing from the sum of the > MDC GEA values in the second significant digit.

For soils and natural samples, the following applies:

The analysis of U-238 is based on the activity of Pa-234m.
The analysis of Np-237 is based on the activity of Pa-233.
U-238dau is the activity of Pb-214 and Bi-214, short lived daughter products of U-238. Equilibrium between parent and daughter products probably does not exist in disturbed materials.
Th-232dau is the activity of Ac-228, Pb-212, and Tl-208, short lived daughter products of Th-232. Equilibrium between parent and daughter products may not exist in disturbed materials.
Other samples, not containing natural materials, may have inapplicable results for the Th, U, transuranics and daughter products. The results must then be balanced for the gross alpha analysis.
**The gross alpha results are not corrected for mass absorbtion
No peaks for this radionuclide were visible above background in the spectrum. The result was reported as less than MDC.

Kathryn Robertson-DeMers

Analyst Kathryn A. Robertson-DeMers 4/12/99

Report To	Fax
Tom Brown	372-7711
Dave St John	372-9487

Report Printed: Monday, April 12, 1999

Quanterra
Environmental Services
5815 Middlebrook Pike
Knoxville, Tennessee 37921
(423) 588-6401

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 5884
Page 1 of ____

Project Name/No. [1] NA
Sample Team Members [2] NA
Profit Center No. [3]
Project Manager [4] DOUG SWENSON
Purchase Order No. [6]
Required Report Date [11] NA

Samples Shipment Date [7] 4-5-99
Lab Destination [8] QES RICHLAND
Lab Contact [9]
Project Contact/Phone [12]
Carrier/Waybill No. [13] AIRBORNE

Bill to: [5] NA
Report to: [10] NA

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
12730	SUMMA CAN	NA	SUMMA	6L	NONE	CLEAN ~~CLEAN~~ CAN'S FOR SAMPLING		
12266	↓	↓	↓	↓	↓	"	"	

FOR LAB USE ONLY

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☑ Disposal by Lab ☐ Archive (mos

Turnaround Time Required: [26]
Normal ☐ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation)	Date: 4-5-99 Time: 13:00	1. Received by [28] (Signature/Affiliation) Doug Bowers	Date: 4-8-99 Time: 1250
2. Relinquished by (Signature/Affiliation) Doug Bowers EAC	Date: 4-5-99 Time: 1210	2. Received by (Signature/Affiliation)	Date: 4-8-99 Time: 1210
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: 4/26/99 Time: 8945

Comments: [29]

Quanterra
Environmental Services
5815 Middlebrook Pike
Knoxville, Tennessee 37921
(423) 588-6401

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 5894
Page 1 of ____

Project Name/No. [1] ____
Sample Team Members [2] ____
Profit Center No. [3] ____
Project Manager [4] DOUG SWENSON
Purchase Order No. [6] ____
Required Report Date [11] NA

Samples Shipment Date [7] 4-9-99
Lab Destination [8] QES RICHLAND
Lab Contact [9] ____
Project Contact/Phone [12] ____
Carrier/Waybill No. [13] AIRBORNE

Bill to: [5] NA
Report to: [10] NA

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
123416	CLEAN SUMMA CAN	NA	SUMMA ~~NA~~	6L	NA	CLEAN CAN'S FOR SAMPLING		
126636	↓	NA	↓	↓	↓	"	"	

FOR LAB USE ONLY

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☐ Archive (mo

Turnaround Time Required: [26]
Normal ☐ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) Bryant Dawson	Date: 4-9-99 Time: 17:00	1. Received by [28] (Signature/Affiliation) Karen Schlumberger	Date: 4-9-99 Time: 1700
2. Relinquished by (Signature/Affiliation) Karen Schlumberger	Date: 4-14-99 Time: 1330	2. Received by Doug Bowers (Signature/Affiliation) Doug Bowers EAC	Date: 4-14-99 Time: 1330
3. Relinquished by Doug Bowers (Signature/Affiliation) Doug Bowers EAC	Date: 4-15-99 Time: 1210	3. Received by (Signature/Affiliation) K Schlumberger	Date: 4-15-99 Time: 1210

Comments: [29]

Bryant Dawson 4/16/99 0915

0041

MCA

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 002
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQN101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
75-71-8	Dichlorodifluoromethane	7700	U
75-45-6	Chlorodifluoromethane	7700	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	7700	U
74-87-3	Chloromethane	19000	U
75-01-4	Vinyl chloride	7700	U
106-97-8	n-Butane	7700	U
106-99-0	1,3-Butadiene	7700	U
74-83-9	Bromomethane	7700	U
75-00-3	Chloroethane	7700	U
75-69-4	Trichlorofluoromethane	7700	U
109-66-0	Pentane	19000	U
75-35-4	1,1-Dichloroethene	7700	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	7700	U
75-15-0	Carbon disulfide	7700	U
107-05-1	3-Chloropropene	7700	U
75-09-2	Methylene chloride	7700	U
156-60-5	trans-1,2-Dichloroethene	7700	U
110-54-3	n-Hexane	7700	U
75-34-3	1,1-Dichloroethane	7700	U
156-59-2	cis-1,2-Dichloroethene	7700	U
67-66-3	Chloroform	7700	U
71-55-6	1,1,1-Trichloroethane	7700	U
110-82-7	Cyclohexane	19000	U
56-23-5	Carbon tetrachloride	7700	U
71-43-2	Benzene	7700	U
107-06-2	1,2-Dichloroethane	7700	U
142-82-5	n-Heptane	7700	U
79-01-6	Trichloroethene	7700	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 002
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQN101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
78-87-5	1,2-Dichloropropane	7700	U
74-95-3	Dibromomethane	7700	U
75-27-4	Bromodichloromethane	7700	U
10061-01-5	cis-1,3-Dichloropropene	7700	U
108-88-3	Toluene	7700	U
111-65-9	n-Octane	7700	U
10061-02-6	trans-1,3-Dichloropropene	7700	U
79-00-5	1,1,2-Trichloroethane	7700	U
127-18-4	Tetrachloroethene	7700	U
124-48-1	Dibromochloromethane	7700	U
106-93-4	1,2-Dibromoethane (EDB)	7700	U
108-90-7	Chlorobenzene	7700	U
100-41-4	Ethylbenzene	7700	U
136777-61-2	m-Xylene & p-Xylene	7700	U
111-84-2	Nonane	7700	U
95-47-6	o-Xylene	7700	U
100-42-5	Styrene	7700	U
75-25-2	Bromoform	7700	U
98-82-8	Cumene	7700	U
79-34-5	1,1,2,2-Tetrachloroethane	7700	U
103-65-1	n-Propylbenzene	7700	U
108-67-8	1,3,5-Trimethylbenzene	7700	U
124-18-5	n-Decane	7700	U
98-83-9	alpha-Methylstyrene	7700	U
95-63-6	1,2,4-Trimethylbenzene	7700	U
541-73-1	1,3-Dichlorobenzene	7700	U
106-46-7	1,4-Dichlorobenzene	7700	U
100-44-7	Benzyl chloride	7700	U

~~BECHTEL HANFORD, INC.~~

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 002
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQN101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
95-50-1	1,2-Dichlorobenzene	7700	U
1120-21-4	**n-Undecane**	**9400**	
112-40-3	n-Dodecane	7700	U
120-82-1	1,2,4-Trichlorobenzene	7700	U
87-68-3	Hexachlorobutadiene	7700	U
91-20-3	Naphthalene	7700	U
67-56-1	Methanol	390000	U
60-29-7	Ethyl ether	19000	U
67-64-1	Acetone	190000	U
107-13-1	Acrylonitrile	19000	U
108-05-4	Vinyl acetate	19000	U
78-93-3	2-Butanone (MEK)	19000	U
71-36-3	1-Butanol	19000	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**1600000**	
591-78-6	2-Hexanone	19000	U
1634-04-4	Methyl tert-butyl ether	19000	U
107-02-8	Acrolein	19000	U
75-05-8	Acetonitrile	39000	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 004
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQQ101 Date Extracted:05/12/99
Dilution factor: 170531 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV807

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
75-71-8	Dichlorodifluoromethane	34000	U
75-45-6	Chlorodifluoromethane	34000	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	34000	U
74-87-3	Chloromethane	85000	U
75-01-4	Vinyl chloride	34000	U
106-97-8	n-Butane	34000	U
106-99-0	1,3-Butadiene	34000	U
74-83-9	Bromomethane	34000	U
75-00-3	Chloroethane	34000	U
75-69-4	Trichlorofluoromethane	34000	U
109-66-0	Pentane	85000	U
75-35-4	1,1-Dichloroethene	34000	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	34000	U
75-15-0	Carbon disulfide	34000	U
107-05-1	3-Chloropropene	34000	U
75-09-2	Methylene chloride	34000	U
156-60-5	trans-1,2-Dichloroethene	34000	U
110-54-3	n-Hexane	34000	U
75-34-3	1,1-Dichloroethane	34000	U
156-59-2	cis-1,2-Dichloroethene	34000	U
67-66-3	Chloroform	34000	U
71-55-6	1,1,1-Trichloroethane	34000	U
110-82-7	Cyclohexane	85000	U
56-23-5	Carbon tetrachloride	34000	U
71-43-2	Benzene	34000	U
107-06-2	1,2-Dichloroethane	34000	U
142-82-5	n-Heptane	34000	U
79-01-6	Trichloroethene	34000	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 004
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQQ101 Date Extracted:05/12/99
Dilution factor: 170531 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV807

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
78-87-5	1,2-Dichloropropane	34000	U
74-95-3	Dibromomethane	34000	U
75-27-4	Bromodichloromethane	34000	U
10061-01-5	cis-1,3-Dichloropropene	34000	U
108-88-3	Toluene	34000	U
111-65-9	n-Octane	34000	U
10061-02-6	trans-1,3-Dichloropropene	34000	U
79-00-5	1,1,2-Trichloroethane	34000	U
127-18-4	Tetrachloroethene	34000	U
124-48-1	Dibromochloromethane	34000	U
106-93-4	1,2-Dibromoethane (EDB)	34000	U
108-90-7	Chlorobenzene	34000	U
100-41-4	Ethylbenzene	34000	U
136777-61-2	m-Xylene & p-Xylene	34000	U
111-84-2	Nonane	34000	U
95-47-6	o-Xylene	34000	U
100-42-5	Styrene	34000	U
75-25-2	Bromoform	34000	U
98-82-8	Cumene	34000	U
79-34-5	1,1,2,2-Tetrachloroethane	34000	U
103-65-1	n-Propylbenzene	34000	U
108-67-8	1,3,5-Trimethylbenzene	34000	U
124-18-5	n-Decane	34000	U
98-83-9	alpha-Methylstyrene	34000	U
95-63-6	1,2,4-Trimethylbenzene	34000	U
541-73-1	1,3-Dichlorobenzene	34000	U
106-46-7	1,4-Dichlorobenzene	34000	U
100-44-7	Benzyl chloride	34000	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 004
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CTPQQ101 Date Extracted:05/12/99
Dilution factor: 170531 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV807

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
95-50-1	1,2-Dichlorobenzene	34000	U
1120-21-4	n-Undecane	34000	U
112-40-3	n-Dodecane	34000	U
120-82-1	1,2,4-Trichlorobenzene	34000	U
87-68-3	Hexachlorobutadiene	34000	U
91-20-3	Naphthalene	34000	U
67-56-1	Methanol	1700000	U
60-29-7	Ethyl ether	85000	U
67-64-1	Acetone	850000	U
107-13-1	Acrylonitrile	85000	U
108-05-4	Vinyl acetate	85000	U
78-93-3	2-Butanone (MEK)	85000	U
71-36-3	1-Butanol	85000	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**6100000**	
591-78-6	2-Hexanone	85000	U
1634-04-4	Methyl tert-butyl ether	85000	U
107-02-8	Acrolein	85000	U
75-05-8	Acetonitrile	170000	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 006
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CVMDQ101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809 DUPLICATE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
75-71-8	Dichlorodifluoromethane	7700	U
75-45-6	Chlorodifluoromethane	7700	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	7700	U
74-87-3	Chloromethane	19000	U
75-01-4	Vinyl chloride	7700	U
106-97-8	n-Butane	7700	U
106-99-0	1,3-Butadiene	7700	U
74-83-9	Bromomethane	7700	U
75-00-3	Chloroethane	7700	U
75-69-4	Trichlorofluoromethane	7700	U
109-66-0	Pentane	19000	U
75-35-4	1,1-Dichloroethene	7700	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	7700	U
75-15-0	Carbon disulfide	7700	U
107-05-1	3-Chloropropene	7700	U
75-09-2	Methylene chloride	7700	U
156-60-5	trans-1,2-Dichloroethene	7700	U
110-54-3	n-Hexane	7700	U
75-34-3	1,1-Dichloroethane	7700	U
156-59-2	cis-1,2-Dichloroethene	7700	U
67-66-3	Chloroform	7700	U
71-55-6	1,1,1-Trichloroethane	7700	U
110-82-7	Cyclohexane	19000	U
56-23-5	Carbon tetrachloride	7700	U
71-43-2	Benzene	7700	U
107-06-2	1,2-Dichloroethane	7700	U
142-82-5	n-Heptane	7700	U
79-01-6	Trichloroethene	7700	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 006
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CVMDQ101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809 DUPLICATE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
78-87-5	1,2-Dichloropropane	7700	U
74-95-3	Dibromomethane	7700	U
75-27-4	Bromodichloromethane	7700	U
10061-01-5	cis-1,3-Dichloropropene	7700	U
108-88-3	Toluene	7700	U
111-65-9	n-Octane	7700	U
10061-02-6	trans-1,3-Dichloropropene	7700	U
79-00-5	1,1,2-Trichloroethane	7700	U
127-18-4	Tetrachloroethene	7700	U
124-48-1	Dibromochloromethane	7700	U
106-93-4	1,2-Dibromoethane (EDB)	7700	U
108-90-7	Chlorobenzene	7700	U
100-41-4	Ethylbenzene	7700	U
136777-61-2	m-Xylene & p-Xylene	7700	U
111-84-2	Nonane	7700	U
95-47-6	o-Xylene	7700	U
100-42-5	Styrene	7700	U
75-25-2	Bromoform	7700	U
98-82-8	Cumene	7700	U
79-34-5	1,1,2,2-Tetrachloroethane	7700	U
103-65-1	n-Propylbenzene	7700	U
108-67-8	1,3,5-Trimethylbenzene	7700	U
124-18-5	n-Decane	7700	U
98-83-9	alpha-Methylstyrene	7700	U
95-63-6	1,2,4-Trimethylbenzene	7700	U
541-73-1	1,3-Dichlorobenzene	7700	U
106-46-7	1,4-Dichlorobenzene	7700	U
100-44-7	Benzyl chloride	7700	U

~~BECHTEL HANFORD, INC.~~

Lab Name:QUANTERRA SDG Number: W02747

Matrix: (soil/water) AIR Lab Sample ID:H9D170101 006
Method: EPA-2 TO-14
Volatile Organics, (GCMS-TO14 Low Level)-Air

Sample WT/Vol: / mL Date Received: 04/16/99
Work Order: CVMDQ101 Date Extracted:05/12/99
Dilution factor: 38718 Date Analyzed: 05/12/99

QC Batch: 9132163

Client Sample Id: BOV809 DUPLICATE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
95-50-1	1,2-Dichlorobenzene	7700	U
1120-21-4	**n-Undecane**	**9200**	
112-40-3	n-Dodecane	7700	U
120-82-1	1,2,4-Trichlorobenzene	7700	U
87-68-3	Hexachlorobutadiene	7700	U
91-20-3	Naphthalene	7700	U
67-56-1	Methanol	390000	U
60-29-7	Ethyl ether	19000	U
67-64-1	Acetone	190000	U
107-13-1	Acrylonitrile	19000	U
108-05-4	Vinyl acetate	19000	U
78-93-3	2-Butanone (MEK)	19000	U
71-36-3	1-Butanol	19000	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**1600000**	
591-78-6	2-Hexanone	19000	U
1634-04-4	Methyl tert-butyl ether	19000	U
107-02-8	Acrolein	19000	U
75-05-8	Acetonitrile	39000	U

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-053-03	Page 1 of 1

Collector Doug Bowers	Company Contact Tom Brown	Telephone No. 376-1547	Project Coordinator TRENT, SJ	Price Code / Data Turnaround 45 Days
Project Designation 276-S Hexone Storage Tank	Sampling Location 276-S Hexone tanks (200 West)		SAF No. B99-053	
Ice Chest No. N/A Seal Chain Cage No #	Field Logbook No. EFL 1133-7		Method of Shipment Gov Vehicle	
Shipped To Quanterra Incorporated	Offsite Property No.		Bill of Lading/Air Bill No.	
			COA	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	Summa Canister											
No. of Container(s)	1											
Volume	6L											
SAMPLE ANALYSIS	VOA - T0-14 (Add-on) (4-Methyl-2-Pentanone)											
Sample No.	Matrix *	Sample Date	Sample Time									
* B0V808	Vapor	4-15-99	0949	X				tank 276-S-142 @ 5' 7"				
B0V809	Vapor	4-15-99	0939	X				tank 276-S-142 @ 14'				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By Doug Bowers	Date/Time 4-15-99/1210	Received By K. A. Hunter	Date/Time 4-15-99 1210
Relinquished By	Date/Time	Received By Bryan Blomquist	Date/Time 4/16/99 0915
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS
** Close SDG upon receipt of samples.

Rec'd @ Ambient temp
w/ custody Seals Intact
BJB 4/16/99

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

(49)(3)(0)(0)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-053-01	Page 1 of 1

Collector Doug Bowers	Company Contact Tom Brown	Telephone No. 376-1547	Project Coordinator TRENT, SJ	Price Code	Data Turnaround 45 Days
Project Designation 276-S Hexone Storage Tank	Sampling Location 276-S Hexone tanks (200 West)		SAF No. B99-053		
Ice Chest No. N/A Summa cans no #	Field Logbook No. EFL 1133-7		Method of Shipment Gov Vehicle		
Shipped To Quanterra Incorporated	Offsite Property No.		Bill of Lading/Air Bill No.		
			COA		

POSSIBLE SAMPLE HAZARDS/REMARKS											
	Preservation	None									
	Type of Container	Summa Canister									
	No. of Container(s)	1									
Special Handling and/or Storage	Volume	6L									
SAMPLE ANALYSIS		VOA - T0-14 (Add-on) {4-Methyl-2-Pentanone}									

Sample No.	Matrix *	Sample Date	Sample Time										
* BOU806	Air	4-8-99	1339	X				BOU872			2765-141 @ 5'7"		
BOU807	Air	4-8-99	1346	X				BOU873			2765-~~142~~-141 @ 14'		

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By Doug Bowers	Date/Time 4-8-99/1626	Received By Refg 14 3728	Date/Time 4-8-99/1626
Relinquished By Refg 14 3728	Date/Time 4-15-99/1100	Received By Doug Bowers	Date/Time 4-15-99/1100
Relinquished By Doug Bowers	Date/Time 4-15-99/1210	Received By K. Hedley	Date/Time 4-15-99/1210
Relinquished By	Date/Time	Received By Bryan Blanquet	Date/Time 4/16/99 0915

SPECIAL INSTRUCTIONS
** Close SDG upon receipt of samples.
@ 4°C in IA
Rec'd @ Ambient temp
w/custody Seals Intact
BPB 4/16/99

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

CS

ERC Radiological Counting Facility Analysis Report

RCF Number RCF5729

Sample Date & Time 4/8/99 1339

Project ID: 276-S (RadScreen) **SAF Number:** B99-053 **Date Analyzed** 4/9/99

Sample ID: B0V872 B0U806 + B0U807

Gamma Energy Analysis

Nuclide		Activity (pCi/g)	Error (pCi/g)	MDC (pCi/g)
K-40 #	<	3.3E+01		3.3E+01
Co-60	<	2.2E+00		2.2E+00
Cs-137	<	2.5E+00		2.5E+00
Eu-152	<	6.0E+00		6.0E+00
Eu-154	<	3.2E+00		3.2E+00
Eu-155	<	6.3E+00		6.3E+00
Th-232d	<	5.1E+01		5.1E+01
U-235	<	1.5E+01		1.5E+01
Np-237	<	5.2E+00		5.2E+00
U-238d#	<	5.4E+00		5.4E+00
U-238 #	<	1.4E+02		1.4E+02
Am-241	<	3.1E+00		3.1E+00

Post-it® Fax Note 7671	Date	# of pages ▶
To Dave St. John	From K.A. Robertson-DeMers	
Co./Dept.	Co.	
Phone #	Phone # 373-9731	
Fax # 372-9487	Fax #	

Total GEA (pCi/g) +/-

		Activity (pCi/g)		Error (pCi/g)
Gross Alpha**		1.7E-01	+/-	3.4E-01
Gross Beta	<	6.7E-02		

Alpha MDC (pCi/g)
1.4E-01
Beta MDC (pCi/g)
6.7E-02

Definitions:

All errors reported at 2 standard deviations.
N/R = no result or analysis not requested. <MDC = Less than detection limit.
All GEA results reported as "<" list the Minimum Detectable Concentration (MDC) value for that radionuclide.
Rounding error may result in the reported total GEA activity differing from the sum of the > MDC GEA values in the second significant digit.

For soils and natural samples, the following applies:

The analysis of U-238 is based on the activity of Pa-234m.
The analysis of Np-237 is based on the activity of Pa-233.
U-238dau is the activity of Pb-214 and Bi-214, short lived daughter products of U-238. Equilibrium between parent and daughter products probably does not exist in disturbed materials.
Th-232dau is the activity of Ac-228, Pb-212, and Tl-208, short lived daughter products of Th-232. Equilibrium between parent and daughter products may not exist in disturbed materials.
Other samples, not containing natural materials, may have inapplicable results for the Th, U, transuranics and daughter products. The results must then be balanced for the gross alpha analysis.
**The gross alpha results are not corrected for mass absorbtion
No peaks for this radionuclide were visible above background in the spectrum. The result was reported as less than MDC.

Kathryn Robertson-DeMers

Analyst Kathryn A. Robertson-DeMers 4/12/99

Report To	Fax
Tom Brown	372-7711
Dave St John	372-9487

Report Printed: Monday, April 12, 1999

ERC Radiological Counting Facility Analysis Report

RCF Number RCF5730 B0V808 & B0V809 Sample Date & Time 4/8/99 1358

Project ID: 276-S (RadScreen) SAF Number: B99-053 Date Analyzed 4/12/99

Sample ID: B0V873

Gamma Energy Analysis

Nuclide		Activity (pCi/g)	Error (pCi/g)	MDC (pCi/g)
K-40	<	4.4E+01		4.4E+01
Co-60	<	2.9E+00		2.9E+00
Cs-137	<	2.9E+00		2.9E+00
Eu-152	<	6.0E+00		6.0E+00
Eu-154	<	1.3E+01		1.3E+01
Eu-155	<	3.7E+00		3.7E+00
Th-232d#	<	3.8E+01		3.8E+01
U-235	<	1.8E+01		1.8E+01
Np-237	<	8.1E+00		8.1E+00
U-238d	<	9.2E+00		9.2E+00
U-238 #	<	4.8E+02		4.8E+02
Am-241	<	4.2E+00		4.2E+00

Total GEA (pCi/g) +/-

		Activity (pCi/g)	Error (pCi/g)
Gross Alpha**	<	9.9E-02	
Gross Beta	<	2.5E-01	

Alpha MDC (pCi/g)
9.9E-02
Beta MDC (pCi/g)
2.5E-01

Definitions:

All errors reported at 2 standard deviations.
N/R = no result or analysis not requested. <MDC = Less than detection limit.
All GEA results reported as "<" list the Minimum Detectable Concentration (MDC) value for that radionuclide.
Rounding error may result in the reported total GEA activity differing from the sum of the > MDC GEA values in the second significant digit.

For soils and natural samples, the following applies:

The analysis of U-238 is based on the activity of Pa-234m.
The analysis of Np-237 is based on the activity of Pa-233.
U-238dau is the activity of Pb-214 and Bi-214, short lived daughter products of U-238. Equilibrium between parent and daughter products probably does not exist in disturbed materials.
Th-232dau is the activity of Ac-228, Pb-212, and Tl-208, short lived daughter products of Th-232. Equilibrium between parent and daughter products may not exist in disturbed materials.
Other samples, not containing natural materials, may have inapplicable results for the Th, U, transuranics and daughter products. The results must then be balanced for the gross alpha analysis.
**The gross alpha results are not corrected for mass absorbtion
No peaks for this radionuclide were visible above background in the spectrum. The result was reported as less than MDC.

Kathryn Robertson-DeMers

Analyst Kathryn A. Robertson-DeMers 4/12/99

Report To	Fax
Tom Brown	372-7711
Dave St John	372-9487

Report Printed: Monday, April 12, 1999

Quanterra
Environmental Services
5815 Middlebrook Pike
Knoxville, Tennessee 37921
(423) 588-6401

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 5884
Page 1 of ____

Project Name/No. [1] NA
Sample Team Members [2] NA
Profit Center No. [3]
Project Manager [4] DOUG SWENSON
Purchase Order No. [6]
Required Report Date [11] NA

Samples Shipment Date [7] 4-5-99
Lab Destination [8] QES RICHLAND
Lab Contact [9]
Project Contact/Phone [12]
Carrier/Waybill No. [13] AIRBORNE

Bill to: [5] NA
Report to: [10] NA

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
12730	SUMMA CAN	NA	SUMMA	6L	NONE	CLEAN ~~CLEAN~~ CAN'S FOR SAMPLING		
12266	↓	↓	↓	↓	↓	"	"	

FOR LAB USE ONLY

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☑ Disposal by Lab ☐ Archive (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) [signature]	Date: 4-5-99 Time: 13:00	1. Received by [28] (Signature/Affiliation) Doug Bowers [signature]	Date: 4-8-99 Time: 1250
2. Relinquished by (Signature/Affiliation) Doug Bowers [signature] ERC	Date: 4-15-99 Time: 1210	2. Received by (Signature/Affiliation) [signature]	Date: 4-15-99 Time: 1210
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation) [signature]	Date: 4/16/99 Time: 0915

Comments: [29]

MCA 3/15/91

Quanterra
Environmental Services
5815 Middlebrook Pike
Knoxville, Tennessee 37921
(423) 588-6401

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 5894
Page 1 of ____

Project Name/No. [1] ____
Sample Team Members [2] ____
Profit Center No. [3] ____
Project Manager [4] DOUG SWENSON
Purchase Order No. [6] ____
Required Report Date [11] NA

Samples Shipment Date [7] 4-9-99
Lab Destination [8] QES RICHLAND
Lab Contact [9] ____
Project Contact/Phone [12] ____
Carrier/Waybill No. [13] AIRBORNE

Bill to: [5] NA
Report to: [10] NA

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
123416	CLEAN SUMMA CAN	NA	SUMMA ~~NA~~	6L	NA	CLEAN CAN'S FOR SAMPLING		
121636	✓	NA	✓	✓	✓	"	"	

FOR LAB USE ONLY

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☐ Archive (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) [signature]	Date: 4-9-99 Time: 17:00	1. Received by [28] (Signature/Affiliation) [signature]	Date: 4-9-99 Time: 1700
2. Relinquished by (Signature/Affiliation) [signature]	Date: 4-14-99 Time: 1330	2. Received by Doug Bowers (Signature/Affiliation) [signature] ERC	Date: 4-14-99 Time: 1330
3. Relinquished by Doug Bowers (Signature/Affiliation) [signature] ERC	Date: 4-15-99 Time: 1210	3. Received by (Signature/Affiliation) [signature]	Date: 4-15-99 Time: 1210

Comments: [29]

[signature] 4/16/99 0915

MCA 3/15/91

C3

Jean Marshall
BHI Sample Management
Phone: (509) 372-9346
FAX: (509) 372-9487

facsimile transmittal

To: Jamie McKinney
Fax: 423-~~5~~84-4315
From: Rich Weiss
Date: May 10, 1999
Re: Gas Analysis
Pages: 2
CC:

☑ Quick Turn / Priority Data
☐ Final Data Package

Jamie,

Begin analysis ~~on~~ of the samples on the following sheet as marked. We will provide formal documentation via an SDR shortly.

Call me if you have any questions

Rich Weiss

509-372-9592

SAMPLE SUMMARY

Project ID:	276-S Hexone Storage Tank	Sampling Team:	ERC Sampling
Task ID:	1	Sampling Mgr/Coordinator:	TRENT, SJ
Operable Unit:	200-RO-2	Samplers:	BOWERS, DL
SAF Number:	B99-053	Field Logbook ID:	EFL 1133-7
		Sampling Media:	Vapor

Sample Number	SDG Number	Location	Analyte Code	Laboratory	Date Collected	Date Shipped	Comments
B0V806	W0FAKE02	276-S Hexone Tank #141	1	Quanterra Incorporated	4/8/99 1:39 PM	4/15/99 12:10 PM	5'7" Light Gas
B0V807	W0FAKE02	276-S Hexone Tank #141	1	Quanterra Incorporated	4/8/99 1:58 PM	4/15/99 12:10 PM	14' TO-14
B0V808	W0FAKE02	276-S Hexone Tank #142	1	Quanterra Incorporated	4/15/99 9:49 AM	4/15/99 12:10 PM	5'7" Light Gas
B0V809	W0FAKE02	276-S Hexone Tank #142	1	Quanterra Incorporated	4/15/99 9:39 AM	4/15/99 12:10 PM	14' TO-14
B0V810	W0FAKE02	276-S Hexone Tank #142	1	Quanterra Incorporated	5/4/99 2:16 PM	5/5/99 7:26 AM	5'7" Light Gas
B0V811	W0FAKE02	276-S Hexone Tank #142	1	Quanterra Incorporated	5/4/99 2:27 PM	5/5/99 7:26 AM	14' TO-14
B0V812	W0FAKE02	276-S Hexone Tank #141	1	Quanterra Incorporated	5/4/99 2:48 PM	5/5/99 7:26 AM	5'7" Light Gas
B0V813	W0FAKE02	276-S Hexone Tank #141	1	Quanterra Incorporated	5/4/99 2:57 PM	5/5/99 7:26 AM	14' TO-14
~~B0V872~~	~~RCF99053~~	~~276-S HEXONE TANK #141~~	~~2~~	~~Radiological Counting Facility~~	~~4/8/99 1:39 PM~~	~~4/9/99 9:20 AM~~	~~Rad. Screen for (B0V806,B0V807)~~
~~B0V873~~	~~RCF99053~~	~~276-S HEXONE TANK #141~~	~~2~~	~~Radiological Counting Facility~~	~~4/8/99 2:16 PM~~	~~4/9/99 9:20 AM~~	~~Rad. Screen for (B0V808,B0V809)~~

MAY 10 '99 12:09PM BHI S&D MANAGEMENT 509 372 9487

Analyte Codes:

Date: 5/10/99 10:41:55 AM