W03339

0054269

H0J260129 Sample Data Summary **1**

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- Raw QC Data 104
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Sample Receipt Documentation **131**

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RECEIVED
JAN 0 9 2000
EDMC

NOV 2000
RECEIVED

SEVERN TRENT SERVICES

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921-5947

Tel: 865-291-3000
Fax: 865-584-4315
www.stl-inc.com

CERTIFICATE OF ANALYSIS

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

November 21, 2000

Attention: Keith Maki

NOV 2000 RECEIVED

SAF Number	:	B99-009
Date Samples Received	:	October 26, 2000
Number of Samples	:	Two (2)
Sample Type	:	Air
Data Deliverable	:	45 Day Data Package

I. Introduction

Two (2) air samples were received on October 26, 2000 by the STL Knoxville Laboratory for analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Bechtel Hanford, Inc. (BHI) specific ID:

STLKL ID#	BHI ID#	MATRIX	DATE OF RECEIPT
DNR18	B10LW9	Air	10/26/00
DNR2E	B10LX0	Air	10/26/00

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

III. Quality Control

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

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

IV. Comments

The original chain of custody documentation is included with this report.

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

Sample Data Summary

BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03339

Matrix: (soil/water) AIR Lab Sample ID:H0J260129 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/26/00
Work Order: DNR181AA Date Extracted:10/30/00
Dilution factor: 1.98 Date Analyzed: 10/30/00

QC Batch: 0304554

Client Sample Id: B10LW9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	5.9	U
56-23-5	Carbon tetrachloride	0.40	U
67-66-3	Chloroform	0.40	U
75-09-2	**Methylene chloride**	**0.56**	
127-18-4	Tetrachloroethene	0.40	U
79-01-6	Trichloroethene	0.40	U
78-93-3	2-Butanone (MEK)	0.99	U

BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03339

Matrix: (soil/water) AIR Lab Sample ID:H0J260129 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/26/00
Work Order: DNR181AC Date Extracted:10/30/00
Dilution factor: 1.98 Date Analyzed: 10/30/00

QC Batch: 0304554

Client Sample Id: B10LW9 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	9.9	U
56-23-5	Carbon tetrachloride	0.40	U
67-66-3	Chloroform	0.40	U
75-09-2	Methylene chloride	0.53	
127-18-4	Tetrachloroethene	0.40	U
79-01-6	Trichloroethene	0.40	U
78-93-3	2-Butanone (MEK)	0.99	U

BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03339

Matrix: (soil/water) AIR Lab Sample ID:H0J260129 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/26/00
Work Order: DNR2E1AA Date Extracted:10/30/00
Dilution factor: 1291 Date Analyzed: 10/30/00

QC Batch: 0304554

Client Sample Id: B10LX0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	6500	U
56-23-5	**Carbon tetrachloride**	**12000**	
67-66-3	Chloroform	260	U
75-09-2	Methylene chloride	260	U
127-18-4	Tetrachloroethene	260	U
79-01-6	Trichloroethene	260	U
78-93-3	2-Butanone (MEK)	650	U

BECHTEL HANFORD, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03339

Matrix: (soil/water) AIR Lab Sample ID:H0J300000 554
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/26/00
Work Order: DN3LN1AA Date Extracted:10/30/00
Dilution factor: 1 Date Analyzed: 10/30/00

QC Batch: 0304554

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	5.0	U
56-23-5	Carbon tetrachloride	0.20	U
67-66-3	Chloroform	0.20	U
75-09-2	Methylene chloride	0.20	U
127-18-4	Tetrachloroethene	0.20	U
79-01-6	Trichloroethene	0.20	U
78-93-3	2-Butanone (MEK)	0.50	U

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03339

Matrix: (soil/water) AIR Lab Sample ID:H0J300000 554
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 10/26/00
Work Order: DN3LN1AC Date Extracted:10/30/00
Dilution factor: 1 Date Analyzed: 10/30/00

QC Batch: 0304554

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
79-01-6	Trichloroethene	10	
71-43-2	Benzene	10	
108-90-7	Chlorobenzene	10	
75-35-4	1,1-Dichloroethene	10	
108-88-3	Toluene	10	

EPA-19 TO-14 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: QESKNX QESSDG: W03339

Lot #: H0J260129

	CLIENT ID.	SRG01	SRG02	SRG03	TOT OUT
01	B10LW9	96	96	87	00
02	B10LX0	95	98	86	00
03	METHOD BLK. DN3LN1AA	97	97	86	00
04	LCS DN3LN1AC	95	96	97	00
05	B10LW9 DUP	96	92	88	00

SURROGATES		QC LIMITS
SRG01	= 1,2-Dichloroethane-d4	(70-130)
SRG02	= Toluene-d8	(70-130)
SRG03	= 4-Bromofluorobenzene	(70-130)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: QESKNX SDG No: W03339

Lot #: H0J300000 WO #: DN3LN1AC
BATCH: 0304554

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
Benzene	10	10	102	70 - 130	
Chlorobenzene	10	10	104	70 - 130	
1,1-Dichloroethene	10	10	102	70 - 130	
Toluene	10	10	103	70 - 130	
Trichloroethene	10	10	103	70 - 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS:

FORM III

BLANK WORKORDER NO.

DN3LN1AA

EPA-19 TO-14 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESKNX

SDG Number:W03339

Lab File ID: bk1030b.d

Lot Number: H0J260129

Date Analyzed: 10/30/00

Time Analyzed: 13:46

Matrix: AIR

Date Extracted:10/30/00

GC Column: DB-5 ID: .32

Extraction Method: TO-14

Instrument ID: MT

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	B10LW9	DNR181AA	dnr18.d	10/30/00	20:20
02	B10LW9 DUP	DNR181AC X	dnr18b.d	10/30/00	21:24
03	B10LX0	DNR2E1AA	dnr2e.d	10/30/00	20:51
04	CHECK SAMPLE	DN3LN1AC C	rf1030.d	10/30/00	12:40
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

Sample Receipt Documentation

HCT 260129

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		B99-009-09	Page 1 of 1
Collector Baechler/Cowgill/Johansen	Company Contact K Maki	Telephone No. 373-4989	Project Coordinator TRENT, SJ	Price Code 9N Air Quality | |
Project Designation 200-ZP-1 Operations On-Site and Off-Site Air Monitor Samp	Sampling Location 200 West		SAF No. B99-009	Data Turnaround 45 Days
Ice Chest No.	Field Logbook No. EL 1330	COA R20ZP1D760	Method of Shipment Hand Delivered	
Shipped To Quanterra Incorporated	Offsite Property No.		Bill of Lading/Air Bill No.	

POSSIBLE SAMPLE HAZARDS/REMARKS												
	Preservation	None										
	Type of Container	Summa Canister										
	No. of Container(s)	1										
Special Handling and/or Storage	Volume	6L										
SDG W03339 SAMPLE ANALYSIS		See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time										
B10LW9	GASEOUS	10/25/00	1036	X								AS-3	
B10LX0	GASEOUS	10/25/00	1046	X								AS-2	

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By M.A. Baechler	Date/Time 10/25/00 1338	Received By K. Ashtenberg	Date/Time 10-25 1338
Relinquished By K. Ashtenberg	Date/Time 10-25-00 1600	Received By Matthew F. [illegible]	Date/Time 10/26/00 08:35
Relinquished By	Date/Time	Received By	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) VOA - T0-14 {2-Butanone, Acetone, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene}

Rec'd Temp. Ambient
Custody Seals intact
MFH. 10/26/00
Rec'd 2 cans, No Flow controlers.

Matrix *
S-Soil
SE-Sediment
SO-Solid
S-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	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (10/99)

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921-5947
Phone: (865) 291-3000
Fax: (865) 584-4315

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 6858
Page 1 of 1

Project Name/No. 1
Sample Team Members 2
Profit Center No. 3 140
Project Manager 4 Jamie McKinney
Purchase Order No. 6
Required Report Date 11

Samples Shipment Date 7 10-20-00
Lab Destination 8 STL Richland
Lab Contact 9 Jackie Waddel
Project Contact/Phone 12
Carrier/Waybill No. 13

Bill to: 5
Report to: 10

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
LOT# 3341 04191			SUMMA	6Lt	NA	N/A		
LOT# 3342 12521							FOR LAB USE ONLY	
							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) David D. Flora — Date: 10-20-00 Time: 1800	1. Received by 28 (Signature/Affiliation) K. Schlinder — Date: 10/23/00 Time: 100 C
2. Relinquished by (Signature/Affiliation) Kevin Schlinder — Date: 10/23/00 Time: 1330	2. Received by (Signature/Affiliation) M Marsh / M Marsh — Date: 10/23/00 Time: 1330
3. Relinquished by (Signature/Affiliation) M Marsh / M Marsh — Date: ~~10/25/00~~ 10/24/00 Time: ~~1050~~ 1445	3. Received by (Signature/Affiliation) M.A. Baechler / M.G. Baechler — Date: 10/24/00 Time: 1445

Comments: 29

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

Invoice

SEVERN TRENT SERVICES

STL Knoxville
5815 Middlebrook Pike
Knoxville,TN 37921-5947
Tel: 865 5886401
Fax:

Number: **14007612**
Date: 21 NOV 00
STL Project Number: H0J260129
Customer Number: 127642
Terms: NET 30 DAYS
Customer Contact:
SAMPLE RECEIVING DATE : 10/26/00
REPORT DATE : 11/21/00
Keith Maki

REMIT TO:

Severn Trent Laboratories, Inc.
P.O. Box 2473
Carol Stream, IL 60132-2473

Bill To:

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

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

Line No.	Qty.	Matrix Code	Analysis Description	Unit Price	Extended Price
1	1		AIR, TO-14, Volatile Organics (duplicate)		156.00
2	1		AIR, TO-14, Volatile Organics (LCS)		156.00
			Sample Subtotal		**312.00**
			CLIENT ID = B10LW9		
		AIR	**QUANTERRA SAMPLE ID** = H0J260129-001		
3	1		AIR, TO-14, Volatile Organics		156.00
			Sample Subtotal		**156.00**
			CLIENT ID = B10LX0		
		AIR	**QUANTERRA SAMPLE ID** = H0J260129-002		
4	1		AIR, TO-14, Volatile Organics		156.00
			Sample Subtotal		**156.00**

Please reference Invoice number when remitting.

Customer P.O. Number / Contract Number / Reference
MW6-SBB-A19981 (0000X-SC-G0063)/B99-009/B99-009

STL Project Manager: Jamie A. McKinney
Salesperson: MCK

Sub Total
Tax
Total: 624.00

O R I G I N A L **(Page 1 of 1)**

Severn Trent Laboratories, Inc

BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03339

Matrix: (soil/water) AIR Lab Sample ID:H0J260129 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/26/00
Work Order: DNR181AA Date Extracted:10/30/00
Dilution factor: 1.98 Date Analyzed: 10/30/00

QC Batch: 0304554

Client Sample Id: B10LW9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	9.9	U
56-23-5	Carbon tetrachloride	0.40	U
67-66-3	Chloroform	0.40	U
75-09-2	**Methylene chloride**	**0.56**	
127-18-4	Tetrachloroethene	0.40	U
79-01-6	Trichloroethene	0.40	U
78-93-3	2-Butanone (MEK)	0.99	U

BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03339

Matrix: (soil/water) AIR Lab Sample ID:H0J260129 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/26/00
Work Order: DNR181AC Date Extracted:10/30/00
Dilution factor: 1.98 Date Analyzed: 10/30/00

QC Batch: 0304554

Client Sample Id: B10LW9 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	9.9	U
56-23-5	Carbon tetrachloride	0.40	U
67-66-3	Chloroform	0.40	U
75-09-2	Methylene chloride	0.53	
127-18-4	Tetrachloroethene	0.40	U
79-01-6	Trichloroethene	0.40	U
78-93-3	2-Butanone (MEK)	0.99	U

STL Knoxville GC/MS Air Data Review / Narrative Checklist

LOT/Project # H0J260129

Method: TO-14 - KNOX-MS-0001 Rev 2

Instrument:	MT					
Scanned File Names:	T100400I					
	T103000					

Review Items A. Tune / Continuing Calibration	N/A	Yes	No	Why is data reportable?	2nd ✓
1. Were all samples injected within 12 hr of BFB?		✓			✓
2. Has a Continuing Calibration Checklist been completed for each analytical batch?		✓			
3. Was the correct CCAL used for quantitation?		✓			
B. CLIENT SAMPLE AND QC SAMPLE Results					
1. Were all special project requirements met?		✓			
2. Were dilution factors/header information verified?		✓			
3. Are surrogates and internal standards within QC limits? (70-130% R for surr.; 50-150%R from CCAL for IS) *If no, list samples/reason (e.g.,* sur1*):* Sample Reason Sample Reason		✓		☐[sur1] DUP surr. %R demonstrated same effect. ☐[sur2] Reanalysis demonstrated same effect. ☐**[sur5] At client's request, data was flagged as estimated & released without further investigation.*** ☐**[is1] Per client, reanalysis was not performed** * ☐[is2] Reanalysis confirmed a matrix effect.	
4. Were positive hits evaluated using qualitative identification criteria and technical judgement?		✓			
5. Are positive results within calibration range?		✓			
6. For dilutions, is highest concentration hit ≥ 5 ppb? *List samples and reason (e.g.,* elev1*):* Sample Reason Sample Reason		✓		☐[elev1] Elevated RL for (ANALYTE) due to sample matrix interferences. ☐[elev3] Elevated RLs for all analytes due to difficult sample matrix. ☐[elev5] Elevated RLs for all analytes due to presence of non-target compounds.	
7. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?		✓		Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	
8. Have alternate hits/manual integrations been verified as correct?		✓			
9. Final report acceptable? (Results correct, RLs calculated correctly, units correct, surrogate %R correct, appropriate flags used, dilution factor correct, analysis dates correct.)		✓			
10. Was a narrative prepared and all deviations noted?		✓			
C. Preparation QC					
1. System blank run every 12 hours prior to samples?		✓			
2. System blank surrogate recoveries within QC limits (70-130% R)?		✓		☐**[mb1] All sample surrogates OK and there is no analyte >RL in samples associated with blank.***	
3. Are all analytes present in the system blank ≤ RL? *If no, list blank ID:*		✓		☐**[mb3] No analyte > RL in associated samples.*** ☐**[mb4] Sample results > 20x higher than blank.** ☐**[mb6]** Common lab contaminant (methylene chloride/Freon) ≤2x RL.*	
4. DUP done per 20 samples and are all RPDs within limits? (for analytes >5x RL, ≤30 RPD for nonpolars; ≤40 RPD for polars; no criteria for methanol and n-butanol) *If no, list DUP ID:*		✓			
D. Other					
1. Are all nonconformances documented appropriately and copy included with deliverable?	✓				

Analyst: CWJ	Date: 10/31/00	2nd Level Reviewer:	Date: 11/6/00
Comments:		Comments:	

* Such action must be taken in consultation with client.

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 10/30/00
Time: 18:22:22

LEV 1	LEV 2		LEV 1	LEV 2	
_	_	Blank	_	_	Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: _____

Concentrationist: _____

****
* QC BATCH: 0304554 *
****

PREP DATE: 10/30/00
COMP DATE: 10/30/00

Reviewer/Date: _____ / 0/00/00

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJI	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	11/01/00	H0J260115-001 DNRX4-1-AD	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	11/01/00	H0J260115-002 DNRX8-1-AD	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	11/01/00	H0J260115-003 DNR0A-1-AD	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	11/01/00	H0J260115-004 DNR0C-1-AD	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	11/01/00	H0J260115-005 DNR0E-1-AD	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	11/01/00	H0J260115-006 DNR0F-1-AD	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	11/01/00	H0J260115-007 DNR0G-1-AD	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 10/30/00
Time: 18:22:22

****
* QC BATCH: 0304554 *
****

PREP DATE: 10/30/00
COMP DATE: 10/30/00

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	11/01/00	H0J260115-008 DNR0H-1-AD	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	11/01/00	H0J260115-009 DNR0L-1-AD	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	12/07/00	H0J260129-001 DNR18-1-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	12/07/00	H0J260129-001 DNR18-1-ACX		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	12/07/00	H0J260129-002 DNR2E-1-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	0/00/00	H0J300000-554 DN3LN-1-AAB		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															
0/00/00	0/00/00	H0J300000-554 DN3LN-1-ACC		88	JY	AIR	100mL 100.00mL	NA	NA	NA		.0		.0	CX-802 CX-799
COMMENTS:															

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD
‡

NUMBER OF WORK ORDERS IN BATCH: 14

STL-Knoxville Initial Canister Dilution

Analyst: SAH

Notebook: 2087 Page: 3

Barometer: 30.26 inches Hg at sea level Date: 10/30/00

738.504 mm Hg at Knoxville

Lot #	W/O #	P init inches	P init Abs,mm	P final psig	P final Abs,mm	Dilution Factor	
H0J260129	DNR 18	- 0.1	736.0	13.9	1457.3	1.98	(18)
	DNR 2E	0.0	738.5	15.2	1524.6	2.06	(2E)

1 psig = 2.036 inch Hg

Pinit(Abs,mm)=(Pinit(inch)*25.4mm/inch)+Pbar(mm)

Pfinal(Abs,mm)=(Pfinal(psig)*2.036 (inch Hg/psig)*25.4 (mm/inch))+Pbar(mm)

dilution factor = Pfinal(Abs,mm)/Pinit(Abs,mm)

barometer: correction factor for 300 m altitude of Knoxville = 30.1 from Handbook of Chem and Physics

pressure in mm Hg = [(pressure at sea level in inches*25.4 mm/in) - 30.1]

cjcandil.xls

rev.03

STL-Knoxville Serial Dilution

Analyst: SAH

Notebook: 2087 Page: 3

Barometer: 30.26 inches Hg at sea level Date: 10/30/00
738.504 mm Hg at Knoxville

Lot #	W/O #	Initial Volume (ml)	P final (psig)	P final Abs,mm	Dilution Factor (Serial)	Dilution Factor **(Total)**	
H0J260129	DNR 18						
	DNR 2E	120	12.5	1384.9	93.8	***193.6***	(2E) (*2.06)

1 psig = 2.036 inch Hg
Pinit(Abs,mm)=(Pinit(inch)*25.4mm/inch)+Pbar(mm)
Pfinal(Abs,mm)=(Pfinal(psig)*2.036 (inch Hg/psig)*25.4 (mm/inch))+Pbar(mm)
dilution factor = Pfinal(Abs,mm)/[(initial vol.)(Pbar(mmHg))/6000]
barometer: correction factor for 300 m altitude of Knoxville = 30.1 from Handbook of Chem and Physics
pressure in mm Hg = [(pressure at sea level in inches*25.4 mm/in) - 30.1]

cjcandil.xls
rev.03

STL-Knoxville

TO-14 Canister Dilution Log

Initial Dilution								In-Can Dilution				Serial Dilution					
Analyst	Date	Pbarr (in.)	Lot #	Work Order #	Can #	Initial Pressure Pi (in.)	Final Pressure Pf (psig)	Analyst	Date	Pbarr (in.)	Final Pressure Pf (psig)	Analyst	Date	Pbarr (in.)	To Can #	Volume (ml)	Final Pressure Pf (psig)
JAA	10/27/00	30.17	J260234	DNTX7	04746	-7.4	14.4										
				TOX	11287	-3.1	15.2										
				TOO	14167	-10.3	14.2										
				VG5	05357	-8.4	14.8										
			CWJ 10/30/00	VH2	11414	-5.0	14.5										
				JHO	12342	-10.2	14.3										
				VH6	12298	VAC-CHUM	13.6	←Trip Blank									
DDF	10-30-00	30.26	HOJ260129	DNR18	12521	-0.1	13.9										
				2E	64191	0	15.2					JAA	10/30/00	30.26	12444	120	12.5
			HOJ260115	DNRX4	92070	-8.5	14.2										
				8	93160	-4.8	15.0										
				OA	0177	-2.2	14.9										
				OC	93079	-7.6	15.0										
CWJ	10/30/00		HOJ260115	DNROG	12273	-9.3	12.4										
				DNROH	12648	-8.6	12.6										
				DNROL	12612	-8.8	12.0										
			CWJ	10/30/00													

MS038R0.xls, 10/16/00

Note: See page 4 for the rest of HOJ260115 CWJ 10/30/00

Knoxville, TN (37921)

CURRENTLY

as reported at Knoxville, TN.
Last updated Monday, October 30, at 9:58 AM Eastern Standard Time

Partly Cloudy

Temp: 55°F
Wind: From the Northeast at 7 mph
Dewpoint: 30°F
Rel. Humidity: 38%
Visibility: unlimited
Barometer: 30.26 inches

Sample Receipt Documentation

HCT 260129

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			B99-009-09	Page 1 of 1
Collector Baechler/Cowgill/Johansen	Company Contact K Maki	Telephone No. 373-4989	Project Coordinator TRENT, SJ	Price Code 9N	Data Turnaround 45 Days
Project Designation 200-ZP-1 Operations On-Site and Off-Site Air Monitor Samp	Sampling Location 200 West		SAF No. B99-009	Air Quality [ ]	
Ice Chest No.	Field Logbook No. EL 1330	COA R20ZP1D760	Method of Shipment Hand Delivered		
Shipped To Quanterra Incorporated	Offsite Property No.		Bill of Lading/Air Bill No.		

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	See item (1) in Special Instructions.										

SDG
W03339

Sample No.	Matrix *	Sample Date	Sample Time										
B10LW9	GASEOUS	10/25/00	1036	X								AS-3	
B10LX0	GASEOUS	10/25/00	1046	X								AS-2	

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By M.A. Baechler	Date/Time 10/25/00 1338	Received By K. Aehtenlig	Date/Time 10-25 1338
Relinquished By K. Aehtenlig	Date/Time 10-25-00 1600	Received By Matthew F. [illegible]	Date/Time 10/26/00, 08:35
Relinquished By	Date/Time	Received By	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) VOA - T0-14 (2-Butanone, Acetone, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene)

Rec'd Temp. Ambient
Custody Seals intact
MFH. 10/26/00
Rec'd 2 cans, No Flow controlers.

Matrix *
S=Soil
SE=Sediment
SO=Solid
S=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	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (10/99)

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STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921-5947
Phone: (865) 291-3000
Fax: (865) 584-4315

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 6858
Page 1 of 1

Project Name/No. 1
Sample Team Members 2
Profit Center No. 3 140
Project Manager 4 Jamie McKinney
Purchase Order No. 6
Required Report Date 11

Samples Shipment Date 7 10-20-00
Lab Destination 8 STL Richland
Lab Contact 9 Jackie Waddel
Project Contact/Phone 12
Carrier/Waybill No. 13

Bill to: 5
Report to: 10

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
LOT# 3341 04191			SUMMA	6Lt	NA	N/A		
LOT# 3342 12521								

FOR LAB USE ONLY

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) David D. Flora Date: 10-20-00 Time: 1800
2. Relinquished by (Signature/Affiliation) Kevin Ashburn Date: 10/23/00 Time: 1330
3. Relinquished by (Signature/Affiliation) M. Munsu / M. Munsu Date: ~~10/25/00~~ 10/24/00 Time: ~~1050~~ 1445

1. Received by 28 (Signature/Affiliation) K. Ashburn Date: 10/23/00 Time: 1000
2. Received by (Signature/Affiliation) M. Munsu / M. Munsu Date: 10/23/00 Time: 1330
3. Received by (Signature/Affiliation) M.A. Baechler / M.A. Baechler Date: 10/24/00 Time: 1445

Comments: 29

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

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MCA 3/15/91