142977

ANALYTICAL REPORT

JOB NUMBER: 200967

Prepared For:

RMT
222 S. Riverside Plaza
Suite 820
Chicago, IL 60606

Attention: Rae Mindock

Date: 11/20/2000

Signature

11/20/00
Date

Name: Eric A. Lang

Title: Project Manager

2417 Bond Street
University Park, IL 60466

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Severn Trent Laboratories - Chicago
GC/MS BNA Case Narrative

RMT-Riverdale Chemical
STS# 200967
BNA DATA: TCLP

1. The TCLP extraction, organic extraction, and all analyses were performed within recommended hold times.

2. The Method Blank and the TCLP Blank had all analytes below the reporting limits.

3. The LCS (Method Blank Spike) samples were LCS/LCD (prep 5927). A full list BNA spike solution was used (100 µg/mL), and 1.0 mL was spiked in the LCS samples. In-house statistical recovery limits were used and the compounds specified in the method were used for QC evaluation. All of the spike recoveries and RPD values for the specified compounds were within QC limits.

4. No Matrix Spike sample was extracted in this analytical batch.

5. All of the samples in this analytical batch had surrogates within in-house generated QC limits.

6. All analyses were performed following USEPA SW846 method 8270C protocol. All of the internal standard and surrogate peaks have been labeled by name. All of the samples had internal standard areas and retention times within acceptance limits as compared to the corresponding continuing calibration standard.

7. The sample and the TCLP Blank were extracted using 100 mL of the TCLP leachate. The Method Blank and the LCS samples were extracted using 1000 mL of deionized water. All of the samples were analyzed without dilution. The results and reporting limits were adjusted to account for the extraction volume.

Gary Rynkar
GC/MS BNA Unit Leader

11/19/00
Date

STL Chicago
Herbicide Case Narrative

RMT
Riverdale Chemical
Job #: 200967-1
TCLP Herbicides

1. STL Chicago uses the following Gas Chromatographic system for the analysis of herbicides:

ID#	INSTRUMENT	COLUMN TYPE	DETECTOR
32	Varian 3400	Rtx-35	Electron Capture
31	Varian 3400	Rtx-5	Electron Capture

2. This TCLP sample was extracted for TCLP Herbicides (2,4-D and 2,4,5-TP) based on SW846 method 8150B. The extracts were analyzed based on SW846 method 8151.

3. All required holding times were met for the extraction and analysis.

4. The method blanks were below the reporting limits for all target compounds.

5. Statistical control limits established for water samples have been applied TCLP matrix and are used as advisory limits.

6. The surrogate used for this analysis was DCAA. All surrogate recoveries were within statistical control limits.

7. The recovery for 2,4-D associated with the blank spike was biased low and below advisory limits with 42% recovery. The recovery for 2,45-TP was in control with 54% recovery.

8. A matrix spike was not performed on this sample.

9. All initial and continuing standard calibrations associated with this sample were in control for all target compounds on both columns.

10. All positive hits were confirmed using a second column.

Linda S Mackley
Linda S. Mackley
Organics Section Manager

11-14-00
Date

S A M P L E I N F O R M A T I O N
Date: 11/20/2000

Job Number.: 200967
Customer...: RMT
Attn.....: Rae Mindock

Project Number.....: 20000334
Customer Project ID....: RIVERDALE CHEMICAL
Project Description....: Riverdale Chemical

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
200967-1	DSL-16	Soil	11/07/2000	10:15	11/07/2000	11:20

LABORATORY TEST RESULTS

Job Number: 200967 Date: 11/20/2000

CUSTOMER: RMT PROJECT: RIVERDALE CHEMICAL ATTN: Rae Mindock

Customer Sample ID: DSL-16
Date Sampled.....: 11/07/2000
Time Sampled.....: 10:15
Sample Matrix.....: Soil

Laboratory Sample ID: 200967-1
Date Received.....: 11/07/2000
Time Received.....: 11:20

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
3010A	Acid Dig. Leachates (ICAP)					
	Acid Digestion (ICP), TCLP	Complete		Text	11/10/00	clb
1311	TCLP Extraction					
	TCLP Extraction, TCLP	Complete			11/08/00	pjm
1311	TCLP Zero Headspace Extraction					
	TCLP Zero Head Space (ZHE) Extraction, TCLP	Complete			11/10/00	pjm
8151A	Herbicides					
	2,4-D, TCLP	510	100	ug/L	11/14/00	lsm
	2,4,5-TP (Silvex), TCLP	ND	10	ug/L	11/14/00	lsm
8081A	Organochlorine Pesticide Analysis					
	gamma-BHC (Lindane), TCLP	ND	2.5	ug/L	11/13/00	lsm
	Heptachlor, TCLP	ND	2.5	ug/L	11/13/00	lsm
	Heptachlor epoxide, TCLP	ND	2.5	ug/L	11/13/00	lsm
	Endrin, TCLP	ND	5.0	ug/L	11/13/00	lsm
	Methoxychlor, TCLP	ND	25	ug/L	11/13/00	lsm
	Toxaphene, TCLP	ND	50	ug/L	11/13/00	lsm
	Chlordane, TCLP	ND	10	ug/L	11/13/00	lsm
7470A	Leachable, Mercury (CVAA)					
	Mercury (Hg), TCLP	<0.0020	0.0020	mg/L	11/14/00	gok
7470	SW846 Dig. Leachates (Hg)					
	Digestion, Mercury, TCLP	Complete		Text	11/14/00	gok
6010B	Leachable, Metals Analysis (ICAP)					
	Arsenic (As), TCLP	<0.100	0.100	mg/L	11/13/00	pfk
	Barium (Ba), TCLP	<1.00	1.00	mg/L	11/13/00	pfk
	Cadmium (Cd), TCLP	<0.050	0.050	mg/L	11/13/00	pfk
	Chromium (Cr), TCLP	<0.050	0.050	mg/L	11/13/00	pfk
	Lead (Pb), TCLP	0.116	0.050	mg/L	11/13/00	pfk
	Selenium (Se), TCLP	<0.100	0.100	mg/L	11/13/00	pfk
	Silver (Ag), TCLP	<0.050	0.050	mg/L	11/13/00	pfk
8150B	Extraction 8150B(Herbicides TCLP)					
	Separatory Funnel Liq/Liq Extraction, TCLP	Complete			11/12/00	dak
8270C	Semivolatile Organics					
	Pyridine, TCLP	ND	200	ug/L	11/13/00	glr
	1,4-Dichlorobenzene, TCLP	ND	100	ug/L	11/13/00	glr
	2-Methylphenol (o-cresol), TCLP	ND	100	ug/L	11/13/00	glr
	Hexachloroethane, TCLP	ND	100	ug/L	11/13/00	glr
	4-Methylphenol (m/p-cresol), TCLP	ND	100	ug/L	11/13/00	glr
	Nitrobenzene, TCLP	ND	100	ug/L	11/13/00	glr
	Hexachlorobutadiene, TCLP	ND	100	ug/L	11/13/00	glr
	2,4,6-Trichlorophenol, TCLP	ND	100	ug/L	11/13/00	glr

* In Description = Dry Wgt.

LABORATORY TEST RESULTS

Job Number: 200967 Date: 11/20/2000

CUSTOMER: RMT PROJECT: RIVERDALE CHEMICAL ATTN: Rae Mindock

Customer Sample ID: DSL-16
Date Sampled.....: 11/07/2000
Time Sampled.....: 10:15
Sample Matrix.....: Soil

Laboratory Sample ID: 200967-1
Date Received.....: 11/07/2000
Time Received.....: 11:20

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	2,4,5-Trichlorophenol, TCLP	ND	500	ug/L	11/13/00	glr
	2,4-Dinitrotoluene, TCLP	ND	100	ug/L	11/13/00	glr
	Hexachlorobenzene, TCLP	ND	100	ug/L	11/13/00	glr
	Pentachlorophenol, TCLP	ND	500	ug/L	11/13/00	glr
8260B	Volatile Organics (5mL Purge)					
	Vinyl chloride, TCLP	ND	100	ug/L	11/16/00	dpk
	1,1-Dichloroethene, TCLP	ND	100	ug/L	11/16/00	dpk
	2-Butanone (MEK), TCLP	ND	100	ug/L	11/16/00	dpk
	Chloroform, TCLP	ND	100	ug/L	11/16/00	dpk
	Carbon tetrachloride, TCLP	ND	100	ug/L	11/16/00	dpk
	Benzene, TCLP	ND	100	ug/L	11/16/00	dpk
	1,2-Dichloroethane, TCLP	ND	100	ug/L	11/16/00	dpk
	Trichloroethene, TCLP	ND	100	ug/L	11/16/00	dpk
	Tetrachloroethene, TCLP	ND	100	ug/L	11/16/00	dpk
	Chlorobenzene, TCLP	ND	100	ug/L	11/16/00	dpk

* In Description = Dry Wgt.

QUALITY CONTROL RESULTS

Job Number.: 200967 | Report Date.: 11/20/2000

CUSTOMER: RMT | PROJECT: RIVERDALE CHEMICAL | ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: 8151A | Units.....: ug/L | Analyst...: lsm
Method Description.: Herbicides | Batch.....: 5968

MB	Method Blank		5892	10.000	11/14/2000	0730

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
2,4-D	0								
2,4,5-TP (Silvex)	0								

LCS	Laboratory Control Sample	000GPLHERA	5892	10.000	11/14/2000	0802

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
2,4-D	0.2098			0.502000		42		48-131	*
2,4,5-TP (Silvex)	0.0561			0.103000		54		53-133	

EB1	Extraction Blank 1		5892	10.000	11/14/2000	0834

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
2,4-D	0								
2,4,5-TP (Silvex)	0								

MS	Matrix Spike	000GPLHERA	200983-1	10.000	11/14/2000	1136

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
2,4-D	0.2017			5.020000	0	40		48-131	*
2,4,5-TP (Silvex)	0.0543			1.030000	0	53		53-133	

Test Method.....: 8081A | Units.....: ug/L | Analyst...: lsm
Method Description.: Organochlorine Pesticide Analysis | Batch.....: 5943

MB	Method Blank		5929		11/13/2000	1421

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
gamma-BHC (Lindane)	0								
Heptachlor	0								
Heptachlor epoxide	0								
Endrin	0								
Methoxychlor	0								
Toxaphene	0								
Chlordane	0								

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967 | Report Date.: 11/20/2000

CUSTOMER: RMT | PROJECT: RIVERDALE CHEMICAL | ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	000KWLPTFA	5929		11/13/2000	1454

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
gamma-BHC (Lindane)	0.010			0.010000		100		56-125	
Heptachlor	0.009			0.010000		90		50-129	
Heptachlor epoxide	0.010			0.010000		100		59-126	
Endrin	0.010			0.010000		100		30-154	
Methoxychlor	0.109			0.100000		109		38-149	
Chlordane	0.009			0.010020		90		68-118	

LCS	Laboratory Control Sample	000HWLPTTA	5929		11/13/2000	1527

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Toxaphene	1.055			1.002000		105		65-138	

EB1	Extraction Blank 1		5929		11/13/2000	1601

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
gamma-BHC (Lindane)	0								
Heptachlor	0								
Heptachlor epoxide	0								
Endrin	0								
Methoxychlor	0								
Toxaphene	0								
Chlordane	0								

MS	Matrix Spike	000KWLPTFA	200983-1		11/13/2000	1741

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
gamma-BHC (Lindane)	0.011			0.010000	0	110		56-125	
Heptachlor	0.009			0.010000	0	90		50-129	
Heptachlor epoxide	0.010			0.010000	0	100		59-126	
Endrin	0.010			0.010000	0	100		30-154	
Methoxychlor	0.113			0.100000	0	113		38-149	
Toxaphene	0			0.000000	0	0		65-138	
Chlordane	0.009			0.010020	0	90		68-118	

Test Method.....: 6010B | Units.....: mg/L | Analyst...: pfk
Method Description.: Leachable, Metals Analysis (ICAP) | Batch.....: 6005

S0	Standard 0				11/13/2000	1735

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00182								
Barium (Ba)	0.00001								
Cadmium (Cd)	0.00130								
Chromium (Cr)	0.00007								
Lead (Pb)	0.00006								

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967

Report Date.: 11/20/2000

CUSTOMER: RMT

PROJECT: RIVERDALE CHEMICAL

ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
S0	Standard 0				11/13/2000	1735

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Selenium (Se)	-0.00037								
Silver (Ag)	-0.00019								

S3	Standard 3	M00KINT003			11/13/2000	1757

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	9.99643			10.000000		100		95-105	
Barium (Ba)	20.09874			20.000000		100		95-105	
Cadmium (Cd)	4.94427			5.000000		99		95-105	
Chromium (Cr)	9.93532			10.000000		99		95-105	
Lead (Pb)	9.84017			10.000000		98		95-105	
Selenium (Se)	9.87179			10.000000		99		95-105	
Silver (Ag)	2.00007			2.000000		100		95-105	

S3SI	Standard 3 SI	M99JSK1418			11/13/2000	1801

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.01501								
Barium (Ba)	0.03024								
Cadmium (Cd)	0.00538								
Chromium (Cr)	0.01422								
Lead (Pb)	0.01189								
Selenium (Se)	0.01427								
Silver (Ag)	0.00436								

ICV	Initial Calibration Verification	M00FICV002			11/13/2000	1805

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	4.02892			4.00		101		90-110	
Barium (Ba)	7.98030			8.000		100		90-110	
Cadmium (Cd)	1.98384			2.00		99		90-110	
Chromium (Cr)	3.98085			4.00		100		90-110	
Lead (Pb)	3.92122			4.00		98		90-110	
Selenium (Se)	3.97699			4.00		99		90-110	
Silver (Ag)	0.78925			0.800		99		90-110	

ICB	Initial Calibration Blank				11/13/2000	1809

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.00145								
Barium (Ba)	0.01310								
Cadmium (Cd)	0.00293								
Chromium (Cr)	0.00524								
Lead (Pb)	-0.00492								
Selenium (Se)	0.01362								
Silver (Ag)	0.00102								

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967 | Report Date.: 11/20/2000

CUSTOMER: RMT | PROJECT: RIVERDALE CHEMICAL | ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CRI	Contract Required Detection Limits	M00HCRI004			11/13/2000	1812

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.19277			0.20		96		50-150	
Barium (Ba)	0.40369			0.40		101		50-150	
Cadmium (Cd)	0.00989			0.01		99		50-150	
Chromium (Cr)	0.02102			0.02		105		50-150	
Lead (Pb)	0.09954			0.10		100		50-150	
Selenium (Se)	0.20514			0.20		103		50-150	
Silver (Ag)	0.01943			0.02		97		50-150	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
ISB	Interference Check Sample B	M00HISB003			11/13/2000	1819

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.31410			5.000		106		80-120	
Barium (Ba)	0.49782			0.50		100		80-120	
Cadmium (Cd)	0.97876			1.00		98		80-120	
Chromium (Cr)	0.48926			0.50		98		80-120	
Lead (Pb)	4.76643			5.000		95		80-120	
Selenium (Se)	5.02181			5		100		80-120	
Silver (Ag)	0.19258			0.20		96		80-120	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	M00JCCV002			11/13/2000	1822

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.17225			5.00		103		90-110	
Barium (Ba)	10.23052			10.00		102		90-110	
Cadmium (Cd)	2.54395			2.50		102		90-110	
Chromium (Cr)	5.13242			5.00		103		90-110	
Lead (Pb)	5.07240			5.00		101		90-110	
Selenium (Se)	5.10690			5.00		102		90-110	
Silver (Ag)	1.00363			1.00		100		90-110	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				11/13/2000	1826

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.01095								
Barium (Ba)	0.00209								
Cadmium (Cd)	-0.00095								
Chromium (Cr)	0.00141								
Lead (Pb)	-0.00371								
Selenium (Se)	0.00708								
Silver (Ag)	-0.00001								

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967 | Report Date.: 11/20/2000

CUSTOMER: RMT | PROJECT: RIVERDALE CHEMICAL | ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	M00JCCV002			11/13/2000	1903

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.00171			5.00		100		90-110	
Barium (Ba)	10.35836			10.00		104		90-110	
Cadmium (Cd)	2.48523			2.50		99		90-110	
Chromium (Cr)	5.01179			5.00		100		90-110	
Lead (Pb)	4.87151			5.00		97		90-110	
Selenium (Se)	4.99189			5.00		100		90-110	
Silver (Ag)	1.00161			1.00		100		90-110	

CCB	Continuing Calibration Blank				11/13/2000	1907

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00400								
Barium (Ba)	0.00140								
Cadmium (Cd)	-0.00129								
Chromium (Cr)	-0.00139								
Lead (Pb)	0.00511								
Selenium (Se)	-0.00268								
Silver (Ag)	-0.00043								

CCV	Continuing Calibration Verification	M00JCCV002			11/13/2000	1937

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	4.98640			5.00		100		90-110	
Barium (Ba)	10.38463			10.00		104		90-110	
Cadmium (Cd)	2.50419			2.50		100		90-110	
Chromium (Cr)	4.98319			5.00		100		90-110	
Lead (Pb)	4.89442			5.00		98		90-110	
Selenium (Se)	5.00092			5.00		100		90-110	
Silver (Ag)	1.00694			1.00		101		90-110	

CCB	Continuing Calibration Blank				11/13/2000	1940

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00553								
Barium (Ba)	0.00214								
Cadmium (Cd)	0.00030								
Chromium (Cr)	0.00213								
Lead (Pb)	0.00554								
Selenium (Se)	0.00298								
Silver (Ag)	-0.00020								

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967

Report Date.: 11/20/2000

CUSTOMER: RMT

PROJECT: RIVERDALE CHEMICAL

ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CRI	Contract Required Detection Limits	M00HCRI004			11/13/2000	1944

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.20273			0.20		101		50-150	
Barium (Ba)	0.40547			0.40		101		50-150	
Cadmium (Cd)	0.00954			0.01		95		50-150	
Chromium (Cr)	0.02144			0.02		107		50-150	
Lead (Pb)	0.10397			0.10		104		50-150	
Selenium (Se)	0.19573			0.20		98		50-150	
Silver (Ag)	0.02077			0.02		104		50-150	

ISB	Interference Check Sample B	M00HISB003			11/13/2000	1950

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.15995			5.000		103		80-120	
Barium (Ba)	0.50279			0.50		101		80-120	
Cadmium (Cd)	0.96274			1.00		96		80-120	
Chromium (Cr)	0.47726			0.50		95		80-120	
Lead (Pb)	4.63952			5.000		93		80-120	
Selenium (Se)	4.92165			5		98		80-120	
Silver (Ag)	0.19364			0.20		97		80-120	

CCV	Continuing Calibration Verification	M00JCCV002			11/13/2000	1954

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.01560			5.00		100		90-110	
Barium (Ba)	10.36231			10.00		104		90-110	
Cadmium (Cd)	2.49119			2.50		100		90-110	
Chromium (Cr)	5.00053			5.00		100		90-110	
Lead (Pb)	4.90293			5.00		98		90-110	
Selenium (Se)	4.96728			5.00		99		90-110	
Silver (Ag)	1.00233			1.00		100		90-110	

CCB	Continuing Calibration Blank				11/13/2000	1957

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.00234								
Barium (Ba)	0.00288								
Cadmium (Cd)	0.00016								
Chromium (Cr)	0.00075								
Lead (Pb)	-0.00686								
Selenium (Se)	0.00362								
Silver (Ag)	0.00012								

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967

Report Date.: 11/20/2000

CUSTOMER: RMT

PROJECT: RIVERDALE CHEMICAL

ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
EB1	Extraction Blank 1		5823		11/13/2000	2000

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.01583								
Barium (Ba)	0.65866								
Cadmium (Cd)	-0.00128								
Chromium (Cr)	0.00184								
Lead (Pb)	-0.00930								
Selenium (Se)	-0.00030								
Silver (Ag)	-0.00001								

EB1	Extraction Blank 1		5823		11/13/2000	2004

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.01899								
Barium (Ba)	0.12136								
Cadmium (Cd)	-0.00014								
Chromium (Cr)	0.00094								
Lead (Pb)	0.01304								
Selenium (Se)	-0.00932								
Silver (Ag)	-0.00089								

LCS	Laboratory Control Sample	M001SPK002	5823		11/13/2000	2007

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	1.77952			2.000000		89		80-120	
Barium (Ba)	1.88996			2.000000		94		80-120	
Cadmium (Cd)	0.04538			0.050000		91		80-120	
Chromium (Cr)	0.18649			0.200000		93		80-120	
Lead (Pb)	0.43092			0.500000		86		80-120	
Selenium (Se)	1.78539			2.000000		89		80-120	
Silver (Ag)	0.04426			0.050000		89		80-120	

MD	Method Duplicate		200954-1		11/13/2000	2017

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.01916				0.00824	0.0109		0.1000	
Barium (Ba)	0.63186				0.60817	0.0237		1.0000	
Cadmium (Cd)	0.00008				-0.00158	0.0017		0.0500	
Chromium (Cr)	0.01497				0.01378	0.0012		0.0500	
Lead (Pb)	-0.00195				-0.00518	0.0032		0.0500	
Selenium (Se)	-0.00051				-0.00107	0.0006		0.1000	
Silver (Ag)	-0.00052				-0.00106	0.0005		0.0500	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967 | Report Date.: 11/20/2000

CUSTOMER: RMT | PROJECT: RIVERDALE CHEMICAL | ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	M00HSPK004	200954-1		11/13/2000	2020

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	4.64684			5.00	0.00824	93		50-150	
Barium (Ba)	96.75449			100.00	0.60817	97		50-150	
Cadmium (Cd)	0.90296			1.00	-0.00158	90		50-150	
Chromium (Cr)	4.71648			5.00	0.01378	94		50-150	
Lead (Pb)	4.71728			5.00	-0.00518	94		50-150	
Selenium (Se)	0.91854			1.00	-0.00107	92		50-150	
Silver (Ag)	0.91641			1.00	-0.00106	92		50-150	

SD	Serial Dilution		200954-1		11/13/2000	2024

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.00033				0.00824				
Barium (Ba)	0.13521				0.60817				
Cadmium (Cd)	-0.00102				-0.00158				
Chromium (Cr)	0.00323				0.01378				
Lead (Pb)	0.01104				-0.00518				
Selenium (Se)	-0.00154				-0.00107				
Silver (Ag)	0.00079				-0.00106				

CCV	Continuing Calibration Verification	M00JCCV002			11/13/2000	2034

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.21390			5.00		104		90-110	
Barium (Ba)	10.24396			10.00		102		90-110	
Cadmium (Cd)	2.55395			2.50		102		90-110	
Chromium (Cr)	5.15012			5.00		103		90-110	
Lead (Pb)	5.12830			5.00		103		90-110	
Selenium (Se)	5.17388			5.00		103		90-110	
Silver (Ag)	1.01011			1.00		101		90-110	

CCB	Continuing Calibration Blank				11/13/2000	2037

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.00253								
Barium (Ba)	0.00521								
Cadmium (Cd)	0.00147								
Chromium (Cr)	0.00099								
Lead (Pb)	-0.00987								
Selenium (Se)	0.00160								
Silver (Ag)	-0.00063								

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967

Report Date.: 11/20/2000

CUSTOMER: RMT

PROJECT: RIVERDALE CHEMICAL

ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	M00JCCV002			11/13/2000	2114

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.36634			5.00		107		90-110	
Barium (Ba)	10.13788			10.00		101		90-110	
Cadmium (Cd)	2.59012			2.50		104		90-110	
Chromium (Cr)	5.24455			5.00		105		90-110	
Lead (Pb)	5.28456			5.00		106		90-110	
Selenium (Se)	5.37306			5.00		107		90-110	
Silver (Ag)	1.00734			1.00		101		90-110	

CCB	Continuing Calibration Blank				11/13/2000	2117

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00641								
Barium (Ba)	0.00268								
Cadmium (Cd)	0.00000								
Chromium (Cr)	0.00331								
Lead (Pb)	0.00046								
Selenium (Se)	0.00915								
Silver (Ag)	0.00051								

CCV	Continuing Calibration Verification	M00JCCV002			11/13/2000	2154

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.49854			5.00		110		90-110	
Barium (Ba)	10.04494			10.00		100		90-110	
Cadmium (Cd)	2.62792			2.50		105		90-110	
Chromium (Cr)	5.31016			5.00		106		90-110	
Lead (Pb)	5.46022			5.00		109		90-110	
Selenium (Se)	5.46477			5.00		109		90-110	
Silver (Ag)	1.00716			1.00		101		90-110	

CCB	Continuing Calibration Blank				11/13/2000	2158

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.01203								
Barium (Ba)	0.01531								
Cadmium (Cd)	0.00424								
Chromium (Cr)	0.00918								
Lead (Pb)	-0.00025								
Selenium (Se)	0.01244								
Silver (Ag)	0.00102								

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967

Report Date.: 11/20/2000

CUSTOMER: RMT

PROJECT: RIVERDALE CHEMICAL

ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CRI	Contract Required Detection Limits	M00HCRI004			11/13/2000	2201

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.21162			0.20		106		50-150	
Barium (Ba)	0.39544			0.40		99		50-150	
Cadmium (Cd)	0.00993			0.01		99		50-150	
Chromium (Cr)	0.02038			0.02		102		50-150	
Lead (Pb)	0.10719			0.10		107		50-150	
Selenium (Se)	0.20310			0.20		102		50-150	
Silver (Ag)	0.01789			0.02		89		50-150	

ISB	Interference Check Sample B	M00HISB003			11/13/2000	2208

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.57179			5.000		111		80-120	
Barium (Ba)	0.49153			0.50		98		80-120	
Cadmium (Cd)	1.00079			1.00		100		80-120	
Chromium (Cr)	0.50023			0.50		100		80-120	
Lead (Pb)	5.09474			5.000		102		80-120	
Selenium (Se)	5.31818			5		106		80-120	
Silver (Ag)	0.19260			0.20		96		80-120	

CCV	Continuing Calibration Verification	M00JCCV002			11/13/2000	2211

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	5.41587			5.00		108		90-110	
Barium (Ba)	10.13797			10.00		101		90-110	
Cadmium (Cd)	2.61487			2.50		105		90-110	
Chromium (Cr)	5.24969			5.00		105		90-110	
Lead (Pb)	5.34094			5.00		107		90-110	
Selenium (Se)	5.40717			5.00		108		90-110	
Silver (Ag)	1.00972			1.00		101		90-110	

CCB	Continuing Calibration Blank				11/13/2000	2214

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.01436								
Barium (Ba)	0.01435								
Cadmium (Cd)	0.00444								
Chromium (Cr)	0.00771								
Lead (Pb)	0.00506								
Selenium (Se)	0.01426								
Silver (Ag)	0.00192								

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967

Report Date.: 11/20/2000

CUSTOMER: RMT | PROJECT: RIVERDALE CHEMICAL | ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: 8270C
Method Description.: Semivolatile Organics

Units.....: ug/L
Batch.....: 5924

Analyst...: glr

MB	Method Blank		5927		11/13/2000	1610

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Pyridine	0								
1,4-Dichlorobenzene	0								
2-Methylphenol (o-cresol)	0								
Hexachloroethane	0								
4-Methylphenol (m/p-cresol)	0								
Nitrobenzene	0								
Hexachlorobutadiene	0								
2,4,6-Trichlorophenol	0								
2,4,5-Trichlorophenol	0								
2,4-Dinitrotoluene	0								
Hexachlorobenzene	0								
Pentachlorophenol	0								

LCS	Laboratory Control Sample	000JWLBNAE	5927		11/13/2000	1641

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Pyridine	40.2677			100		40		10-96	
1,4-Dichlorobenzene	59.2017			100		59		34-99	
2-Methylphenol (o-cresol)	68.8024			100		69		50-95	
Hexachloroethane	57.3736			100		57		31-94	
4-Methylphenol (m/p-cresol)	64.1335			100		64		49-96	
Nitrobenzene	62.8453			100		63		56-105	
Hexachlorobutadiene	53.3266			100		53		37-108	
2,4,6-Trichlorophenol	69.1242			100		69		63-103	
2,4,5-Trichlorophenol	72.0779			100		72		64-110	
2,4-Dinitrotoluene	75.3327			100		75		64-118	
Hexachlorobenzene	73.7838			100		74		66-109	
Pentachlorophenol	65.8766			100		66		54-125	

EB1	Extraction Blank 1		5927		11/13/2000	1712

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Pyridine	0								
1,4-Dichlorobenzene	0								
2-Methylphenol (o-cresol)	0								
Hexachloroethane	0								
4-Methylphenol (m/p-cresol)	0								
Nitrobenzene	0								
Hexachlorobutadiene	0								
2,4,6-Trichlorophenol	0								
2,4,5-Trichlorophenol	0								
2,4-Dinitrotoluene	0								
Hexachlorobenzene	0								
Pentachlorophenol	0								

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967

Report Date.: 11/20/2000

CUSTOMER: RMT

PROJECT: RIVERDALE CHEMICAL

ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: 8260B
Method Description.: Volatile Organics (5mL Purge)

Units.....: ug/L
Batch.....: 6183

Analyst...: dpk

MB	Method Blank		6178		11/16/2000	1421

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Vinyl chloride	0								
1,1-Dichloroethene	0								
2-Butanone (MEK)	0								
Chloroform	0								
Carbon tetrachloride	0								
Benzene	0								
1,2-Dichloroethane	0								
Trichloroethene	0								
Tetrachloroethene	0								
Chlorobenzene	0								

LCS	Laboratory Control Sample	V00K16DSB	6178		11/16/2000	1505

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Vinyl chloride	58.8078			50.00		118		51-138	
1,1-Dichloroethene	43.3354			50.00		87		53-136	
2-Butanone (MEK)	46.1467			50.00		92		38-132	
Chloroform	48.1821			50.00		96		71-132	
Carbon tetrachloride	50.1072			50.00		100		69-133	
Benzene	47.7762			50.00		96		71-122	
1,2-Dichloroethane	50.9184			50.00		102		70-128	
Trichloroethene	48.9486			50.00		98		78-126	
Tetrachloroethene	46.0718			50.00		92		74-132	
Chlorobenzene	47.3967			50.00		95		83-123	

EB1	Extraction Blank 1		6178		11/16/2000	1645

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Vinyl chloride	0								
1,1-Dichloroethene	0								
2-Butanone (MEK)	0								
Chloroform	0								
Carbon tetrachloride	0								
Benzene	0								
1,2-Dichloroethane	0								
Trichloroethene	0								
Tetrachloroethene	0								
Chlorobenzene	0								

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967

Report Date.: 11/20/2000

CUSTOMER: RMT

PROJECT: RIVERDALE CHEMICAL

ATTN: Rae Mindock

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	V00K16DSB	200967-1		11/16/2000	1936

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Vinyl chloride	59.7681			50.00	0	120		51-138	
1,1-Dichloroethene	44.1059			50.00	0	88		53-136	
2-Butanone (MEK)	47.5110			50.00	0	95		38-132	
Chloroform	50.4025			50.00	0	101		71-132	
Carbon tetrachloride	44.7246			50.00	0	89		69-133	
Benzene	46.6807			50.00	0	93		71-122	
1,2-Dichloroethane	49.1222			50.00	0	98		70-128	
Trichloroethene	47.7584			50.00	0	96		78-126	
Tetrachloroethene	50.2320			50.00	0	100		74-132	
Chlorobenzene	49.1891			50.00	0	98		83-123	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 200967 | Report Date.: 11/20/2000

CUSTOMER: RMT | PROJECT: RIVERDALE CHEMICAL | ATTN: Rae Mindock

Test Method.....: 7470A | Batch.....: 5976 | Analyst...: gok
Method Description.: Leachable, Mercury (CVAA) | Units.....: ug/L | Test Code.: HG
Parameter.....: Mercury (Hg)

QC	Lab ID	Reagent	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
ICV		M99DSK1342	2.016444			2.000000		101	90-110		11/14/2000	1520
ICB			-0.02759								11/14/2000	1523
CRA		M00JSK1564	0.187026			0.200000		94	50-150		11/14/2000	1525
MB	5975		-0.00029								11/14/2000	1527
LCS	5975	M99DSK1342	1.994334			2.000000		100	80-120		11/14/2000	1529
EB1	5975		-0.02556								11/14/2000	1532
MD	200932-1		-0.00118				-0.01532	0.1414	2.0000		11/14/2000	1536
MS	200932-1	M00DSK1485	0.735513			20	-0.01532	74	50-150		11/14/2000	1539
CCV		M99DSK1342	0.95158			1.000000		95	90-110		11/14/2000	1543
CCB			-0.03101								11/14/2000	1545
EB2	5975		-0.00369								11/14/2000	1556
MD	200983-1		-0.01303				0.000585	0.1361	2.0000		11/14/2000	1601
MS	200983-1	M00DSK1485	0.575357			20	0.000585	58	50-150		11/14/2000	1603
CCV		M99DSK1342	0.945814			1.000000		95	90-110		11/14/2000	1610
CCB			-0.03131								11/14/2000	1612
MD	200997-1		-0.00224				-0.00653	0.0429	2.0000		11/14/2000	1621
MS	200997-1	M00DSK1485	0.704973			20	-0.00653	70	50-150		11/14/2000	1623
CCV		M99DSK1342	0.935813			1.000000		94	90-110		11/14/2000	1628
CCB			-0.01284								11/14/2000	1630

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

SURROGATE RECOVERIES REPORT

Job Number.: 200967 Report Date.: 11/20/2000

CUSTOMER: RMT PROJECT: RIVERDALE CHEMICAL ATTN: Rae Mindock

Method.....: Semivolatile Organics Batch.....: 5924
Method Code.....: 8270 Analyst.....: glr

Surrogate	Units
2,4,6-Tribromophenol (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
5927	TCLP	MB	1.00000	56.6256	75.0	76	29-126		11/13/2000	1610
5927	TCLP	LCS	1.00000	61.1612	75.0	82	29-126		11/13/2000	1641
5927	TCLP	EB1	1.00000	56.5910	75.0	75	29-126		11/13/2000	1712
200967-1	TCLP		1.00000	62.4214	75.0	83	29-126		11/13/2000	1743

Surrogate	Units
2-Fluorobiphenyl (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
5927	TCLP	MB	1.00000	31.0914	50.0	62	34-112		11/13/2000	1610
5927	TCLP	LCS	1.00000	35.7641	50.0	72	34-112		11/13/2000	1641
5927	TCLP	EB1	1.00000	30.0359	50.0	60	34-112		11/13/2000	1712
200967-1	TCLP		1.00000	32.1854	50.0	64	34-112		11/13/2000	1743

Surrogate	Units
2-Fluorophenol (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
5927	TCLP	MB	1.00000	33.6152	75.0	45	21-97		11/13/2000	1610
5927	TCLP	LCS	1.00000	36.7005	75.0	49	21-97		11/13/2000	1641
5927	TCLP	EB1	1.00000	34.3245	75.0	46	21-97		11/13/2000	1712
200967-1	TCLP		1.00000	35.4018	75.0	47	21-97		11/13/2000	1743

Surrogate	Units
Nitrobenzene-d5 (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
5927	TCLP	MB	1.00000	33.0227	50.0	66	38-113		11/13/2000	1610
5927	TCLP	LCS	1.00000	35.0648	50.0	70	38-113		11/13/2000	1641
5927	TCLP	EB1	1.00000	32.7394	50.0	65	38-113		11/13/2000	1712
200967-1	TCLP		1.00000	34.8393	50.0	70	38-113		11/13/2000	1743

SURROGATE RECOVERIES REPORT

Job Number.: 200967 | Report Date.: 11/20/2000

CUSTOMER: RMT | PROJECT: RIVERDALE CHEMICAL | ATTN: Rae Mindock

Surrogate	Units
Phenol-d5 (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
5927	TCLP	MB	1.00000	23.1297	75.0	31	18-97		11/13/2000	1610
5927	TCLP	LCS	1.00000	25.1031	75.0	33	18-97		11/13/2000	1641
5927	TCLP	EB1	1.00000	23.9555	75.0	32	18-97		11/13/2000	1712
200967-1	TCLP		1.00000	25.0367	75.0	33	18-97		11/13/2000	1743

Surrogate	Units
Terphenyl-d14 (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
5927	TCLP	MB	1.00000	38.0745	50.0	76	10-119		11/13/2000	1610
5927	TCLP	LCS	1.00000	45.5704	50.0	91	10-119		11/13/2000	1641
5927	TCLP	EB1	1.00000	37.9408	50.0	76	10-119		11/13/2000	1712
200967-1	TCLP		1.00000	38.1721	50.0	76	10-119		11/13/2000	1743

Method.....: Organochlorine Pesticide Analysis | Batch.....: 5943
Method Code.....: 8081 | Analyst.....: lsm

Surrogate	Units
Decachlorobiphenyl (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
5929	TCLP	MB	1.0000	0.040	0.04014	100	10-117		11/13/2000	1421
5929	TCLP	LCS	1.0000	0.036	0.04014	90	10-117		11/13/2000	1454
5929	TCLP	LCS	1.0000	0.038	0.04014	95	10-117		11/13/2000	1527
5929	TCLP	EB1	1.0000	0.042	0.04014	105	10-117		11/13/2000	1601
200967-1	TCLP		1.0000	0.038	0.04014	95	10-117		11/13/2000	1634
200983-1	TCLP		1.0000	0.028	0.04014	70	10-117		11/13/2000	1708
200983-1	TCLP	MS	1.0000	0.043	0.04014	107	10-117		11/13/2000	1741
200983-1	TCLP	MS	1.0000	0.044	0.04014	110	10-117		11/13/2000	1814
201017-1	TCLP		1.0000	0.042	0.04014	105	10-117		11/13/2000	1848

Surrogate	Units
Tetrachloro-m-xylene (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
5929	TCLP	MB	1.0000	0.034	0.04012	85	15-130		11/13/2000	1421
5929	TCLP	LCS	1.0000	0.036	0.04012	90	15-130		11/13/2000	1454
5929	TCLP	LCS	1.0000	0.038	0.04012	95	15-130		11/13/2000	1527
5929	TCLP	EB1	1.0000	0.038	0.04012	95	15-130		11/13/2000	1601

SURROGATE RECOVERIES REPORT

Job Number.: 200967 Report Date.: 11/20/2000

CUSTOMER: RMT PROJECT: RIVERDALE CHEMICAL ATTN: Rae Mindock

Surrogate	Units
Tetrachloro-m-xylene (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
200967-1	TCLP		1.0000	0.039	0.04012	97	15-130		11/13/2000	1634
200983-1	TCLP		1.0000	0.024	0.04012	60	15-130		11/13/2000	1708
200983-1	TCLP	MS	1.0000	0.036	0.04012	90	15-130		11/13/2000	1741
200983-1	TCLP	MS	1.0000	0.037	0.04012	92	15-130		11/13/2000	1814
201017-1	TCLP		1.0000	0.035	0.04012	87	15-130		11/13/2000	1848

Method.....: Herbicides Batch.....: 5968
Method Code.....: 8151 Analyst.....: lsm

Surrogate	Units
DCAA (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
5892	TCLP	MB	10.000	0.3141	5.0142	63	41-146		11/14/2000	0730
5892	TCLP	LCS	10.000	0.3512	5.0142	70	41-146		11/14/2000	0802
5892	TCLP	EB1	10.000	0.4308	5.0142	86	41-146		11/14/2000	0834
200967-1	TCLP		10.000	0.4658	5.0142	93	41-146		11/14/2000	0906
200983-1	TCLP		10.000	0.4048	5.0142	81	41-146		11/14/2000	1103
200983-1	TCLP	MS	10.000	0.3465	5.0142	69	41-146		11/14/2000	1136
201017-1	TCLP		10.000	0.3668	5.0142	73	41-146		11/14/2000	1208

Method.....: Volatile Organics (5mL Purge) Batch.....: 6183
Method Code.....: 8260.5 Analyst.....: dpk

Surrogate	Units
1,2-Dichloroethane-d4 (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
6178	TCLP	MB	1.00000	48.2793	50.00	97	66-132		11/16/2000	1421
6178	TCLP	LCS	1.00000	52.4980	50.00	105	66-132		11/16/2000	1505
6178	TCLP	EB1	1.00000	50.6272	50.00	101	66-132		11/16/2000	1645
200967-1	TCLP		1.00000	50.0855	50.00	100	66-132		11/16/2000	1902
200967-1	TCLP	MS	1.0000	49.2154	50.00	98	66-132		11/16/2000	1936

SURROGATE RECOVERIES REPORT

Job Number.: 200967 | Report Date.: 11/20/2000

CUSTOMER: RMT | PROJECT: RIVERDALE CHEMICAL | ATTN: Rae Mindock

Surrogate	Units
4-Bromofluorobenzene (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
6178	TCLP	MB	1.00000	49.2843	50.00	99	79-122		11/16/2000	1421
6178	TCLP	LCS	1.00000	52.4620	50.00	105	79-122		11/16/2000	1505
6178	TCLP	EB1	1.00000	49.1442	50.00	98	79-122		11/16/2000	1645
200967-1	TCLP		1.00000	49.5352	50.00	99	79-122		11/16/2000	1902
200967-1	TCLP	MS	1.0000	50.3516	50.00	101	79-122		11/16/2000	1936

Surrogate	Units
Dibromofluoromethane (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
6178	TCLP	MB	1.00000	46.4336	50.00	93	66-132		11/16/2000	1421
6178	TCLP	LCS	1.00000	49.0787	50.00	98	66-132		11/16/2000	1505
6178	TCLP	EB1	1.00000	51.0564	50.00	102	66-132		11/16/2000	1645
200967-1	TCLP		1.00000	51.9747	50.00	104	66-132		11/16/2000	1902
200967-1	TCLP	MS	1.0000	50.8209	50.00	102	66-132		11/16/2000	1936

Surrogate	Units
Toluene-d8 (surr)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
6178	TCLP	MB	1.00000	49.0913	50.00	98	78-128		11/16/2000	1421
6178	TCLP	LCS	1.00000	54.4630	50.00	109	78-128		11/16/2000	1505
6178	TCLP	EB1	1.00000	49.0483	50.00	98	78-128		11/16/2000	1645
200967-1	TCLP		1.00000	47.2607	50.00	95	78-128		11/16/2000	1902
200967-1	TCLP	MS	1.0000	50.1157	50.00	100	78-128		11/16/2000	1936

L A B O R A T O R Y C H R O N I C L E

Job Number: 200967 Date: 11/20/2000

CUSTOMER: RMT PROJECT: RIVERDALE CHEMICAL ATTN: Rae Mindock

Lab ID: 200967-1 Client ID: DSL-16 Date Recvd: 11/07/2000 Sample Date: 11/07/2000

METHOD	DESCRIPTION	RUN#	BATCH#	PREP #	DATE/TIME ANALYZED		DILUTION
5030 TCLP/SPLP	5030CP TCLP/SPLP Prep	1	6178		11/16/2000	1902	
3010A	Acid Dig. Leachates (ICAP)	1	5823		11/10/2000	1440	
8150B	Extraction 8150B(Herbicides TCLP)	1	5892		11/12/2000	0000	
3510C	Extraction for TCLP (Chlor.Pest)	1	5929		11/12/2000	0000	
3510C	Extraction for TCLP (SVOC)	1	5927		11/12/2000	0000	
8151A	Herbicides	1	5968	5892	11/14/2000	0906	10.000
7470A	Leachable, Mercury (CVAA)	1	5976	5975	11/14/2000	1554	
6010B	Leachable, Metals Analysis (ICAP)	1	6005	5823	11/13/2000	2010	
8081A	Organochlorine Pesticide Analysis	1	5943	5929	11/13/2000	1634	1.0000
7470	SW846 Dig. Leachates (Hg)	1	5975		11/14/2000	1125	
8270C	Semivolatile Organics	1	5924	5927	11/13/2000	1743	1.00000
1311	TCLP Extraction	1	5794		11/08/2000	1630	
1311	TCLP Zero Headspace Extraction	1	5798		11/10/2000	1530	
8260B	Volatile Organics (5mL Purge)	1	6183	6178	11/16/2000	1902	1.00000

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 11/20/2000

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2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.

3) Reporting limits are adjusted for preparation sample size, sample dilutions and moisture content if analyzed on a dry weight basis.

4) The test results for the noted analytical method(s) meet the requirements of NELAC and the Illinois EPA Rules and Regulations Part 186, where applicable.

   IEPA Certification ID# 100201
   NY Certification ID# 11006

5) According to 40CFR Part 136.3, pH, Sulfite, Chloride Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g., pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviation

Inorganic Qualifiers

U Analyte was not detected at or above the reporting limit.
< Not detected at or above the reporting limit.
J Result is less than the RL, but greater than or equal to the method detection limit.
B CLP: Result is less than the CRDL, but greater than or equal to the instrument detection limit.
S Result was determined by the Method of Standard Additions.

Inorganic Flags

^ ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, MRL: Instrument related QC exceed the upper or lower control limits.
H MB, EB: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit.
* LCS, LCD, MSD, MD, PS, PSD: Batch QC exceeds the upper or lower control limits.
N MS, MSD: Spike recovery exceeds the upper or lower control limits.
4 MS, MSD: The analyte present in the original sample 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
E SD: Serial dilution exceeds the control limits.
W PS: Post-digestion spike was outside 85-115% control limits.
+ MSA correlation coefficient is less than 0.995.

Organic Qualifiers (Q - Column)

U Analyte was not detected at or above the reporting limit.
ND Compound not detected.
J/B Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
M Manually integrated compound.
Q Result was qualitatively confirmed, but not quantified.
I Indicates the presence of an interference.
C Pesticide identification was confirmed by GC/MS.
Y The chromatographic response resembles a typical fuel pattern.
Z The chromatographic response does not resemble a typical fuel pattern.
E Result exceeded calibration range, secondary dilution required.

Organic Flags (Flags Column)

^ MB,EB, MLE: Batch QC is greater than reporting limit.
* LCS, LCD, CCV, MS, MSD, Surrogate, RS:Batch QC exceeds the upper or lower control limits.
A Concentration exceeds the instrument calibration range or below the reporting limit.
B Compound was found in the blank and sample.
D Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.
H Alternate peak selection upon analytical review
I Indicates the presence of an interfence, recovery is not calculated.
P The lower of the two values is reported when the percent difference between the results of two GC columns is greater than 25%.

Abbreviations

Batch	Designation given to identify a specific extraction, digestion, preparation set, or analysis set
CAP	Capillary Column
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
Contract	Contract laboratory identification code
CRA	Low Level Standard Check - GFAA; Mercury
CRI	Low Level Standard Check - ICP
Dil Fac	Dilution Factor
DL	Secondary dilution was performed
DL Fac	Detection Limit Factor
DSH	Distilled Standard - High Level
DSL	Distilled Standard - Low Level
DSM	Distilled Standard - Medium Level
EB	Extraction Blank
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ISA	Interference Check Sample A
ISB	Interference Check Sample B
Job No.	The first six digits of the sample ID which refers to a specific client, project and sample group
Lab ID	An 8 number unique laboratory identification
LCD	Laboratory Control Standard Duplicate
LCS	Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
MB	Method Blank or (PB) Preparation Blank
MD	Method Duplicate
MDL	Method Detection Limit
MLE	Medium Level Extraction Blank
MRL	Method Reporting Limit Standard
MSA	Method of Standard Additions
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not Detected
PACK	Packed Column
PREPF	Calculation factor used by the Laboratory's Information Management System (LIMS)
PS	Post Spike
PSD	Post Spike Duplicate
RA	Re-analysis
RE	Re-extraction and analysis
RL	Reporting Limit
RPD	Relative Percent Difference of duplicate (unrounded) analyses
RRF	Relative Response Factor
RS	Reference Standard
RT	Retention Time
RTW	Retention Time Window
SampleID	A 9 digit number unique for each sample, the first six digits are referred as the job number
SCB	Seeded Control Blank
SD	Serial Dilution
UCB	Unseeded Control Blank

NOTES

One or a combination of these data qualifiers and abbreviations may appear in the analytical report.

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RT	Retention Time
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UCB	Unseeded Control Blank

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SEVERN TRENT SERVICES

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact:
Company:
Address:
Phone:
Fax:
E-Mail:

Bill To:
Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only ____ of ____

Lab Lot# 200967

Package Sealed	Samples Sealed
Yes (No)	Yes (No)
Received on Ice	**Samples Intact**
(Yes) No	(Yes) No

Temperature °C of Cooler 5.9c

Within Hold Time	Preserv. Indicated
(Yes) No	Yes (No) NA
pH Check OK	**Res Cl_2 Check OK**
Yes No (NA)	Yes No (NA)

Sample Labels and COC Agree: (Yes) No COC not present

Sampler Name:
Signature:
Project Name:
Project Number:
Project Location:
Lab PM:
Date Required
Hard Copy: ___/___/___
Fax: ___/___/___

Refrg #	2
# / Cont.	16
Volume	40 ml
Preserv	—

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab			Additional Analyses / Remarks
1		[illegible]	[illegible]			G		x	

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
				[illegible]	STL	11/7/00	1120
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4
6. Cool to 4°
7. None

COMMENTS

Date Received 11 / 7 / 00

Courier: **Hand Delivered** ☑

Bill of Lading