192763

ANALYTICAL REPORT

JOB NUMBER: 201093

Prepared For:

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

Attention: Rae Mindock

Date: 11/28/2000

Signature

Date: 11/28/00

Name: Eric A. Lang

Title: Project Manager

STL Chicago
2417 Bond Street
University Park, IL 60466

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S A M P L E I N F O R M A T I O N
Date: 11/28/2000

Job Number.: 201093
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
201093-1	DSL 22	Soil	11/15/2000	14:40	11/16/2000	10:00

LABORATORY TEST RESULTS

Job Number: 201093 Date: 11/28/2000

CUSTOMER: RMT PROJECT: RIVERDALE CHEMICAL ATTN: Rae Mindock

Customer Sample ID: DSL 22
Date Sampled.....: 11/15/2000
Time Sampled.....: 14:40
Sample Matrix.....: Soil

Laboratory Sample ID: 201093-1
Date Received.....: 11/16/2000
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
1311	TCLP Extraction					
	TCLP Extraction, TCLP	Complete			11/17/00	pjm
8081A	Organochlorine Pesticide Analysis					
	gamma-BHC (Lindane), TCLP	ND	2.5	ug/L	11/21/00	lsm
	Heptachlor, TCLP	ND	2.5	ug/L	11/21/00	lsm
	Heptachlor epoxide, TCLP	ND	2.5	ug/L	11/21/00	lsm
	Endrin, TCLP	ND	5.0	ug/L	11/21/00	lsm
	Methoxychlor, TCLP	ND	25	ug/L	11/21/00	lsm
	Toxaphene, TCLP	ND	50	ug/L	11/21/00	lsm
	Chlordane, TCLP	ND	10	ug/L	11/21/00	lsm
3520C	Extraction for TCLP (Chlor.Pest.)					
	Continuous Liq./Liq. Extraction, TCLP	Complete			11/20/00	dak

* In Description = Dry Wgt.

QUALITY CONTROL RESULTS

Job Number.: 201093 | Report Date.: 11/28/2000

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

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

Test Method.....: 8081A | Units.....: ug/L | Analyst...: lsm
Method Description.: Organochlorine Pesticide Analysis | Batch.....: 6658

MB	Method Blank		6363		11/21/2000	1452

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								

LCS	Laboratory Control Sample	000KWLPTFA	6363		11/21/2000	1525

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
gamma-BHC (Lindane)	0.00958			0.010000		96		56-125	
Heptachlor	0.00938			0.010000		94		50-129	
Heptachlor epoxide	0.00986			0.010000		99		59-126	
Endrin	0.00999			0.010000		100		30-154	
Methoxychlor	0.10753			0.100000		108		38-149	
Chlordane	0.01009			0.010020		101		68-118	

LCS	Laboratory Control Sample	000HWLPTTA	6363		11/21/2000	1558

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Toxaphene	0.95598			1.002000		95		65-138	

EB1	Extraction Blank 1		6363		11/21/2000	1632

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	201093-1		11/21/2000	1738

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
gamma-BHC (Lindane)	0.01032			0.010000	0	103		56-125	
Heptachlor	0.00994			0.010000	0	99		50-129	
Heptachlor epoxide	0.01058			0.010000	0	106		59-126	
Endrin	0.01047			0.010000	0	105		30-154	
Methoxychlor	0.11222			0.100000	0	112		38-149	

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

QUALITY CONTROL RESULTS

Job Number.: 201093

Report Date.: 11/28/2000

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

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	000KWLPTFA	201093-1		11/21/2000	1738

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Toxaphene	0			0.000000	0	0		65-138	
Chlordane	0.01062			0.010020	0	106		68-118	

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

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 201093 | Report Date.: 11/28/2000

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

Method.....: Organochlorine Pesticide Analysis | Batch.....: 6658
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
6363	TCLP	MB	1.00000	0.01718	0.04014	43	10-117		11/21/2000	1452
6363	TCLP	LCS	1.00000	0.01543	0.04014	38	10-117		11/21/2000	1525
6363	TCLP	LCS	1.00000	0.01713	0.04014	43	10-117		11/21/2000	1558
6363	TCLP	EB1	1.00000	0.03196	0.04014	80	10-117		11/21/2000	1632
201093-1	TCLP		1.00000	0.03155	0.04014	79	10-117		11/21/2000	1705
201093-1	TCLP	MS	1.00000	0.03077	0.04014	77	10-117		11/21/2000	1738
201093-1	TCLP	MS	1.00000	0.02985	0.04014	74	10-117		11/21/2000	1811

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

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
6363	TCLP	MB	1.00000	0.04202	0.04012	105	15-130		11/21/2000	1452
6363	TCLP	LCS	1.00000	0.04192	0.04012	105	15-130		11/21/2000	1525
6363	TCLP	LCS	1.00000	0.03903	0.04012	97	15-130		11/21/2000	1558
6363	TCLP	EB1	1.00000	0.04220	0.04012	105	15-130		11/21/2000	1632
201093-1	TCLP		1.00000	0.04262	0.04012	106	15-130		11/21/2000	1705
201093-1	TCLP	MS	1.00000	0.04377	0.04012	109	15-130		11/21/2000	1738
201093-1	TCLP	MS	1.00000	0.03724	0.04012	93	15-130		11/21/2000	1811

LABORATORY CHRONICLE

Job Number: 201093

Date: 11/28/2000

CUSTOMER: RMT

PROJECT: RIVERDALE CHEMICAL

ATTN: Rae Mindock

Lab ID: 201093-1 Client ID: DSL 22 Date Recvd: 11/16/2000 Sample Date: 11/15/2000

METHOD	DESCRIPTION	RUN#	BATCH#	PREP #	DATE/TIME ANALYZED		DILUTION
3520C	Extraction for TCLP (Chlor.Pest.)	1	6363	6312	11/20/2000	0000	
8081A	Organochlorine Pesticide Analysis	1	6658	6363	11/21/2000	1705	1.00000
1311	TCLP Extraction	1	6312		11/17/2000	1615	

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%.

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 11/28/2000

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.

SEVERN TRENT SERVICES

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Report To:
Contact: MINDOCK
Company: RMT
Address: 222 RIVERSIDE
Chicago IL 60606
Phone: 312 575 0200
Fax: 312 575 0900
E-Mail: RAC.Mindock@RMTWK.COM

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

Shaded Areas For Internal Use Only ____ of ____

Lab Lot# 201093

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

Temperature °C of Cooler unchilled

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: Riverbank
Project Number: 456201
Project Location:
Date Required: ASAP
Hard Copy: __/__/__
Fax: __/__/__
Lab PM: E. LANG

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	TCLP Pest	Additional Analyses / Remarks
Refrg #								
# / Cont.					1			
Volume					40z			
Preserv					Ice			
1		DSL 22	11/15		SO	C		

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Sam Cerrillo	Riverbank Chemical	15th Nov	10:00	[illegible]	STL	11/16/00	1000
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
- Wastewater
- Water
- Soil
- Sludge
- Miscellaneous
- Oil
- 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° ICE
7. None

COMMENTS

Date Received 11/16/00
Courier: Fx
Hand Delivered ☐
Bill of Lading See attach